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**ENABLING CONDITIONS FOR  
ORGANIZATIONAL LEARNING:  
A STUDY IN INTERNATIONAL BUSINESS VENTURES**



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*To Virginia,*

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## ABSTRACT

RESUMO

## DECLARATION

The author wishes to declare that except from commonly understood and accepted ideas, or where specific reference is made, the work reported in this dissertation is his own and includes nothing which is the outcome of work done in collaboration. The work has not previously been or is not being concurrently submitted for any degree, diploma or other qualification at any other University.

  
Aldemir Drummond Júnior

## ABSTRACT

### ENABLING CONDITIONS FOR ORGANIZATIONAL LEARNING: A STUDY IN INTERNATIONAL BUSINESS VENTURES

Aldemir Drummond Júnior

The significance of international business in the world economy has greatly increased since the beginning of the 1980s, mainly as a consequence of the expansion in the flow of foreign direct investment. Declining costs of transportation and advances in information technology have allowed transnational corporations to spread the production of goods and services around the world. Increasing competition has represented a continuous pressure on organizations for faster or better adaptation to a changing environment. Despite these pressures for change, organizations also need some stability in order to make sense of both the direction they want to take, and the actions which can help them to keep the course. Knowledge about an organization's internal affairs and its interaction with the external environment has become a main source of competitive advantage. The process by which organizations create or acquire this knowledge has been called organizational learning.

This dissertation seeks to identify and discuss some key factors which facilitate the occurrence of organizational learning in International Business Ventures (IBVs), here understood as the involvement of foreign investing companies in host countries, with some degree of management that is shared between nationals of both local and foreign countries. The dissertation describes four in-depth case studies in two IBVs, one located in the UK and the other in Brazil. The first company is a subsidiary of Toshiba, which produces television and air conditioner sets for the European market. The second company is a joint venture between Toshiba and Semp, a local company, which produces television sets, VCRs and audio equipment for the Brazilian market.

Due to the lack of empirical research in the field of this study, data collection and analysis followed the broad lines of the grounded theory approach. Two processes of organizational learning occurring during the last few years in each company were identified and reconstructed through semi-structured interviews with their key participants. Data about the companies and the processes was supplemented with the use of secondary sources. Throughout the whole study particular attention was directed to the context where the processes developed. All interviews were tape recorded and transcribed verbatim. The data were then qualitatively coded in order to help the identification of the main themes and categories related to the objective of the study. Literature was reviewed during all stages of the research in order both to stimulate theoretical sensitivity and to enhance the generalizability into theory of the main findings of the study.

Some of the main areas of contribution from the research include: the relationship between time and behavioural/cognitive changes in processes of organizational learning; the relationship between time and acquisition of tacit/explicit knowledge; the analysis of outcomes as moments in a process, and their use as leverage for continuous learning; the importance of control for guiding the process and evaluating its outcomes; communication as a major difficulty in the work of cross-cultural teams, and strategies to overcome such difficulties; and the relationship between local and foreign knowledge for the management of IBVs. In addition, the analysis of processes of organizational learning and the attention given to their context represent a methodological contribution of the study.

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## Chapter 1

### INTRODUCTION

This dissertation examines organizational learning in international companies through the presentation and discussion of in-depth empirical studies in two organizations. Its main objective is to identify some enabling conditions for organizational learning in these companies. The first section of this introductory chapter discusses the growth in international business in the last fifteen years or so, and the fact that international companies have expanded their production of goods and services across different countries. The second section briefly discusses how knowledge is becoming one of the main assets of an organization, and its relevance for the operation of international companies. The third section presents the main research question which guides the study and the research design adopted. Finally, the fourth section presents the structure of the dissertation.

#### 1.1 Recent Growth in International Business

The significance of international business in the world economy has increased greatly since the beginning of the 1980s. The world stock of foreign direct investment (FDI) expanded more than fourfold between 1980 and 1993, reaching a total of US\$ 2,135 billions (United Nations 1995). As a percentage of the world output, however, it was only in the 1990s that the stock of FDI regained the same level as 1914 (Jones 1996), which shows the impact on international business of two world wars and the excesses of nationalism in this century. The current period represents not only a recuperation of the importance of international business, but an essential change in the structure of FDI. Dunning (1992) estimates that in 1914 natural resources represented 55% of the total stock of FDI, with 30% in services and 15% in manufacturing. In 1992, services represented 50%, manufacturing 39% and natural resources 11% (United Nations 1993).



The convergence of two initially distinct technologies, computers and transportation, in the last decades have virtually 'shrunk' the world in terms of the higher speed in which people, goods, capital and information can move around the globe. In addition, security is higher and costs are lower. Transnational corporations (TNCs) have greatly benefited from the development of these technologies. With better ways of controlling their operations abroad and lower costs of transportation, they have been able to spread the production of goods and services over a large number of countries, which has resulted in the increase in FDI mentioned above.

The economic development of Japan since the Korean War, and more recently of the East and South East Asian newly industrialized countries (NICs) has changed the shape of the world economy and trade. Whereas some forty or fifty years ago the United States and a few countries in Western Europe were responsible for most of the world's economic output, the global economy is now shaped primarily by the 'Triad' (Ohmae 1985), with North-America, the European Community, and East and South East Asia as vertices of a triangle. According to Dicken (1992), those three regions are responsible for 77% of world exports and 62% of world manufacturing output. They are also the dominant generators and recipients of FDI.

More recently, other countries have attracted foreign investment, partly as a result of changes in their policies towards it. The big debt crises faced by some developing countries in the early 1980s is one of the main causes of the such changes in governmental policies, from state-led development strategies to private sector-led, outward, non-debt creating policies. The high growth rates of the Asian NICs have made them models of successful outward-oriented development (United Nations 1992). China and some countries in Latin America, like Argentina, Brazil and Chile, are examples of countries which have actively tried to attract FDI in the last decade or so.

## **1.2 Knowledge as an Organizational Asset**

If in the 1970s TNCs came to be seen "as the embodiment of almost anything disconcerting about modern industrial society" (Vernon 1977 p.19), in the 1990s they have been called

"everybody's favourite monster" (The Economist 1993). During this period, the number of TNCs has grown from 7,000 to over 35,000. Although few companies can be truly considered global corporations, many TNCs compete in a large number of countries, which requires the deployment of a vast amount of resources in the form of capital and knowledge.

If, on the one hand, the technological change in the last few years has collaborated with the expansion of TNCs, on the other hand, it has also brought pressure in the form of increasing competition for innovation. The presence of a larger number of competitors in almost every market, and the fact that consumers are better informed and more demanding in relation to quality and other benefits they can get from products, have forced companies into a race for innovation, which can differentiate them from competitors.

In spite of the point made by Ohmae (1990) that young consumers in the countries of the 'Triad' are becoming increasingly homogeneous, it seems that many international products still have to undergo some adaptation in order to suit local conditions (Bartlett and Ghoshal 1989, Sugiura 1990). For the TNCs producing them, international competition is a sum of a series of local competitions, with each national or regional market having its particular characteristics. Thus, in addition to knowledge about products and processes necessary to produce a good or service, they also need to have knowledge about local markets. The simultaneous necessity for innovation of processes and products, and adaptation to local conditions, gives to knowledge a paramount role for a firm's competitiveness in an international environment characterized by change.

It has been more than twenty years since some authors predicted dramatic changes in work and organizations, to an environment where knowledge would be the basis for competition (Bell 1973, Nasbitt 1982, Toffler 1980). According to Pava (1983), a gradual shift from routine to non-routine work is one of the consequences of such changes for office workers. However, even in manufacturing organizations where routine jobs are dominant, knowledge has become an important issue for both employees and companies. Increasing competition has meant a continuous pressure towards costs reduction. In western companies this has been achieved by a combination of massive redundancies, redesign of working processes and products, automation of tasks, and the use of multi-skilled labour. Workers are required to

have increasingly higher levels of education and training, in order to be more productive. Some companies from Asia, particularly Japan, have managed to achieve such costs reductions without making workers redundant (Financial 1996).

For companies, knowledge has become one of the main sources of competitive advantage. This sort of statement usually leads us to think of knowledge as linked to advanced technological innovations. However, this is not always necessarily the case. In many circumstances, faster or better adaptation to a changing environment may give just the edge a company needs to be ahead of competitors. In both cases, innovation and adaptation, knowledge creation or acquisition seems to play a central role.

The processes by which people within organizations create and/or acquire knowledge which can be used in the organizations' operations has been called organizational learning. The development of these processes in international business ventures<sup>1</sup> (IBVs) is the focus of the study this dissertation presents and discusses.

### **1.3 Main Research Question and Research Design**

Let me first explain the origins of my interest in the subject of this dissertation. Before engaging myself in the doctoral programme in Cambridge, I took a master's degree in management, for which I undertook a research on international joint ventures in Brazil (Drummond 1992). In that research I looked at partner's motivations for forming joint ventures, their results and some managerial variables which could be linked to those results. I interviewed one manager representing each partner in eight joint ventures. Two issues particularly attracted my attention, even though they were not at the centre of that investigation: a) how managers had to adapt themselves to the working styles of managers from the partner, who were from a different national culture; and b) how some of the

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<sup>1</sup> In this dissertation, international business ventures (IBVs) refer to the involvement by foreign investing companies in host countries. Those IBVs can be new companies or already existent local companies in which foreign companies have acquired a stake. The process is assumed to entail some degree of management that is shared between nationals of both local and foreign countries.

Brazilian companies improved their managerial systems as a result of the joint ventures. In this case, the improvements came either from the contact with the partner or as a requirement for competing in international markets, to which they had access through the joint venture.

I then decided to pursue a PhD degree and continue doing research in international companies. In February 1993, few weeks after arriving in Cambridge, I attended a presentation by Professor John Child where he reported on a seminar he had just attended in Germany on organizational learning. The links between the points he discussed in the seminar and the two issues mentioned in the previous paragraph became evident to me. Professor Child then furnished me with some literature on organizational learning and I later decided that would be the main theme of my doctoral research.

Further search of the literature, including that on strategic management, gave me a broader perspective on the importance of knowledge for the competitiveness of companies. The resource-based view of the firm, which has been developed in the last twelve years or so (Prahalad and Hamel 1990, Teece, Pisano and Shuen 1992, Wernerfelt 1984), but whose principles can be traced back to the work of Selznick (1957) and Penrose (1959), proposes that firm-specific resources are critical factors for explaining what makes firms different from each other and, consequently, what gives them competitive advantage. These resources can be both tangible and intangible assets, and, amongst the latter, knowledge occupies centre stage. Prahalad and Hamel call those firm-specific resources 'core competencies', and define them as "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies" (Prahalad and Hamel 1990 p.82).

Despite the increasing volume of published work on organizational learning (Crossan and Guatto 1996), and the acknowledgement of its relevance in the strategic management literature, there is still a lack of empirical evidence on both how processes of organizational learning develop within organizations, and how they can be a source of competitive advantage. If one considers the case of IBVs and the particular circumstances in which they operate, the gap is even larger.

The research discussed in this dissertation aims at identifying some key factors which facilitate the occurrence of organizational learning within IBVs. The main research question which guides it is: *which are the key enabling factors for the occurrence of organizational learning in IBVs?* The idea is to analyse in detail the evolution of processes of organisational learning within IBVs, and to identify the key enabling conditions for their occurrence. In addition to that, there is a secondary objective of identifying whether the occurrence of organizational learning has brought the development or improvement of any specific organizational capability for the companies involved. This leads to a secondary research question: *have the processes studied fostered the development or improvement of any organizational capability?*

The research was carried out through an empirical study within two companies in the consumer electronics sector in different countries, the UK and Brazil. The UK company is a subsidiary of Toshiba which produces television and air conditioning sets for the European market. The Brazilian company was formerly a locally owned company, in which Toshiba has acquired a 40% stake. Its produces television sets, VCRs and audio equipment for the Brazilian market. In each company I studied in detail some processes occurred in the last few years which were considered by top managers as bringing important changes or new activities for the company. Two issues were central for the choice of processes to be studied, their learning potential for the company and their importance for top managers. The former was assessed by the changes or innovation the processes represented for each company as a whole. The latter was important because I firmly believed that the more relevant the processes were considered, the more willing managers would be in collaborating with the research. Indeed, I have managed to collect a large amount of data about the companies and processes studied, through interviews with people involved in their development, internal documents, and some material collected from secondary sources as the business press, electronic databases, and sectoral associations to which the companies are affiliated to.

The undertaking of such an empirical study called for a theoretical basis to assist in both the definition of the main points on which the research would be focused, and the interpretation of the data collected. However, there was no single theory which I deemed sufficient for this task. The already mentioned lack of empirical research in the field of organizational learning

in IBVs lent this research an exploratory character. Instead of building a theoretical model which would be tested in the empirical study, my option has been for a broad theoretical basis which primarily indicates the main points to be discussed in the study. This theoretical basis draws mainly from the literature on organizational learning, but also gains insights from that on international management, organizational strategy, organizational culture and organizational change. After the field work, all the material collected was put together in the form of written case studies, which are presented in this dissertation. In the discussion of these cases I then present the main triggers and objectives for the processes studied, the content of learning involved and the main enabling conditions for organizational learning to occur.

#### **1.4 Structure of the Dissertation**

The dissertation is structured in three parts, with the second part sub-divided in two sections, as shown in Table 1.1.

The first part, consisting of chapters 2 and 3, presents the literature review, theoretical basis and research methodology. Chapter 2 is a review of existing literature on organizational learning, and some other contributions I consider relevant to the theme of this study from the literatures on international management, organizational strategy, organizational culture and organizational change. During this discussion, I indicate the theoretical basis which was developed for guiding the study. Chapter 3 presents the research methodology adopted.

The first section of part two, consisting of chapters 4 and 5, presents and analyses a case study at Toshiba Consumer Products, a subsidiary of Toshiba located in Plymouth, UK. Chapter 4 is the description of the case, where two processes, the establishment of a new division for the production of air conditioning sets, and the establishment of local design centres, are presented. Chapter 5 is the analysis of the case, where each of the two processes are discussed, and the main enabling factors for the occurrence of organizational learning in each process are proposed.

**Table 1.1**

**Structure of the Dissertation**

Part 1	Chapters 2 and 3	Literature Review, Theoretical Basis and Research Methodology
Part 2.1	Chapters 4 and 5	British Case Study and Case Analysis
Part 2.2	Chapters 6 and 7	Brazilian Case Study and Case Analysis
Part 3	Chapter 8 and 9	Comparison of Cases, Summary and Implications

The second section of part two, consisting of chapters 6 and 7, presents and analyses a case study at Semp Toshiba, a joint venture between Semp and Toshiba in São Paulo, Brazil. Chapter 6 is the description of the case, where two processes, productivity improvement, and the adoption of a new commercialization policy, are presented. Chapter 7 is the analysis of the case, where each of the two processes are discussed, and the main enabling factors for the occurrence of organizational learning in each process are proposed.

The third part of the dissertation, consisted of chapters 8 and 9, presents a comparison between the cases, and discusses the main contributions and implications of the study to the body of knowledge on the subject. Chapter 8 presents a comparison between the cases, where the main differences and similarities are highlighted. The enabling factors for the occurrence of organizational learning proposed for each case are then put together and discussed. In this discussion the theoretical contributions of the study are suggested. Chapter 9 summarizes the

main contributions and limitations of the research and suggests some managerial implications and directions for further research.

PART ONE

THEORETICAL AND METHODOLOGICAL BASES

## Chapter 2

### ORGANIZATIONAL LEARNING: A DISCUSSION ON THE KEYS ISSUES IN THE LITERATURE

This chapter presents a review of the key points in the literature related to the subject of this study. The objective of the review is to develop a theoretical basis for the research. The chapter is divided in five sections. The first section briefly discusses the resource-based view of the firm, an approach to organizational strategy where organizational learning is considered as a process by which organizations can acquire or develop resources and, as a consequence, gain competitive advantage. The second section discusses some issues frequently present in the literature on organizational learning, which are of particular importance for this study. The third section proposes that organizational learning is a social phenomenon which should be analysed taking the organizational context into consideration. In this sense, some organizational variables which are relevant for processes of organizational learning are discussed. The fourth section discusses some specific issues of international business which bear upon the analysis of organizational learning within international companies. Finally, the fifth section highlights the contribution of the literature on factors which can facilitate the occurrence of organizational learning.

#### 2.1 Resource-based View of the Firm

The field of strategic management was challenged in a major way during the 1980s. Economic changes negatively affected the performance of traditional companies, which had been following the general guidelines of the most prominent approach to strategy. According to Whittington (1993 p.3), authors associated to this approach, which he calls 'classical', see strategy as "a rational process of deliberate calculation and analysis, designed to maximize long-term advantage". Whittington proposes two basic dimensions for distinguishing the different approaches to strategy: outcomes and processes. In the classical approach, outcomes

are profit-maximizing, and processes are deliberated by top managers. The basic assumptions of this approach to strategy are criticized by Mintzberg (1990), particularly the belief that a strategy can be fully formulated before implementation.

The belief in the efficacy of designing strategy left many large companies with huge staffs dedicated to strategic planning. The acceleration of the pace of both global competition and technological change in the 1980s resulted in smaller, less hierarchical and more adaptive companies threatening those large corporations in both traditional and new markets. Planning staffs were amongst the first to be laid off. Authors in the fields of strategic and general management also responded to these changes, basically through the development of a number of new contributions, generally focusing in either the external or the internal analysis of the organization. Porter's five forces framework (Porter 1980) emphasizes the characteristics of an industry, and the relative position of companies within it for determining their competitive advantage or disadvantage. Although based on the principles of the 'classical' approach to strategy, it is a powerful framework for analysing industries. Other authors have dedicated their attention to the internal side of organizations, many times to very specific aspects of it (Deming 1986, Hammer and Champy 1993, Peters and Waterman 1982, Prahalad and Hamel 1990).

In the last twelve years, a framework for strategy which combines both internal and external analysis of the organization has emerged. Its basic premise is that a company's performance is driven by its resources, hence the term 'resource-based view of the firm'. The framework incorporates contributions from previous work, such as those mentioned in the preceding paragraph. On the external side, the framework has not produced any original contribution (Collis 1991), basically relying on the extensive work already existent in the strategy field. Its originality stems from the attention dedicated to the internal resources of the firm. It acknowledges that valuable resources can be both physical and intangible (Collis and Montgomery 1995). Of particular interest for this study is the notion that some resources commanded by a firm, specially those which are intangible, can be a result of processes by which a firm creates or acquires and adapts knowledge about its operations, that is to say, processes of organizational learning. Moreover, such accumulated knowledge can also be important for the definition of the uses a company gives to its physical resources.

Some examples of intangible resources which are a result of accumulated knowledge, and can give competitive advantage to a company, are: better integration between its many activities so it can respond faster to market demands, higher commitment from the workforce so it provides a better service to clients, and a high rate of innovative and good quality products which attract consumers. Besides yielding services or products which are attractive to consumers, such resources have also to bear other characteristics which make them distinctive. Of these characteristics, one of the most important is that they must be difficult to imitate (Barney 1991, Dierickx and Cool 1989). This inimitability generally occurs because the resources are either a result from a long process of development, which can not be accelerated by another company which wants to replicate it, or they contain a causal ambiguity (Collis and Montgomery 1995), that is to say, competitors are not able to disentangle either what the resources are or how to replicate them. An example of inimitability is given by Leonard-Barton (1992b) who describes a U.S. steel producer as a learning laboratory. In her words, a "close look at the company reveals an organic learning system so tightly integrated that Forward (the company's CEO) says he can tour competitors through the plant, show them almost *'everything'*, and we will be giving away *'nothing'* because they can't take it home with them" (p.24). But even being difficult to imitate, resources which give competitive advantage usually have a limited life, either because a competitor innovates with something better, or the external environment changes, requiring different resources from companies. In both cases, if companies do not adopt new resources or knowledge, the old ones may be transformed in which Leonard-Barton (1992a) calls core rigidities, inappropriate sets of knowledge; and Levitt and March (1988) call competency traps, old and inferior procedures which are performed instead of new and superior ones.

The perception of this dynamic character of competition has stimulated some authors associated with the resource-based view of the firm to propose the concept of dynamic capabilities (Teece and Pisano 1994, Teece, Pisano and Shuen 1992). According to Teece and Pisano (1994 p.538), "the term 'capabilities' emphasizes the key role of strategic management in appropriately adapting, integrating, and re-configuring internal and external organizational skills, resources, and functional competences toward changing environment". One of the foundations of the dynamics capabilities approach is a focus on how the firm learns new skills. Teece, Pisano and Shuen (1992) recognize learning processes as

intrinsically social phenomena and also identify in organizational routines the locale for knowledge generated in the learning processes. These two points will be discussed with more detail later in this chapter.

Despite acknowledging the importance of organizational learning for the acquisition of resources, authors associated with the resource-based view of the firm do not discuss how learning processes actually occur within organizations. However, there is a literature dedicated to the specific subject of organizational learning which discusses the issue.

## **2.2 Organizational Learning**

Organizational learning is a concept which has been discussed since the early 1960s. It was then a sort of by product of a broader discussion on how organizations adapt to the environment. The discussion was mainly focused on the examination of decision-making processes and how organizational members would change their behaviour in order to adapt to environmental requirements. This process of adaptation was called organizational learning by some authors, and a point of divergence amongst them was whether learning is an sporadic and stepwise process (Cangelosi and Dill 1965, Chapman et al. 1959, Hirschman and Lindblom 1962) or a continuous and gradual one (Cyert and March 1963). Cangelosi and Dill (1965) are perhaps the first authors to propose a specific model of organizational learning, where they separate individual and subgroup adaptation from organizational adaptation, and assume that learning of preferences and goals goes together with learning how to achieve them.

After these initial discussions, organizational learning was left out of the central debates in organizational theory. These were largely concentrated on how organizations adopt different structures and strategies in order to adapt to the environment where they operate, but writers would not label these processes as learning (Burns and Stalker 1961, Child 1972, Lawrence and Lorsch 1967, Miles and Snow 1978, Pfeffer and Salancik 1978, Thompson 1967). From the mid-seventies organizational learning started to return to the literature, initially through the writings of a small number of authors (Argyris and Schön 1978, Duncan and Weiss 1979,

March and Olsen 1976a). It has since then become a concept increasingly more debated by authors from different areas within organizational studies and even economics. According to Dodgson (1993 p.376), there are three main reasons why organizational learning is currently so fashionable: a) organizations are attempting "to develop structures and systems which are more adaptable and responsive to change"; b) "the profound influence that rapid technological change is having on organizations"; and c) the fact that "the concept of 'learning' has a broad analytical value", for it "is a dynamic concept, and its use in theory emphasizes the continually changing nature of organizations. Furthermore, it is an integrative concept that can unify various levels of analysis: individual, group, corporate, which is particularly helpful in reviewing the cooperative and community nature of organizations."

It seems that organizational learning has historically been associated to organizational adaptation to the environment, and, with the acceleration of the pace of environmental change in the last few years, the importance of such adaptation has grown. Moreover, some researchers have associated organizational learning not only to adaptation, but also to innovation, to the creation of knowledge (Nonaka and Takeuchi 1995). Practitioners have already made a similar point, stressing that management innovation is as important as product and process innovation, and organizational learning is the principal process by which it occurs (Stata 1989). Stata goes on to affirm that "the rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries" (p.64); a belief which is shared by de Geus (1988). Based on both the existent body of theoretical work on the issue and the perception of practitioners like Stata, Miner and Mezias (1996 p.90) argue that "organizational learning now stands on the threshold of moving center stage in organization theory, both in an applied and theoretical context".

