DEALING WITH CULTURAL AND STRUCTURAL DIVERSITY IN CROSS-BORDER R&D CENTRE ACQUISITIONS

Satu Teerikangas
Helsinki University of Technology, P.O. Box 9500, 02015 HUT, Finland
Telephone: +358 50 581 4167, Telefax: +358 9 4 513 095, Email: Satu.Teerikangas@hut.fi

Tomi Laamanen
Helsinki University of Technology, P.O. Box 9500, 02015 HUT, Finland
Telephone: +358 400 609 544, Telefax: +358 9 4 513 095, Email: Tomi.Laamanen@hut.fi

Paper submitted to the 11th conference of the European International Business Association, 8-10 December, 2002 in Athens

DEALING WITH CULTURAL AND STRUCTURAL DIVERSITY IN CROSS-BORDER R&D CENTRE ACQUISITIONS

ABSTRACT

This paper examines the cultural fusion of two entities in a post-acquisition integration process. Extending the earlier research on the relationship between cultural diversity and acquisition performance, this paper looks into the cultural dynamics of the post-acquisition integration process. The findings of this paper show that these dynamics stem from the integrative challenge that an acquisition represents and the way this challenge is dealt with over time. The integrative challenge consists of differences in terms of culture and structure between the buying and acquired firms. Based on in-depth case histories of three European cross-border R&D centre acquisitions, cultural and structural differences are identified at national, corporate and functional levels. Interdependencies between these levels explain why a study focused on any level of analysis alone would lead to an incomplete understanding of the dynamics of the integration process.

KEYWORDS: mergers and acquisitions, integration process, multiple levels of culture, R&D

I INTRODUCTION

Over the past two decades, acquisitions have become increasingly commonplace as the means of international expansion used by companies seeking global reach. They provide access to local competence and intelligence bases without carrying the burden of starting operations from zero. In particular, R&D centres represent a scarce asset that would require significant investments to build from scratch. Despite their appeal, over half of cross-border acquisitions are reported to fail (Morosini, 1998). Reasons for failure can be traced back to an inadequate strategic rationale behind the acquisition, lack of pre-acquisition planning, or inappropriate post-acquisition implementation management (Cartwright and Cooper, 1992). Companies engaging in cross-border acquisitions do not always seem to have the necessary capabilities for successfully completing them.

Compared to domestic acquisitions, cultural diversity present in cross-border acquisitions presents an additional dimension of challenge to the acquisition process. Given their implicit nature, cultural differences seem to go unidentified and unmanaged throughout the acquisition process (Buono and Bowditch, 1989; Olie 1990, 1994; Cartwight and Cooper 1993, 1996; Morosini et al, 1998). Cultural diversity has even been claimed to contribute to acquisition failure. Empirical evidence supporting the claim is still, however, relatively limited. Extant research seems to suffer from semantic confusions regarding the way the number levels of culture included in the study influence the results.

In empirical research on culture in mergers and acquisitions, the focus was at first set on the impact of corporate culture on acquisition performance. Extending the earlier findings of Datta (1991) on differences in management styles, Chatterjee et al. (1992) found that the perception cultural differences between top management teams engaged in acquisitions is negatively related to shareholder gains. Weber (1996) found that cultural differences are negatively related to the effectiveness of the integration process, but have no effect on financial performance. Krishnan and Miller (1997) noted that the complementarity of the top management teams has a positive impact on acquisition performance.

Over time, the scope has been extended to include the impact of differences in both corporate and national cultures (David and Singh, 1994; Weber et al 1996; Very et al. 1996, 1997; Krug and Hegarty 1997; Morosini et al., 1998). The effect of national level cultural differences has been studied both independently and together with a complementary analysis of the role of the corporate culture. Separating these two has been shown to be beneficial (e.g. Weber et al. 1996), as cultural distance on the national level does not necessarily relate to corporate level cultural distance (Very et al. 1997).

The studies extending the analysis to national cultures deepen the findings on the impact of cultural differences on the corporate level. Very et al. (1996, 1997) show that differences in national culture may also contribute positively to acquisition performance if a target firm's management perceives the acquiring firm's cultural traits as attractive. They find a positive relationship between the target firm's perception of attractiveness of the buying firms' culture and post-acquisition performance. Krug and Hegarty (1997) find that top management turnover of target firms increases more in cross-border acquisitions than in domestic U.S. acquisitions. Morosini et al. (1998) extend Very et al's (1996) results further and also find that national cultural distance may be positively related to success. Morosini et al. reason that by carrying out culturally distant acquisitions a firm may increase the probability of possessing a greater variety of potentially valuable "routines and repertoires" that will be valuable in the future. By making culturally distant acquisitions companies may also prepare themselves better. They may carry out more thorough pre-acquisition evaluation and prepare better for cultural encounters.

Despite the expanding body of research on the effect of cultural diversity on acquisition performance, major gaps remain. The existing research suggests that culture should be acknowledged and coped with in the decision-making and evaluation processes of both domestic and cross-border mergers and acquisitions. The research provides, however, no practical measures of the cultural challenge in cross-border acquisitions during the integration process. Extending Nahavandi and Malekzadeh (1998), Pablo (1994), Calori et al. (1994), and Morosini and Singh (1994), an improved understanding of the relation between the cultural challenge and the actions done to carry out post-acquisition integration are expected to contribute to improved integration management.

In addition to corporate and national culture, the importance of other layers of culture has received increasing attention over the last years in management sciences. Literature on corporate culture distinguishes cultural differences between functions (van Maanen and Barley, 1984), industries (Turner, 1971) and also regional, local, societal, and social cultures (Alvesson, 1992). Professional cultures have also been mentioned (David and Singh, 1994) and their integration studied (Håkansson, 1995, von Bonsdorff and Lindell, 1997). Yet, there are no empirical studies that would show how the different layers of culture interact with respect to the post-acquisition integration process. Buying an R&D unit not only creates cultural encounters within the R&D function. It also makes it necessary to link the R&D unit to other parts of the buying firm's organisation within the corporate and national cultural contexts involved.

This article contributes to research on cultural diversity in cross-border acquisitions by looking at the cultural dynamics of the post-acquisition integration process. The findings are based on an in-depth study of three cross-border acquisitions of R&D centres acquired by a Finnish multinational firm in the 1990s. A total of 45 theme interviews were carried out with managers from both the buying and the acquired firms. The acquired firms operated in Denmark, the United Kingdom and Germany.

The findings show that there is both a cultural and a structural element to the differences between the buying and acquired firms in an acquisition. These differences are termed as the integrative challenge in an acquisition. Cultural and structural diversity was found at national, corporate and functional levels. Also interdependencies between the different levels of culture and structure were identified. The findings of this paper suggest that an improved understanding of the integrative challenge in an acquisition may provide means for dealing appropriately with it. This is a first step toward a successful integration process and value creation through an acquisition.

This paper proceeds as follows: Based on extant literature, section 2 proceeds to develop a typology of cultural and structural differences between the buying and acquired firms in an acquisition. Section 3 presents the methodology of the study and case selection. Section 4 presents the case study findings. Section 5 discusses the findings in light of earlier research and suggests avenues for further research. Finally, Section 6 concludes.

II A TYPOLOGY OF DIFFERENCES BETWEEN THE PARTICIPATING FIRMS

Extending earlier research, this section of the paper develops a typology of the integrative challenge in an acquisition. The typology relates to the structural and cultural differences between the buying and acquired firms in an acquisition. These differences are manifested at national, corporate and functional levels. The typology is represented in the form of a matrix, Table 1. One axis represents the culture – structure dimension, whereas the second axis represents the levels of analysis involved, here national, corporate and functional levels. In this way, a total of six instances of integrative challenge were identified. Each instance is constructed using dimensions found in extant research.

The typology makes the following broad distinctions. First, differences between the participating firms to an acquisition occur at the national level. These relate either to differences in national culture, or to differences in national structure. Second, differences exist also at the corporate level, as the participating firms differ according to their corporate culture and corporate structure. Finally, differences in terms of functional culture and structure are also identified. This section will proceed by presenting the theoretical construct development behind each of the six instances of integrative challenge.

Table 1: Typology of cultural and structural differences between firms participating in an acquisition

	Cultural dimension	Structural dimension
Functional level	**Functional culture:** Unit culture Professional culture	**Functional structure:** Unit structure Independence and international scope Flow of work
Corporate level	**Corporate culture:** Power culture Network culture Task culture Person culture	**Corporate structure:** Industry Organization structure Ownership pattern Multinational orientation
National level	**National culture:** Power distance Uncertainty avoidance Context of communication	**National structure:** Economic institutions and government System and production of knowledge Structural industry conditions

Cultural differences at the national level

Anthropologists, social psychologists, and cross-cultural psychologists have each taken their approach to structuring and operationalising national culture. This reflects their quest for understanding human behaviour and finding out whether universals in human behaviour exist. In this setting, a lot of work on differences between cultures and societies in terms of values has been made. The first studies can be found in anthropology, later in social psychology and more recently cross-cultural psychology. Other studies have tried to understand patterns of culture, the influence of attitudes on behaviour or even the universality of emotions. These areas of literature represent years of efforts by hundreds of researchers, who still remain without the ultimate answer. In the field of management sciences, the focus with work on national culture has been on how to operationalize it. Here, we find the work of Hall (1976), Hofstede (1980), Triandis (1995), Trompenaars (1997) or Adler (1997) particularly well known to researchers. Their fame stems from the researchers' thirst have to be able to quantify cultural differences in order to use these results in further studies. Other streams of research have voiced criticism and concerns on attempts to quantify the non-quantifiable, and raised rays of hope for using novel ways of approaching culture.