### **2.2.1 Cognitive and Behavioural Changes**

But for all the distinction recently achieved, the concept of organizational learning is defined in a wide variety of ways by researchers. This was observed by Fiol and Lyles (1985) some ten years ago, and continues to be true. For instance, Huysman (1996) has dedicated a whole PhD dissertation to the discussion of the ambiguities in the literature on organizational

learning, where she thoroughly examines the different perspectives on the concept. This is not, however, the objective of this study. I have opted for mentioning here only some of the ideas proposed by different researchers and which, in my view, are relevant for the study discussed in this dissertation. In this sense, two issues seem to stand out as a first step for a discussion on organizational learning. First is the idea that organizational learning entails some sort of change, and this change can involve both cognitive and behavioural aspects. Whilst some authors would favour one of these aspects, others would consider both as integral part of a learning process. Examples of the former are Huber (1991 p.89), who takes a cognitive perspective by saying that "an organizations learns if any of its units acquires knowledge that it recognizes as potentially useful to the organization"; and, in a opposite standpoint, de Geus (1988 p.71) who states that "the only relevant learning in a company is the learning done by those people who have the power to act". Amongst authors who contemplate both cognitive and behavioural aspects, two important contributions are made by Fiol and Lyles (1985 p.803), who define organizational learning as "the process of improving actions through better knowledge and understanding"; and Child and Markóczy (1993), who propose a typology of managerial learning in joint ventures with six types of learning, according to changes occurring in cognition and/or behaviour of managers, and also whether those changes occur unilaterally or with managers of all partners.

### **2.2.2 Learning as Outcome and Learning as Process**

The second issue relates to what authors look at when analysing organizational learning. Many authors only consider the outcomes of organizational processes, assessing whether learning has occurred or not. Few others investigate how these outcomes are actually achieved, examining processes of learning. This appears to be quite relevant, as any deeper understanding of how learning occurs depends on the analysis of such processes. The same can be said in relation to recommendations to organizations regarding how they may improve their learning processes. The exclusive analysis of outcomes seems to be a result of both the difficulties in researching processes of organizational learning and the fact that some authors would consider investigation within individual organizations out of the scope of their work. The former is true for most of the business and management literature, which usually has a normative character mainly based on common sense, without being grounded on any

methodologically sound research. The latter can be observed in part of the more recent economics literature (Dosi and Marengo 1994, Hirschman 1985) which, despite acknowledging the importance of organizational learning for innovation and survival of firms, and therefore advancing from a neo-classical view which considers knowledge as another given resource available to firms, does not go very much beyond that. However, some authors would go a bit further, by indicating other literatures where organizational learning is considered more carefully (Hodgson 1995).

It is important to highlight here that the analysis of outcomes of organizational learning processes is important for any assessment of these processes. Changes in organizational procedures, and therefore in behaviour, are the most apparent demonstration of the occurrence of learning. However, this analysis is not sufficient for understanding how learning come about in organizations.

There is a small number of empirical works which investigate processes of organizational learning. As the research discussed in this dissertation deals with such processes, it is worthwhile to briefly describe some of these studies. Moreover, they usually involve a number of issues traditionally related to the debate on organizational learning. The intention here is to introduce the reader to the points more frequently debated in the organizational learning literature and describe how researchers have dealt with these points in their empirical and theoretical work. Thus, the empirical studies on organizational learning processes will be presented throughout the chapter, during the discussion of issues to which they are related.

### **2.2.3 Key Issues in the Debate on Organizational Learning**

Although there is no widely recognized theory of organizational learning, some issues have been mentioned consistently by different authors and can be considered as the main constituent parts of the debate on the subject. Those which are relevant for the study presented in this dissertation are discussed below.



### *Agents and Levels of Learning*

The concept of organizational learning was some times rejected by authors who used to reason that organizations are a construct, and therefore, unable to learn by themselves. Argyris and Schön (1996) comment how their initial work (Argyris and Schön 1978) on the subject was badly received by some well-respected scholars of the time, because the idea of organizational learning was considered to be confusing. Nowadays this is no longer the rule, with references to organizational learning being conspicuous in the organizational literature. But despite the concept being more accepted, many basic questions remain a matter of debate. For instance, there is a wide agreement over the idea that organizations learn through their members (Argyris and Schön 1978, Simon 1991), but how individual and organizational learning are related is contentious.

The already mentioned lack of empirical research on processes of organizational learning has resulted in many authors using models of individual learning, usually borrowed from psychology, for explaining an organizational phenomenon. Such an approach is clearly unsatisfactory as it tends to treat the organization as an individual. Others have proposed the existence of different levels of learning within an organization, usually the individual, the group and the organization (Inkpen and Crossan 1995). In this case, models of individual learning are also frequently used for explaining processes at the first level. However, this can also be misleading, as there is generally a lack of consideration for the organization as a social setting involving the individual and, therefore, affecting her/his learning processes. Child and Heavens (1996) timely note such deficiency in the literature, drawing attention to the social constitution and contextual embeddedness of organizations. They argue that both the nature of organizational structures, and the dynamic interplay of action and structure in the learning process, encompass paradoxes which can both stimulate and impede organizational learning, depending partly on how they are managed. Hedberg (1981) nicely defines the relationship between individual and organizational learning when he observes that "although organizational learning occurs through individuals, it would be a mistake to conclude that organizational learning is nothing but the cumulative result of their member's learning. Organizations do not have brains, but they have cognitive systems and memories. As individuals develop their personalities, personal habits, and beliefs over time, organizations develop world views and ideologies. Members come and go, and leadership

changes, but organizations' memories preserve certain behaviors, mental maps, norms, and values over time" (p.6).

At the group level, some researchers have given compelling examples of the occurrence of learning, with shared understandings and tacitly coordinated behaviour being their most relevant characteristics (Brown and Duguid 1991, Hutchins 1991). Besides being high quality pieces of research, these two studies are also relevant due to the increasing significance of the work of teams within organizations. It seems important, however, not to assume that a group's learning is the same as organizational learning, as political questions within organizations may result in the content of learning being contested between groups (Child and Loveridge 1990).

Kim (1993) deals with the relationship between individual and organizational learning, proposing that the mechanism which transfers learning from one level to the other is the sharing of mental models. These are defined by Senge (1990a p.8) as "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action". Kim argues that "the mental models in individual's head are where a vast majority of an organization's knowledge (both know-how and know-why) lies" (p.44). Thus the importance of individuals making these mental models explicit, so they can be improved and, as a consequence, also improve the level of organizational knowledge. A weak point in Kim's analysis is, however, the fact that he views groups as 'mini-organizations', proposing that his model of learning can represent both group and organizational learning. With this assumption, he simply glosses over questions of organizational politics mentioned in the previous paragraph. Nevertheless, his idea of sharing mental models can be useful in the analysis of team work.

At the organizational level, some of the learning experiences of past and present members is stored in the form of working routines (Levitt and March 1988, Weick 1991) and organizational culture (Schein 1985). Nelson and Winter (1982 p.99) argue that organizational routines are "the most important form of storage of the organization's specific operational knowledge". Schein (1985 p.9) defines culture as "a pattern of basic assumptions - invented, discovered, or developed by a given group as it learns to cope with its problems of

external adaptation and internal integration - that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems', and proposes this definition as valid for both groups and organizations. This proposition seems to be fine, as long as we, again, bear in mind the question of politics within organizations and allow for the possibility of different sub-cultures within an organization. Both the ideas of organizational culture and operational routines imply the occurrence of learning. Moreover, the learning of individuals or groups which becomes part of an organization's culture and operational routines will define this organization's way of working, until new learning occurs and culture and routines are changed.

To conclude this topic, it seems reasonable to assume that learning occurs through individuals, and it may be encoded in group or organizational cultures and routines<sup>1</sup>, mainly according to the preferences of those who have the power to determine dominant values at group and organizational levels.

#### *Types of Learning*

Writers on organizational learning have consistently suggested the occurrence of two types of learning within organizations<sup>2</sup>. The basic distinction is between one type of learning which results in modifications in organizational procedures without questioning the norms and values which guide them, and a second type whereby the norms and values which guide organizational procedures are questioned and possibly changed. This distinction started with Argyris and Schön (1978), who proposed the existence of two types of organizational learning, single-loop and double-loop learning. The expressions single-loop and double-loop refer to the number of feedback loops necessary in a learning episode in order to correct a mismatch between the expectations of the agent and the actual consequences of her/his action. In single-loop learning, a single feedback loop "connects detected error (...) to organizational strategies of action and their underlying assumptions". In double-loop

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<sup>1</sup> I am adopting a broad definition of organizational routines here, one that is not limited to operational routines but also includes policy guidelines and strategies.

<sup>2</sup> Some writers use the expression 'levels of learning' for defining what I am calling 'types of learning'. I will keep here the expression 'types of learning' to differentiate it from the levels within the organization which I have discussed in the previous section.

learning, the "double-loop refers to the two feedback loops that connect the observed effects of action with strategies and values served by strategies. Strategies and assumptions may change concurrently with, or as a consequence of, change in values" (Argyris and Schön 1996 p.21). Argyris and Schön also propose the existence of a special case of double-loop learning, called second-order learning, through which members of an organization may question and modify the organization's learning system itself. This idea is based on the concept of deutero-learning, advanced by Gregory Bateson (1972), who observes that, in psychological laboratories, an experimental subject, after being submitted to repeated experiments, "learns to learn. He not only solves the problems set him by the experimenter, where each solving is a piece of simple learning; but, more than this, he becomes more and more skilled in the solving of problems" (p.166).

Fiol and Lyles (1985) also propose the existence of two types of learning within organizations, along similar lines to the concepts of Argyris and Schön. The first type, called lower-level learning, is a result of repetition and routine, and relates to the development of "rudimentary associations of behavior and outcomes" (p.807), impacting only certain parts of the organization. The second type, called higher-level learning, "aims at adjusting overall rules and norms rather than specific activities and behaviors" (p.808), and has as desired consequences the development of new cognitive frameworks for decision-making. It is then possible to associate lower-level learning to changes in behaviour and higher-level learning to changes in cognition.

Senge (1990b), also based on Argyris and Schön, suggests the existence of adaptive learning, which is related to coping with the environment, and generative learning, which is related to creating. Generative learning entails the capacity of seeing the systems that controls events and being able to identify the source of problems. Senge holds that contemporary organizations are generally reactive, or at best responsive, but rarely generative, and that is mainly because their leaders pay attention only to events or patterns of behaviour, but fail to see the systemic structure of reality. He maintains that generative learning is superior than adaptive learning in giving competitive advantage to a company.

March (1991) discusses the choice for organizations between exploitation of old certainties and exploration of new possibilities. Whilst the former means the refinement and extension of existing competencies, the latter means experimentation with new alternatives. March argues that organizations need to strike a balance between the two in order to survive and prosper. Although he does not qualify the two options as types of learning, it is possible to assume that each of them entails different types of learning. We can then go a bit further and propose that, in the same way as organizations need to balance exploitation and exploration, the two types of learning entailed by them are also complementary, both needing to be fostered by organizations.

This suggestion is similar to one put forward by Edmondson and Moingeon (1996). These authors also propose the existence of two types of learning, learning how and learning why. The first is defined as "organizational members engaging in processes designed to transfer and/or improve existing skills and routines". The second as "organizational members inquiring into causality using diagnostic skills. The objective in learning why is to discern underlying logic or causal factors" (p.27). These definitions are similar to those from other authors. What is interesting in Edmondson and Moingeon's work is the idea that both learning how and learning why are important for organizations in the sense of giving them competitive advantage. The authors argue that the two types of learning are qualitatively different, and are suitable for different organizational situations. According to them, "this proposal is based on an observation that not all competitive advantage requires frame-breaking change" (p.28). With this proposition, Edmondson and Moingeon differentiate their work from most of the literature on organizational learning which considers double-loop learning (or higher-level, or generative, or learning why) as intrinsically better than single-loop learning.

Finally, in a more pragmatic approach, a document from CIBAM (1993) suggests the existence of three types of learning within international strategic alliances: technical, systemic and strategic. The technical type refers to the acquisition of new techniques, such as quality measurement, which may be confined to individuals or small groups. The systemic level refers to the introduction and operation of new systems, such as production control and budgeting systems, which impact on relationships and coordinated behaviour within an

organization. The strategic type refers to changes in the mind-sets of senior managers, especially their criteria of business success and their mental maps of factors which are significant for achieving that success. It has consequences for the organization as a whole, and involves reflexive cognitive processes with a view to generating new insights and being proactive. Higher levels of learning are believed to be more difficult to achieve, mainly due to: the increasing cognitive readjustment required, the wider scope of their consequences, and the fact that they are usually more sensitive to organizational politics. Child and Faulkner (1997) suggest the existence of some degree of parallel between this approach and the usual theoretical perspective, with technical learning corresponding to single-loop learning, systemic learning to double-loop learning, and strategic learning to second-order learning.

#### *Tacit and Explicit Knowledge*

Another dichotomy frequently mentioned in the organizational learning literature is between tacit and explicit forms of knowledge. This is a more recent discussion than the others previously mentioned, and it seems that the debate on the issue is still in its early days. The idea of explicit knowledge is almost self-explanatory, meaning knowledge that can be readily communicated to others. The performance of organizational routines, for instance, generally involves a set of well defined steps, which can be classified as explicit knowledge. However, researchers have increasingly perceived that those routines also involve knowledge which does not fall into this category. The more people get used to their tasks, the more they will perform them in their own personal way, which many times will represent an improvement over the way they first performed the task. But if one asks the performer how he/she carried out the task he/she will possibly not be able to explain it, or will explain only part of it<sup>3</sup>. Such behaviour can be extended to teams of workers, who may find ways of integrating their individuals tasks in a manner which yields a better overall performance, without making such knowledge explicit.<sup>4</sup> Furthermore, if one considers non-routine jobs, as it is usually the case of managerial functions, the implicit component of task performance will be greater. This

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<sup>3</sup> There is the possibility that the performer knows how to explain her/his task, but is not willing to do so. In this case, the knowledge would not be intrinsically different from explicit knowledge, in the sense of being also ready to be communicated. However, considering a context in which the performer does not want to make it explicit, for whatever reason, the consequences of the use of this knowledge will be different from explicit knowledge.

<sup>4</sup> See the already mentioned study conducted by Hutchins (1991) for an example of implicit knowledge of a ship's navigating team.

form of knowledge has been called tacit knowledge, a concept proposed by Michael Polanyi (1966).

The increasing attention recently given to tacit knowledge stems not only from the perception of its presence within organizations, but also from its intrinsic characteristic of not being easily communicated. On the one hand, this can represent a problem for organizations. If an important part of organizational knowledge is held by one individual, or a small group of individuals, and it is difficult to communicate, the departure of this (these) individual(s) from the organization can represent the loss of that knowledge. On the other hand, the difficulties in communication can also represent that the knowledge is difficult to be imitated and, according to what has been discussed in section 2.1, be a potential source of competitive advantage. Spender (1996) explores this possibility, stressing the bond existent between tacit knowledge and the experience of the knower. Differently from explicit knowledge, which generally can be transmitted and understood independently of the knower, tacit knowledge is situational, dependent on the context experienced by the knower.

Nonaka (1991, 1994) and Nonaka and Takeuchi (1995) propose a theory of knowledge creation which has as its cornerstone the distinction between tacit and explicit knowledge. According to the authors, their "dynamic model of knowledge creation is anchored to a critical assumption that human knowledge is created and expanded through social interaction between tacit knowledge and explicit knowledge" (1995 p.61). They call this interaction 'knowledge conversion', and suggest its existence in four modes: 1) tacit to tacit, called socialization; 2) tacit to explicit, called externalization; 3) explicit to explicit, called combination; and 4) explicit to explicit, called internalization. Figure 2.1 presents the four modes.

Figure 2.1

Four Modes of Knowledge Conversion

	Tacit Knowledge	To	Explicit Knowledge
Tacit Knowledge	Socialization		Externalization
From			
Explicit Knowledge	Internalization		Combination

Source: Nonaka and Takeuchi (1995)

Socialization is defined as the creation of tacit knowledge, such as shared mental models and technical skills. The authors judge essential that all parts involved in this process share the same experiences. Externalization is defined as the articulation of tacit knowledge into explicit concepts. It is triggered by dialogue or collective reflection. The authors suggest that this conversion is frequently driven by the use of metaphors and/or analogies, as people may find it difficult to use analytical methods to express their tacit knowledge. Nonaka and Takeuchi regard externalization as holding the key to organizational knowledge creation, as it allows new knowledge to be made explicit. Combination is defined as a process of organizing concepts into a knowledge system. The sequence of externalization and combination converts individual knowledge into an organizational property. Internalization is defined as a process of embodying explicit knowledge into tacit knowledge, being similar to 'learning by doing'. The four modes of knowledge creation would work as an spiral, with each mode following the other. However, the organization needs to create conditions for the process of knowledge creation to occur. This will be discussed later in this chapter.

An interesting characteristic of Nonaka (1991, 1994) and Nonaka and Takeuchi's (1995) work is the constant use of examples, taken from research which they have conducted. On reading their work, it is possible to perceive that they have researched processes of organizational learning, and carefully analysed them in the light of the literatures on innovation, learning, and organizational theory. They were able to create a very well-thought theory, with powerful concepts based on an attractive combination of theoretical and empirical reflection. Their theory is already an almost obligatory reference for any work in organizational learning.

### *Triggers of Learning*

What would trigger processes of organizational learning? According to Hedberg (1981) learning is typically triggered by problems. Hedberg refers to March and Simon's (1958) proposition that dissatisfaction is a trigger for organizational problem solving. On identifying a problem, members of organizations would search for a solution, engaging in what Cyert and March (1963) called problemistic search. This search might well lead to the acquisition of new knowledge for the organization, characterizing a process of organizational learning.

Another possible trigger is the perception of opportunities in the environment. Thompson (1967) defines the activity of monitoring the environment for opportunities as 'opportunistic surveillance', and suggests that it could help an organization in anticipating institutional trends. But he acknowledges that, by the number of companies which fail to anticipate institutional changes, there is a scarcity of opportunistic surveillance. Thompson indicates some possible causes for such scarcity, and one of the most interesting is what he describes as "a bias toward certainty, which shows up in various forms including preference for short-term rather than long-term considerations, quantitative rather than qualitative data, and precedent rather than innovation" (p.152). It is interesting to perceive the similarity between his point of view and Senge's (1990b) point on adaptive and generative learning.

A third trigger for organizational learning is a drive for innovation which does not come from a direct search for environmental opportunities. This possibility is almost neglected in the literature on organizational learning. Dodgson observes that "the role of human agency and individual goals such as the drive for self-actualization are almost completely ignored in

many accounts of organizational adaptability. Organizational learning is stimulated *both* by environmental changes and internal factors in a complex and iterative manner" (p.387). An example of this type of trigger is given by Morita (1987), when he describes the objectives of Sony by saying that their plan "is to lead the public with new products rather than ask them what kind of products they want. The public does not know what is possible, but we do. So instead of doing a lot of market research, we refine our thinking on a product and its use and try to create a market for it by educating and communicating with the public" (p.79).

A fourth factor which can trigger organizational learning processes is the arrival of newcomers in an organization. Huber (1991) labels as grafting the process whereby organizations hire new members who possess knowledge not previously available. Such knowledge will most probably be diffused across the organization, moving from individual to organizational level. Hedberg (1981) points out that changes in leadership can work as triggers for change actions within organizations, leading to the occurrence of organizational learning. Hedberg also observes that new leaders come to replace old ones, and the departure of the latter can represent removal of part of the past of the organization. This is another issue of the debate, discussed in the next topic.

#### *Unlearning*

It has been argued that for new knowledge to take place, old knowledge has to be discarded (Hedberg 1981). This act of discarding is known as unlearning. The amount of unlearning which needs to occur for new learning to take place seems to be directly proportional to the degree of conflict existent between the old and new knowledge. But it is not necessarily the case that a greater amount of unlearning represents a more difficult task. That seems to depend on the context. If the old knowledge has lost its legitimacy within a different context, people may be willing to discard it, in so far as they perceive the deficiency, and believe the new knowledge to be superior (Child and Smith 1987).

But unlearning can also represent a very complex task. Biggart (1977) analyses a large process of change at the U.S. Post Office Department, where she gives particular attention to the destruction of the old structure and style of the organization. In that case, the changes were enormous in relation to the previous situation and, as many groups, both inside and

outside the organization, had strong interests in the previous status quo, the changes faced huge opposition. Destruction of past practices was the only way to implement the new. Biggart shows many examples of resistance to this destruction and how different interest groups acted in favour and against the process of change. Besides being a good example of unlearning, her work is also an excellent endeavour at describing a process of change considering its context.

In this sense, Biggart's description of the old ideology, formal structure, operating procedures, and forms of control at the U.S. Post Office Department reveals a context of heavy institutional embeddedness (Granovetter 1985) of the old structures and practices<sup>5</sup>. It was, therefore, very difficult for unlearning to take place. It only occurred through the concerted actions of destroying "the most debilitating aspects of the former organization: the formal structure, the ideology, the leadership, and opposing alliances and power bases", and engaging "in the constructive activities of creating new work methods, building new facilities, developing technological improvements, and creating alliances" (Biggart 1977 p.424). Thus, the old knowledge only lost its legitimacy through the use of power which, simultaneously, destroyed the old and created the new source of legitimacy. Scott (1995 p.45) argues that legitimacy is a "condition reflecting cultural alignment, normative support, or consonance with relevant rules or laws". In the case of the U.S. Post Office Department, all three levels were acted upon, with human agency changing structural and cultural conditions.

Another difficulty related to unlearning is that success usually reinforces organizational habits, making unlearning difficult. Organizations which were once successful may take time to perceive the necessity for change. It is difficult for them to overcome the competencies they have developed with older routines (Whetten 1987).

#### *Organizational Memory*

Processes of organizational learning must involve some form of organizational memory so as the knowledge being acquired or created can be latter used by the organization. Despite the

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<sup>5</sup> I am adopting Scott's (1995 p.33) definition of institutions, which "consist of cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior. Institutions are transported by various carriers - cultures, structures, and routines - and they operate at multiple levels of jurisdiction".

existence of a consensus about its importance, there is still a lack of research on organizational memory (Huber 1991). Memory is basically related to the storing and retrieval of information. Walsh and Ungson (1991) define organizational memory as "stored information from an organization's history that can be brought to bear on present decisions" (p.61). Organizations deal with different types of information, which usually are stored in different ways. For instance, Nelson and Winter (1982 p.99) argue that organizational routines are the most important form of organizational memory. March and Simon (1958) already had postulated that standard operating routines embody organizational memory. Important means of storing 'hard' information are company files and databases.

Mintzberg (1975), on the other hand, has shown how managers acquire 'soft' information through verbal media and store it in their minds. One of the main difficulties in researching memory in organizations is exactly the fact that much of it lies in people's brains. Two problems may arise from the attempt to retrieve this type of memory: a) the difficulty in expressing some of the knowledge kept in individual memory, which is connected to the already discussed issue of tacit knowledge; and b) the time necessary for the individual who holds this memory to dump it so as it can be of use to other people. Nevertheless, if individual memory is not made public or, in this case, organizational, such knowledge will be lost when the individual leaves the organization. That can also happen, even with explicit knowledge, when organization's members do not store this knowledge in organizational files due to non-anticipation of its use in the future.

To summarize this section, Table 2.1 presents the six issues discussed in relation to organizational learning and its main features. The other two points to highlight are: a) learning entails both cognitive and behavioural changes; and b) most of the research on the subject tend to concentrate on the outcomes of organizational learning; however, only by investigating processes we will be able to understand how learning occurs within organizations.

**Table 2.1****Key Issues in the Debate on Organizational Learning**

<b>Issues</b>	<b>Main features</b>
Agents and Levels of Learning	<ul style="list-style-type: none"><li>• Organizations learn through their members</li><li>• Learning can be consolidated at individual, group and organizational levels</li><li>• Shared mental models help knowledge to flow between different levels</li><li>• The content of learning may be object of disputes between groups. Politics influence learning</li><li>• Organizational routines and cultures are embodiments of learning</li></ul>
Types of Learning	<ul style="list-style-type: none"><li>• Questioning procedures and assumptions in order to correct a mismatch between expectations and actual outcomes</li><li>• Questioning norms and values which guide procedures and assumptions</li><li>• Questioning the learning system</li></ul>
Tacit and Explicit Knowledge	<ul style="list-style-type: none"><li>• Tacit: knowledge not codified, context and experience related, difficult to communicate</li><li>• Explicit: codified knowledge, readily transmissible</li></ul>
Triggers of Learning	<ul style="list-style-type: none"><li>• Problem solving</li><li>• Environmental search looking for opportunities</li><li>• Internal drive, self motivation for innovation</li><li>• Newcomers</li></ul>
Unlearning	<ul style="list-style-type: none"><li>• Knowledge which is no longer desirable</li><li>• Can be a matter of dispute, as different groups can have different views on which knowledge is desirable</li><li>• Knowledge linked to past successes may be more difficult to discard</li></ul>
Organizational Memory	<ul style="list-style-type: none"><li>• Hard and soft knowledge require different media for acquisition, storage and diffusion</li><li>• Soft knowledge is frequently tacit and, therefore, difficult to be communicated. As a consequence, it is difficult to make it part of the organizational memory</li></ul>

### 2.3 Learning and its Context

In the previous section, I have pointed out that some authors exclusively apply individual learning models to the analysis of organizational learning, and that I regard that as unsatisfactory. I have also acknowledged the fact that organizations learn through their members, and, indeed, individual learning models can inform us on how human beings learn. However, organizational learning is, fundamentally, a social process, involving human agency within a social context. The analysis of the process must, therefore, take this aspect into consideration. Unfortunately, much of the literature on organizational learning does not seem to consider that. On the one hand, the already mentioned emphasis on individual learning models tends to neglect political aspects within organizations which bear upon processes of organizational learning. Factors which can hinder the occurrence of organizational learning are considered to be strictly psychological. Factors which can stimulate the occurrence of organizational learning are suggested as organizations were uniform entities, with no contradictory views within them. On the other hand, some perspectives on organizational learning, mainly from the economics literature, tend to adopt the firm as their unit of analysis without any consideration to actors within it (Child 1997). Such standpoint simply does not allow the understanding of how organizations may learn.

The perspective adopted in this dissertation seeks to consider, for the analysis of learning processes, both the external and internal contexts of the organizations studied. The external context relates to "the economic, business, political and societal formations in which firms must operate" (Whipp, Rosenfeld and Pettigrew 1988 p.18). These formations establish certain conditions for the operations of firms, which can both constrain and enable organizational action. On the other hand, organizational decision-makers can exercise some choice regarding the immediate environment where the organization operates, like where to locate its operations, the clientele it shall serve and the employees it shall recruit (Child 1972). This choice, in turn, will have an influence in shaping the environment. In this sense, there is a mutual relationship between the external context and the organization, whereby each one influence and are influenced by the other (Giddens 1984).

Another impact the external context has on firms is through organizational members, who are connected to other social structures outside the organization, like professional associations, family and nation. These connections represent that the identities of those members can not be seen as exclusively linked to their organizational role, but as formed by several layers of social influences which can, in certain situations, be in conflict with each other.

The internal context is here understood as "the structure, culture and politics of an organization" (Whipp et al. 1988 p18). It is important to perceive that, although I am using this distinction between external and internal contexts, they are in reality parts of a single totality (Whittington 1992). The influence of social structures on organizational members mentioned in the previous paragraph are an evidence of that. However, for the purposes of analysis, it seems to me that the distinction is useful, for it allows clearer understanding of the relationship between an organization and the environment it operates. What then seems to be necessary when making this distinction is to keep awareness of analytical character of its formulation.

Considering the issues discussed in the previous section and the organizational context, it is possible to identify several factors connected to the latter which may bear upon processes of organizational learning; hence the importance of taking them into consideration. Let us then examine some contributions in the literature which refer to these factors.

Regarding the external environment, Hedberg (1981) suggests factors which influence an organization's learning, presenting some of them in the form of dichotomies. Hedberg argues that in three of these dichotomies - stability versus turbulence, simplicity versus complexity, and benevolence versus hostility - an intermediary situation would be most conducive to learning. In others, like richness versus scarcity of information, and failure versus success in feedback, one option is clearly better than other. In these cases, richness of information about the environment and successful feedback. This last one is particularly interesting, as Hedberg observes that whilst individuals who receive feedback indicating failure have to split their attention between solving unsolved problems and coping with new situations, those who receive feedback indicating success can concentrate in integrating their knowledge and solving new problems. Thus, "learners' ability to learn is thus not only a function of the

nature of an environment but also of their coping capacity, and of the dynamics that develop during the learning process" (Hedberg 1981 p.14).

In the case of the study discussed in this dissertation, aspects of the relationship between the organizations and their external environments which may have influenced the processes of learning were examined during the data collection and analysis. This will be further explored the next chapter, during the discussion of the research methodology adopted.

Regarding the internal context, the literatures on organizational learning, change and culture give some indication of aspects which may influence processes of learning. I will discuss here the aspects I considered before undertaking the fieldwork. Some of these aspects have an extensive literature exclusively dedicated to them. For the sake of brevity, I will only discuss features I regard as directly related to organizational learning.

Perhaps one of the most important these aspects is organizational culture. Following the definition by Schein (1985), I have mentioned in the previous section that the formation of an organizational culture implies the occurrence of learning. But, in a reciprocal relationship, existent organizational culture or subcultures also impact on the processes of organizational learning. According to Wilson (1992), there are two main cultural approaches to organizations: structural and interpretive. The former emphasizes how roles are structured together to form particular organizational designs, meaning that organizational structure is an important aspect of its culture. Handy (1986) gives a well known example of the relationship between culture and structure, with four typologies of culture and their related structures. The interpretive approach emphasizes the cognitive and interpretive processes by which individuals either support or try to hinder organizational change. Interpretation, symbols and language are amongst the main features of this approach. Wilson argues that the two approaches "lead towards very different interpretations of the process of organizational change" (1992 p.72).

In spite of Wilson's point, I will argue that both approaches have important features for the interpretation of organizational learning processes. Before justifying my point of view, let me just make clear that I consider change as part of organizational learning processes; in fact, I

have previously discussed the point that learning involves cognitive and/or behavioural changes. There are many examples of how organizational structure may help the occurrence of learning. Aoki (1988) describes how information structures help learning within Japanese firms. Similarly, Takeuchi and Nonaka (1986) argue that Japanese companies overlap different stages of development of new products (R&D, manufacturing and marketing, for instance) in order to both expedite the process and allow redundancy of information which facilitates the flow of tacit knowledge. On the other hand, Burns and Stalker (1961) show how Scottish firms with bureaucratic structures, called by them as 'mechanistic', failed to absorb electronics R&D engineers and adapt to a changing environment. Their account of groups within those organizations fighting for control over resources and new functions shows that not only the structure but also the culture (although they did not give such denomination) hampered adaptation.

The interpretive approach assumes that individuals inside organizations share meanings that are sustained through a common language and everyday social interactions. The idea of shared meanings and the importance of language seem to be closely connected to some perspectives on organizational learning. For instance, Senge and Sterman (1992) define organizational learning as "the process whereby shared understandings change" (p.138). Kofman and Senge (1993) argue that one of the principles of the learning organization is the practice of 'generative conversation', whereby language functions as a device for connection, invention and coordination. Again, it is important to observe that the idea of shared meaning does not imply the existence of a single culture within an organization.

Schein (1996) discusses the existence of three cultures within organizations in general: executives, engineers and operators. He suggests that these cultures are based in different assumptions. Executives and engineers are occupational communities with world views based on their education, shared technology and work experiences. Their reference groups are their peers outside the organization. Executives have a financial focus, trying to ensure return to shareholders. They see the organization as intrinsically hierarchical, and consider that it must be run by rules and control systems. They also think that the organization must be a team, but accountability has to be individual. Engineers think that the ideal world is one of elegant machines and processes working in perfect precision and harmony, without human

intervention. They prefer 'people free' solutions to problems. Operators think that the success of the organization depends on people's knowledge and skill, which is local and based on the organization's core technology. They usually need to work in collaborative teams, which demands communication, openness and trust. According to Schein, each culture has its own history which justifies its viewpoint. However, because of their different assumptions, it is difficult for organizations to create an alignment among them, which can hinder organizational learning. It is worth noting that Schein's model is perhaps more suitable to Western organizations. For instance, Morita (1987) affirms that Japanese executives will invariably list as one of their most important responsibilities the continued employment and improvement of the livelihood of workers. "In order to do that, the company must make a profit. Make a profit will never be at the top of the list" (p.179).

Paul Adler's (1992) research at NUMMI, the Toyota-GM joint venture for car manufacturing in California, is an example of attention to both structural and interpretive aspects of culture and how they affect learning. Seeking to understand the high levels of productivity, quality and work motivation achieved by NUMMI, despite the history of a previous GM plant in the same place being very problematic, Adler concludes for three main elements: a) implementation of Tayloristic principles in a democratic way, by involving workers in the development of work standards; b) although NUMMI is characterized by high levels of standardization and formalization, its workflow procedures are designed to encourage learning on the part of a workforce assumed to share a common goal of production efficiency and quality; and c) the company's performance and morale are sustained by the combination of these learning-oriented characteristics of the organization's 'formal' systems with the distinctive characteristics of its 'informal' organization - its culture, the fabric of trust between workers and managers, and the balance of power between labour and management.

Summing-up, organizational culture and organizational learning have a reciprocal relationship. Even considering different views on organizational culture, it is possible to indicate aspects of the concept which may directly influence the occurrence or not of organizational learning.

Another important aspect of the internal context which can have influence on organizational learning is teamwork and, within it, communication appears to be a variable of particular relevance. The importance of teamwork for organizations has increased as the environment where they operate becomes more complex. In order to deal with complexity, organizations need to mobilize an increasing quantity of knowledge. Such knowledge is produced at various levels within the organizations, and has to be integrated so it can be embodied in the products and services provided by them. In this sense, the performance of organizational functions demands both a wide range of skills from employees and the ability of exchanging knowledge with other organizational members, which is heavily dependent on communication. It is through teamwork that organizations attempt to coordinate employees and direct the knowledge they are capable of producing towards organizational objectives. A number of issues already discussed in this chapter are related to both teamwork and communication, like the transfer of knowledge between different organizational levels and the sharing of experiences and knowledge in the tacit-explicit knowledge cycle. Some of the teams involved in the research presented in this dissertation are bi-national. In this case, factors such as language and other cultural differences may surge as an additional difficulty for effective teamwork and communication. These issues will be further considered in the next section of this chapter, which discusses international business and organizational learning.

The last internal variable I want to consider in this section is leadership. A number of authors have directed attention to this issue when discussing organizational learning. There is a particularly interesting view regarding the role of managers as leaders in an organizational learning process, which is shared by few of these authors. The general idea is that managers should provide a shared context where organizational members could feel sufficiently confident to put forward divergent views over a question. By doing that, they would stimulate debate and, arguably, reach a better informed decision than one coming out of an unilateral reasoning. Moreover, by skilfully conducting this debate, managers could be able to reach a consensus out of the divergent views. Let us briefly see how different authors consider this point.

Fiol (1994) proposes that "(L)earning in organizations entails not only the acquisition of diverse information, but the ability to share a common understanding so as to exploit it. The apparent paradox is that collective learning, by definition, encompasses both divergence and convergence of the meanings that people assign to their surroundings. (...) "meaning" is not a unidimensional construct, but rather encompasses multiple dimensions. If we unpack the construct, we may find that meanings can be simultaneously diverse and shared across individuals. Consensus may develop around one dimension of meaning and not around another. (...) The important point is that meaning resides not only in the content of the pictures we convey in our communications, but also in the way we frame them" (p.404-405). After investigating how consensus evolved within a team of managers over the creation and management of a new venture in a financial services company, Fiol proposes that "to promote learning as a community, managers must actively encourage the development of different and conflicting views of what is thought to be true, while striving for a shared framework of the issues that is broad enough to encompass those differences" (p.418)

This proposition is similar to Mary Parker Follett's notion of 'integration' as one possible way of dealing with conflict. According to Follett (1963 p.30-33), "as conflict - difference - is here in the world, as we cannot avoid it, we should, I think, use it. Instead of condemning it, we should set it to work for us.(...) when two desires are integrated, that means that a solution has been found in which both desires have found a place, that neither side has had to sacrifice anything. (...) Integration involves invention, and the clever thing is to recognize this, and not to let one's thinking stay within the boundaries of two alternatives which are mutually exclusive". Similarly, Hampden-Turner (1994) suggests that by the reconciliation of apparently opposing values one can get a superior result than from the usual either-or choice between these values. "The leader's task is to reconstruct the culture so that ... conflicts are first defused and eventually become complementary forces, mutually reinforcing the best aspects of culture rather than continually attacking them. What he or she needs to avoid are patterns of social conflict. These are invariably indicated by a contrast between a positive and a negative view of the same issue. (...) There are important gains in this move from social conflicts to dilemmas. If the members of a culture are to own the new culture offered to them, then their own positive efforts and the justifications of their views must be part of the final picture" (Hampden-Turner 1990 p.193).

Nonaka (1994) discusses the idea that front line employees and lower managers deal with a great amount of valuable information about a company's business, but they find it difficult to turn this information into useful knowledge and, moreover, to communicate such knowledge to others. The difficulty in communication is due to the fact that people actively interpret new knowledge in order to fit it to their own situation and perspectives. Thus, according to Nonaka, "what makes sense in one context can change or even lose its meaning when communicated to people in different context" (p.30). He proposes a model of management called middle-up down, where the main job of top and middle managers "is to orient this chaotic situation toward purposeful knowledge creation. These managers do this by providing their subordinates with a conceptual framework that helps them make sense of their own experience" (p.31). This idea bears some similarity with the concept of the 'linking pin', advanced by Rensis Likert (1961), who argues that group leaders need to be able to influence both her/his subordinates and her/his own boss. Through this linking function, managers can establish the connections between different groups within the organization. Likert (1961 p.105) maintains that "an organization will function best when its personnel function not as individuals but as members of highly effective work groups with high performance goals. Consequently, management should deliberately endeavor to build these effective groups, linking them into an over-all organization by means of people who hold overlapping group membership".

Mintzberg and Westley (1992) analyse cycles of organizational change, considering that they always start with a learning process, during which "a plethora of ideas and initiatives may in fact express a restlessness with the old order" (p.44). Mintzberg and Westley suggest that some processes of learning may start in specific parts of an organization and gradually pervade the behaviour of the organization at large. But whether "the learning is focused or scattered, it has to become the basis for a new perspective, in effect, a new vision of some aspect of organizational life, however specific. (...) The change process may not necessarily be driven at this step by visionary leadership *per se*, but we believe most significant successful change has to be driven by a new vision, in other words, some kind of reconception, which serves as a conceptual umbrella by which to make conscious the emergent learning" (p.44).

A different view on leadership is proposed by Senge (1990b) and Kofman and Senge (1993), who argue that in a learning organization managers have to act in a completely distinct way from a traditional organization. Whilst in the latter, leadership is associated to 'being in control', implying that those 'below' are not in control, in the former leadership is not a individualistic phenomena. In this sense, managers assume three main roles: designer, teacher and steward. As designers, managers should design the governing ideas and values by which people will live, and also "the policies, strategies and structures that translate guiding ideas into business decisions" (Senge 1990b p.10). Moreover, managers should create effective learning processes which sustains such policies, strategies and structures. As teachers, managers should help people within organizations to gain more insightful views of the reality. That would be done through bringing people's mental models to surface and helping them to see the systemic structure of reality. As stewards, managers should be guided by the willing to serve both the people they lead and the organization. This would be the best way of getting the commitment of organizational members. Senge also argue that such type of leadership requires new skills from managers, directed towards building a shared vision, surfacing and testing mental models, and being able to be 'systems thinkers', focusing "less on day-to-day events and more on underlying trends and forces of change" (Senge 1990b p.15).

Such view of leadership is strongly contested by Coopey (1995), who argues that the model of the learning organization lacks "specific features to facilitate changes in the framework and institutions of governance, and in the political processes constrained by them" which "detracts considerably from the model's prescriptive value, especially as it affects the interests of rank-and-file employees" (p.197). He opposes the idea contained in the learning organization literature that power would be more evenly distributed within such organizations. Coopey goes on to suggest that managers at the top of the organization will be the main beneficiaries of possible changes in the structure and increments in collective knowledge associated with the distribution of power within a learning organization. He proposes that those managers, making "use of their enhanced penetrative organizational knowledge at the nodal points where internal and external circuits of power intersect, (...) are likely to build up and safeguard their power" (p.211).

Although the purpose of this dissertation is not to discuss the relationship between power and organizational learning, it is important to consider Coopey's point of view. It is assumed here that an investigation on the enabling conditions for organizational learning must take the context of the organization into consideration. This means that the objectives of the processes need to be clear, including who defines these objectives. Thus, despite not concentrating the discussion on possible changes in the balance of power, it seems important to be aware of those who are perceived to be the beneficiaries of the processes, and the resources used by those beneficiaries to facilitate their development.

To summarize this section, Table 2.2 presents the main issues discussed about the relationship between organizational learning and its context.

Issue	Discussion
Organizational learning	<ul style="list-style-type: none"> <li>Organizational learning is a process that involves the acquisition, creation, and transfer of knowledge within an organization.</li> <li>Organizational learning is a process that involves the acquisition, creation, and transfer of knowledge within an organization.</li> <li>Organizational learning is a process that involves the acquisition, creation, and transfer of knowledge within an organization.</li> </ul>
Context	<ul style="list-style-type: none"> <li>Context is the environment in which organizational learning takes place.</li> <li>Context is the environment in which organizational learning takes place.</li> <li>Context is the environment in which organizational learning takes place.</li> </ul>
Relationship	<ul style="list-style-type: none"> <li>The relationship between organizational learning and its context is complex and multifaceted.</li> <li>The relationship between organizational learning and its context is complex and multifaceted.</li> <li>The relationship between organizational learning and its context is complex and multifaceted.</li> </ul>

Table 2.2

Learning and its Context

Context	Main Features in Relation to Organizational Learning
<p>External <i>(favourable condition to organizational learning in italics)</i></p>	<ul style="list-style-type: none"> <li>• Stability versus turbulence (<i>intermediary point</i>)</li> <li>• Simplicity versus complexity (<i>intermediary point</i>)</li> <li>• Benevolence versus hostility (<i>intermediary point</i>)</li> <li>• Richness versus scarcity of information</li> <li>• Failure versus success in feedback</li> </ul>
<p>Internal</p>	<ul style="list-style-type: none"> <li>• Organizational culture and organizational learning have a reciprocal relationship</li> <li>• Organizational structure can both facilitate and hinder learning</li> <li>• Subcultures can both hinder and enrich organizational learning</li> <li>• Involvement of workers in defining their tasks' standards may result in a committed workforce → standardization of tasks does not necessarily hinder organizational learning</li> <li>• Effective teamwork and good communication are essential for organizational learning</li> <li>• Managers should provide a shared context where employees could feel stimulated to express diverse views on a problem</li> <li>• Development of processes of organizational learning can be better understood by the identification of: a) objectives of the processes; b) who sets these objectives; and c) which resources these setters use for facilitating the processes.</li> </ul>

## 2.4 International Business Ventures and Organizational Learning

Is there any difference between studying organizational learning processes in an IBV<sup>6</sup> and a company which is owned and run exclusively by home country nationals (local companies)? I would say yes, there is a difference, and I would think of three issues as responsible for such difference: ownership, product and process adaptation to local conditions, and cross-national teams. In the section I will discuss why these issues deserve particular attention for the analysis of learning processes in IBVs.

Ownership is relevant in the case of international joint ventures, where foreign and host country companies are joint owners of the venture. Depending on the motivations of the partners for forming the alliance, their interest in the outcomes of learning processes occurring within the joint venture may be very different. If, on the one hand, the main objective of all partners is the profitability of the joint venture, then the impact of ownership on learning processes would be restricted to possible conflicts on how to manage the joint venture. In this case, what would differentiate the joint venture from an ordinary company would be the possible interference of the partners in the management of the business and, as a consequence, on learning processes. Killing (1983) points out that, in joint ventures where the partners share the management, this degree of interference is related to the performance of the venture. The better the performance, the greater the tendency of the partners of giving more autonomy to the joint venture's managers to run the business. But if the performance is considered unsatisfactory by the partners, they will tend to interfere. Killing observes that such interference usually delays the decision-making processes at the joint venture, resulting in an even worse performance. Although Killing has not studied processes of organizational learning, it seems reasonable to draw comparisons between performance and learning. In this sense, bad performance and consequent interference by the parent companies may pose difficulties for learning processes, as managers at the parent companies and the joint venture may have different interpretations over which are the main causes for the bad performance

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<sup>6</sup> In order to avoid the reader searching back for the definition of international business ventures (IBVs), I will repeat it here. IBVs refer to the involvement by foreign investing companies in host countries. They can be new companies or already existent local companies in which foreign companies have acquired a stake. The process is assumed to entail some degree of management that is shared between nationals of both local and foreign countries.

and, as a consequence, delay organizational action. This situation would characterize what March and Olsen (1976b) have defined as audience learning, when the individual no longer affects organizational action in an unambiguous way.

On the other hand, parent companies can have different, and even competing, reasons for forming the alliance. They, or at least one of them, may decide to participate in a joint venture not primarily for obtaining financial profit, but for learning skills they do not have but the partner does (Hamel 1990, 1991, Inkpen 1992, 1995, Pucik 1988). On examining a number of joint ventures involving large multi-national companies, Hamel concluded that the collaboration could "provide an opportunity for one partner to internalize the skills of the other, and thus improve its position both within and without the alliance" (Hamel 1991 p.83). After investigating how such reapportionment of skills between the partners occurred, Hamel proposes a model of inter-partner learning. In this model, three variables appear as the main determinants of learning: intent, transparency and receptivity. "Intent refers to a firm's initial propensity to view the collaboration as an opportunity to learn; transparency to the 'knowability' or openness of each partner, and thus the potential for learning; and receptivity to a partner's capacity for learning, or 'absorptiveness'" (Hamel 1991 p.89-90). Thus, a partner which wants to learn from the other needs to have a clear intention to do that, which should be communicated to all employees working at the joint venture. It also needs a high degree of receptivity, which means a continuous commitment to learn, together with personnel skilled in observing, interpreting, applying and improving upon partner capabilities (Hamel 1990). This task would be facilitated if the other partner shows transparency in relation to its skills. In other words, the less protective a partner is in relation to its knowledge, the easier it makes for the other partner to internalize them.

It seems important to remember here that other authors adopt a completely different perspective for the analysis of joint ventures or alliances in general. For instance, Lorange and Roos propose the existence of a rationale for a "long-term, win-win emphasis regarding strategic alliances; an emphasis on more lasting relationships where benefits and costs can tip both ways in the short run but even out in the long run" (1992 p.16). Thus, whether the parents companies will adopt a competitive or a collaborative perspective in relation to an alliance depends on the context of each parent and the objectives they have for forming the

alliance. Considering the objectives of the study discussed in this dissertation, it is also relevant to remember that, for some types of IBVs, as wholly owned subsidiaries, the question of ownership does not seem to particularly affect the study of organizational learning processes.