In this study, cultural differences at the national level were identified based on extant research in terms of differences in power distance, uncertainty avoidance and high vs. low-context communication. Power distance and uncertainty avoidance are two of the five dimensions along which Hofstede found differences between cultures at the societal / national level (Hofstede, 1980). Despite criticisms (e.g McSweeney, 2002), his work has remained a classic in social sciences. This stems largely from the fact that his work remains among the few that have quantified cultural differences across a number of countries simultaneously using a large sample, obtaining an index for each country along the five dimensions of study. Given that the focus of Hofstede's study has been at the societal level, he sees the impact of the dimensions of his study in families, at schools and in work organizations. Of the five dimensions, the two used in this paper are advocated by Hofstede (2002) as particularly relevant in explaining the impact of national culture on corporate behaviour. The distinction between high- vs. low-context communication has been adopted from Hall (1976), whose work has become an unrivalled classic with regard to differences between national culture communication styles.

Power distance is been defined by Hofstede (2002) as "*the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally".* Hofstede divides countries along a continuum ranging from high to low power distance countries. In organisations, differences in power distance can be found for example in how centralised decision structures are, how concentrated authority is, whether the organisation is structured along a flat or a tall pyramid, the proportion of supervisory personnel used, the use of consultative vs. authoritative leadership. For a richer discussion on the concept of power distance, please refer to Hofstede (2002).

Hofstede (2002) defines uncertainty avoidance as *"the extent to which the members of a culture feel threatened by uncertain or unknown situations"*. As with the power distance index, societies are classified along a continuum ranging from whether uncertainty avoidance is low or high. In organisations, uncertainty avoidance translates into the strength of loyalty toward the employer, scepticism or appeal toward technological solutions, the degree to which innovators feel constrained by rules, whether top managers are involved in strategy or operations and whether the power of superiors depends on position and relationships or the control of uncertainties (Hofstede, 2002).

Hall (1976) has distinguished between cultures depending on whether they rely on high or low context communication. In low-context cultures, the communication style is direct and explicit. What is said, counts, and one need not infer for what is not said. In high-context cultures, communication is indirect and is highly dependent on the context of communication. Thus, depending on the culture, silence, indirect communication, or body language might be used. The inattentive newcomer who does not know about the intricacies of context in a high-context culture might miss a great deal of the communication process. Contrary to Hofstede, the work of Hall does not provide an index according to which cultures can be classified. The work of classifying a culture according to its context of communication is left to the reader.

Cultural differences at the corporate level

The notion of corporate culture has been explored in management sciences as early as in the 1960s, but it was not until the 1980s that the topic become of increasing research interest with the publication of the works of both Peters and Waterman (1982) and Ouchi (1981) on the success factors of US and Japanese companies. Researchers and practitioners alike became interested in the possibility of improving an organisation's performance using the newly found "human" dimension of the firm. Since this awakening, the topic of corporate culture has received a wealth of attention. It has been approached e.g. as a value system, as symbols, as identity and as climate and spirit. Given the intangible nature of corporate culture, the field of research has also been subject to constructive criticism (Alvesson, 2002).

One way to approach corporate cultures is by using typologies. Their usage stems from the ease of categorisation that they provide. Instead of typical difficulty of identifying aspects of corporate culture and dealing with their intangible nature, categorisations exemplify most common types of corporate cultures, making them more tangible. Some of the best-known categorisations of corporate cultures include the ones by Handy (1976, 1985, 2000), Deal and Kennedy (1982), Quinn and McGrath (1985) and Scholz (1987). These categorisations differ in focus and breadth.

For the purposes of this paper, the categorisation of corporate cultures by Handy (2000) was found to be most relevant. He distinguishes between four types of corporate cultures. The power culture (Handy, 1976), later termed the club culture (Handy, 2000) is described as the spider's web and best characterises an entrepreneurial culture. The leader of a power culture is compared to Zeus, the mighty and powerful head of the gods of Ancient Greece. The organisation has its official structure, characterised by the vertical lines in the spider's web. What characterises the organisation more though, are the encircling lines connecting all vertical lines. Key in these cultures are the power clubs to make things happen. The achievement of affinity and trust are important in succeeding in a power culture.

The role culture can be stereotyped as the bureaucratic organisation. Handy compares it with the image of a Greek temple. The pillars of the organisation reflect its products or functions. The patron of the organisation is the god Apollo, the god of reason. This organisation values logic and rationality. Given the strength of its structure, this organisation form fits well in a stable and predictable environment, but is ill equipped to deal with change. Rather, they have organised themselves perfectly to enable efficient work. Life insurance companies are an example of role cultures.

The task culture focuses on tasks, e.g. projects, problems and seeks solutions to these. Its structure is represented as a net in Handy's work, with different parts of the net holding different power potentials. A matrix organisation is an example of a net organisation. Athena, the warrior goddess, is the ideal manager type for a task culture. The task culture is adaptable; as it always tries its best to solve a given task. Therefore, teams or task forces are formed to fit the situation. Control in the traditional command sense, is not possible. Task cultures are found where flexibility and sensitivity are essential for success.

The person (Handy, 1976) or existential (Handy, 2000) culture is found in professional organisations and as its name entails, its focus is on employees' interests and values. Their personal goals are more important to them than the goals of the organisation. Thus Handy refers to these organisations as "clusters" or "galaxies of individual stars". The work of doctors, lawyers or university researchers is close to the person culture, according to Handy.

Cultural differences at the functional level

Traditionally, research on culture in management literature has taken a focus on either the corporate or national level. Corporations have been assumed to share one culture that can be identified (Alvesson, 1992). A focus on the multitude of cultures in the study of firms' cultures is relatively recent. The existence of professional cultures in organisations has been advocated in the work of e.g. van Maanen and Barley (1984), Hofstede (1990), Trice and Beyer (1993), Trice (1993). Schneider and Barsoux (1996) argue that professional cultures differ in what is considered proper behaviour. They also differ in their values and beliefs as well as the choice of methodology for their work. These findings suggest that given a group's occupation or profession, they are likely to have a different culture.

In parallel and very much linked to the debate on professional cultures is another debate on multiple cultures and identities in a firm. Albert and Whetten (1985) have found that there are multiple competitive identities in an organisation. Raelin (1986) looked at culture clashes between professional and corporate cultures in organisations, thus acknowledging the presence of subcultures within the larger corporate culture. Also Sackman (1997) has distinguished between national, corporate and subculture levels in an organisation. David and Singh (1994) note the existence of national, corporate and functional cultures in cross-border acquisitions. In his study of R&D laboratories, Håkansson (1995) pointed to the fact that the unit culture of R&D units is different from the corporate culture. These findings would seem to suggest that functions within a firm have a different culture from the prevailing corporate culture, hence the term corporate "sub-cultures". This would be in line with Miles (1980), who in his work on contingency and multinational firms' structure assumed a firm's sub-units to be different from one another. Such differences seem to be forgotten in today's multinationals, with the importance given to global-scale harmonisation efforts. Have differences at the unit level been forgotten?

These literature findings would seem to suggest that at the functional level, cultural differences pertain to both the professional culture of the members of the unit as well as the unit's own culture, which is different from the prevailing corporate culture. Thus, it is expected that a marketing unit, a research and development unit or a production unit will all have distinctly different characteristics given that they all represent different professional or occupational cultures. The second dimension of cultural differences at the functional level refers to the culture of the unit itself. If organisations are seen as consisting of subcultures, then each subculture is likely to have a different identity, a different culture.

Structural differences at the national level

Research on economic growth discusses the impact of national infrastructure on the innovativeness of a country. Carlsson and Stankiewicz (1991) examine the issue from the perspective of technological systems. They define a technological system as a dynamic network of agents interacting in a specific economic area under a particular institutional infrastructure and involved in the generation, diffusion and utilization of technology. They specify economic competence, clustering of resources, and institutional infrastructure as the central features of technological systems. According to Carlsson and Stankiewicz (1991), the institutional infrastructure comprises the political system, the educational system, patent legislation, institutions regulating labour relations. These elements of institutional infrastructure they divide into (1) the basic economic institutions and the role of government and (2) the system and production of knowledge. Based on this classification, the authors address the fluidity, adaptability, and the overall strength of different types of institutional settings from the perspective of optimal evolution and growth. In doing this they emphasize that techno-economic selection takes place in a socio-cultural environment through a process of interaction and communication among actors.

Porter (1990) addresses the national level infrastructure in his work from the perspective of the competitiveness of nations. He defines the four main characteristics of nations, that is factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry, as the "Diamond of National Competitive Advantage". According to Porter (1990), competitive advantage of nations result from the differences in culture, management style, infrastructure, economies, institutions, histories, demographics, and other factors that affect the way people do live and do business. Porter's classification acknowledges the evolutionary perspective in the development of competitiveness. Institutional structures and industry conditions are both preconditions and consequences of structural evolution at the national level.

Combining the above two perspectives, we classify structural differences at the national level to stem from (1) the role of the basic economic institutions and the government, (2) the system and production of knowledge, and (3) the structural industry conditions including factor and demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. Structures of specific industries act as the link between corporate and country level structures and are discussed more below when defining the structural differences at the corporate level.

Structural differences at the corporate level

Industry structure, corporate ownership pattern, formal organization structure, and multinational orientation provide the structural setting for the behaviour of organizations. Each of these dimensions is discussed below in greater detail.

Industry structures have been the primary target of study in industrial organization research that has focused on the effect of industry structures on firm conduct and performance in different industry contexts (Bain, 1968). The concentration of industries, emergence of entry barriers, and existence of mobility barriers have been discussed extensively (Caves and Porter, 1977). It has been shown that monopolistic, oligopolistic, and perfectly competitive industry structures are related to different types of conduct at the firm level. Acquisitions have been closely linked to this research tradition since acquisitions can be used as the means to enter a new industry, increase industry concentration, or change position from one strategic group to another (Porter, 1987; McGee and Thomas, 1986). The industry structure has been found related to acquisition behaviour and vice versa (Ravenscraft and Scherer, 1987). However, not until recently in research on networked industry structures the industry structure has also been linked to other behavioural characteristics of firms. It has been shown, for example, that a firm's position in a networked industry structure may influence a firm's adaptive learning and decision-making processes (e.g. Haunshild, 1993; Beckman and Haunschild, 2002)

Despite its centrality in acquisition research, the effect of previous ownership structures has received relatively limited attention. Previous ownership may, however, have major implications for firm behaviour and the nature of the integration challenge. A privately held entrepreneur-driven firm may, for example, not have established formal structures for reporting and control similarly to a subsidiary of an established multinational firm. A patriarchal owner may have created incentives and other practices that emphasize the family-centeredness of the organization. A publicly traded owner may have established formal practices derived from the reporting requirements of a stock exchange. McGee and Thomas (1986) define the nature of shareholders according to the family influence, country of origin, corporate interconnection, multinationality, and institutional holdings. Ownership structures affect directly the behaviour of firms through the establishment of different kinds of incentives, control systems, and processes. Ownership also affects the desired rate of return and the time horizon over which it is to be earned. Based on the above, we categorize acquisition targets according to their ownership structures into (1) privately held firms versus publicly traded firms and (2) entrepreneur-owned versus family-owned versus corporate-owned versus institution-owned firms.

The way firms structure their organisations is another way of differentiating between firms. The functional structure is the traditional way firms organised themselves (Ansoff and Brandenburg, 1971). For example, it was prevalent in the early American industry in the early 20th century. Its bureaucratic structure enables functional specification but leaves a wealth of coordination responsibility to the headquarters. In the wake of internationalisation, the geographic, regional or area format become popular (Stieglitz, 1972). It enabled a focus on a specific region in a time where global communications were not well developed. Later, firms began to organise themselves in product divisions, each responsible for a certain product (Davis, 1979). In this structure, all necessary functions can be found within each product division. This enables focusing on the effective production of key products. However, coordination between the product divisions remains challenging. During the 1970s, the matrix structure emerged (Ansoff and Brandenburg, 1971). In this structure, functional divisions are combined with either product or geographic divisions. The aim is to improve coordination and control on a global scale. Despite the apparent complexity it creates, the matrix structure has been acclaimed for the fact that it ensures communication across the firm.

Going beyond the structure discussion, Bartlett and Ghoshal (1998) have claimed that firms also differ with regard to their multinational orientation. They distinguish between four types of global companies – the multinational, the global, the international and the transnational. These four types differ fundamentally in the extent of their approach to globalisation. In practice, these differences are noted in the way they have opted to organise their operations, the role they provide to their overseas operations as well as the way they develop and diffuse knowledge. The global orientation of the mother organisation dictates the level to which the global operations of the firm are intertwined. The multinational firm takes a decentralised and nationally self-sufficient approach to its global operations. This enables it to exploit local opportunities. Given the lack of global level links, knowledge is developed and retained in each unit, instead of being leveraged on a global scale. On the contrary, the global firm centralises its operations on a global scale. This means that subsidiaries implement strategies developed at the central hub of the firm and knowledge is developed and retained in the central operations of the firm. The international firm is a mix between the multinational and the global firms. It retains the sources of its core competencies centralised, whilst less critical competencies are allocated to subsidiaries. The role of overseas operations is to adapt and leverage parent company competencies. Knowledge is developed at the centre and then transferred to the subsidiaries. The newest organisational form, introduced by Bartlett and Ghoshal is the transnational. It uses neither a centralised nor a decentralised approach. Rather, its assets and capabilities are dispersed around the world and the firm's units are dependent on one another. Thus, each subsidiary contributes in a specific way to the global operations of the firm. Likewise, knowledge is developed and transmitted globally.

Structural differences at the functional level

Structural differences at the functional level are identified as follows. First, functional units can differ in their structural orientation. Second, they can differ in the international scope of their operations and work with varying degrees of independence from the firm's other operations. Finally, the flow of work can be organised either along projects or along processes.

The structure of functional units can differ. Thus, even though units belong to a same firm, they can exhibit different unit structures. The degree of global alignment within the corporation is likely to explain subsidiary level differences (Bartlett and Ghoshal, 1998). As compared with options for structuring an organisation, options available at the unit level are the functional, the product divisional or the matrix structures.

Second, depending on the multinational orientation of the mother firm, the units will vary in terms of the international scope of their operations. Units can focus on a local, national, regional or global level of operations. Units can also be different depending on the degree of independence they have from the firm's other operations. Units can enjoy total independence from the headquarters or they can be linked to the global operations of the firm. The choice of international scope and degree of dependence are linked with Bartlett and Ghoshal's (1998) typology of multinational firms and the role of overseas operations.

The flow of work is either organised according to a project or a process orientation. Thus some units are project oriented, whilst other are process oriented. The project approach is best highlighted in project management literature. The process orientation has emerged in the wake of globalisation as a means of linking parts of the firm together (Bartlett and Ghoshal, 1998). A process orientation is especially relevant in the context of new product development, as it links the functions required to develop and launch the product in a joint effort (Rothwell, 1994).

III METHODOLOGY

Three majority-share cross-border acquisitions of R&D centres were chosen as the case studies for the paper. The aim was to understand how the integration process had been managed. The acquired R&D units were from Denmark (case 1), the United Kingdom (case 2) and Germany (case 3) respectively. The buying firm operated in the information and telecommunications industry and used these acquisitions as a means of increasing its R&D resources in the 1990s growing global economy. In the integration, the buying firm opted for a symbiosis type integration (Haspeslagh and Jemison, 1991).

The study was conducted using an in-depth case-study approach. This type of qualitative methodology enables theory to emerge from empirical data, which itself can be supported by data from the literature. The strength of the case study approach lies in its ability to get the participants' perspectives through an interactive process to which the participants actively contribute. The theory emerges through continuous feedback and modifications (Yin, 1984, Eisenhardt, 1989). This was considered appropriate when studying cultural dynamics of the integration process, a topic that is both complex and has received little in-depth attention from research to date. The approach shared similarities with the grounded theory approach advocated by Glaser and Strauss (1967), as the researchers entered the research situation with an open mind to understand the dynamics of case studies instead of attempting to pre-influence the results. However, given an initial literature study, which was made to ensure that the research would not merely replicate existing research, the approach used was not purely grounded theory. The debate mirrors Yin (1994), who argues that case studies differ from qualitative studies of a grounded theory nature in the sense that they should be based on a strong reading of existing literature.

A total of 45 interviews were made. The interviewees consisted of persons from the management level that had been involved in the acquisition integration in both the buying and acquired firms. Interviewing people from the acquired firm's side enabled feedback to be obtained about the way the buying firm's organisation had handled the different integration processes it had been involved in. Approximately fifteen interviews per case were carried out, two thirds of these in the acquired units, and one third in the buying firm. The reason for this choice of sample emerged from the fact that not many people on the buying firm's side had been actively involved in the acquisitions. The amount of interviews was deemed sufficient, as after approximately ten interviews, saturation occurred and most themes started to be recurring and little additional insight was gained into the overall process other than the participant's personal and role-specific insight.

The focus of the interviews was on understanding how the integration process had been managed. Depending on their role in the integration, the interviewees had in-depth knowledge on different areas relevant to the integration. An initial research framework was formed based on existing literature. It formed the basis for the theme interview format. This was used as the overall guide for the interviews, but deviations were made to tailor each interview to the person interviewed. This enabled a maximum gathering of intelligence related to the topic. Also, this interview technique enabled the identification of situational factors that might have been lost in a quantitative study. Each interview lasted between one to two hours. Some key persons were also interviewed a second time.

Key themes discussed in the interviews related to: 1) the acquisition process from the moment the buying firm decided to acquire a new R&D unit to the end of the integration process, 2) the way the integration process was managed, 3) the impact of cultural differences on the acquisition process and 4) the outcome of the acquisition. These themes formed the initial research framework. All interviews were coded along dimensions of the research framework and an in-depth case analysis was made for each case. A cross-case analysis of the three cases was then made along the dimensions of the research framework. Findings from the cross-case analysis enabled the development of an improved research framework and the refinement of the findings of the study. A key finding of the study pertained to the implicit yet significant role that cultural differences played in affecting the outcome of each acquisition.

IV MANAGING THE DYNAMICS OF THE INTEGRATIVE CHALLENGE

In the following, the results from the three case studies are presented. First, the buying firm and its integration approach are presented. Second, for each case the integration process is discussed in terms of how the integrative challenge impacted the post-acquisition integration process and how this challenge was dealt with. Aspects relating to both pre-acquisition evaluation as well as post-acquisition integration are discussed. Finally, conclusions on the results from the case studies are made.