The second issue which would differentiate an IBV from an ordinary company for the study of organizational learning is that both the product or service provided by an IBV, and the production processes of these companies generally receive an input, whose degree will vary, from the foreign company. In the case of wholly owned subsidiaries or joint ventures where the foreign partner supplies the technology, the IBV's product generally is conceived by the foreign company and adapted to the conditions of the local market. The same can be said in relation to production processes. This adaptation is, in itself, a learning process which normally involves both foreign and host country professionals. Conversely, a local company usually develops its own products or services which are already conceived for the local market. Production and managerial systems in these companies are also conceived according to local practices. I am not saying that the local products and processes are better than the IBV's, only that the latter generally have to be adapted to local conditions, and one must pay attention to that when studying processes of organizational learning within such organizations.

The third issue which differentiates IBVs from local companies is that the former, by definition, implies the presence of personnel from both foreign and host countries. The analysis of learning processes involving teams formed by these personnel will have to consider questions related to cross-cultural relationships. However, the degree in which cultural differences really matter for both teamwork and the effectiveness of alliances is subject of controversy amongst authors.

Salk (1992a, 1992b) observes that much of the research on international joint ventures which have multi-cultural management teams regards such teams as problem-prone and considers cultural differences as a prime culprit. But she points out that these studies are mainly "cross-sectional and lacked the data to look explicitly at interpersonal or intergroup dynamics" (Salk 1992a p.3). After doing longitudinal research in three joint ventures with multi-cultural

management teams, Salk proposes a model for team development with "four basic categories of explanatory variables: founding conditions (structural), emergent meanings and interpretations (behavioral precedents; basic psycho-social issues for the team, subgroups and individual members), contextual factors (time, history, changing external conditions) and outcomes (reinforcement or change of development trajectories; quality of relations)" (Salk 1992a p.10).

Salk stresses the importance of the founding conditions of the joint venture in establishing a framework for people to define their primary social identities and the initial division of power between the different national groups. At this initial stage of team development, people do use stereotypes to define members from other cultures, even if their behaviour contradict such stereotypes. However, the development of the team can represent either a reinforcement or a break of the initial dynamic. Contextual factors, like the perception of an external threat to the organization and consequent sense of shared fate among the team; the role of leadership and collective experiences through time may result in what Salk calls 'integrative convergence', with increasing cultural hybridization. On the other hand, Salk observed in one team the occurrence of 'inertial divergence', where the identities defined at the initial stages never changed. She then concludes that not always the path of team development points towards greater integration between different cultures.

An important conclusion of Salk's work is that context plays a central role in the development of cross-cultural management teams. She also argues that these teams can function more effectively with the passing of time, even if they do not reduce the social distance between different national groups. Such conclusion was based in one of her case studies, where the social distance between groups of managers of two nationalities was not reduced during the four years of the study, although the performance of the team has improved. Salk, however, observes that, in this case, the company was facing a favourable market, which "made the costs of any inefficiencies or lack of coordination less apparent than they would have been in a resource-poor environment" (1992a p.15).

Kanter and Corn (1994) looked at eight acquisitions of U.S. firms by foreign companies to see whether cultural differences had an impact in the integration of the companies. They

acknowledge that their study was 'biased' towards finding cultural differences and tensions because of them, as they consistently asked managers to characterize typical U.S. and foreign managers behaviours in concrete situations. Even so, Kanter and Corn conclude that "nationality-based culture was one of the less significant variables affecting the integration of the companies and their organizational effectiveness" (p.9). Similarly to Salk, they found that "contextual factors play the dominant role in determining the smoothness of the integration, the success of the relationship, and whether or not cultural differences become problematic" (p.10). Consequently, they "conclude that the significance of cultural differences between employees or managers of different nationalities has been overstated" (Kanter and Corn 1994 p.10).

This last observation does not mean, however, that national cultures have no impact on the relationship of cross-cultural teams. Adler (1991) gives several examples of misunderstandings in cross-cultural communications, resulting from the different cultural backgrounds of participants. She recommends a series of techniques for increasing the accuracy in cross-cultural communications, based on the principle of presenting the message through multiple channels, like speaking and showing figures which summarize the point.

Hayes and Allinson (1988) studied the learning styles of 195 mid-career managers from three different cultures and concluded that "there are important cultural differences in the learning styles of managers" (p.79). They argue that it "may well be that the kind of learning environments and activities which promotes effective learning in some cultures may not promote the same outcomes in other cultures where different learning styles predominate" (p.79).

IBVs have cultural diversity inherently built into them. Adler (1991) argues that cultural diversity can have both positive and negatives impacts on teams. If, on the one hand, heterogeneity increases the potential productivity, on the other it also increases the complexity of work. Hamel and Prahalad (1994) also agree that companies need to have greater variety as the competitive environment becomes more complex. They define such variety as "genetic variety - a broader range of managerial beliefs and a greater repertoire of managerial actions" (p.60). In their view, cultural diversity does not necessarily mean genetic

variety as in many international companies "much of the potential for creativity offered by cultural diversity is often surrendered to an allegiance to very undiverse views about the industry and how to compete in it. (...) There is a fine line between socialization and brainwashing. Companies that worship cultural diversity yet enforce, by design or default, an orthodox set of industry perspectives and management precepts, are as competitively vulnerable as those that are myopically ethnocentric" (Hamel and Prahalad 1994 p.63). Hampden-Turner (1990 p.190) also observes that "many corporate cultures greatly reduce the permissible variety of individual expression".

It is then possible to infer that: a) environmental complexity requires both diversity and learning from organizations; and b) diversity, including cultural, can be a source of learning. Thus, management of diversity might be an important factor for facilitating both organizational learning and effectiveness.

Barrett, Drummond and Sahay (1996) studied a software development project carried out by a team comprising Indian and Jamaican professionals. They analysed how various work and non-work systems related to the Indian society have influenced the behaviour of an Indian manager who headed the project. Whilst his behaviour was viewed as natural by the Indian team members, it was strongly rejected by the Jamaican ones. The authors argue that cross-cultural differences were the main responsible for such divergence. They have identified differences in work attitudes related to deadlines, management styles, attitudes towards authority, and coordination mechanisms as the main triggers for cross-cultural conflicts in this case.

Child and Rodrigues (1996) discuss the role of social identities in the international transfer of knowledge through joint ventures, observing that national culture is, together with organizational and occupational cultures, an important source of meaning for identity. Adopting the aforementioned classification of types of learning between technical, systemic and strategic, they argue that the transfer of systemic and strategic knowledge have a greater impact on group social identity than technical knowledge. The question of national culture is particularly important in the case of systemic knowledge, as procedures and systems impinge upon culturally-based norms of conduct. Child and Rodrigues also suggest that members of



**Table 2.3**

**International Business Ventures and Organizational Learning**

Issues	Main Features in Relation to Organizational Learning
Ownership	<ul style="list-style-type: none"> <li>• Relevant for international joint ventures (IJV)</li> <li>• Parent companies strategies can be collaborative and/or competitive</li> <li>• Collaborative strategies → joint creation of value, parent companies seek for IJV's profitability or growth - i.e. economic success               <ul style="list-style-type: none"> <li># successful IJV performance → parent companies allow more autonomy → learning facilitated</li> <li># unsatisfactory performance → parent companies interfere in IJV → learning usually hindered (unless the interference removes a major block to learning such as a poor general manager)</li> </ul> </li> <li>• Competitive strategies → at least one parent company seeks to learn from the other, internalizing skills it does not have               <ul style="list-style-type: none"> <li># intent, transparency and receptivity as determinants of learning</li> </ul> </li> </ul>
Product/Process Adaptation	<ul style="list-style-type: none"> <li>• Learning processes by themselves</li> </ul>
Cross-national Teams	<ul style="list-style-type: none"> <li>• Context plays a significant role in the integration of cross-national teams</li> <li>• IBVs are culturally diverse organizations. Diversity may represent a source of learning, but it can also bring difficulties for management</li> <li>• Communication is a particularly important issue for the work of cross-national teams. It can be a source of misunderstandings</li> <li>• Socialization can greatly reduce the impact of cultural diversity</li> <li>• National culture is one source of identity. Some types of knowledge may clash with culturally-based norms of conduct, becoming object of dispute</li> <li>• Organizational culture as another important source of identity</li> <li>• Some shared identity is necessary within an international team for the creation and transference of knowledge</li> </ul>

## 2.5 Factors which Facilitate Organizational Learning

In the previous discussion about leadership and organizational learning, I have pointed out that some authors argue that managers should provide a shared context where organizational members could feel secure enough to put forward divergent views over a question. The assumption behind this view is that the simultaneous presence of opposite categories within an organization may facilitate the occurrence of organizational learning. Its origins can perhaps be traced back to the concept advanced by Lawrence and Lorsch (1967) that organizations need both differentiation and integration in order to perform effectively in the external environment.

Fiol (1994) argues for the presence of consensus over the context and diversity over the concepts as a way to promote collective learning. Weick and Westley (1996) consider occasions which juxtapose order and disorder as social spaces where learning is possible. This juxtaposition should be created not through the alternation between order and disorder, but through an intimate and continuous connection between the two. According to them, the "likelihood of learning drops quickly when invention and disorder overwhelm capacities for retention and identity, or when systems, routines, and order overwhelm capacities for unjustified variation" (p.456).

Discussing the relationship between a system and its environment, Hedberg (1981) concludes that both too much environmental turbulence and stability are dysfunctional for learning to occur. The former makes mapping the environment an impossible task for learners. The latter produces little information and few opportunities for learning. So, again, learning seems to be linked to opposite categories; both turbulence and stability are necessary, in a certain degree, for learning to occur.

Amongst the authors who take a more pragmatic perspective in relation to factors which can facilitate organizational learning, Nonaka and Takeuchi (1995) argue that, in their model of organizational knowledge creation, the role of the organization is to provide a proper context for facilitating group activities and the creation and accumulation of knowledge at the

individual level. In this sense, they indicate five conditions at the organizational level to promote knowledge creation.

The first is intention, which is defined as an organization's aspiration to its goals, and assumes the form of a strategy for developing the organizational capability to acquire, create, accumulate and exploit knowledge. "Organizational intention provides the most important criterion for judging the truthfulness of a given piece of knowledge. If not for intention, it would be impossible to judge the value of information or knowledge perceived or created" (p.74).

The second condition is autonomy, at both individual and group level. Autonomous individuals are more creative and motivated, autonomous cross-functional groups are more flexible. They should have freedom to set their own task boundaries, but pursuing the objectives expressed in the organizational intention.

The third condition is named by Nonaka and Takeuchi as fluctuation and creative chaos, and refers to the interaction between the organization and its external environment. The authors argue for the necessity of a continuous questioning of existing premises by individual members, and also the role of managers in creating an intentional sense of chaos within the organization, so as members feel constantly challenged to reflect upon their actions (Schön 1983).

The fourth condition is redundancy, defined as "the existence of information that goes beyond the immediate operational requirements of organizational members. In business organizations, redundancy refers to intentional overlapping of information about business activities, management responsibilities, and the company as a whole. (...) Sharing redundant information promotes the sharing of tacit knowledge, because individuals can sense what others are trying to articulate." (Nonaka and Takeuchi 1995 p.80-81). They observe that for Western managers the term redundancy is associated with waste or information overload. Acknowledging that the latter can indeed be a problem, they indicate that one "way to deal with the possible downside of redundancy is to make clear where information can be located and where knowledge is stored within the organization" (p.82). However, that does not seem

to be always possible. One of the problems of tacit knowledge is that, usually, only the knower and those who work directly with her/him will know who holds it. Again communication seems to be important, here in the sense discussed by Brown and Duguid (1991), where 'communities of practice' diffuse knowledge through storytelling.

The fifth condition proposed by Nonaka and Takeuchi is requisite variety, meaning the existence of diversity within an organization. Internal diversity helps the organization to match environmental diversity, and can be fostered through providing equal access to information throughout the organization. This can be facilitated by the adoption of a flat and flexible organizational structure.

Finally, DiBella, Nevis and Gould (1996) propose a model of organizations as learning systems based on their research on a small group of firms where they tried to identify learning capabilities. Their model is divided in two parts. One "is composed of *learning orientations*, the values and attitudes that determine where learning will take place and the nature of what is learned. These orientations form a pattern that defines a given organization's 'learning style'" (p.42). The other "is composed of *facilitating factors*, the structures and processes that affect how easy or hard is for learning to occur and the amount of effective learning that takes place. These are normative factors based on the best practices in dealing with generic issues" (p.41-42).

This first part of their model basically agrees with the point made in this chapter that learning is closely linked to organizational culture and, as the latter varies, the former also does, which generates different styles of learning systems. The second part of the model has similar objectives to my study. It is therefore worth presenting it with more detail. DiBella, Nevis and Gould suggest ten facilitating factors in the companies they researched.

1. Scanning imperative, the interest in external happenings and in the nature of one's environment.
2. Performance gap, the shared perception of a gap between actual and desired state of performance.

3. Concern for measurement, the deployment of considerable effort in defining and measuring key factors when venturing into new areas; strive for specific, quantifiable measures.
4. Experimental mindset, the support for trying new things, and not punishing of small failures.
5. Climate of openness, the accessibility of information, the sharing of errors and problems, the acceptance of conflict.
6. Continuous education, the support for growth and development of members.
7. Operational variety, the diversity in personnel and pluralistic definition of valued internal capabilities.
8. Multiple advocates, where top-down and bottom-up initiatives are possible.
9. Involved leadership, which articulates vision and is very actively engaged in its actualization.
10. Systems perspective, a strong focus on how parts of the organization are interdependent.

It is not difficult to perceive that many of the facilitating factors are similar to those suggested by Nonaka and Takeuchi (1995), and also to other issues previously discussed in this chapter. Such similarity makes them stronger, in the sense of being supported by other researchers.

To summarize this section, Table 2.4 presents some of the factors which can facilitate the occurrence of organizational learning.

## 2.6 Summary

In this chapter I have presented and discussed the key points in the literature related to organizational learning and the factors which can facilitate its occurrence, specially considering the case of IBVs. Throughout the whole chapter, I have tried to draw the reader's attention to the importance of considering both the internal and the external context of the organization when trying to understand processes of organizational learning. Other relevant issues considered were the possible influence of organizational politics in the development of

these processes, including the identification of who sets the objectives for learning and which resources are deployed in order to facilitate its occurrence. Tables 2.1 to 2.4 summarize the main points considered in each section of the chapter, which can have direct influence in the occurrence of organizational learning within IBVs.

**Table 2.4**

**Factors which Facilitate Organizational Learning**

• Simultaneous presence of opposite categories, such as differentiation and integration, environmental turbulence and stability, consensus and diversity, order and disorder.
• Organizational intention of learning
• Individual and team autonomy
• Creative chaos provoking continuous individual reflection while in action
• Redundancy of information
• Requisite variety
• Scanning imperative
• Performance gap
• Concern for measurement
• Experimental mindset
• Climate of openness
• Continuous education
• Operational variety
• Multiple advocates
• Involved leadership
• Systems perspective

## Chapter 3

### RESEARCH METHODOLOGY

This chapter presents the methodology adopted for the present research. It is divided in four sections. The first section discusses the characteristics of the study and its methodological requirements. The second section explains how the companies participating in the study were chosen and how access to them was negotiated. The third section covers the fieldwork design and execution. In this section, I also present the interview schedules and the main issues addressed in the interviews. The fourth and last section presents the method adopted for data analysis and discusses some of the limitations of the methodology.

#### 3.1 Methodological Requirements

The objective of the research is to identify factors which can facilitate the occurrence of organizational learning in IBVs. As I have argued in the previous chapters, two issues are deemed as essential for the accomplishment of such objective; the analysis of processes of organizational learning, and the consideration, in this analysis, of the context where these processes have developed. Before discussing the methodological requirements for undertaking the study, let me first define process within the scope of this research.

I will use the definition given by Van de Ven (1992 p.170), for whom "process is a sequence of events or activities that describes how things change over time, or that represents an underlying pattern of cognitive transitions by an entity in dealing with an issue". However, by adopting this definition I am not assuming that a 'sequence of events' occurs in a linear way. Conversely, it is here recognized that processes of learning may occur in a haphazard way, being characterized by a multilevel structure, as discussed in the previous chapter, where episodes at different levels influence each other.

The prime research question of this study - which are the key enabling factors for the occurrence of organizational learning in IBVs - does not have a simple answer, in the sense that these factors are not going to 'jump out' of the organizations upon superficial examination. The researcher needs to understand the development of organizational processes and the attitudes of people involved, in order to be able to build an interpretation which can account for the factors which have strong influence on the processes. This demands the involvement of the researcher with the phenomenon being studied in its field of action, that is, the researcher needs to have a close contact with the IBVs and its members, which characterizes the research as a qualitative one (Kirk and Miller 1986).

Qualitative data, here understood as data in the form of words, seems to be appropriate for the objectives of the study. Miles and Huberman (1994) present some of the strengths of well-collected qualitative data, highlighting its local groundedness, as the data is "collected in close proximity to a specific situation, rather than through the mail or over the phone. The emphasis is on a specific case, a focused and bounded phenomenon embedded in its context. The influences of the local context are not stripped away, but are taken into account. The possibility for understanding latent, underlying, or nonobvious issues is strong" (p.10). These characteristics indeed support the use of qualitative data for the study.

The method which appears to be more suitable is the case study. Yin (1989 p.20) argues that the case study method has a distinct advantage when a "'how' or 'why' question is being asked about a contemporary set of events, over which the investigator has little or no control". Although the main research question of this study is a 'which' one, the proposed investigation requires the understanding of how the processes of organizational learning develop and how some factors may facilitate its occurrence. In this sense, it is difficult to adopt anything other than a case-type, qualitative methodology. The case studies in this research can then be qualified as both exploratory, as there is still little understanding about the issue to be researched, and explanatory, as the main research question deals with "operational links needing to be traced over time, rather mere frequencies or incidence" (Yin 1989 p.18).

The requirement of researching organizational processes within their contexts, would certainly mean a large amount of data for each process examined. This, together with the constraints of time and resources available for a PhD project, led me to choose a small number of cases for the study. When deciding on the number of cases to study, I thought that, in view of the requirements of the study, I would rather have a small number from which I could get detailed information, than a larger number with superficial data.

### 3.2 Choosing the Organizations

I then faced the question of choosing the organizations to contact. The first factor considered was the countries in which the IBVs would be located, as these would be the countries where I would do the fieldwork. In this case, the choice for Brazil and the UK was relatively straightforward. The main reasons for this choice were threefold. Firstly, these two countries are part of a broader research program at the Centre for International Business and Management at the Judge Institute, which this study is affiliated. Secondly, this study is funded by CNPq, a research agency attached to the Brazilian government, and, although I had no obligation to do that, I considered it important to undertake at least part of the research in Brazil. Thirdly, as I also wanted to investigate a company in a country different than Brazil, the UK was an obvious choice, for it is a major recipient of FDI in Europe, and it is the country where I am currently living.

Another important consideration was that I wanted to be able to compare the findings in the organizations researched and, therefore, it would be interesting if I could have some characteristics in common between the companies. As the IBVs would be operating in different countries, the idea of having the same company as the foreign investor appeared reasonable to me. This way, besides having the same company, I would also have the same national culture for the foreign investor. A third common factor that I considered was that the IBVs should be operating in the same sector in both countries, and the product technology should also be similar.

The final consideration before choosing the companies was that I would like to have a good level of access, meaning both access to top level managers and that these managers should not be concerned about myself having contacts with competitors, so they could feel more comfortable in talking to me. As a consequence, I decided to approach one IBV in Brazil and one in the UK, both with the same foreign investor. I also reasoned that the proposal of a comparative research between IBVs which were operating in the same sector, and attached to the same foreign company, could sound appealing to the IBV's managers and, therefore, facilitate access.

For selecting the companies, the initial consideration was the country of origin of the foreign investing company. Japan was the first choice for the following reasons: a) Japan is a major player in FDI worldwide, and Japanese companies have invested considerably both in Brazil and the UK; b) the Japanese culture is quite different from both Brazilian and British cultures; c) it is a well recognized fact that the distinctive manufacturing practices adopted by Japanese companies have changed some industries in the world (Womack, Jones and Roos 1990). Thus, it would be very probable that Japanese companies would try to introduce these practices in both their subsidiaries and joint ventures they have abroad, and that could mean learning processes; and d) during the research I undertook for my master's degree (Drummond 1992), I studied, amongst other organizations, four joint ventures in Brazil with Japanese companies as foreign partners, and I had a good rapport with all Japanese managers I interviewed.

The third reason just mentioned (item c) led me to focus on companies in the manufacturing sector. One industry which I thought could be appropriated for the study was consumer electronics, because of both the relevance of Japanese companies in this industry, and the fact that, for some products, the technology would be very similar between companies installed in Brazil and the UK. I then wrote to the offices of the Japan External Trade Organization (JETRO) in both London and São Paulo, and asked for a list of companies with Japanese investment in the UK and Brazil.

After examining the two lists, a few companies appeared to be suitable for the research. My first choice was Toshiba, which had a joint venture in Brazil (Semp Toshiba) and a

subsidiary in the UK (Toshiba Consumer Products - TCP), both producing TV sets and some other consumer electronics. I made contact with the vice-president of Semp Toshiba and the managing director of TCP, briefly explaining the objectives of the study and emphasizing the fact that their companies would be the only ones to take part. Both managers showed interest in the proposal, with the condition that the other company also agreed. I then sent a written proposal to Semp Toshiba and arranged a meeting with the managing director of TCP to explain the study in more detail. In exchange for the access, I offered to send reports with the main findings in each company and a comparison between the two. Both companies then agreed to take part.

### **3.3 Fieldwork Design and Execution**

I considered two options for studying the processes of organizational learning. The first would be to follow such processes during their evolution, via a longitudinal research design. There were two major issues constraining this option. First, I had a limited amount of time for the fieldwork. Following processes in real time carried the risk that their learning content would not have developed sufficiently during the time I could stay in the companies. Moreover, according to the terms of my scholarship, I would only have funds to spend a maximum of three months on fieldwork in Brazil. Second, I thought it would be much more difficult to get access to the companies if I proposed a long period of research.

The second option was to reconstruct processes of organizational learning that had occurred in the recent past of the companies, or that were still developing at the time of the fieldwork, but with an already accumulated stock of knowledge. This option appeared to be more feasible and was, therefore, chosen. The critical point then was how to select the processes to be studied, or, in other words, how I could be sure that the processes selected really exhibited organizational learning.

### 3.3.1 Assessing the Occurrence of Learning

The first requirement for any type of assessment is to have a parameter in relation to which one can compare the object of the assessment. In this case, this was a requirement to have an operational definition of organizational learning. Despite all the debate existing in relation to this issue, discussed in the previous chapter, I considered necessary to have an operational definition, so I could be more confident in selecting the processes. I have already alluded to this definition in the first chapter, but I shall make it explicit here. In this study, organizational learning is understood as the process (1) by which members of an organization create and/or acquire knowledge about the organization's internal affairs and its interaction with the external environment, and (2) by which this knowledge is subsequently used in the organization's operations.

The previous chapter discussed the question of what different authors look at when analysing organizational learning, that is, processes and outcomes. I have also made clear that, although I intend to analyse processes of organizational learning, in order to be able to identify some of their enabling conditions, it is through the analysis of their outcomes that it is possible to assess the occurrence of learning. Indeed, this is the way most writers on organizational learning have assessed its occurrence. Before examining how they have done that, I would just like to note that I do not regard outcome as separate from process, but as an integral part of it. In this sense, I agree with Follett (1924), who pointed out that "(S)ome writers, while speaking otherwise accurately of the behaviour process, yet use the word result - the result of the process - whereas there is no result *of* process but only a moment *in* process ... (O)n the social level, cause and effect are ways of describing certain moments in the situation when we look at those moments apart from the total process" (p.60-61). Thus, although some times using the expression 'outcomes of processes', I wish to stress their conceptual integration. This is a point to which I shall return to when concluding this dissertation.