The buying firm and its symbiotic integration approach

The acquiring company was a Finnish multinational company in the information industry, whose focus during the 1990s was growth and globalisation. In order to achieve its growth targets, it needed to increase its research and development resources. This was the guiding rationale behind the three cross-border majority-share acquisitions studied in this paper. The buying firm, originating from Finland, is impacted by the Finnish national culture as regards management and communication styles. Finland is a low-context culture, where communication is direct and the use of silence typical. A rather low uncertainty avoidance index (33/100) can explain why a responsibilising management style is preferred. Despite a medium to high power distance index (59/100), the buying firm showed a liking for low levels of hierarchy. This is understandable, as Hofstede (2002) does point to the fact that his results reflect cultural differences at the societal level. Thus, the individual groups or companies may comprise of a different sample than the average national one.

The buying firm aimed for the new units to be operational a year after the deal. In the integration, a symbiosis type full integration was sought (Haspeslagh and Jemison, 1991). This followed the buying firm's transnational strategy, which translated itself into a global organisation supported by a global corporate culture and processes. This meant that the newly acquired R&D units were to be integrated into the way of working of the buying firm from a structural and cultural perspective.

Corporate culture was regarded as the glue that keeps the organisation together. The corporate culture is pictured following Handy's categorisation as a task culture. This translated into a focus on individual responsibility, openness, and flexibility. The integration of corporate cultures was granted an important role also in the integration process of new units. The strategy for ensuring this integration was based on the concept of self-integration. This was very much in line with the firm's low-hierarchy and responsibilising management style. By actively taking part in the integration process, it was assumed that the new units would gradually mould themselves into the buying firm's corporate culture.

Networking across the corporate units was considered a crucial way to ensure that staff around the world knows one another. The responsibility for creating networks was given to the new units and each individual was to create the network needed to perform his or her task in the new organisation.

The integration of corporate structure could be seen at the functional level. Instead of being an isolated unit in the larger political and bureaucratic structure of the mother firm, the new units were to be integrated into the global way of working of the buying firm. This reflects the buying firm's transnational orientation. In addition to self-integration and networking, the transfer to the buying firm's functional structure was supported through the use of integration tools such as project work and onsite coaching. This was regarded by the buying firm as the most effective way of making the new units able to function as interdependent R&D centres within the buying firm using its global processes and structure. It was considered that working in new projects with other R&D centres, functioning along interdisciplinary processes would gradually ensure strong interactions across all organisational levels.

Case 1 - The Danish case

During the evaluation process, the buying firm was attracted by the firms' similarity as regards working structures and by the professionalism manifested by the unit. These were regarded as positive signs toward an easy integration process. Further, a good relationship during the evaluation process was developed between representatives of management. They were eager to start working together. The Finns liked the Danes' enthusiasm and openness. However, differences in national culture were not taken into account per se in the evaluation process.

The Danish unit presented the smallest integrative challenge of the three cases studied here. In terms of management style, the Danish unit and the buying firm shared a liking for low levels of hierarchy and hence a responsibilising management style. Also, both used a direct communication style. Thus, along dimensions of national culture, the only difference related to the use of silence vs. overtness in communication style. The Finns' frequent use of silence in communication perplexed the Danes. As the Finns communicate little, this requires additional efforts on the other side to communicate. In an integration situation, this translates into additional efforts that an acquired unit has to take to socialise itself into the buying firm. The lack of openness in the Finnish culture could be mistaken for hiding important information, or for acting as a gatekeeper. This is especially true in the research and development function, where professional pride is often a driver and information hiding may take place. The lack of openness could also be mistaken for a lack of support, which the Danes have later realised not to be true in reality, as they do get a lot of support from Finland. The Danes felt that silence is more difficult for more open cultures to deal with, as they have to learn its significance in different contexts. Silence shows a lack of respect in some cultures. As such, it might even hamper organisational development and affect the organisation negatively.

Differences in national culture were not specifically recognised in the integration process. An event on Finnish culture was organised at the start of the integration. The buying firm did not seem to note the existence of cultural differences, thus no training on culture or how to work across cultures was organised. The interviewees from Denmark stated that the danger with this approach is that employees might jump to wrong conclusions without understanding the underlying reasons for the others' behaviour. The Danish unit initiated later efforts, as it noticed differences with regard to the Finnish use of silence. For example, new recruits in Denmark are specifically told about the differences in communication style between the Danes and the Finns. This is regarded as critical in ensuring that the new recruits do not have to go through the same perplexing questions as was done during the integration process. This initiative reflects the fact that throughout the integration process, the Danes have made a conscious effort to understand the Finns, and relate their experiences to new recruits even today. The most practical way was found to be through informal discussions, and through experience, since no other means were available.

The corporate culture is identified as a role culture (Handy, 2000). It was further described as politics, bureaucracy and distance as each unit tried to lure its own terms toward management attention. In terms of corporate culture, the unit was to transfer to a task culture, where the focus is on getting things done instead of focusing on the political side of work. In terms of corporate structure, the Danish unit used to be part of a multinational firm. Conforming to this strategy, units were functioning independently with little interaction globally. Given the transnational orientation and a structure along product divisions, there was little effort to ensure co-operation among the units. This differed from the buying firm, which operated as a transnational firm with little boundaries to ensure co-operation amongst its units globally. The challenge for the Danish unit consisted in transferring to the structure of a transnational firm. When integration began, the opportunity for self-integration was greeted with enthusiasm in the Danish unit. For one, they respected their new mother firm and saw a brighter future in it as compared to the previous mother firm. For another, they enjoyed the openness and flexibility of the corporate culture as compared to the distant and political style in the old mother firm. It seemed that the Danes brought brightness and dynamism into the operations of the buying firm. The local management team wanted the new unit to rapidly build itself a new identity within the buying firm and thus encouraged its staff to actively contact the buying firm to ease self-integration. The active and open approach can be regarded as quite typical of the Danish culture, and also the unit's culture. This activeness and openness supported the integration efforts.

As regards functional culture, the professional culture of engineers united the engineers from buying and acquired firms. What differed was the way in which the engineers behaved. In terms of the unit's culture, given the independence of the unit vis-à-vis the mother firm, it had developed its own culture to support its research work. This culture was characterised by flexibility, openness, fun and hard work. The unit's culture was in fact close to the corporate culture of the buying firm, and if possible, even more open. This is not atypical of Danish firms, as the Danes are seen as open, flexible and fun-loving people. In terms of functional structure, minor differences as compared to the buying firm could be noted in the way work was organised. In its years of independent operations, the unit had developed a process orientation and worked with a matrix structure in an interdisciplinary way with the unit's other functions. The challenge for the Danish unit consisted in transferring to the buying firm's transnational structure. Given the multinational strategy of the mother firm, the unit had operated independently from other R&D centres and functions in the firm. Now, it was to become an interdependent unit within the buying firm's global structure and processes. In practice, this challenge turned out to be rapidly overcome, possibly owing to the Danish unit's eagerness to integrate. This eagerness can stem from the nature of R&D work, where greater exposure to others within a trusted environment can induce more innovation than local enclosure. A year after the integration, the Danish unit was successfully integrated into the buying firm. The similarities between the firms and the supportive effect of the Danish culture on the Danes' open behaviour can be seen as contributing to this.

Case 2 - The British case

When evaluating the British unit, the acquiring firm noted that the firms shared little similarities in terms of functional structures. Despite this, the unit was bought owing to its strategic and competitive importance. Through the acquisition, a potential future competitor could be eliminated. In this case, business-related drivers overrode culture-related drivers. Consequently, the lack of similarities between the organisations translated into a more cumbersome integration process and it took the UK unit between five to eight years to integrate into the operations of the buying firm as compared with the more successful one-year integration of both the German and Danish units.

Of the three cases, the British unit represented the greatest integrative challenge. Differences were rooted in national culture, as the Finns and the British cultures seemed to differ along all dimensions of national culture relevant to this study. Many later frustrations in the integration process can be traced back to these differences. The Finns' liking for a low level of hierarchy and a responsibilising management style was contrasted with the British linking for higher levels of hierarchy and a supervising management style. These were considered the greatest challenge in the integration effort. The British have a strong sense of history and hierarchy. As a result, they feel, culturally, that they have a certain place in the society, which grants them less latitude for making decisions alone. This explains why structure is regarded important in British companies. Second, they enjoy a stronger group feeling, making an autocratic or supervisory management approach not abnormal in British companies. It provides a way to ensure the commitment of the staff, as supervision signals the importance of the task under work. This is different from the Finnish approach, where a management style based on respect for the individual and flexible structures involving an open, non-hierarchical culture are more easily opted for. As a result, Finns accept a degree of uncertainty and implicitness in communications, and employees are able to work independently on their projects without direct supervision. These differences in management style explain why the unit had difficulty in transferring to a networking-based organisation with low hierarchy as compared to clear rules in a set organisation structure. According to their national culture, the British staff yearned for structure and authority. This was not possible, as they were now owned by a firm that operated differently. Further, these differences explain why the message to self-integrate was slow to pass in the British unit. Instead of personal responsibility, the staff waited for management orders.

The Finns' directness and silence in communication style was contrasted with the British indirectness and use of small talk. To the British, behaving according to societal norms entails indirect communication and the quasi-impossibility of confrontation. Problems are stated more implicitly. On the contrary, Finns communicate in a less verbal, yet more direct and confrontational way, without much consideration about how the person at the receiving end feels. Content is more important to a Finn than context, as opposed to the British counterpart. The Finns' silence was felt as confusing and even perplexing, until the counterpart understood its cultural roots. These differences manifested themselves in numerous misunderstandings between the two parties. Owing to the different communication styles of the British and the Finns, the British did not always feel welcome at events. For example, a warm Finnish welcome greeting, stating *"Join us at the conference next week; here is the invitation,"* was codified by the British side as rude and disinterested behaviour, lacking in politeness. As a result, the Finns wondered why the British did not show up. Another example is provided by the language of e-mail, which in the Finnish tradition is very brief, again codified by the British as a sign of disinterest, even though this was not the intention of the sender. Finally, the direct and open Finnish way of communicating, when compared to the more indirect and implicit British politeness, could provide fruitful ground for misunderstandings. Such reasons might explain why the British stated that navigating in the buying firm at times felt like *"hitting a stone wall"*, while in the meanwhile their Finnish counterparts did not always understand the behaviour of the British staff. Accurately reading the other party's mind required years of experience in dealing with the culture. Through more polished, polite and clear communications, the Finns might have established a better relationship with the British staff.

In the case of the British unit, differences in national cultures were identified unexpectedly only after years of working together. The topic then started to appear in management meetings, and gradually sessions on differences in national culture began to be held. By this time, misunderstandings had already surfaced, and the real benefit of this training could have been reaped earlier. The British interviewees noted the importance of an integration strategy that recognises and addresses cultural differences in a proactive way. Integration of staff overseas requires a wealth of sensitivity. They added that in order to reap the best from a foreign unit in that particular cultural setting, a buying firm should adapt its approach more to the cultural context at hand.

Differences pertained also to corporate culture and structure. The corporate culture of the firm consisted of striving for high targets, dynamism and the will to make it as the key to success. These were echoed by an authoritative management style. The integration challenge in terms of corporate culture consisted in transferring from a leader-led power culture to a task culture. Second, the British unit used to be part of a medium-sized privately owned British firm. Now, it had to get used to being part of a larger corporation functioning globally in a more organised format. This was a psychological shock, as the unit would have preferred continuing working under its British mother firm. It felt that it the transfer to a transnational structure stole away the freedom of decision it used to enjoy. Matters were made worse, when they noticed that expected corporate behaviour in the firm was different. The British unit, where the leader and management had traditionally provided clear guidelines, was quite at loss with the freedom provided in the context of the post-acquisition integration efforts. Fear of authority explains why a British engineer found it more difficult to contact a person hierarchically superior to him. The Finnish leader of the new unit used the Finnish participative and responsibilising management style and did not give clear orders to the staff. The British interpreted this as a sign of disinterest. Consequently, integration was slow. The interviewees from the British unit referred this to *"the hangover of the pre-acquisition times"*. The old culture took long to evade. A reason for this could be the differences in national cultures. The corporate culture of the buying firm reflected values typical of the Finnish working style. These were not supported by the British values. Thus, the new unit had a cumbersome time in shifting its thought pattern. This became even more challenging, as it was not supported by a conscious integrative effort other than self-integration. Transferring the buying firm's thinking into the UK unit would have required more conscious efforts on the Finnish side. British interviewees noted that the Finns could have sold the buying firm's culture better by being more open about it, explaining the positive side of informality and management visibility. As long as the new corporate culture was not clearly explained, it remained in the haze for the new centre and was perceived as more chaotic than it actually is. Had the Finns been more consistent with their expectations and communicated these to the staff, the staff would have performed better. The British side felt that the buying firm was accepting lower performance than the UK unit had, since supervision and the importance of deadlines were not emphasised.

In terms of functional culture, the uniting factor consisted in professional culture of engineers. This translated itself as shared engineer values and language. However, structure-wise, discrepancies could be found in all aspects between the two firms. The British unit was organised along a traditional functional organisation, and the staff was not used to communicating across functional borders. On a symbolic level, this transfer reflected the transfer toward a less hierarchical management style, as shown earlier. Second, given the smaller size of the British firm, it had not had the time to develop its organisation and hence functioned in ad hoc project teams as compared with the organised process orientation of the buying firm. They enjoyed the dynamism and surprise effects related to ad hoc project work. Transferring to a more organised process orientation came as a shock. Finally, it was not used to being interdependent vis-à-vis the firm's other R&D centres. Given the extent of the integrative challenge at the outset of the integration and the fact that the self-integrative approach to integration did not suit the British unit, it took the unit on average five to eight years to integrate in the buying firm. Success was finally ensured through the growth of the unit and the recruiting of new staff instead of changing the old staff to the new ways.

Case 3 - The German case

The interest of the buying firm toward the German unit stemmed from the high level of competence and the successful product development history that the unit boasted. Also, in terms of working methods, the unit shared some similarities with the buying firm. As with the earlier two cases, the evaluation team did not explicitly address differences in national culture prior to the buy.

In the German case, the integrative challenge was not as great as in the British case, yet not as small as in the Danish case. In terms of national culture, differences pertained to both management and communication styles. The Germans were used to higher levels of hierarchy and a supervising management style. The effect of differences in expected levels of hierarchy could be noted in the challenge that the integration posed to the German unit. They were used to a structured organisation, governed by clear hierarchical rules and respective responsibilities. The direction of orders was top down and staff would not take initiative unless they were ordered to do so. This was the polar opposite of behaviour along the corporate culture of the buying firm, where individual responsibility and low levels of hierarchy were the norm. In the German unit, the management team took a strong role in guiding the new unit's self-integration. It was aware that free individual responsibility and a lack of managerial authority were not a custom in Germany, and thus the new model should not be transferred too fast to the German unit. The integration was initiated top-down, with networking toward the buying firm beginning at highest levels of management, gradually moving to reach all staff. The integration was carefully planned on the German unit's side by its management to ensure correct allocation of tasks. An example relates to the use of titles, which was a worry on the German side: would their titles be omitted in the transfer to the buying firm? Still, the staff found the integration method rather confusing. There were many persons involved from the buying firm's side, yet no clear responsible for different areas. The new unit's integration would have been easier if contact persons had been made available. Owing to the difficulty of finding the right contact person, the establishment of interpersonal links happened in an uncoordinated way. Each person from the German unit tried to find his peer without necessarily knowing which function this person would belong to. More clarity in the process could have been ensured from the buying firm's side, by clearer lines of authority towards the acquired unit.

As regards communication style, the Germans share the Finns' directness, but as compared to the Finns' silence, they are used to a more open communication style. Their openness helped them in the integration effort. Using their naturally direct and open style, they enjoyed the opportunities provided by self-integration, as they could take a proactive role in the integration process, influencing their own future. This was much appreciated by the buying firm and helped to enable learning to occur from the acquired to the buying firm.

The Germans noted that no specific approach to cultural differences was adopted. This resulted in feelings of confusion for the Germans trying to navigate the new corporate environment. Misunderstandings were noticed once they were taking place. Instead of being associated with national culture, they were seen as stemming from corporate difference. This led easily to efforts to bash the other party for their "weird" working style.

The German case resembles the Danish case as regards corporate culture and structure. In terms of corporate culture, it was to transfer from a role to a task culture. In the previous mother firm, it was used to politics, a lack of openness and a focus on quarterly targets. In its transfer to a new corporate culture, the Germans' worries about the complexity and the lack of structure in the networked buying firm and the difficulty of finding a decision-maker could be traced back to differences in national cultures. The Germans felt quite lost at times, having to navigate in an unstructured environment. They became frustrated, as they kept searching for structure and only later realised that it was lacking. Also, they tried to implement their structured approach to meetings and projects, and were at start at loss with the less structured and flexible working approach of the Finns.

"In a networked organisation, if you wish to be integrated, you have to do it yourself."

"The key to getting around in the buying firm was knowing the right contact person."

In terms of corporate structure, the German unit used to be part of a global firm with a multinational orientation, where units are independent. The challenge for the German unit was thus to become part of a transnational firm sharing strategy, structure and culture globally. As in the Danish case, the management of the German unit was pleased with the freedom it now had to also influence not only its own destiny but also the corporation's future. Many work-related aspects that the unit did well ended up being transferred to the buying firm, thus learning was taking place in both ways. This made the German unit satisfied, as it felt it had something to offer to new mother firm, even though it had a short history with it.

The German mother firm's multinational strategy and lack of global corporate culture meant that the unit had developed its own unit culture, characterised by a focus on high performance, flexibility, team spirit and a team of strong fighters. This strong unit culture can be regarded as contributing to the openness and willingness to integrate into the buying firm. In terms of structure, it had an interdisciplinary matrix organisation, similar to the buying firm. As in some instances this organisation was more advanced, some of its features ended up being integrated in the buying firm's structure. Also, it had some process orientation in its work, although at not as high a level as in the buying firm. The difference between the two pertained to the German unit being used to independence. It was to become integrated into the global interdependent network of operations of the new firm. The German unit's integration was successful a year after the deal. The similarities in terms of organisational structure as well as the Germans' active approach toward the integration supported this result.

Conclusions on managing the dynamics of the integrative challenge

The findings point to the importance of acknowledging the presence and impact of cultural diversity in cross-border acquisitions. Diversity between the participating firms was found both in terms of culture and structure at national, corporate and functional levels. The notion of integrative challenge represents the impact of these differences on the success of the integration process. In the cases studied, each acquisition represented a different, case-specific integrative challenge as synthesised in Table 2. This reflected the fact that the acquired R&D units differed from the buying firm in terms of their national culture and structure, their mother organisation's corporate culture and structure and the R&D unit's functional culture and structure.