Almost all previous research has assessed the occurrence of learning by reference to the outcome of the process. Inkpen (1992) examined forty joint ventures looking at the organizational conditions which play a role in their learning processes. He was interested in observing how the joint ventures could represent a learning opportunity for the parent

companies, particularly the internalization of partner's skills. Inkpen proposes that learning occurs at three levels, individual, group and organization, and that, in each level, different learning processes are at work. "At the individual level, the critical process is interpreting; at the group level, integrating; and at the organizational level, internalizing. The product of the individual process of interpreting is a change in individual beliefs and individual behaviours. The product of the group process is shared beliefs and concerted actions. The product of the organization process is internalization of knowledge as reflected in organizational capabilities and routines" (p.217). Thus, at the organizational level, Inkpen considers that the internalization of a partner's skills, embodied in the building of new organizational capabilities and routines are the product of the occurrence of organizational learning.

Building on the same research, Inkpen and Crossan (1995) propose almost the same framework. The only change is at the organizational level, where the product of the learning process now "is the institutionalization of an organization schema reflected in the organizational systems and routines. The manifestation of institutionalization outcomes is organizational strategy as reflected by a coherent pattern of actions" (p.598).

Hamel (1990) also sees the processes of organizational learning in international joint ventures in the internalization of partner's skills. Similarly to Inkpen, Hamel thus sees their manifestation in the creation of organizational capabilities.

DiBella, Nevis and Gould (1996) examined four companies, trying to identify learning capabilities and develop a typology of organizational learning styles. They associate the occurrence of learning with the existence of core competencies within these organizations, which, in their view, would be consequences of 'learning investments' made by the companies.

From the discussion in the previous chapter and the examples given above, there are strong precedents for assessing organizational learning not by any quantitative measurement of the amount of learning occurred, but by reference to the impacts the processes of learning have had on the organization in question. Thus, looking at the processes' outcomes appears to be a sensible way of assessing whether learning has actually occurred or not.

### 3.3.2 Eliciting Events

The fieldwork followed the same lines in both companies. It was first conducted at TCP and then at Semp Toshiba. What I will describe in this sub-section happened similarly in both companies. In order to choose the processes to be studied, I had interviews with five senior managers at the company, all members of the company board. Appendix A.1 exhibits the questions asked in these initial interviews. Basically, I asked the managers to identify the events they considered organizationally critical in the last five years, to give me a brief description of each event, and to name the people who were closely involved in the processes around the events.

I had few assumptions behind these initial interviews. First, was that, although I acknowledged that processes of organizational learning could occur at any organizational level, the perceptions of senior managers would be more appropriate for identifying processes which had broad impact in the organization. Second, I followed Schein's (1985) notion that events are critical when they are perceived as such by organizational members. Third, Senge (1990a) observes that managers usually pay more attention to events than to processes. Although Senge makes this remark in a critical tone regarding manager's perception of reality, it suggested that it could be fruitful to ask them to recollect events, and then try to reconstruct the processes around these events. The reason for establishing a limit of the past five years was that this was a reasonable time span for people to still have an accurate memory of what had happened.

During these initial interviews, when giving the description of what the events were about, the managers actually started to describe the processes around the events. All interviews were tape recorded. I then analysed each interview and selected a few processes, based on the number of times they were mentioned by different managers, and the changes or innovation they had brought or were bringing to the organization. The former would indicate the criticality of the process for the company, and the latter its learning potential. I then contacted the manager I had initially agreed the study in the company and discussed the processes I had chosen. In this discussion we selected two processes to be studied. The choice of two processes in each company appeared right for the managers because of the number of

interviews I would have to make connected to each process. For myself, I considered four processes in total a reasonable number, based on the amount of data I was calculating I would gather, and also following a suggestion by Eisenhardt (1989), who notes that a number of cases between four and ten usually works well for theoretical development from case studies. The processes finally selected were: at TCP, the establishment of the Air Conditioner Division, and the establishment of local design centres at both divisions of the company; and at Semp Toshiba, the productivity improvement in the last few years, and the adoption of a new commercialisation policy.

Besides these interviews to elicit the events and processes, I also asked in each company to have one interview with a manager who had been at the company for a long time. I asked this manager to tell me the history of the company. At TCP I interviewed the personnel director, who has been in the company since the start of operations. At Semp Toshiba I interviewed the Brazilian vice-president, who has been in the company for more than twenty five years. The objectives of these two interviews were to better understand the history and context of each company.

### 3.3.3 Reconstructing the Processes

In order to reconstruct each process, I went back to the companies and interviewed the people who were identified in the initial interviews as their central participants. With few exceptions, these people were managers at the first (directors) or second level (head of divisions) in the companies. The interviews were divided in two parts. The first part, exhibited in Appendix A.2, relates to the personal career of the interviewee and his<sup>1</sup> impressions about the company. The objectives of this part were: a) trying to create a relaxed environment for the interview, by starting with managers talking about their career background (Johnson 1987); b) to have an idea of the professional standpoint of each interviewee, which could help in the interpretations of the interviews; and c) to have a picture of the organizational culture, mainly through the questions under the third section<sup>2</sup> (perceptions of the significant values and beliefs of the company).

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<sup>1</sup> All interviewees were males.

<sup>2</sup> The questions in this first part are based on Isabella (1990).

The second part of the interview, exhibited in Appendix A.3, aims at the reconstruction of the process. The interview schedule is divided in eight blocks. They relate to the three constituents parts for a research on process suggested by Pettigrew (1985): context, content and process. Thus, sections one (objectives of the process), seven (learning) and eight (consequences) relate to content<sup>3</sup>; sections two (external environment) and three (internal environment) to the external and internal contexts, respectively; and sections four (constitution of the team), five (teamwork) and six (memory) to process. Within the sections, the questions relate to some of the issues debated in the literature, which were discussed in the previous chapter. Table 3.1 presents each section of the interview schedule for reconstructing the processes, and the issues in the literature they are related to.

At the start of each interview I would explain the objectives of the study to the interviewee, and assure him about the confidentiality of the interview. I would then give him a copy of the interview schedule and ask whether he would prefer to answer each question or to read each block of questions and answer them as a whole. Some interviewees preferred a third option, to have a quick look at the whole schedule and just describe the process in question. I let each interviewee to choose the form he would consider more comfortable. In any case, I would try to make sure that the most important points in the schedule were addressed by the interviewee. The general tone of the interviews was open and I would usually ask many more questions than those in the schedule, trying to get further details about any point I deemed interesting. The more interviews I had about a process, the more knowledgeable I became about it, which meant that I could increasingly ask more detailed questions.

Besides interviewing the people who were indicated in the initial stages, I also had a few interviews with people who, during the interviews for reconstructing the processes, were consistently mentioned by other interviewees, but were not present in the initial list. Eisenhardt (1989) argues that such adjustments to data collection are an advantage of case studies, when the researcher is trying to understand each case individuality, and in as much depth as feasible.

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<sup>3</sup> The brief descriptions of processes in the interviews of the initial stage (for selecting the events), were also related to the content of the processes.

**Table 3.1****Issues in the Interview and in the Literature**

<b>Section of the interview</b>	<b>Issues in the Literature</b>
1. Objectives of the process	<ul style="list-style-type: none"><li>• Triggers of learning</li><li>• Setting of objectives</li></ul>
2. External environment	<ul style="list-style-type: none"><li>• Triggers of learning</li><li>• Learning and the external context</li></ul>
3. Internal environment	<ul style="list-style-type: none"><li>• Triggers of learning</li><li>• Learning and the internal context</li></ul>
4. Constitution of the team	<ul style="list-style-type: none"><li>• Agents of learning</li><li>• Organizational politics</li><li>• Setters of objectives</li><li>• Unlearning</li></ul>
5. Teamwork	<ul style="list-style-type: none"><li>• Teamwork</li><li>• Communication</li><li>• Tacit and explicit knowledge</li><li>• Innovation</li><li>• Diversity</li><li>• Unlearning</li></ul>
6. Memory	<ul style="list-style-type: none"><li>• Organizational memory</li></ul>
7. Learning	<ul style="list-style-type: none"><li>• Self reflection</li></ul>
8. Consequences	<ul style="list-style-type: none"><li>• Outcomes of learning</li><li>• Self reflection</li><li>• Cross-cultural relationship</li></ul>

The fieldwork at TCP was conducted from the mid August to the end of October 1994, and at Semp Toshiba from December 1994 to mid February 1995. In May 1996, after having transcribed all interviews and done part of the analysis, I went to Brazil for few weeks for personal reasons and took the opportunity to go back to Semp Toshiba, where I did some more interviews, when I sought to follow up the most recent developments of the processes I had studied in the previous year.

In total, I carried out thirty eight interviews. At TCP, I had eleven interviews with British staff and eight with Japanese. At Semp Toshiba, I had fourteen interviews with Brazilian staff and five with Japanese. Some managers were interviewed more than once. The interviews' length ranged from one and a half to three hours. All interviews were tape recorded, totalling fifty eight hours. I also had many informal conversations with the staff at both companies, usually during lunch time.

With respect to secondary information, at TCP the managing director gave me access to his personal archive. There I found information mainly related to one of the processes, the establishment of the Air Conditioner Division. There were minutes of many meetings, and press cuttings from regional newspapers about the opening of the new division. The company also provided me with detailed organizational charts, some data on production volumes, and company brochures with annual reports. I also searched for information in an electronic financial database.

At Semp Toshiba, the only written information I could get from Brazilian managers was an organizational chart. Nevertheless, I managed to collect some production information from a Japanese director. I also found information on the Brazilian production of consumer electronics in a manufacturer's association, and several reports about Semp Toshiba in the business press.

### **3.4 Data Analysis**

The primary focus of analysis is each individual process of organizational learning. This dissertation presents four processes and, therefore, four cases. However, the study is concerned with organizational learning, and each process is analysed considering the organizational context. Thus, the organization is the unit of analysis.

#### **3.4.1 Preparing the Data**

All interviews were transcribed verbatim by myself. It was a long and, some times, boring task, but besides the advantage of having the full transcription for data analysis afterwards, the very task of transcribing allowed me to further internalize the development of the processes. After doing all transcriptions I ended up with five hundred and fifty pages of interviews, typed in one and a half space.

With the whole set of interviews printed, I found it impossible to analyse them by taking one by one and reading. The strategy I adopted was to cut each interview into a number of broad issues, and reassemble all interviews together according to these issues. The selection of issues again relate to the three constituents parts for a research on process suggested by Pettigrew (1985); context, content and process, with the additional information on each interviewee's personal data, and their impressions on the organizational culture. Table 3.2 displays how the interviews were reassembled, with the main issue for grouping (column one), the interview where the data was extracted (column two), and the section in the interview containing the information related to the issue (column three).

Issues one and two relate to general information about the interviewees and the companies and, therefore, occur only once in each company. Issues three to six relate to each process analysed, occurring twice in each company.

**Table 3.2****Initial Cuts for Data Analysis**

<b>Issue</b>	<b>Interview</b>	<b>Section</b>
1. Personal Data	<ul style="list-style-type: none"><li>• Personal career</li><li>• Personal career</li><li>• Personal career</li></ul>	<ul style="list-style-type: none"><li>• Current job</li><li>• Career history</li><li>• Personal perceptions</li></ul>
2. Organizational Values and Culture	<ul style="list-style-type: none"><li>• Personal career</li></ul>	<ul style="list-style-type: none"><li>• Perception of the significant values and beliefs of the company</li></ul>
3. External Context	<ul style="list-style-type: none"><li>• Process Reconstruction</li></ul>	<ul style="list-style-type: none"><li>• External Environment</li></ul>
4. Internal Context	<ul style="list-style-type: none"><li>• Process Reconstruction</li></ul>	<ul style="list-style-type: none"><li>• Internal Environment</li></ul>
5. Content	<ul style="list-style-type: none"><li>• Event selection</li><li>• Process Reconstruction</li><li>• Process Reconstruction</li><li>• Process Reconstruction</li></ul>	<ul style="list-style-type: none"><li>• Brief description of the process</li><li>• Objectives of the process</li><li>• Learning</li><li>• Consequences</li></ul>
6. Process	<ul style="list-style-type: none"><li>• Process Reconstruction</li><li>• Process Reconstruction</li><li>• Process Reconstruction</li></ul>	<ul style="list-style-type: none"><li>• Constitution of the team</li><li>• Teamwork</li><li>• Memory</li></ul>

After reassembling the interviews according to the issues described above, I continued with the same amount of data to analyse, just rearranged. In order to have a broader (literally) view of the data, I stuck the interviews in the walls of my office at home. The data for each company was sufficient to cover all the space available in the walls<sup>4</sup>. I found it a very effective way of grappling with the data, for I could easily read the different interviews and make connections between them<sup>5</sup>. It was much easier to find where a certain passage was,

<sup>4</sup> This idea came from my previous experience as a data analyst in a software company. When we had a very large system to develop, we would draw charts representing data flows and stick them in walls, so we could have a better visual comprehension of the system.

<sup>5</sup> Such effectiveness, however, did not spare me the comments of friends who would visit me and joke about my strange 'wallpaper'.

that it would have been with the interviews piled over my desk. It also helped to avoid losing the unity of each interview. By cutting them and reassembling, I was concerned that I could lose the context of each individual interview. But, even having them cut, the fact that I had all interviews in front of me in the walls, made it was easy, when necessary, to read one interview as a whole.

### 3.4.2 Analysing

For the data analysis, the basic approach adopted was that of grounded theory (Glaser and Strauss 1968). There is only a small number of studies on factors which can facilitate the occurrence of organizational learning, and even fewer in the case of IBVs. Thus, the approach is appropriate for the objectives of the research, as the intention is to "build rather than only test theory" (Strauss and Corbin 1990 p.57). By saying that the purpose is to build theory I do not mean any grand theory on organizational learning. The objective is, through careful data collection and analysis, to propose some factors which can facilitate the occurrence of learning. These factors should then be generalizable to theoretical propositions, as it should be possible with any research based on case studies. The aim is to expand and generalize theories, and not to enumerate frequencies (Yin 1989).

The initial step in the data analysis was to read the interviews repeatedly, so I could make better sense of the processes. The second step was to qualitatively code the interviews (Strauss and Corbin 1990), trying to identify the main themes and categories related to the objective of the study. Some of the codes came directly from the interview schedule, like objectives, agents, communication and memory. Others emerged from the continuous reading of the interviews; the making of comparisons between different interviews; and the establishment of connections between these interviews, and also between passages of the same interview. Examples of these codes are control, resistance, facilitator, trigger (actions which triggered the processes), and continuity (actions which allowed the processes to continue).

I also examined the secondary data collected during the fieldwork, and kept an eye on the business press for any reports on the companies researched. This material was then used for

helping the writing up of the case studies, and also for the data analysis. The use of several sources of information was seen as a way of enhancing the richness of interpretation.

After considering that I had a satisfactory level of knowledge about each process in the companies, I wrote the case studies in the form that they are presented in chapters four and six of this dissertation. When writing up the cases, I have tried as much as possible to not let my opinion interfere, although I acknowledge that, having been researched and written by me, they are partly an expression of my view. I have tried to do that through the extensive use of quotations, and through building the descriptions scrupulously following the general impressions described by the interviewees. The idea behind this attempt of 'letting the interviewees tell the case' was to allow the reader, as much as possible, to have a similar contact with the data to my own, and to develop her/his own chain of evidence.

With the cases studies ready, I then returned to the interviews. A new long period of reading the interviews and written cases, and also a recheck of the coding led me finally to propose the enabling conditions for organizational learning, which are discussed in chapters five, seven and eight.

During the whole period of data analysis, and even after finishing it, I kept searching the literature related to the study. Examples of that are the several texts discussed in the previous chapter published after my field work period. According to Strauss and Corbin (1990), this continuous contact with the literature can "stimulate theoretical sensitivity by providing concepts and relationships that are checked out against actual data" (p.50). I also wanted to build on existing work connected to my research. It would be silly to not consider contributions made by other researchers. In this sense, I did not ignore the terminology used by other authors when I found something in the cases which was reflected in the work of others. On the contrary, I saw that as a confirmation of the findings.

Finally, I would like to comment on the main limitations of the method. The first limitation relates to the fact that, as the research deals with processes which had already occurred in the organizations, or which were still occurring but had started some time before the fieldwork, there is the risk that the interviewees may have over rationalized their description of the processes. It is a well known tendency of the human being to tidy up happenings of the past,

so the actors can appear in more control over the situation than they actually were. I have tried to minimize this risk by interviewing several people about each process. Conflicting information was always rechecked, frequently with a third informant.

The second limitation relates to the fact that the large majority of the interviewees were senior managers in both companies. In this sense, I do not have the interpretation of workers in relation to the processes, despite the fact that they have participated in most of them. Such limitation is a consequence of the method adopted for choosing the interviewees, whereby the initial interviewees, all at the most senior level in both companies, pointed out who were the key participants in each process. It was, therefore a conscious methodological option of mine.

### **3.5 Summary**

This chapter presented the methodology adopted for the research discussed in this dissertation. In endeavouring to propose some factors which can facilitate the occurrence of organizational learning in IBVs, I opted for in-depth case studies in two companies. Processes of organizational learning which had occurred in these companies in the last few years were selected through interviews with their most senior managers. The criteria for selecting the processes was the assessment of the outcomes in these processes. Their criticality for the companies, assessed by the number of times a process was mentioned by different managers, and their learning potential, assessed by changes and innovations they have brought, were the main parameters for selection. Extensive information about the development of the processes was collected through interviews with the key participants, and also through secondary sources. Data analysis was based on the grounded theory approach. A long period examining the data collected, coupled with a process of coding, and a continuing search in the literature related to the study, led to the emergence of themes and categories. These activities then enabled me to propose some enabling conditions for organizational learning.

INTRODUCING NEW ACTIVITIES  
IN A CROSS-CULTURAL ENVIRONMENT

PART TWO

ORGANIZATIONAL LEARNING  
IN INTERNATIONAL BUSINESS VENTURES

4.1 History of the Company

The company is a subsidiary of the parent company, which is a multinational corporation. The company was established in 1980 in the United States and has since then expanded its operations to various international markets. The company's primary business is the production and distribution of consumer goods. The company has a long history of success and is well-known for its quality products and excellent customer service. The company's growth has been driven by its ability to adapt to different cultural environments and its commitment to innovation and research and development. The company's success can be attributed to its strong financial performance, its diverse product portfolio, and its effective marketing and sales strategies. The company's international expansion has been a key factor in its growth, and it continues to invest heavily in research and development to stay ahead of the competition in the global market.

## Chapter 4

### INTRODUCING NEW ACTIVITIES IN A CROSS-CULTURAL ENVIRONMENT

This chapter describes two processes occurred during the last few years when new activities were introduced at Toshiba Consumer Products (TCP). The first section presents a brief history of the company. The second section gives an account of the main values and characteristics of the company, as viewed by its managers. The third section describes the establishment of a new division at TCP dedicated to produce air conditioning equipment. The fourth section describes the establishment and development of local design at TCP's Audio Visual and Air Conditioner divisions. All the following description is based on the interpretation of the interviewed managers about these developments.

#### 4.1 History of the Company

TCP began its operations on May Bank Holiday 1981 in Plymouth, United Kingdom (UK), aiming at producing television sets (TVs) for the UK market. It followed a joint venture between Rank Radio International and Toshiba which was established in November 1978 and which closed in March 1981. Rank Radio had established a facility in Plymouth in 1947, following a direction from the British government for creating jobs in the region after the Second World War. It started by producing radios, moving after to TVs. In 1978, Rank formed the joint venture with Toshiba, aiming at increasing its production volume in order to sell into the European market. The original concept was that Toshiba would provide technical input through its modern design and specifications, and the facility in Plymouth would manufacture the TVs. However, Rank kept producing its own models, which were based on Philips technology, and the joint venture ended up having two distinct product lines, which made its production costs higher than when Rank was operating as a single company. One of the strongest stimuli for Rank-Toshiba to export into Europe was the then low value of the pound. With the new Tory government, the value of the pound soared to a new strength and it

became difficult for the company to sell into Europe. Rank decided to finish the joint venture, where it had a majority stake, and completely closed the site in March 1981.

In April 1981, Toshiba announced that it would start a new company on its own to manufacture TVs at the previous joint venture site and would re-employ some of the personnel. From the two thousand people who used to work at Rank-Toshiba, the new company would start operations with around three hundred. Managers could, therefore, be very selective in choosing employees for the new company and, according to the Personnel Director, only those with an 'impeccable record' were chosen. By that expression he meant people who had high attendance records at Rank-Toshiba and no extreme political opinion.

TCP was a new company which was starting with the same personnel, on the same site and with the same product as Rank-Toshiba. The top management team had also previously worked at the joint venture and they were conscious of the necessity of making clear that TCP was a different company. Several actions were taken to this end, the more evident being:

1. the creation of a Company Advisory Board (COAB), which is a forum which represents all sections in the company and can be used to review the company's financial performance and its future plans, and to discuss employee conditions. Although the final responsibility for decisions is laid on the shoulders of management, members of COAB receive all information before any decision is taken and can discuss and advise the company;
2. the introduction of 'pendulum' arbitration, whereby any dispute between the company and its employees which is not solved in the COAB is then taken to an independent arbitrator who has to decide for one of the two proposals, without recommending a compromise for 'splitting the difference down the middle'. Such measure aimed at making the parties more open to negotiation and willing to formulate feasible proposals to solve differences;
3. single union, strike free agreement, whereby TCP employees are represented by a single union, as opposed to seven unions which used to represent Rank-Toshiba employees. With the existence of COAB and 'pendulum' arbitration, the union agreed to sign a deal with TCP where no industrial action would be taken. Such agreement was later adopted by other Japanese companies in the UK;
4. common restaurant and overalls. Again in a different way from Rank-Toshiba and many other British companies, TCP has a single restaurant for all its members. They also have to wear a common blue overall while within the company. A series of other measures were

taken at the outset of the company which give the basis for people within TCP calling it a single-status company<sup>1</sup>. Although some of these measures were normally adopted by Japanese companies in the UK, like single restaurants and the use of uniforms, others were exclusive to TCP, like the COAB.

All TCP supervisors went to Japan in order to learn Japanese methods in areas like quality, productivity and supervision. Even the first members elected for COAB went to a one week tour through Toshiba's plants in Japan in order to understand the company culture better. Also, a large number of Japanese team leaders and specialists came to Plymouth in order to show TCP employees how to run the factory their way. There was some resentment by the British workers towards what a manager called the 'over enthusiasn' about the company from the Japanese who came to Plymouth. He defined their style as 'go go go, push push push'. Even though, British managers tried to emulate the Japanese spirit during the first years, TCP started with a very tough style where employees should account for every second in the factory. If a worker did not show up at the company, TCP would send someone to his/her home to check what was happening. The first Manager Director used to define the company as 'lean and hungry', with no 'spare people'.

The company grew quickly in the first six years. It started with a daily output of 300 sets, distributed across eight models sold in the UK market. In 1983 it began to export to the Continent. By 1986, it was producing 2,000 sets a day with fifty models. Between 1984 and 1986, TCP's share of the UK TV market doubled from 3.5 per cent to 7 per cent. In May 1984, the company started to assemble VCRs. In April 1985, a new division was added to the company, in order to assemble microwave ovens for the UK market. The number of employees also grew steadily. From the original 300 work force in 1981, there were nearly 1,100 in 1987. However, at the end of the 1980's Toshiba adopted a new approach to the European market for consumer electronics and decided to concentrate its European production of VCRs in Germany.

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<sup>1</sup> Trevor (1988) in chapter 4 gives a detailed description of all measures taken.

At the same time, sales of microwave ovens in the UK market dropped dramatically for Toshiba, the reasons being twofold. First, there was a health scare linked both to a belief that microwave oven cooking was not sufficiently intense to destroy some food bacteria and also to a discussion about the possibility that heating baby bottles in a microwave oven could modify the milk and actually be a carcinogenic risk. Second, some major retailers in the UK were able to import and sell microwave ovens with their own label cheaper than TCP could sell its products. The consequence for TCP was that in a interval of fifteen months sales dropped to one third of which they used to be. In 1990, Toshiba decided to close its microwave oven assembly line in the UK and move all European production to France.