A second finding relates to the interplay between cultural and structural diversity at the three levels of analysis: national, corporate and functional. National culture influenced corporate and functional cultures, whilst corporate culture influenced functional culture especially if the units were not independent from the mother firm's operations. Corporate structure impacted both functional structure and culture. For example, the global strategy and structure of the mother firm dictated whether the R&D function and its unit culture were developed for local or global fit. Findings from the case studies seemed to point toward interaction between the cultural and structural levels. The greater the challenge on the cultural side, the more difficult the structural integration would become. Examples of these interdependencies are provided in the following.

In the case of the buying firm, corporate culture was supported by the values espoused within the Finnish culture. In the Danish case, the openness and directness of the Danes was reflected in the behaviour of members of the acquired Danish unit both in their professional culture and in their unit's culture. It also impacted their willingness to integrate. In the British case, the culture of the selling firm was influenced by the Britts' liking for hierarchy and supervision. This made it difficult for the unit to transfer to a freer culture in the buying firm. The transfer was made even more difficult in the absence of integrative help from the buying firm. In the German case, the importance of structure was reflected in the way the German unit has organised itself and their liking for clarity. This explains why they were at first at loss in the integration and why their management took such an active approach to secure the integration result.

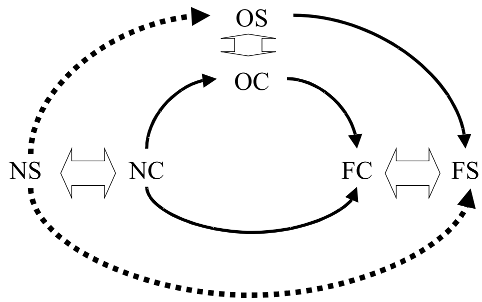

Figure 1: Interdependencies between levels of culture and structure

These findings suggest that it is important to see the integrative challenge as a whole, instead of focusing on the national, corporate or functional level only. These interdependencies are depicted in Figure 1, using the titles NC for national culture, OC for corporate culture, FC for functional culture, NS for national structure, OS for organisational structure and FS for functional structure. The effect of national structure is represented with a dotted arrow, as it was not studied in the cases for this paper.

Given the existence of an integrative challenge in an acquisition and its interdependent nature, the third finding in this study relates to integration management. Integration requires work on both cultural and structural differences between the participating firms. If left unnoticed, either can make the integration of the other more difficult. In the cases studied the functional and at times corporate levels of the integrative challenge were identified in the evaluation phase. The buying firm wanted to know whether the new unit shared its working structures and culture. Despite the evaluation, it did not focus its later integration efforts to utilise the differences identified at functional or corporate levels or to minimise their negative effects. It did not identify differences in national culture at this point. Yet, as the case analyses point out, elements of national culture turned out as key determinants to explaining corporate and functional behaviour. Using the concept of integrative challenge, differences in both culture and structure can be identified during the pre-acquisition evaluation phase and used as a means of focusing the integration approach instead of assuming that the same, "our firm's integration approach", will work in any situation.

By understanding that each firm and unit represents a different mapping in terms culture and structure, the buying firm can optimise its integration efforts accordingly. First, it can assess the way that its own behaviour is dependent on culture and structure. Second, it can examine the likely challenges of its integration approach. Finally, the interplay between the different levels of culture and structure can be examined to understand a priori how national culture influences cultural behaviour at both corporate and functional level and how corporate structure influences functional structure.

Cultural dimension	Culture of buying firm	Culture of case 1: acquired Danish R&D unit	Culture of case 2: acquired British R&D unit	Culture of case 3: acquired German R&D unit
Functional culture: 1) Professional culture 2) Unit culture	**Buying firm's R&D units:** 1) R&D 2) N/A	**Case 1 R&D unit:** 1) R&D 2) "Flexibility, openness, work, fun"	**Case 2 R&D unit:** 1) R&D 2) "High targets, authority, dynamism"	**Case 3 R&D unit:** 1) R&D 2) "Strong fighters, team spirit, performance, flexibility"
Corporate culture: Power / Network / Task / Person culture	**Buying firm**: Task culture	**Case 1 selling firm:** Role culture	**Case 2 selling firm:** Power culture	**Case 3 selling firm:** Role culture
National culture: 1) Uncertainty avoidance 2) Power distance 3) Context of communication	**Finland: (x)** 1) Low uncertainty avoidance 2) Low power distance 3) Low context: silence and directness	**Denmark:** 1) Low uncertainty avoidance 2) Low power distance 3) Low context: openness and directness	**United Kingdom:** 1) Medium uncertainty avoidance 2) Medium power distance 3) High context: indirectness and small talk	**Germany:** 1) High uncertainty avoidance 2) Medium power distance 3) Low context: openness and directness
Structural dimension	**Structure of buying firm**	**Structure of acquired Danish R&D unit**	**Structure of acquired British R&D unit**	**Structure of acquired German R&D unit**
Functional structure: 1) Unit structure 2) Independence and international scope 3) Flow of work	**Functional structure:** 1) Matrix structure 2) Interdependence and global scope 3) Process flow	**Case 1 R&D unit:** 1) Matrix structure 2) Independence and global scope 3) Process work	**Case 2 R&D unit:** 1) Functional structure 2) Independence and global scope 3) Project work	**Case 3 R&D unit:** 1) Matrix structure 2) Independence and global scop 3) Process work
Corporate structure: 1) Industry 2) Organization structure 3) Ownership pattern 4) Multinational orientation	**Buying firm**: 1) IT industry 2) Matrix structure 3) Public ownership 4) Transnational firm	**Case 1 selling firm:** 1) IT industry 2) Product structure 3) Public ownership 4) Multinational firm	**Case 2 selling firm:** 1) IT industry 2) Functional structure 3) Private ownership 4) Multinational firm	**Case 3 selling firm:** 1) IT industry 2) Product structure 3) Public ownership 4) Multinational firm
National structure: 1) Economic institutions and government 2) System and production of knowledge 3) Structural industry conditions	**Finland:** 1) Government technology funding 2) System and production of knowledge 3) Favourable factor conditions	**Denmark:** Not included in this study.	**United Kingdom:** Not included in this study.	**Germany:** Not included in this study.

Table 2: Integrative challenge between the buying firm and the three acquired R&D units

V DISCUSSION

This paper provides a new perspective to the impact of culture in the acquisition process. As compared to the traditional view in the mergers and acquisitions literature where cognitive dimensions of culture alone seems to account for "culture shock", this paper shows that the discussion between structure and culture is central to understanding the behaviour of staff in acquisitions. Whilst culture pertains to the values and behaviour of a group of people, structure helps to understand the reasons for their behaviour. Taken together, they help to assess differences between two firms in an acquisition and thus understand the causes of potential culture clashes.

This finding takes us back to anthropological work in the 1950s and 1960s, much of which was devoted to understanding the structure-culture linkage. The British school focused on social structures in the functionalist tradition, whilst the American school emphasised the cultural tradition. Today, the two streams have become closer, and the cultural system is taken to denote the ideational, the symbolic, whilst the social system defines the institutions and modes of defining social relationships (Geertz, 1957). An example of this is the French anthropologist Roger Bastide (1971), who in his studies of acculturation argued that both social and cultural aspects together help to understand the acculturative phenomenon. He sees acculturation as a "social phenomenon", touching all aspects of social and cultural reality. Thus, cultural relations should be studied in the social frame within which they take place.

Discussion on the link between structure and culture has also taken place in literature on corporate culture. Traditionally, organisational culture researchers have viewed corporate culture as a subsystem within the greater organisational system, comprising of strategy, structure and processes. They have tried to understand the fit between strategy, structure and culture (Boje et al. 1982, Bourantas et al. 1990, Kennedy 1982, Kilman 1982, Peters and Waterman 1982, Sathe 1985, Schwartz and Davis 1981). Authors within this tradition believe in the existence of one strong corporate culture impacting the behaviour of staff (see Alvesson, 1992 for a summary). In international business literature, Pennings et al (1994), Barkema and Vermeulen (1998), Vermeulen and Barkema (2001) found product diversity and multinational diversity to impact a firm's decision to acquire or start greenfield operations. Product diversity can be regarded as similar to structural diversity, whilst multinational diversity refers to cultural diversity at the national level. In the merger and acquisition literature, a similar result was found by Håkansson (1995), who distinguished between socio-cultural, technical and processual integration in cross-border R&D centre acquisitions.

These findings in the areas of anthropology, corporate culture, international business and mergers and acquisitions show that the distinction between cultural and structural dimensions of diversity is rooted in extant research. Thus, it seems that the culture and structure distinction is a powerful tool for an improved understanding of the integrative challenge in an acquisition. By specifying the integrative challenge, it is possible to uncover what lies behind performance problems in acquisitions. It can further help to explain why current findings on the culture-performance link in extant research have revealed at times contradictory findings.

Second, the paper suggests that whilst diversity exists in terms of both culture and structure, both can further be divided into appropriate levels of analysis. Together, they constitute the integrative challenge in an acquisition. If left unmanaged, cultural clashes and a less successful acquisition result are likely to occur. It is thus important to identify the relevant number of levels of culture and structure. When studying or dealing with cultural differences, one should not reduce them to one level of analysis, e.g. national, only. In this study, three levels of analysis were identified as being of importance. One can question, whether these three levels are always present or whether the acquisition case itself will dictate the relevant levels of diversity. In the latter case, relevant levels could include national, corporate, unit, functional, industry or even team cultures.

This finding is aligned with earlier sociological and anthropological research, where the existence of multiple cultures has been acknowledged. Merton (1968) argued for the possibility of using other levels of analysis than the societal one, e.g. organisational, institutional or group levels. Likewise, in recent research on organisational culture, Fombrun (1983) made a distinction between societal (i.e. national) culture, industrial culture and corporate culture, Hofstede et al. (1990) tried to specify the linkage between corporate and national culture in a firm, and Sackman (1997) has distinguished between national, corporate and subculture levels in an organisation, whilst Raelin (1986) has looked at culture clashes between professional and corporate cultures in organisations. Further, Van Maanen and Barley (1984) have noted the existence of professional cultures, Trice and Beyer (1993) and Trice (1993) discuss occupational subcultures. The finding is also in line with David and Singh (1994) who note the existence of national, corporate and functional cultures in cross-border acquisitions. In his study of R&D laboratories, Håkansson (1995) questioned whether the common professional background of R&D engineers did not contribute to lessen differences in corporate culture.

Third, different levels of cultural and structural diversity were found to interact and thus influence one another and the outcome of the acquisition. This finding reflect the work of Roger Bastide (1971), who noted the importance of seeing acculturation as a total phenomenon, taking all its levels into account.

He saw the challenge in culture as resulting from its multi-levelled structure, going from superstructures to infrastructures. This allows for the chain reactions in acculturation: a small change somewhere in the system induces changes elsewhere, having secondary consequences. It seems that these case studies have enabled the re-reading of the anthropological work of Roger Bastide on the dynamics of cultural change.

Apart from the debate on the existence of these subcultures, Hofstede (2002) notes that there are virtually no studies in management sciences attempting to understand the dynamics of multiple cultures interacting simultaneously. There is little research existing to date that simultaneously looks at multiple cultures and providing a typology for them. A reason for this can be found in the complexity of understanding any one culture alone. Another reason can be seen as stemming from the difficulty of assessing the relative importance of the levels of culture involved.

Findings from earlier research seem to suggest the essential role of national culture in determining the value base for individuals. Linton (1959) claims that a person's base personality is determined directly by the culture to which he belongs. Later, Berger and Luckman (1966) identify primary and secondary socialisation. In our context, primary socialisation refers to the impact of national culture, whilst secondary socialisation refers to the impact of corporate and other cultures. Hofstede (1991) suggests a continuum of cultures in terms of the importance of values versus practices on one hand and the age of socialisation on the other hand. He sees the continuum beginning with national culture, going on to social class, professional culture, industry culture and finally corporate culture. Based on findings from literature, we can thus conclude that the strength of a culture seems to be related to the age and primacy of socialisation. Thus, the earlier a culture has been learned, the harder it is to change or unlearn. This would relate to national culture. As to the relative importance of functional, corporate, industry and social class cultures, we can refer to Hofstede's analysis, according to which all cultures are all important but relate to in differing importance to either practices and values. The more they relate to practices, the easier they are to change.

In this study, national culture influenced behaviour at corporate and functional levels. National culture forms the core layers of individuals' values and is thus the most difficult to change. It will affect the integration process but cannot be changed per se. As corporate and functional cultures have been learned at a later age, they pertain not to the values but to the practice-layer of culture. This makes them easier to change or modify. Certain aspects of corporate structure are likely to impact both functional structure and culture. For example, the global strategy and structure of the firm are likely to dictate whether the R&D function and its unit culture are developed for local or global fit. These interdependencies explain why it is challenging to deal with the cultural dynamics in the integration process. A change in one level of the culture or structure is likely to have repercussions on the other levels.

Where the integrative challenge is not identified from the evaluation process onward, a more cumbersome integration process can be expected. This is in line with Kogut and Singh (1988), who found that the decision to acquire or set up a joint venture was dependent on the cultural distance between the countries involved: the greater the distance, the less likely the acquisition. These findings are also in line with Datta (1991), who noted that the analysis of organisational fit should be combined with the financial analysis. Cartwright and Cooper (1993) have added that an effective evaluation of cultural differences and similarities is an early means of assessing the success potential of the merger. The contribution made here is the amount of levels of cultural and structural diversity that need to be taken into account and how each level will contribute to the acquisition's success. The findings suggest, however, that it is possible to determine the integration challenge in the acquisition process already at the evaluation stage and plan accordingly to ensure a successful integration of the new unit into the operations and the cultural identity of the buying firm. First, the buying firm needs to explicitly identify the integrative challenge in terms of cultural and structural diversity. Second, it needs to understand that different types of the integration approaches are likely to impact the cultures involved. Finally, it should plan accordingly to in order to minimise cultural clashes. It can do so by taking both structural and cultural aspects into account.

To conclude and cast an eye into the future, the findings of this paper provide an insight into the complexity of the dynamics that lie behind the term "cultural differences". Given the novelty of the findings, further research is required to provide a more completed understanding of the dynamics of cultural differences in the context of mergers and acquisitions. First, to understand how the constructed typology works in different contexts and how it needs to be expanded. Second, to understand what are the interdependencies and dynamics between levels of culture and structure. Third, to determine whether the findings from this study in the case of symbiotic acquisitions extend to other types of acquisition strategies. Fourth, to assess whether other factors in the integration process impact the success of the acquisition as well as the likelihood of escalation of problems related to cultural differences. Ideally, cultural differences should thus not be considered on their own, but related to the overall integration process. Given the exploratory nature of this study, further studies in other national, corporate and functional environments are needed to further develop the findings of this study.

VI CONCLUSION

Extending earlier research on cultural diversity in cross-border acquisitions, this paper argues that identifying and managing the impact of the integrative challenge is key to ensuring a successful acquisition outcome. A typology is developed for this purpose. The typology identifies diversity in terms of culture and structure at national, corporate and functional levels of analysis. Interdependencies between levels of cultural and structural diversity are identified. They help to explain why it is important to identify the integrative challenge in an acquisition. As the levels interact and influence one another, looking at cultural or structural differences at any one level alone will give an erroneous picture of the acquisition. Successful acquisition management requires an understanding and approach to dealing with the dynamics of cultural differences.

References

Adler, N. 1997. International Dimensions of Organizational Behavior. Kent. Boston. Third Edition.

Alvesson, M, Berg, P, O. 1992. Corporate culture and organisational symbolism. Walter de Gruyter. New York. 258 pages.

Angwin, D. 2000. Mergers and Acquisitions across European Borders: National Perspectives on Preacquisition Due Diligence and the Use of Professional Advisers. Journal of World Business. Vol. 36, No. 1. Pages 32-57.

Ansoff, H, I, Brandenburg, R, G. 1971. A language of organization and design: Parts I and II. Management Science. August. Vol. 17, No. 12. Pages 705-731.

Bain, J.S. 1968. Industrial Organization. Second Edition. Wiley. New York.

Barkema, H, G, Vermeulen, F. 1998. International Expansion Through Start-Up Or Acquisition: A Learning Perspective. Academy of Management Journal. Vol. 41, No. 1. Pages 7-26.

Bartlett, C. Ghoshal, S. 1998. Managing Across Borders, the Transnational Solution. Random House Business Books. London. Second Edition. 389 pages.

Bastide, R. 1971. Anthropologie Appliquée. Payot. Paris.

Beckman, C.M., Haunschild, P.R. 2002. Network Learning: The Effect of Partners' Heterogeneity of Experience on Corporate Acquisitions. Administrative Science Quarterly. Vol. 47. Pages 92-124.

Berger, P, Luckman, T. 1967. The Social Construction of Reality. A Treatise in the Sociology of Knowledge. Penguin Books. 249 pages.

Berry, J, W, Poortinga, Y, H, Segall, M, H, Dasen, P, R. 1992. Cross-cultural psychology, research and applications. Cambridge University Press, Cambridge. 459 pages.

Brouthers, K, D, Brouthers, L, E. 2000. Acquisitions or Greenfield start-up? Institutional, cultural and transaction cost influences. Strategic Management Journal. Vol. 21, No. 1. Pages 89-97.

Buono, A, F, Bowditch, J, L, Lewis, J, W. 1985. When cultures collide: the anatomy of a merger. Human relations. Volume 38, Number 5. Pages 477-500.

Buono, A, F, Bowditch, J, L. 1989. The human side of Mergers and Acquisitions. Managing Collisions Between People, Cultures and Organizations. Jossey-Bass Inc. Publishers. London. 317 pages.

Calori, R, Lubatkin, M, Very, P. 1994. Control Mechanisms in Cross-Border Acquisitions: An International Comparison. Organization Studies. Vol. 15 / 3. Pages 361-379.

Carlsson, B., Stankiewicz, R. 1991. On the Nature, Function, and Composition of Technological Systems. Vol 1. Pages 93-118.

Cartwright, S, Cooper, G, L. 1993. The role of culture compatibility in successful organizational marriage. Academy of Management Executive. Vol. 7. No. 2. Pages 57-70.

Cartwight, S, Cooper, G, L. 1996. Managing Mergers, Acquisitions and Strategic Alliances. Integrating People and Cultures. Butterworth-Heinemann. Second Edition. 250 pages

Caves, R.E., Porter, M.E. 1977. From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition. Quarterly Journal of Economics 91. Pages 241-262.

Chatterjee, S, Lubatkin, M, H, Schweiger, D, M, Weber, Y. 1992. Cultural Differences and Shareholder Value in Related Mergers: Linking Equity and Human Capital. Strategic Management Journal. Vol. 13. Pages 319-334.