With the closure of the Microwave Oven Division (MWOD), there was fear within the company that the work force would be made redundant. However, another division of Toshiba in Japan was considering opening a facility in Europe to produce air conditioning equipment and the two countries which were finally competing for the location of the plant were Spain and the UK. Toshiba was then keen in avoiding any negative propaganda related the closure of the microwave oven operation in Plymouth and the possible redundancy of workers. The solution found was to establish the air conditioner operation at TCP and use those workers.

During the few months between the closure of the MWOD and the start of operations of the Air Conditioner Division, direct workers were moved to the Audio Visual Division, which is situated in a different site in Plymouth, and undertook all sort of activities in order to avoid being idle. Indirect workers were left at the Air Conditioner Division to help with the setting up of the division. As soon as it became operational, the large majority of direct workers of the previous MWOD were transferred back to their original site to be trained in the production of air conditioning equipment.

The Manager Director of TCP has always been a British executive, with the current one, Mr George Williams, holding the position for the last eight years. In relation to the presence of Japanese staff at TCP, there is a remarkable difference between the two divisions of the company, Audio Visual Division (AVD) and Air Conditioner Division (ACD). The AVD has existed since the start of TCP's operations and, as was mentioned above, it was initially

staffed mainly with British managers who used to work at Rank-Toshiba. When some of those managers retired or moved to other companies, they were replaced by other British managers, which kept the AVD under mainly British management. The head of the AVD has always been a Japanese manager who comes from Toshiba Japan and stays at TCP for five years, on average. That executive holds the title of Assistant Managing Director AVD. Other top executives at AVD are British, as is the case with line managers. With only a few exceptions, Japanese tend to stay in specialist functions.

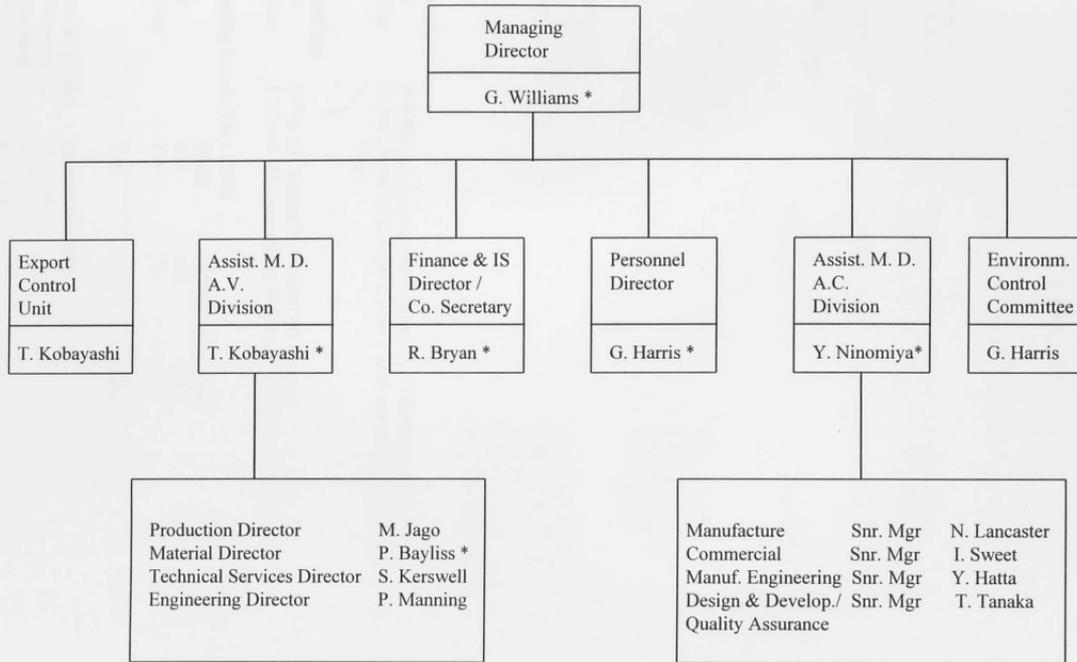
On the other hand, at the ACD most of the top executives are Japanese. The main reason for this seems to be that the activity is still relatively recent at TCP and it is completely different in technical terms from assembling TVs. As there was no previous knowledge about it at the company, Toshiba deemed it important to have experienced managers to start operations and those initially appointed are still heading the division. However, as it will be described later in the chapter, managers at ACD consider localization of management, that is to say, having British nationals occupying managerial positions, as one of the short to medium term objectives of the division.

In terms of revenue, TV assembling is still the main business for TCP but, since the early 1990's, the combination of economic recession in Europe and the arrival of new producers in the market have made competition fiercer, and profitability in that business became one of the main issues for the company. On the other hand, although the turnover of the ACD is much smaller than the AVD, the profitability of the air conditioner business is higher.

To conclude this section, Figure 4.1 presents the organizational chart of TCP. The company has a main board and two divisional boards. The Managing Director, the Finance and Information Systems Director and the Personnel Director take part in all three boards. The other members of the AVD Board are the Assistant Managing Director AVD and the four divisional directors. The other members of the ACD Board are the Assistant Managing Director ACD and the four senior managers. The difference in title between a director at the AVD and a senior manager at the ACD is due to the difference in size of both divisions. Figure 4.2 presents some data comparing the size of the two divisions as of May 1994.

Figure 4.1

Toshiba Consumer Products (UK) Ltd



\* Denotes Main Board Members

**Figure 4.2**

**AVD & ACD Divisions**

**Facility Areas**

AV Division - Building 1 25,000 Sq. Metres / Site 58,240 Sq. Metres  
 - Building 2 3,600 Sq. Metres / Site 8,320 Sq. Metres

AC Division - Building 12,500 Sq. Metres / Site 32,400 Sq. Metres

**Facility Lines**

	<u>CTV</u>		<u>Air Con</u>
Assembly Lines	5		2
Sub Assembly Lines	-		3
Panel Assembly Lines	7		-
M/C Shop Sequencers	5	Press Shop	1
Eyeletters	4	Paint Shop	1
Axial	16	Heat Exchanger	1
Radial	10	Pipe Forming	1

**Technologies**

Light Mechanical	Pipe Forming/Brazing
Electronic Assembly	Heavy Mechanical
	Painting
	Heat Exchanger Assembly
	Electrical Assembly

**Capacity**

CTV 590,000 per annum 1 Shift Assembly / 3 Shift Machine Shop  
 Air Con 25,000 combined sets per annum 1 Shift assembly / 2 Shift Paint and Press Shop

**Model Mix**

CTV 14" to 33" Screen 76 models / 46 Variants  
 Air Con 11/2 to 5 HP Commercial 33 Indoor / 16 Outdoor Models

**Manning Levels (May 1994)**

	<u>Direct</u>	<u>Indirect</u>	<u>Total</u>
CTV	636	181	817
Air Con	119	72	191
	755	253	1008

**Turnover (03/94) thousands GBP)**

AV Division 101,595  
 AC Division 33,770  
 TCP 135,365

## 4.2 Values and Characteristics of the Company

Before describing the processes of change, an account of how the interviewees defined the main values and characteristics of the company will be given. As it was explained in Chapter 3, the objective of such account is to help to situate the interviewees' descriptions of the processes.

For some top managers, profit making and the priority that employees should give to the company over their private life are important values of the company:

"I believe that Toshiba is genuinely committed to the future of mankind, "Committed to People, Committed to the Future" is a very genuine statement, but I believe it is equally committed to a level of profit that enables the company to survive and to grow. (...) No doubt at all that there is a very significant work ethic and the company must come first even to the extent of personal and family life, though it does recognize that personal and family life is important to the employee." (Managing Director - British)

"Anyway, the final purpose of the operation, each business, is to get a profit and to make some capital share to each capital shareholder, we have to give them some profit, this is our purpose." (Assistant Managing Director AVD - Japanese)

"You must put company at first, which I think it's the unique rule rather than typical British company." (Assistant Managing Director ACD - Japanese),

"Toshiba is a company, so get the profit, it is the most important." (Design and Development Department Senior Manager ACD - Japanese)

The interviewees also mentioned excellence in manufacturing and the company care for both its employees and the community around it as significant values:

"...everyone we recruit should be here to see the manufacturing process is perfected as far as possible (...) this very important high performance manufacturing unit is what we're all about (...) So efficiency in manufacturing is our strength. (...) We in fact had a very lean year in 82, we'd started it out well but in 82 the market went flat and we were able to demonstrate other aspects of the culture, that nobody would be laid off, lose their job, even though we were short of work." (Personnel Director - British)

"...quite clearly our aim is to make TV sets in a simple and consistent manner (...) the values that Toshiba has brought is the sort of world wide experience, selling product in different parts of the world, using style from also all over the world, when you have a global view, I think is much easier to decide what is successful, and what will work. (...) I suppose the most critical point was manufacturing on time." (Engineering Director AVD - British)

"Get a profit means also high quality, to get the customer's satisfaction. And for employees, safety is the first." (Design and Development Department Senior Manager ACD - Japanese)

"It's important to this company that they are well regarded, both within the industry and within the district and throughout the world. Both from a point of view of being a good company that produces good products and from a company that is responsible by the way they operate, the way they treat people, the way they respect the environment." (Manufacturing Department Senior Manager ACD - British)

"I think, finally if local people are feeling much satisfaction, which is final goal why establish a Japanese company here. That's the final goal, much dreamed, I think. Profit or technology, those are processes, but final goal. I think, many local people here, if they are feeling 'We are happy to work for Toshiba', that's the final goal." (Assistant Managing Director ACD - Japanese)

"...we have to keep a healthy life of our employees and so that we have to realize to the commitment and the promise with each employee." (Assistant Managing Director AVD - Japanese)

"They like to make sure that they've got production efficiency. There is a big thing on cost. (...) They like to make sure that the production line is kept running, that you don't stop production. (...) I think they try to keep everybody happy, but it's difficult, but I think they do pretty well." (Engineer at Design and Development Department ACD - British)

"I suppose I've been quite pleased to belong to an organization where they... they don't guarantee jobs but what they say is that to the best of their ability they would avoid, as I see in this country, making people redundant unnecessarily and ruining people's job expectations and things." (Manager at Manufacturing Engineering Department ACD - British)

Another value mentioned was the importance that Toshiba gives to its image as a company:

"I think equally the company is very sensitive about its name, that for Toshiba to get its name in a newspaper in an adverse way is a serious sin as far as the company is concerned. (...) My concern was how to handle the closure of MWO positively. And in actual fact, the concern in Japan of course was "Toshiba closes plant, Toshiba makes redundancies", those were the headlines they would be reading. In actual fact Toshiba came out of this with positive publicity, because we managed to handle it without a single redundancy. We were actually praised as a model of how these things should be done. So Japan were very grateful to the local management for the way it was handled in the sense of public relations." (Managing Director - British)

"As an engineer and a manager I have to buy plant and equipment and get services from people, it's a big value because we always pay our bills, OK, that's one of the big strict rules of the company, we will always settle quickly with people, so they know that the money is gonna come in and the rest of it, you get good service at Toshiba, because they know our name is good." (Manager at Manufacturing Engineering Department ACD - British)

"From my point of view, sometimes I have to do with suppliers as well, because you work for Toshiba you seem to deal with English companies but with Japanese majority shareholder sort of thing, and if there is ever a problem, because you Toshiba they will blow all the stops to make sure you get these parts on time. (...) there is a good image of the company." (Engineer at Design and Development Department ACD - British)

According to the interviewees, the main characteristics of the company are related to communication, teamwork and flexibility required from the employees.

"...there was a lot of team working, a lot of attempts in the early stages to show that the barriers were down, there was no deviousness, the open plan office, no offices for anybody at senior level, hardly any symbols of status around, we all started at the same time, finished at the same time, ate in the same place and so on. (...) that was the scene, the wearing of coats, you know, believing in a company, showing that you were part of the team was what was important" (Personnel Director - British)

"I think there is, everyday, a huge commitment to good communication. It's amazing how much time is taken in discussing, briefing, whatever, the people. More so than probably we give it credit. If you sit back and think 'Goodness, how long do we spend doing this and that during the year?', the number of productive hours spent in communicating is a huge proportion of total available hours. (...) You're required to participate. We require you sometimes maybe to stand up in front of other people and say what you think or present something. (...) I think if you are here to look at the manner in which the members in the shop floor operate, they are very hard working, very committed, very flexible, flexibility is very important to us. We are very small in numbers, the ability for people to switch from one job to another is extremely important to us. We do a lot of developmental training in that regard. (...) we need flexibility, we need people to work as teams, work within teams, they have to be able to communicate, they have to be able to support another, they have to understand the full process, so part of the training is to understand the full process, in order we can operate, because if we had sort of 150 people all working in isolation it just would not work." (Manufacturing Department Senior Manager ACD - British)

"I think probably information transmitted to the company is good. So that is one of the very necessary parts I think of making everybody going in the same direction and go fast and respond to difficulties (...) when I tried to recruit people of my age or a little bit younger, from other companies, it wasn't possible for them easily to accept the Japanese way of working, maybe the open style of working, in many instances the style is open because there is no ownership of information." (Engineering Director AVD - British)

"...they want you to be a team player, they want you to openly contribute to the debate in the company, but once a decision is taken, even though you may disagree with it, they want your commitment to carry out the decision that is made." (Managing Director - British)

"Every day in our department, my British manager organizes morning meeting just to give general information, to exchange opinions, just short while, 10 to 15 minutes, the longest 15 minutes. What happened yesterday mainly, not all the detail, just highlight. He explains also when visitors are coming, that sort of communication he tries to make every morning, and appointing one by one, somebody wants to say something towards all the members they can say that. Just we, I myself and my British manager try to create

certain teamwork or team spirit by the every morning meeting, otherwise they could be quite independent. Working only together, not knowing what the other is doing. They are working in one room, but could be quite indifferent from each other. That is bad, from our Japanese style point. They should be aware of the others doing, and when necessary they should be ready immediately "Ah, I know what's going on the other member, OK, I can help". That is our expectation then, otherwise if they are informed, required, all of sudden to help, they don't know what to do. That's why by having every morning meeting I'm trying to create certain team spirit, expected by Japan. Still individuality, culture, is a bit company problem, not problem, cannot meet our expectations. But that's is culture, isn't it? We cannot change their culture, I don't want to change their culture, but simply by understanding their culture, or your culture, important thing is understanding their culture and respecting their culture. Also existing (?) my own culture, our Japanese culture, and then to consider how we can mix, respecting each other how we can create good group spirit, power. (...) You (any employee) should do anything, because independence, individuality by saying this is not my responsibility, I do not take care, this is not our policy, you should try to cover that, within the group. So I require do anything. Should be ready to do anything. Responsibility is clear but also try to do anything." (Manufacturing Engineering Department Senior Manager ACD - Japanese)

"...I do not like to make high fences between departments. Open." (Assistant Managing Director ACD - Japanese)

"They seem to involve us, I mean, they have this COAB meeting and it's quite good because we know what they do at the TV factory, what sort of major ideas they've got." (Engineer at Design and Development Department ACD - British)

### **4.3 Establishment of the Air Conditioner Division**

After deciding for the closure of the MWOD at TCP, Toshiba decided to bring a new business into the company, the production of air conditioning equipment. In terms of the world wide structure of Toshiba, air conditioner is a different division from consumer electronics and executives from one division do not have frequent contact with executives from the other. Also, the production process is very different. While the production of TVs, like microwave ovens, is basically an assembling operation, air conditioner production involves manufacturing, the transformation of plain sheets of metal into equipment, and there is also a specific piping and refrigeration technology. For TCP, the new business was very welcome, but there was no knowledge within the company about either the product technology or the Toshiba personnel who came from Japan to set up the operation.

#### 4.3.1 The Immediate Context

At the end of the 1980's, Toshiba in Japan had decided that it would set up facilities abroad for producing air conditioners. The main reasons for that decision were the overload situation of the Fuji factory in Japan, the only one the company had at that moment; the soaring value of the yen, which was making exports from Japan progressively more expensive; the concern about the establishment of protective barriers against imports in some local markets, like Europe; and, finally, the company's policy of globalization, whereby products should be made in the markets where they were to be sold, aiming at making them both cheaper and more suitable to those markets.

Two major locations were chosen for installing the facilities. One was Asia, and that went to Thailand, and the other one was Europe. At that time, Toshiba was exporting well into the European market and it made sense to have a factory in the region. A number of Japanese specialists were appointed to undertake a feasibility study about the location and specifications of the plant in Europe. Regarding its location, the Assistant Managing Director ACD explained that:

"...there were four countries (France, Italy, Spain and the UK) and we studied level of quality point of view, including efficiency and also cost point of view. Not only weak wage. Weak wage multiplied by efficiency. In terms of wage, Spain or Italy are cheaper than the UK. Level of quality and also weak wage, it's most effective this country. And also Toshiba brand for countries. Spain and Italy were handled not by a subsidiary of Toshiba. UK were handled by a subsidiary of Toshiba in the TV business. The market share was very good. That is another reason. Also other reason is communication. Italy and Spain, people cannot understand English, specially shop floor worker. But also Japanese, even high qualified people, very occasionally they can speak Spanish, Italian or French. But many people can understand English because of the education."

In August 1990 the ACD office opened at TCP. Toshiba decided that the air conditioner factory would be installed at the previous microwave oven factory building, but it had to be extended and also undergo a series of modifications in order to accommodate the new machine-tools.

There was a team of British personnel who were, jointly with the Japanese, responsible for setting up the operation. However, due to their lack of knowledge about the new product,

they acted more in a liaison role with local contractors, making sure that specifications laid down by the Japanese were correctly followed. According to a British manager,

"...the strategy for that business (AC) was largely set in Japan. There was a very strong Japanese presence, there was a feeling that we didn't know this product and everything had to be communicated through the Japanese, from Japan, and it was true."

In relation to competitors, there was no other Japanese producers of air conditioners in the UK, but there were already two companies established in the Continent, besides local producers. After the ACD was set up at TCP, other Japanese companies started similar operations both in the UK and in the Continent. According to a Japanese manager at ACD,

"Japan is very isolated country, by the island, not so open I think. They want to internationalize, Japan. But not opening the door, by going out, abroad, establishing manufacturing activity, creating employment, transferring technology, so we followed. And also because of competition. If we hadn't come out here, we would lose also exporting business, because the other Japanese companies supply their product cheaply than that from Japan. For example, the company B will supply AC here quite cheaply, if we continue exporting products from Japan because of exchange rate, our product could be higher than that price, so we lose business. So that's why whether or not we like we have to establish overseas factory to compete the product's price. That is also a quite high priority. So we are doing the same competition, not only in Japan but also outside, abroad."

#### **4.3.2 Setting up the Air Conditioner Division**

In order to set up the air conditioner factory in Plymouth there were two project teams, one in Japan and one in the UK, headed by Mr Gunishi Tanaka and Mr George Williams, respectively. Due to the lack of air conditioner skills in Plymouth, the British team was very dependent on the approval by the Japanese and the main difficulty they faced at that stage of the process was in gaining trust from the Japanese that they were not only capable but also willing to undertake the tasks allocated to them. Contrary to the consumer electronics division, people at the air conditioner division in Toshiba Japan had no experience of operating overseas, apart from the Thailand factory, and that was reflected in a wary approach to the European operation. Every 3 months members of the British and Japanese teams would meet in order to review the progress of the project. The interval between the meetings was reduced as the project deadline approached, reaching 2 weeks in the end. According to a British member, with such meetings they could practically demonstrate to the

Japanese that they knew what they were doing and when they did not know they would tell that straightway. Such honesty was fundamental for the growth of trust.

With the development of the project, some key members of the Japanese team moved to Plymouth in order to closely follow the expansion of the old microwave oven factory and the installation of new equipment. The leader of the Japanese team, who also moved to Plymouth, was very important in setting the specifications for the factory. He was very knowledgeable about the Fuji factory in Japan and had an exact idea of how the British facility should be. However, as soon as the plant began operation, he went back to Japan. On the other hand, some Japanese managers who came to Plymouth to set up the factory stayed after the start of operations. According to one of those managers, in the Toshiba operation in Thailand some managers did the feasibility study and the project of the factory, and different ones were appointed to run the operation. As a consequence, the latter had difficulties in understanding what he called the 'total operation'. From that experience the company decided to assign the top managerial posts at the ACD to the same personnel who did both the feasibility study and the factory project. Thus, four Japanese managers stayed in Plymouth: one became the Assistant Managing Director ACD, being responsible for the general management of the division, the other three had strong technical skills, each one being responsible for a department within the division. One became the head of the Manufacturing Engineering Department, the second became the head of the Design and Development Department and the third became the head of the Quality Assurance Department. After three years of operations, the latter went back to Japan and the second took over his position, becoming head of both departments.

The rest of the managerial team was made up of British managers coming from the previous MWOD. One of those managers was appointed head of the Manufacturing Department and was initially responsible for recruiting people to work at the ACD. The first people recruited were the workers from the MWOD, who were distributed across the ACD according to assessments made by managers on the basis of their attributes, qualifications and backgrounds. For some departments within the ACD, like Design and Development, TCP recruited recent graduates in engineering from local universities. For other departments, like Manufacturing Engineering, the company decided to start with a nucleus of experienced

engineers coming from the MWOD and gradually recruit young engineers to supplement the skills that were missing. Around 50 people came from the MWOD to the ACD and many more were recruited. In September 1994, the ACD had around 180 personnel.

Whilst the construction of the air conditioner factory was taking place, 46 personnel from the ACD went to Japan for training periods, ranging from one to six weeks. These people were supervisors, superintendents, engineers and specialist shop floor workers. That training period created a certain tension between the Japanese and British, mainly related to the experience of shop floor workers. These people had generally served five years apprenticeships in the UK and also had worked at the MWOD. In spite of that, they were trained in Japan as though they knew nothing, starting from scratch. Some of them got really angry, considering that their past experience was not being respected. They would frequently telephone their managers in Plymouth to complain about the training. One of those managers recalls the situation:

"So when we sent the first group over for so called training, that guys had been sort of in industry for maybe 8, 10 years. When they got at Japan they say "This is rule, this is a screwdriver". And a lot of trouble with people going from here to Japan feeling very insulted. But to be fair to them, for their perspective it was necessary to take it from basis, in reality they could have come in much higher upper chain. But, OK, that was one of the initial problems." (Manufacturing Department Senior Manager ACD - British)

However, the complains did not make any difference and the training just went on as planned by the Japanese, who wanted to make sure that workers would fully internalize their tasks, step by step. Indeed, British managers acknowledged afterwards that, despite the difficulties during the training period, some of the very specialized skills, like brazing, were well transmitted to and learned by workers.

After that initial period of training, some of the recently graduated engineers went back to Japan for a in-depth training in their tasks during six months. That will be described with more detail later in this chapter, when I describe the establishment of local design at TCP.

There was no special training regarding management procedures. According to a Japanese senior manager, most British managers already knew the Japanese style from the microwave oven days. On the other hand, the operational style coming from the air conditioner factory in

Japan had some differences from the microwave oven factory and, therefore, the British had to adapt themselves to this new style. That was accomplished exclusively through day by day contact with the new Japanese managers.

Another activity performed during the construction period was the selection of local suppliers for equipment to be installed in the factory. The Japanese had the knowledge about the equipment specifications but they did not have the English language skills necessary for discussing with these suppliers. Hence, the way adopted was for the Japanese manager to sit with his British team and carefully explain and discuss every important point of the specification and only after that they would negotiate with suppliers. Then, the Japanese manager would go with the British team to visit the suppliers, but negotiation would be conducted by the British.