Datta, D, K. 1991. Organizational fit and acquisition performance: effects of post-acquisition integration. Strategic Management Journal, Vol. 12. Pages 281-297.

David, K, Singh, H. Sources of Acquisition Cultural Risk. In: Krogh von, G, Siknatra, A, Singh, H. 1994. The Management of Corporate Acquisitions. London, The Macmillan Press Ltd. Pages 251-292.

Davis, S, M. 1979. Managing and Organizing Multinational Corporations. Pergamon. Elmsford, New York.

Eisenhardt, K. 1989. Building Theories from Case Study Research. Academy of Management Review. Vol. 14, No. 4. Pages 532-550.

Elsass, P, Veiga, J. 1994. Acculturation in acquired organizations: a force-field perspective. Human relations.

Geertz, C. 1957. Ritual and Social Change: A Javanese Example. American Anthropologist. Vol. 59. Pages 32-54.

Glaser, B, G, Strauss, A, L. 1967. The Discovery of Grounded Theory. Strategies for Qualitative Research. Aldine. Chicago.

Hall, E, T. 1976. Beyond Culture. Doubleday. New York.

Handy, C. 1999. Understanding Organisations. Fourth Edition. Penguin Books. London. 445 pages.

Handy, C. 2000. Gods of Management. The Changing Work of Organisations. Arrow Books. London. 268 pages.

Haspeslagh, P, J, Jemison, D, B. 1991. Managing Acquisitions, Creating Value Through Corporate Renewal. The Free Press. New York. 416 pages.

Haunschild, P.R. 1993. Interorganizational Imitation: The Impact of Interlocks on Corporate Acquisition Activity. Administrative Science Quarterly. Vol 38. Pages 564-592.

Håkansson, L. 1995. Learning Through Acquisitions, Management and Integration of Foreign R&D Laboratories. International Studies of Management and Organization. Vol. 25, Nos. 1-2, Pages 121-157.

Kogut, B, Singh, H. 1988. The Effect of Culture on the Choice of Entry Mode. Journal of International Business Studies. Fall. Pages 411-432.

Keesing, R, M. 1981. Cultural anthropology, a contemporary perspective. CBS College Publishing, New York. 560 pages.

Krishnan, H, A, Miller, A, Judge, W, Q. 1997. Diversification and Top Management Team Complementarity: Is Performance Improved by Merging Similar or Dissimilar Teams? Strategic Management Journal. Vol. 18, No. 5. Pages 361-374.

Krug, J, A, Hegart, W, H. 1997. Post-acquisition turnover among U.S. top management teams: an analysis of the effects of foreign vs. domestic acquisitions of U.S. targets. Strategic Management Journal. Vol. 18:8. Pages 667-675.

Lewis, R, D. 1997. When cultures collide: managing successfully across cultures. Brealey. London.

Linton, R. 1945. The Cultural Foundation of Personality.

Lubatkin, M, Calori, R, Very, P. Veiga, J. 1998. Managing mergers across borders: A two-nation exploration of a nationally bound administrative heritage. November/December.

McGee, J., Thomas, H. 1986. Strategic Groups: Theory, Research and Taxonomy. Strategic Management Journal. Vol. 7. Pages 141-160.

Merton, R, K. 1968. Social Theory and Social Structure. Free Press. New York.

Miles, R, H. 1980. Macro Organizational Behavior. Goodyear. Santa Monica, CA.

Morosini, P, Singh, H. 1994. Post-cross-border acquisitions: implementing national culture-compatible strategies to improve performance. European Management Journal, No. 4, Pages 390-400.

Morosini, P. 1998. Managing cultural differences. Effective Strategy and Execution Across Cultures in Global Corporate Alliances. Pergamon. Oxford. 309 pages.

Morosini, P, Shane, S, Singh, H. 1998. National Cultural Distance and Cross-Border Acquisition Performance. Journal of International Business Studies. Vol. 19, No. 1. First Quarter. Pages 137-158.

Nahavandi, A, Malekzadeh, A, R. Successful Mergers through Acculturation. In: Krogh von, G, Siknatra, A, Singh, H. 1994. The Management of Corporate Acquisitions. London, The Macmillan press Ltd. Pages 293-308.

Nahavandi, A. Malekzhadeh, A, R. 1998. Acculturation in Mergers and Acquisitions. Academy of Management Review. Vol. 13, No. 1. Pages 79-90.

McSweeney, B. 2002. Hofstede's Model of National Cultural Differences and Their Consequences. A Triumph of Faith – A Failure of Analysis. Human Relations. Vol. 55, No. 1.

Napier, N, K, Schweiger, D, M, Kosglow, J, J. 1993. Managing Organizational Diversity: Observations from Cross-Border Acquisitions. Human Resource Management. Winter. Vol. 32, Number 4. Pages 505-523.

Olie, R. 1990. Culture and integration problems in international Mergers and acquisitions. European Management Journal. Vol. 8, No 2. June. Pages 206-215.

Olie, R. 1994. Shades of culture and institutions in international mergers. Organization studies, Vol. 15, No. 3. Pages 381-405.

Ouchi, W, G. 1981. Theory Z: How American Business Can Meet the Japanese Challenge. Addison-Wesley. Reading, MA.

Pablo, A, L. 1994. Determinants of acquisition integration level: a decision-making perspective. Academy of Management Journal. Vol. 37, No. 4. Pages 803-836.

Porter, M.E. 1987. From Competitive Advantage to Corporate Strategy. Harvard Business Review. Vol 65. No 3. Pages 43-59.

Porter, M.E. 1990. The Competitive Advantage of Nations. The Free Press.

Pennings, J, M, Barkema, H, Douma, S. 1994. Organizational Learning and Diversification. Academy of Management Journal. Vol. 37, No. 3. Pages 608-640.

Peters, T, Waterman, R. 1982. In Search of Excellence. Lessons from America's Best-Run Companies. Warner Books. New York.

Raelin, J, A. 1986. The Clash of Cultures. Harvard Business School Press. Boston. 299 pages.

Ravenscraft, D.J., Scherer, F.M. 1987. Mergers, Sell-Offs, and Economic Efficiency. The Brookings.

Rothwell, R. 1994. Towards the Fifth Generation Innovation Process. International Marketing Review. Vol. 11, No. 1. Pages 7-31.

Sackman, S, A. 1997. Cultural complexity in organizations. Inherent Contrasts and Contradictions. Sage Publications. London. 402 pages.

Sales, A, L, Mirvis, P, H. 1984. When Cultures Collide: Issues in Acquisitions. Pages 107-133. In: Kimberley, J, R, Quinn, R, E. The Challenge of Managing Corporate Transitions. Dow Jones-Irwin. 1984. 320 pages.

Schneider, S, C, Barsoux, J-L. 1997. Managing Across Cultures. Prentice-Hall. London. 267 pages.

Schweiger, D, M, Csiszar, E, N, Napier, N, K. 1993. Implementing International Mergers and Acquisitions. Human Resource Planning. Volume 16, Number 1. Pages 53-70.

Segall, M, H, Dasen, P, R, Berry, J, W, Poortinga, Y. 1999. Human behaviour in global perspective, an introduction to cross-cultural psychology. Second edition. Allyn and Bacon, New York. 399 pages.

Stieglitz, H. 1972. Organization Structures of International Companies. Basic Books. New York.

Trice, H, M, Beyer, J, M. 1993. The Cultures of Work Organizations. Prentice Hall. New Jersey. 510 pages.

Trice, H, M. 1993. Occupational Subcultures in the Workplace. ILR Press. Ithaca. 286 pages.

Turner, B. 1971. Exploring the Industrial Subculture. Macmillan. London.

Vaara, E. 1999. Cultural differences and post-merger problems. Misconceptions and cognitive simplifications. Organisasjonsstudier 1(2). Pages 59-88.

Vaara, E. 2000. Constructions of Cultural differences in Post-merger change processes: a sense-making perspective on Finnish-Swedish cases. Management. Vol. 3. No. 3. Pages 81-110.

Van Maanen, J, Barley, S. 1984. Occupational Communities: Culture and Control in Organisations. In: Staw, B, M, Cummings, L, L. Research in Organisational behaviour. Vol. 7. Greenwich. JAI Press.

Triandis, H, C. 1995. Individualism and Collectivism. Westview. Boulder, CO.

Very, P, Lubatkin, M, Calori, R. 1996. A cross-national assessment of acculturative stress in recent European Mergers. International Studies of Management and Organization. Vol. 26. No. 1 Pages 59-86.

Very, P, Lubatkin, M, Calori, R, Veiga, J. 1997. Relative Standing and the Performance of recently acquired European firms. Strategic Management Journal. Vol. 18:8. Pages 593-614.

Von Bonsdorff, C, Lindell, M. 1997. Acquisition and competence transfer between R&D departments. COST A3 workshop in Milan. Working paper. Pages 290-308.

Weber, Y. 1996. Corporate Cultural Fit and Performance in Mergers and Acquisitions. Human Relations, Vol. 49. No. 9. Pages 1181-1202.

Weber, Y, Shenkar, O, Raveh, A. 1996. National and Corporate Cultural Fit in Mergers / Acquisitions: An Exploratory Study. Management Science. Vol. 42. No. 8. August. Pages 1215-1227.

Yin, R. 1984. Case study research: design and methods. Newbury Park, Sage Publications. 166 pages.