The whole period of setting up the ACD is recalled by some British managers as being heavily guided by the Japanese:

"The division was to a large extent a Japanese creation, there was this strong feeling of specialization in the manufacture of AC and in that sense Japan was very keen to control the structure, the training, the education levels of the people recruited in and wanted very long period of training in Japan to accomplish certain skills." (Personnel Director - British)

#### 4.3 Starting Operations

In October 1991 air conditioner mass production started at TCP. In order to make sure that all skills learned during the training in Japan had not been forgotten and were used properly, people who had provided the training in Japan came to Plymouth to follow the first few months of operations. Again, the Japanese insisted that the British followed what they were saying, with no regard to their opinion. And again a British manager acknowledged that the result of such attitude was later useful for the establishment of operational routines:

"And when we started off, everything was sacrificed for the sake of quality. We set a target to do this today, if after the first day you had a quality problem, it didn't achieve what else was required, so (?) the quality is gonna be right. That was a difficult path for these members to go down. Everything had to be done as they said. "This is the way you do it, must be done this way, even if you know another way to do it, you must do it this way". And it took a lot of understanding. "What the hell they're planning, they've got a monopoly on ideas, they've got a monopoly on doing things. We know we can do it

better this way, why don't we do it?" Probably it was after 12, 18 months of operating that you sort of reflect on where you came from, you suddenly realize that "Hey, they were being pedantic, and they were being... not intentionally but they were being in some ways insulting", but the benefit 18 months down the stream was that you routinely did things to avoid the pitfalls that you'd experienced the first 3, 6 months. And you're doing that as a routine, there's no think twice about it. So, they almost programmed you into a way of operating which, if they haven't adopted the approach they did, and taken probably a lot of the sort of passive abuse, we wouldn't have actually got through one the other day (?). But it took time to come to that realization, the period of evolution leading up to that realization is quite difficult and find (?) all sorts of traumas and pitfalls. I think really putting into perspective whether it would be Japanese, whatever the nationality would be in a foreign country, you are going through that loop to a degree. It certainly led to some interesting confrontations at times." (Manufacturing Department Senior Manager ACD)

Those Japanese stayed at TCP until Christmas 1991. Their main objective in Plymouth was to make sure that the factory would be up and running according to their standards. Although they were instructing the local operators on their tasks, the schedule of activities during that period was very tight and there was no time left for discussions. They would generally say how things should be done without any detailed explanation about why they should be done that way. Moreover, many of those Japanese were shop floor workers who could not speak English and, therefore, had to use interpreters for communicating with local workers. The interpreters were not knowledgeable about technical issues, which made communications even more difficult. A British manager commented that that was the ideal time to discuss with the Japanese about the shortcomings of the training period in Japan but such opportunity was lost due to the lack of time. Also, the Assistant Managing Director ACD explained that during that period factors like the knowledge gap between the Japanese and British, the language problems, and the tight schedule, made discussions between workers from both nationalities impossible. However, after most Japanese went back to Japan, things changed:

"After Christmas holidays there were few Japanese here, so British people had to stand up by themselves, together with few permanent Japanese workers here. Therefore it was absolutely necessary to discuss many things. But speed was very slow, even though I had become much lower tempered at that time."

#### **4.3.4 Difficulties with Communication**

After the ACD started operating, the work relationship between Japanese managers and British teams became an important issue. The initial set up of the division was over and it had

now moved to the stage of running an established business. The structure of the ACD had been basically designed by a Japanese member of the feasibility study team. British managers came from the MWOD and the rest of the personnel were selected by the Manufacturing Department Senior Manager, who is British. Therefore, when the Japanese senior managers came to head the ACD and its departments, their subordinates had already been chosen.

The first problem faced by managers and teams in their relationship was language. It was quite difficult for both sides to understand each other in their everyday work. Although it has significantly improved over time, communication is still considered by Japanese managers as the main difficulty:

"I think, as I've said, language, communication was the difficulty. If we could talk perfectly we could understand more. So, just communication. Although culture is different, education system is different, colour of hair is different, shape of the face is different, muscles lengths are different, that is indifferent. I think, finally, if we can talk freely everything could be understood as expected. Simply because of language difference or difficulty. I believe I can communicate if we could speak English or they could Japanese language, or we could speak English more freely. Regarding not only technical matters but also human life etc. If we exchange opinion freely, I believe we could understand mutually in the same way as we are in Japan. Because of language difficulty to understand, sometimes unnecessary conflict is generated. Just as a result I can say. Even in Japan there are similar problems, sometimes we might misunderstand, that is because of culture difference. Now I don't think it is because of cultural difference, simply lacking of communication, because of difficulty of language communication. If we communicate fully we could eliminate any kind of difficulty operation, I believe. So teamwork or etc., everything can be, finally, conducted in the same as that of Japan, I believe. But to let them understand what is required exactly by Japanese people is not easy. We believe we explained perfectly to them, but they don't. That's why they do not follow and then we misunderstand "They do not follow our requirement", but actually simply they haven't understood correctly why they have to do that. They might understand how to do, but they may not understand why they have to do that, like that. That's why they make mistakes, and we say they are not capable, they do not follow our guidance, they such and such. That is misunderstanding, I think. Simply we haven't let them understand correctly. They haven't understood correctly what is required simply because language difficulty, finally, I think. The difficulty I feel, I think is forever language. If we conquer that, I think, I believe we can create the same working condition, atmosphere, wherever we go. But because lacking of language ability, Japanese people believe UK people are quite self defensive, quite argumentative, or quite ... conflict, they might think so, but simply lacking of communication." (Manufacturing Engineering Department Senior Manager ACD - Japanese)

"(At the beginning) For the three Japanese members it was very difficult to understand, specially discerning they speaking in English. Very high speed and also sometime slang and pronunciation. Also for British people here, I think it was very difficult to understand our pronunciation. But nowadays, also because of culture and character, I

think anybody understands my character, and Tats' character, and Joe's character<sup>2</sup>. So if Joe says something, many people imagine easier (sic) "What is he saying?". So, not only friendship. Each other get used, already, I think. (...)At the beginning British people were much keen to introduce AC business here, therefore not so different positions. Culture itself is a much different position between Japanese and British members, but through business there are not big difference. But sometimes the most difficult thing is language." (Assistant Managing Director ACD - Japanese)

"(Talking about the main difficulties he face) Basically they have not enough experience and knowledge about AC. And conversation between Japanese and British people. When I don't understand I would ask again, again, again, that's the best way. But there are little differences, nuances, in the English language, like "should do and must do" that are very difficult to understand. So what they say and I feel is a little bit different. It's very difficult to understand." (Design and Development Department Senior Manager ACD - Japanese)

An interesting feature of the structure of the ACD was that in two departments headed by Japanese, Manufacturing Engineering and Design and Development, there was a British manager positioned between the Japanese senior manager and the team. However, soon after the start of operations, the manager at Design and Development was moved to work as an engineer at Manufacturing Engineering due to the load of work there, leaving the Japanese senior manager with direct contact with his team.

At Manufacturing Engineering, Mike Cockerill, the British manager, has acted as both a sounding-board for the ideas of the Japanese manager and a buffer avoiding conflicts between the head of the department and the team. The Japanese senior manager acknowledges the importance of his role:

"Also, my British manager is quite capable. He is good, very good, he understands almost everything I expect, that's why for me he is quite helpful. By letting him understand, first of all, he tries to let our people understand correctly, in his language. (...) Majority key managers already had been decided when we came here. That means it was very fortunate to me. I was given a good manager. He is very capable manager. But to utilize that it depends on myself. How I communicate with them, it depends on how I communicate with him. (...) (talking about new ideas for the work of his team) ...mainly I've discussed with Mike Cockerill about strategy or policy required or target. And then he explains by his own words to the other members. Again the language, I don't think I can fully explain about requirements directly to my people. If we discuss with my people I would have difficulty. So, first of all, by letting Mike Cockerill understand what is required, what we should do or how we should do, etc., then he explains to individual member detail. So, important thing is, anyhow, I believe manager, British manager like

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<sup>2</sup> The three Japanese managers at the ACD were given English nicknames by the British. The Assistant Managing Director is Tom, the Manufacturing Engineering Department Senior Manager is Joe and the Design and Development Department Senior Manager is Tats.

him, how he understands correctly, how he accepts our requirement, if he refuses that of course I cannot push for him to explain to the people. First of all I have to discuss with Mike Cockerill, about schedule, plan or strategy.

Q. But if he refuses, would you try to discuss with him again?

A. He should have his own idea. If that is acceptable I apply that. He cannot only refuse. He should have his own opinion.(...)

(talking about conflicts within his department) As far as my department is concerned we never had big conflict internally, because he (Mike Cockerill) is capable through discussion, they find always a solution, not solution but a way of tackling the point. Normally Mike Cockerill is coping with any kind of internal conflict, British engineers, he is coping, I think, with that, without my knowing that, he is managing, I think. Quite much I'm aware of the problem or the solution. But as far as I know, don't think there is such a problem in our department. But without my knowing that he might have (laughs) been dealing with that successfully, not sure of that. If he has difficulty in sorting out such aspect he definitely comes to me, but he hasn't come to me, that means we didn't have such a big problem in the past, I believe."

And the same sort of behaviour happens in relation to manufacturing issues, where the Assistant Managing Director discusses with the head of the Manufacturing Department, who is British, about the implementation of some of his ideas:

"So, I think that in that sense Tom and his team are the ones bringing the new ideas, but it does use the senior manager up there, Neil Lancaster, quite a lot to sound off ideas and Neil can steer him towards what he thinks would be an acceptable compromise for the manufacturing method." (Personnel Director - British)

On the other hand, at the Design and Development Department the absence of such British manager has made the relationship between the Japanese senior manager and the team much more difficult. That will be discussed later in this chapter during the description of the establishment of local design at TCP. But it is relevant to say here that, after three and a half years, the ACD decided to hire a British manager to occupy that position at the Design and Developing Department.

#### 4.3.5 Cultural Differences and Teamwork

Although communication is regarded by the Japanese managers as the main difficulty they face, some cultural differences in relation to the relationship between the individual and the group were also mentioned as problematic when considering their impact on teamwork:

"Also there are difficulties... their individuality. We Japanese understand automatically in such a company group, or inside group, for example Manufacturing Engineering Department is a group, so automatically we identify the role of the manager, role of sub manager, role of senior engineer, etc. Automatically we are ready to co-operate, to contribute to the group, but British people might acknowledge the group as the place where they work together. Also they belong to the group, but their recognition is to work

together, not to contribute to the group to create more power than individual effort. Just recognition is different. My manager understands quite well. But although they work together but still they are independent. In Japan if someone can not perform well they try to help internally, automatically, or so of course team leader requires that or try to manage that. They are ready to do that, mutually help. But here, in a sense, they are working in the group but independently. So that's why even manager understands their role simple as a manager, they accept their position. That's why our expectation to the manager is sometimes different from their understanding. To co-ordinate total organization is our, Japanese, expectation to the manager. But their recognition is simple the role of manager, not total organizer. That position, only senior manager, that position manager position, not a kind of total organizer. That is sometimes different." (Manufacturing Engineering Department Senior Manager ACD - Japanese)

And the same on cultural differences in relation to school education and hierarchy:

"When I came here firstly British people made excuses many times. Sometimes that is correct, but sometimes not. Because they are told in school to present their opinion. Always making a presentation. They are required in school. They are also required to make presentations at school, so they get used to it. That's why if they are requested to give an opinion they keep talking, but Japanese people are not good at keep talking. They consider in their minds and without making presentation they do, normally. But here they make presentation first of all, whatever they do, normally. Many times they make their own presentation, for example, by presenting this single thing (showing a small cup of milk) they make their presentation "This is made of such and such...". Quite many presentations they get used to do. But we Japanese "This is only milk cup, that's it", and they consider in their minds many things but they are not good at presenting their thoughts verbally and they try to take action without making presentation so much, normally. That's why in the meeting we Japanese people are normally quite calm and think in our minds and try to take action without making a full presentation. "OK, I understood what is required" and take action, but British people make discussions quite long, if we don't stop them, they will continue discussion. That sounds a kind of excuse or negative sometimes. "Why do they give such opinion to us, do that first" sometimes we want to say. That is a difference.

Q. How do you think is possible to have teamwork if you don't present your ideas verbally?

A. That is a difference from Japan. In Japan senior manager or top management, senior manager, manager and sub manager their structure is quite... in a sense not feudalism, but the structure is quite strong, that's why, for example I'm manager and you are my people "Please do that" and you do that without complaining, without moaning, you might ask slight things but from experience you understand what I want and then, without making presentation you take action, extremely speaking, if the boss requires "Do that". Even if internally, in your main (?) if you are against that, still superficially you follow that quickly. Here in the UK you say "Why is that?", evenly you ask to me. Recognition of senior manager, managers are different in Japan, their word is quite strong, but here, you always try to make presentation whoever towards MD, AMD, senior managers. Does not matter always you are in a even position. But in Japan is like that (showing different levels with his hands), so they (upper position) require that, they (lower position) do that. But here is always like that (same levels), the role is different, manager, senior manager, but position, in a sense, is the same. That's why they try to say something always "Why do you require that? Why that?". "Shut up, you do that" I want to say so, but in Japan they don't ask that "Oh, he is requesting me, I feel very strange but the boss is requesting that, so that's why I'll take action" that is a normal Japanese style. As I said, wherever you go you belong to a certain group, society, automatically

there is a leader. Leader requires something and they follow. In the school teacher and student, sports club captain and team member or director and member, company boss and subordinate, wherever you go there is this relation. So they are not given to give their own opinion, presentation, so frequently, they are required and follow." (Manufacturing Engineering Department Senior Manager ACD - Japanese)

Such perception of cultural differences is, as with any perception, dependent on each individual. In this case, the Japanese manager who gave all comments above was spontaneously mentioned by the large majority of the interviewees as someone who is particularly aware of such differences and also very capable of handling them, being specially well regarded by the British members of TCP. But, independently of nationality or awareness of cultural differences, a factor which was widely mentioned as essential for smoothing difficulties related to cultural differences was time:

"I think time creates a situation where you better understand each others personalities and likes and dislikes, all those things I think help. Something is going and said (?), some of the irritations I suspect still remain. Other things, a necessity, you have to work together, hopefully by demonstration you can see from both sides the level of commitment, a level of expertise so, by that ... (?) you really effect (?), earn, and get respect. I suppose progressively there is a bond of allegiance, if you like, born out of working with, supporting each other. And by that means you make progress. We are a more cohesive management team now that we were 3 years ago, it was rather fragmented particularly fragmented into I used to call Mafia group which is the Japanese and then the British group, there tended to be 2 factions and it was almost like a running battle. Where it got the end was an ... (?) sort of thing. If you put them into a room you guarantee, the British would line off all one side, the Japanese in the other. Nowadays they tend to integrate, which is a good sign. So, in that respect, progressively, this sort of mutual respect, understanding, whatever, has developed, and is more sort of a feeling of integration, a feeling of being part of a team, rather than being part of 2 teams, some aspects of which were in conflict." (Manufacturing Department Senior Manager ACD - British)

"I'm a very happy man, I don't have any serious problem since the establishment. There are a lot of minor problems, cross cultural, misunderstandings of each other. But they are not so serious problems. Time solves them." (Assistant Managing Director ACD - Japanese)

Nevertheless, it seems important to note that although time can make cultural differences easier to cope with, they continue to exist and be perceived by those who deal with them daily. An issue particularly emphasized by British managers was the attitude taken by the Japanese towards meetings:

"I think the Japanese style of decision making is quite often that the meeting is only to rubber stamp a decision. We have some evidence of that; Tom, as I've said strong, he'll

come to the meeting with all very clear on his own mind about what he wants to do."  
(Personnel Director - British)

"Q. When you have a meeting, would you discuss the issues openly in the meeting or would you try to reach an agreement before the meeting?"

A. Obviously and any good manager if something is likely to be contentious at a meeting you try and head it off. Any good manager will try and pre discuss. But the Japanese take it to a different stage. For me it's almost as if the Japanese use meetings differently. We as Europeans tend to discuss a meeting to discuss alternatives and to make a decision. I almost find the Japanese use a meeting to confirm a decision that's been made before you get to the meeting.

Q. So the alternatives are discussed beforehand?

A. The alternatives are discussed beforehand and they will come to the meeting with a common position. They'd prepare more and we come to a meeting to say "Well, let's brain storm, what are the alternatives?" and if someone else's alternative is selected you haven't loss face. But I think the Japanese think if someone else's alternative is selected publicly the person who is not been selected has lost face. So I still genuinely feel there are some truth that Europeans and Japanese use meetings differently. We use meetings to discuss and evolve a decision, they evolve a decision outside the meeting and the meeting confirms the decision. It's a generalization but there's a lot of truth in it."  
(Managing Director - British)

"That's you're going to a meeting, if you're going to a meeting fresh with a group of Japanese, one will speak the rest will keep quiet and you think well, what's going on. If you've got a group of Japanese and you've got a group of English, the English will ... (sounds of everybody talking a lot) arguing a hell among themselves, the English perspective for that is "There is only one guy speaking, that's the senior one the others aren't saying about a word". The Japanese interpretation is "The English have bad manners, attitude is all wrong. Instead of coming in and discussing in a meeting they're actually arguing and disagreeing, that's not constructive", that's their perspective. When in fact, what is happening is the English are conducting a sort of the meeting forum as they normally do, as the sort of cultural links dictate, the Japanese actually have had a pre meeting and they've decided their policy before they come into the meeting. They've decided their approach as quite in order for one person to speak, because they're all on one accord. When the English are all sort of individuals. And quite often that happens, and certainly when there is a non Japanese that seats there and listen, and they obviously have to listen very carefully sometimes, quite often you go away and you watch the face and you think "They've misunderstood", they got away and thought this "These group of English, they aren't very good managers or they aren't very good members, because their attitude, their sort of commitment is all wrong", when in fact it's just English being English and Japanese being Japanese." (Manufacturing Department Senior Manager ACD - British)

#### 4.3.6 Work Routines

Even within teams made up of British workers, the working style at the ACD is very influenced by the Japanese, as managers have tried to emulate the Fuji style. The British

Senior Manager of Manufacturing Department describes the work routine within his department:

"A typical day. We start at 7:45 am, the supervisory team come in, not paid, they come in around 7:15 am. They have a meeting with the superintendents before 7:45, which is start time, they have a meeting with their respective sections, briefing on say why you are here, why a Japanese visitor, how we did yesterday, what we've got to do today, whatever it might be. And that can last 5 minutes, can last longer. And we got through the day, get to the end of the day, the same team leaders and the senior members actually will stay behind, to make sure it's clean, tidy, judge each other's areas, paperwork whatever they want doing in their own time. That is the sort team togetherness and commitment and we require they understand their areas and the individuals within it. So if someone has got a problem, maybe the wife upset them today, or the husband upset them today, or it's the day of month for the ladies, they need to understand that, because unless they understand it, they can't see if this person is fault (?), guidance, maybe this person made a mistake, it's not good going in that sort of bricks knocking round the ears, understand why they've made a mistake and try to put it right. So, they have to have a good working relationship, a mutual trust between them and the members in the section. They have to develop the confidence of those members and in that way we develop a team. We also use small group activities, so we ask for volunteers to join the small groups. They're given the opportunity of each week meeting whatever their small group is and discussing anything they want to regarding how do we improve productivity or safety or whatever they want to promote, basically. (...) From our side we stop half day a month, we actually stop producing, but everyone participating in cleaning, and tiding and maintaining, that's ... (?) the company commitment against what we were saying "You must do as part of you job on an everyday basis", but that's why I'm saying about everywhere is this need to draw wherever you can, anyway, a balance between what you're demanding and what you're prepared to give. If it's all demand then it won't happen, so it's a very difficult path, one you can fall off quite easily, but wherever possible we try to draw that balance of give and take. And in doing so, hopefully get everyone marching in the same direction. And what we have to do also is keep, maintaining interest in their work, you have to keep altering things and directions, to keep people's interests, otherwise what you're doing this week fall by the way side (?). Having said all that, quite honestly if we sat back and supervision, just let it running so, management by the run itself, it would revert very quickly to a traditional so called British company, it wouldn't get clean up and the rules would be flouted, and other things would go with it, so there is a lot of hard work that goes into maintaining the disciplines. And if where else (?) to be honest what I'd love to say to you everyone in here participates as a team member, but the reality is that there are a number of people who doing what we do won't ever participate as a team member. Although during the interviewing process we've been appendage (?) to try to select people who we think have a sort of the background and personality that will become a good team member, a good communicator. We try to sort of ... (?) at the interview stage. But as ever you're not always successful, sometimes you pick a wrong. But, in general terms they are an extremely good rated people. Probably we think more of them that they think we think of them, actually."

The small group activities mentioned above is a Japanese practice adopted in both divisions and is responsible for a number of productivity improvements during the years. According to

the Managing Director, most of the technical and production problems faced by the company have been solved by the small groups.

The Japanese managers emphasized other routines they would like to see the locals adopting. That was particularly the case of planning, where two top Japanese managers at the ACD mentioned the same cycle:

"Manager also, for instance, engineering staff manager have to make their master schedule at first. For instance I always say half year target or something, and then any manager or staff have to make much more break down by their own way, to make master schedule, monthly schedule, weekly schedule. But I think British people are very difficult to make so correct master schedule. This is one of the management style... in Japan. But I think it is much effective than any other country. When I came here, nobody made their plan, nobody had their plan. So, only top down, top down, much different organization here. The organization have to be like a pyramid. And also plan-do-see and recycle plan. Do means act, see means review. And back to plan, as a cycle. I think people here are improving but is very difficult their achievement compared to my expected delivery. That's a challenge point." (Assistant Managing Director ACD)

"Also, I said, practical target I establish, but more put in practice how they (members of his division) should do, when they should achieve, such practical details, they consider themselves. Plan-do-see cycle. Plan-do-see, practical they have to establish themselves. Still I give them the basic practical target. The purely practical schedule plan items, they have to establish themselves and also I verify that, whether or not to meet the established target schedule, whether or not it meets my requirement. So top management give us just idea of target." (Manufacturing Engineering Department Senior Manager ACD)

Also for documentation of technical issues, the Japanese have tried to establish routines for recording and retrieving information. The rationale of such attempt is that by recording experiences related to technical problem solving it should be possible both to avoid incurring in the same problem in the future and to let other people within the company know about those problems. As in other issues, they see a difference between their behaviour and that from the British. An example:

"At the moment, for example, we had various problems on pin press tooling. I always keep the daily diary regarding to ... (?) matters. I always keep diary about what ... (he showed me his folder with many of hand written notes, including drawings of equipment. It looked extremely tidy, but everything was written in Japanese, therefore I couldn't read.). I don't mind keep the record of discussion, interview with you, 10 of October I had the interview with you, such, such, such, not many details, just what happened. Sometimes in detail, for example, a picture also for me to remember myself of what happened, how we dealt with the problem later. I'm always trying to keep the record or a remainder. I don't think they do.

Q. Is this an individual characteristic of yourself? You do this because you like to do this, you think is important...

A. I can't remember everything. Simple, it's simple. For me to remind myself, "Ah, in the past we had a similar problem, we dealt with that", but they think they remember. I don't think they can remember everything. So, I want them to keep similar record and not always they do. So, that is a bit disappointment for me. But anyhow, they are dealing with any repeated problem (laughs). Maintenance side yes, they have got records, maintenance of machinery. But I don't think they keep record in the same level as me.

Q. Which type of issues or questions you keep record of, only technical?

A. Only technical, management side normally I remember, he remembers (the Assistant Managing Director ACD). Management side I do not keep the record. Should be here (in the head) all the time. But technical matter many many details there are, I can't remember. So I try to keep the key points, how we dealt with that." (Manufacturing Engineering Department Senior Manager ACD - Japanese)

#### 4.3.7 Localizing Management

After few years of the establishment of the ACD, one of the main concerns of its managers is the localization of management. There are several reasons which justify such localization, the most prominent being: a) the financial cost of having Japanese managers, due to their high salaries, which is aggravated by the continuous appreciation of the yen in the last few years; b) the fact that a local manager will probably have an easier relationship with his subordinates; and c) as the Japanese managers are regularly substituted every few years, there is a risk of losing continuity in the management of the division.

Localization does not mean that there will be no Japanese at the ACD, but a fewer number of them. The localization of management is a pattern already followed at the AVD where, even with a majority presence of British managers since its outset, the number of Japanese members have been reduced during the years. They now usually work as advisors in the technical functions. However, the positions of head of each of the two divisions of TCP (the Assistant Managing Directors) tend to be occupied by Japanese managers.

A British manager at the ACD who has previously worked at the AVD confirmed the changes in the style after most Japanese pulled out:

"I've worked at the AV site, I think, when there was more Japanese influence than there is now, because when we worked at the AV site there was a greater Japanese presence, because it was just going from Rank Television set to Toshiba television manufacture. So they obviously wanted to set their own standards all, clear all the old British ... (?) "This is gonna be Japanese", so it's a bit more presence there then. To be honest with you, I believe that the AV organization from the Japanese influence is been diluted now,

and it's more influenced by British members. The Japanese support, OK? So in fact we've got now Kobayashi (the Assistant Managing Director AVD) in the ... (?) really, but there is in parallel a strong British management, therefore their point of view emerges, I think, perhaps a bit more strongly. Here, we're tied more to the Japanese line here, I would say, than the AV at the moment."

The Japanese seem keen to promote localization of management and are aware that that means a stronger British style of operation. However, they also seem to want the ACD keeping its foundation on a Japanese style. The Assistant Managing Director ACD explains how he thinks it would be possible to achieve such blend:

"Organization basis, important thing for this company is to have strong leadership person. Absolutely necessary. Not myself, local people. Not so many, key positions. Such sort of person is much important, to have a strong team leadership. And also such sort of people should better understand, sometimes, not only British culture, they have to study cross culture. They might have an opportunity to study Japanese culture and Toshiba organization in Japan. Because Toshiba itself has training course, 2 people here already went to Japan for that sort of training. One is senior manager Neil Lancaster, probably you will interview him, other one is Mr Mike Cockerill, he is manager of Manufacturing Engineering department. Because many methods of technology philosophy are based on Japanese culture, sometimes are very difficult to understand by British people. So therefore I think it's better to understand, not only submit to Japanese methods, so background, it's better to understand the background and it's easier to modify by British brain. At first they have to understand the background of the method, sometimes it's a much strict procedure but people here can not understand, but some key person have to understand the background, it's easier to transfer to give through to all members. That's important. Not only technology wide, everything."

Also the Personnel Director of TCP is concerned about preparing the local managers to assume a broader role at the ACD:

"But what I was trying to lead to in the team issue, I think we've been Japan led and I think now increasingly there is a desire from the Japanese who are here to say, look in the long run it's got to be more of a blended operation than it's been. So I think the Japanese are trying to pull back. But I think in that respect also I've recognized it and I've set up a course on understanding the Japanese which is about to run in November for all of the UK people there. Seems to be late in the day almost, it's something I should have done years ago.

Q. Would this be for all the people?

A. No, it will be for all the managers. The UK managers in team will spend a couple of days really to try to understand what makes the Japanese tic, so that in future dealings we can get the best result possible from any meetings or team activities.

Q. Why did you decide to set up the course?

A. It came out of a survey, we've been doing an Investors in People award, which in the UK is a quality standard for the way people are handled. One of the things that came out of that was the feeling, this was picked up by the consultant perhaps more visibly than we've noticed it, that really there is a need to get a better understanding of how the

Japanese work. People don't really seem to appreciate how the Japanese solve problems, what meetings are about, what it is that motivates and drives the Japanese when they're abroad and so on. And so I've set these two day sessions up, to try and say right, let's just explore all aspects of that. And to me it's a leading also to a team building exercise, it's a sort of a first step of a two or three stage process where ultimately everyone will work together and be able to communicate more clearly what they're thinking, what they're intending, so that the UK managers can take a bigger role in running that site. Because I think in cost terms we will have to, the cost of employing a Japanese is massive. Every Japanese we have here costs as much as sort of half a dozen local people, so it's important to try to get that cost down as much as possible."

One of the worries of the Japanese in relation to localizing of management is the existence of an age gap between the current British managers of the ACD and the young engineers. Most of the managers have been with TCP since it started operations and, before that, used to work at Rank-Toshiba. Their average age is now fifty years old. On the other hand, there are quite a few recently graduated engineers at the division, and almost no middle managers between the two groups. Hence the concern of the Japanese about the difficulty in replacing the current managers when they retire, as the engineers are not experienced enough to take those positions. One response to the problem has been to hire some managers to fill positions where there is a clear necessity, but the preferred path is to develop the young engineers until they are ready to take up managerial positions. That can require a longer stay of Japanese people in line management positions and, as a consequence, the substitution of the current Japanese by colleagues coming from Japan. The Manufacturing Engineering Department Senior Manager ACD anticipates some of the possible difficulties:

"Q. Returning to the question of culture, do you think if a Japanese manager comes in your place or in other place, as you said, do you think he would have the same problems about culture or, with your experience here could you try to transmit to him part of your experience?

A. Of course I would hand over my experience in technology side, management side, everything, I would try to hand over to him through certain period, 2 months, 3 months, 4 months, I'm not sure, depending on Japan arrangement. But I don't think he can understand fully all of them because, I said, after 3 years I came here I realized exact meaning of cultural difference. I don't think I can do that, to let him understand for such a short period. Basically, I can give certain pre-knowledge to him, but still he has to learn himself. 1 year, 2 years, still it may take time. That means we loose continuity, definitely we loose continuity between me and next person. That's is my concern, also his concern (pointing to Tom's office). But sometime we have to accept that. That's why other than expecting the same level of management by Japanese people, we better expect British people to be strong enough to carry on the same development management, even we change Japanese people frequently. So that's why localization is important, not only practical aspect but also management side. The same policy should be kept, the same technology level should be kept, the same level of various manufacturing activity should be kept, the same level of management, finally, should be kept even we change Japanese

people frequently. That is ideal situation isn't it? And then one after another, new fresh air Japanese member can bring, new fresh air or further expectation or further challenge, but basic management, or practical management should be kept by British people. But it may take long, more 10 years, 20 years, not by only 3 - 4 years, I think."

The Managing Director also sees difficulties with the substitution of Japanese managers:

"I find the first year of the Japanese here, we are educating them. They can obviously bring a specific contribution, because they're very skilled and capable people, but they're not really performing until their second year in the sense of an English management team."

Such feeling is further strengthened by the perception that, with time, expatriate managers tend to assume more of a local view of the business, as opposed to a headquarters view.

Again the Managing Director:

"What is evolving now, I find, is that the Japanese are more on our side against the parent company in Japan than they were originally. Because at the early stages of the project, whatever came out from Japan was the Bible. But now they are prepared to say "Well, this is not needed in Plymouth". Whether that's because they've become more used to the UK or whether they've altered their mental outlook or what, I don't know. But they don't automatically support what comes out from Japan whereas before they used to, always. If Japan said "This has to be done by July 95", it had to be done by July 95. Now they will say "They're saying in Japan this has to be done by July 95 but it isn't really necessary. What's best for the business here?". So, there has been a subtle evolution, I think, in looking at things. It's not becoming English - Japanese, it's becoming the team in Plymouth against Toshiba in Japan."

That perception seems to be supported when we read what the Assistant Managing Director ACD says in regard to his concerns about TCP:

"The company itself seems to be independent. But we are one part of the family, Toshiba group. So many decisions from outside this company, that is a concerning point. Difficult to say more details for you but, please, imagine. Because Toshiba total group company is very huge. Many demands from Tokyo. Personally I'm a much independent person compared to the average Japanese. So sometimes there are discussion but sometimes I have to submit to their demand. Between Tokyo Toshiba in Japan, they are a very huge organization. But here it is a very small organization, as a family basis. So must adapt, not only cross culture. Head office people are 99.99999% Japanese nationality. They are thinking by Japanese only. Sometimes demand. Even if their brain were English, I think it's very difficult to submit, for us. Many demands. It creates many problems for myself because I'm a representative in this factory."

Each substitution of a Japanese by another Japanese could then represent that this sort of local view would go back to a headquarters view, until the new manager gets used with the local operation, but by then it would be his time to be replaced.

#### 4.3.8 Inter-site Conflicts

An issue repeatedly mentioned during the interviews was the existence of conflicts in the ACD Board meetings. The main reason for that is the fact that three of the board members are based at the AVD site and do not frequently go to the ACD site. Such behaviour has caused some resentment in the members of the ACD Board who are based at the ACD site.

Whilst some of the members based at the AVD acknowledge the necessity for them to be more frequently present at the ACD site, which coincides with the perception of the members based at the ACD, their rationale for such necessity is different:

"There occasionally are crunch issues over, is very easy for us all not go to the AC, be down here, all my work comes to me across the desk and the feeling from AC people is, well I'm not working for them if I'm not up there. The fact that I might be working on the pension scheme or environmental matters or health and safety matters company wide is irrelevant for them if I'm not physically seen up there then I'm not really on the team. So, it's important for all of us, Finance Director, me, MD, to spend time at the AC. We're measured more on the fact that we're seen around the factory than what actually we're doing. And so, those issues are the team ones. Trying to get close to the AC management isn't that easy because in the end we have still got a job to do, we've all got to solve company wide problems that aren't just the AC problems. And I do a lot of other things, PR things and aspects that seem to link close to the other site, but do need to be done by somebody. It's very difficult to maintain a presence in the AC.

Q. But, are you actually planning...

A. Yes, my commitment certainly is to spend at least half a day at AC every week, just being seen, doing things, even if I just sit there working, I want to do that.

Q. But do you think that people there would see this in which way?

A. They do need that. My experience at large has always been that small sites do feel threatened by larger sites, and then unless you can keep demonstrating all the time as they close (?), you don't pick up the underlining, sort of state of play. You don't know what people are really thinking and it is easy for that site to start to get very negative towards this site and feel it's being ignored, not listen to. (...)

But the Board meetings aren't that open, they are I guess more Japanese, in that I think my understanding of Japanese meetings is the time you get to the meeting you don't raise all sort of new issues and embarrass people. You've generally trashed out the issue before the meeting and the meeting is only really to sign it up." (Personnel Director - British - AVD based)

"...I've got to spend time up there, I don't spend as much time as I should, quite frankly, but I like to walk to someone's desk and sit down and get an update." (Managing Director - British - AVD based)

"And we (the ACD Board) meet twice a month, one for operational purposes, the other for financial results purposes, or more frequently whenever necessary. We discuss all aspects of the company. Past, current, the future, planning. Interesting, sometimes, because three of the members are basically AV based, so their conversation tends to be very AV oriented, which obviously causes irritation to the AC members, who see the

board as being AC, of course. So, quite often there is short interchange because when you've got the AV people, or the joint board members who were supposed to be better acquainted with what's happening here and clearly aren't, coming up with silly suggestions. Yeah, it leads for a large meeting sometimes (?) (laughs). (...) We (members of the ACD Board based at the ACD) also actually, outside of that have a senior manager meeting. So, my Japanese colleagues, and the accountant actually, we meet once a week usually we work four to five days a week, this week four days, this week five days. The last day of any particular week, 8:00 in the morning, we'll meet as a senior management group, and discuss what's going on. Actually is the problems, because quite a few of the things would otherwise be discussed at the board, get discussed and decided at this meeting, you see, so when you go to the board meeting everything is pre ordained. These other three guys haven't been part of that, you see. (...)

Q. So when there is this AC Board meeting, it's interesting because it looks like that there is more differences between one site and the other than between Japanese and British.

A. I think that is true, actually. There is more difference between the representatives that come across from the other division, that there are between the representatives who come from the same division, albeit they are different nationalities. There is a more of a common accord between those (AC) than within the other three (AV - AC). But most of that is born out of the fact that in theory the other three should spend time here every week, operating. For whatever reason it doesn't happen. So, therefore there are things naturally they are excluded from, there are things where naturally they would have understanding they clearly don't have it, because they don't spend enough time here to ... you know, we start our meeting at eight o'clock and they arrive at five to eight. In fact we start a quarter to eight. And then they expect to go ... (?) at the meeting without any preparation, or if you like, the personnel person might go to our personnel person side here and say, well you know "What are the issues, what should I be briefed on", five minutes briefing and then comes to the board meeting talk about personnel matters, and there is a lot of "Come on, you are not really participating, you're joining us but you're not really participating". That often gives rise to a sort of petulance, depending on the subjects that are covered." (Manufacturing Department Senior Manager ACD - British)

#### 4.3.9 Performance of the ACD and Consequences for People

Since the start of operations at the ACD, there have been changes in the environment caused mainly by three factors. Firstly, the continuous appreciation of the yen in relation to the pound has made the importance of increasing local content in the products much higher.

Secondly, the economic recession in Europe in the early 1990's had as a consequence a lower demand for air conditioners than was initially envisaged by Toshiba when it decided to set up the manufacturing unit in Plymouth. In order to keep the factory busy, Toshiba Japan diverted to TCP some production volume from its Fuji factory which was destined to the Middle East market. As the models produced for that market are different from the ones that

TCP produces for Europe, the company has had to expand its model range much earlier than it was previously planned, from 25 to 34 models. That has represented a technical challenge for the members of TCP, but the results have been considered good. A characteristic particularly praised by managers at TCP has been the flexibility shown by the workforce on adapting to the new production requirements.

Thirdly, the environmental situation has got harder than it was anticipated by the company. The production of air conditioners involves the use of non environmental friendly solvents. Since the Montreal Protocol the world wide environmental legislation is getting tougher and Toshiba Japan wants its subsidiaries to meet the environmental targets well before the legislation deadlines. That has also represented technical and financial challenges for TCP, as it needs to adopt new and more expensive methods of production.

However, with regard to the performance of the ACD during its first three and a half years, it was considered satisfactory by managers at TCP. According to one of the Japanese managers at the ACD, by the end of 1994 the division was already two years ahead in terms of general development of what had been planned before starting operations.

To conclude the description of this process, managers were asked about what they think they have learned from and also what were the consequences of the establishment of the ACD. In general, the consequences were related to the performance of the division and that was assessed as good. Although the business did not grow as it was initially expected, volumes were growing and the profit margin was better than the TV business. As the technical development was being regarded as sound and the division is still very young, all interviewees were optimistic in relation to the future of the ACD. A particularly interesting comment was made by the Managing Director about the fact that the microwave oven and the TV business were much closer than the air conditioner and the TV. Thus, although the success of the ACD was putting TCP in a much stronger position, his personal task of managing the two divisions as a single company had been made more difficult.

In relation to what people think they have learned from the experience, the Japanese managers usually drew comparisons with their previous experience in Japan. In this sense,

their role in Plymouth is much wider than what it used to be in Japan mainly because in a smaller unit people are responsible for a broader range of tasks. They also emphasized the importance of communication for overcoming cross cultural difficulties. The Assistant Managing Director ACD expressed disappointment with the relationship with suppliers in the UK. He compared this with the situation in Japan where big companies like Toshiba can make demands which are attended by its suppliers, whereas in the UK the relationship is more equal, with suppliers sometimes refusing to accept TCP's demands in relation to quality and delivery time. The following comment illustrates this problem:

"Very difficult. Internally we can manage, but outside is very difficult to understand their meaning."

On the other hand, British managers consistently emphasized the importance given to people as something they have learned during their experience in the process:

"...I've learned it's a lesson that is so very very true is that you can only achieve results through people and even though at times still the Japanese AC team have been difficult, you have to go out of your way to work as a team and they come part way to you and you come part way to them. I do find myself having to adopt a different approach, and a different realism to dealing with the AC division comparing to dealing with the TV division." (Managing Director)

"So, I think the analysis, the way in which you look at something which is going wrong and you put it right, the forward planning, not making changes without fully investigating the whys and wheres forcing making that change. Valuing people. (...) before then, so tended to get more tied up in what's going on, but not standing back, thinking about who is actually doing it and, you know, what are their needs and aspirations. (...) I don't think the exposure within another British company would have give me some of the attributes that I hope I have now. (...) (talking about cross cultural relationships) The willingness to listen, to examine your own motives as well as theirs, to understand there are two sides to every discussion, every argument, and to try to be sympathetic to the other person's point of view as your own.... And understanding that you're dealing with not only individuals of different nationalities but personalities as well, that personalities can make nationality substantially more difficult to get the relationship going in an effective manner. It's down to individuals to be committed to work together. So, primarily on this site, the prerequisite for every individual is to be willing to work as part of and contribute to the team." (Manufacturing Department Senior Manager ACD)

"I suppose, in a sense, I've learned to be more, perhaps... cost conscious and conscious of the fact that everybody's got to contribute, got to get people to contribute as much as possible during the day and be available for as many hours as is possible. That type of thing. Some of the other organizations, Rank and perhaps BAC to some extent, there were always what I call surplus people. People who do half a job. Because you've grown up in those organizations you tend to neglect the fact that they're like that, tolerate them, in a sense. So, ... (?) not think I'm intolerant to such situations but you've been working with the Japanese for a long time you begin to learn that if the organization is gonna to

survive and protect everybody, those people have rather got to be filled with work or whatever, so I like to think that everybody is fully employed. So I've learned, I suppose, in a way to make sure that people's day is a full up with work." (Manager at Manufacturing Engineering Department ACD)

#### **4.4 Establishing the Local Design Centres**

In the early 1990's Toshiba decided that in some regions of the world it should set up entire business operations, reducing their dependence from the headquarters in Japan. For TCP, one of the consequences of this decision was the establishment of design centres in its two divisions. At the AVD, there was already a group of experienced engineers working with design for four years but it only became an official design department in 1991. At the ACD, there was an Engineering department which was headed by a Japanese manager who used to work with design in Japan before going to Plymouth. In 1992, the name of the department was changed to Design and Development and its engineers started to work with design. That work, like the one at the AVD, is mainly related to the internal design of products. This section describes the processes of setting up the design departments and the consequences for TCP.

##### **4.4.1 The Immediate Context - Reasons for Localizing Design**

When Toshiba decided to establish the design centres in Plymouth, the Japanese economy was going through a very prosperous period and the company was facing difficulties in finding enough design engineers to attend its demand. The large majority of recent graduates could easily find jobs and many engineers were opting for working in sectors which were paying higher salaries like banks and insurance companies. The design engineers at Toshiba Japan were being stretched to the limit in order to attend the demands coming from different markets around the world.

In the case of TV, there was another fact added to the lack of engineering resources for making stronger the point for decentralizing the design activity. In some advanced markets, there was a growing demand for more sophisticated TV models which represent a larger

profit margin for producers. As the market for TVs is very competitive everywhere, Toshiba needed to have its more experienced design engineers in Japan dedicated to such models. However, at that moment, those engineers were frequently busy with different activities like designing simpler models to developing markets or making small modifications in some models to suit specific markets. With the difficulties in hiring new design engineers in Japan, the option of shifting some of the simpler tasks to subsidiaries became very attractive.

The already mentioned appreciation of the Japanese yen also reinforced that option as the salaries of Japanese engineers were becoming unrelentingly higher than those of local engineers working in subsidiaries of Toshiba. Another consequence of currency fluctuations was that everything exported from Japan was becoming more expensive. Hence, the substitution of Japanese components by local parts was another way of reducing local production costs. However, any change of components represented a series of quality tests and, frequently, some small changes in the design of the product which, again, overburdened the design engineers in Japan. This was one more reason for localizing such design tasks.

At the local level, having design engineers would also bring a series of benefits for subsidiaries. In first place, as design engineers have to have a thorough knowledge of the sets produced, their presence at the company makes it easier for solving some manufacturing problems. Secondly, as it was mentioned above, their presence also makes localization of parts an easier and faster task, as they can visit local suppliers, discuss technical specifications and, if necessary, make at least some of the design changes in the sets produced. Thirdly, subsidiaries frequently face the situation where the market requires products more suitable to local conditions which demand small design changes. As the local design teams develop technically, they become gradually more capable to undertake such changes, both faster and cheaper than if they were sent abroad to be made at the headquarters.

In the case of TV in Europe, another development which has justified the start of design activities at TCP is the development of new broadcasting standards. There are committees in Europe which are discussing a possible common standard for digital television, and the main European TV manufacturers take part in such committees. Thus, if a standard is agreed, those companies will have an advantage over their competitors as they will know all technical

information beforehand and will be able to develop equipment for such standard in advance. Toshiba, as a Japanese manufacturer, has no seat in those committees, but it has business relationships with many of the European manufacturers who supply components for TCP. The design engineers who work locally can, through contacts with those manufacturers, get some information about the new standards and feed such information back to Japan, leaving Toshiba in a better competitive position than it would be without any information. The Engineering Director AVD explains:

"it's easy to imagine that you can first of all localize the manufacturing because logistically that makes sense, but after a while you have to localize the design also, I think, because the market is developing and you have to understand the market and respond to the market, and you can only do that with the technical people who can do the design. It's all very well, you can take a liaison man for a while and he can feed back information, but you only really learn when you start to interact, just listening isn't good enough."

Specifically in the UK, TCP was facing some difficulties with the Income Tax Authority in relation to the amount of money sent to Japan as payment for royalties and technical support. According to the Tax Authority the company was sending more money to Japan than it was getting back in terms of engineering design and support. A way out of that contention was to have at least part of the design made locally. Thus, a series of global and local reasons were added to justify the establishment of the design centres in Plymouth.

#### **4.4.2 Forming the Design Teams**

The choice of engineers to work with design was similar in both divisions of TCP. At the AVD, there were already some experienced design engineers but when the Design Department was officially set up they were moved to different functions within the company. According to the Engineering Director, he opted to have recent graduated engineers working with design because they would be more keen to follow instructions coming from Japan. At the ACD, there were also two experienced engineers working at the then named Engineering Department. However, as soon as two recent graduated engineers came back from a period of training in Japan, the other two were moved to the Manufacturing Engineering Department. The previous Engineering Department was renamed Design and Development Department,

comprising only a Japanese senior manager, the two recent graduated engineers and one student.

In both divisions the design departments are headed by Japanese managers. One of the main reasons for that is the importance of communication with Japan during that initial stage of design at TCP. Such communication is mainly made by the Japanese managers. Also, all drawings coming from Japan to TCP are written in Japanese and the company needs people who can read them. Another important reason is that, with teams formed by young engineers, their formation is considered essential for the success of the localization process. The two Japanese managers are very experienced design engineers and can co-ordinate and train the local engineers in their jobs.

In relation to the structure of the design departments, at the AVD there is one experienced engineer at the design team who has worked as a middle manager between the Japanese manager and the team, in the same line as described in section 4.3.4 above. At the ACD, the company was in the process of recruiting an engineer who would take a similar role. This will be described with more detail later in this section.

When selecting engineers to work with design, besides requiring a good academic record the company has given preference to people who live locally. The training for design is both long and costly and TCP is afraid of losing people after they get some experience with design. Thus, there is an expectation that people who have always lived locally will be more keen to stay with the company, even if they can find other jobs which pay better salaries. For the Japanese managers that is not only a serious concern but also a certain surprise for in Japan it is more difficult for people to change jobs than in the UK. Those managers however consider that salaries for engineers are low in the UK in general and particularly in the West Country. That issue makes the risk of losing well trained personnel even higher.

#### **4.4.3 Training**

Some of the design engineers had their initial training in Japan. According to an engineer at the ACD, his training was divided in stages, the first being a view of all departments in the

factory where he was working at. Next, he started to work in a department with eight Japanese engineers who helped him to understand all the control systems in an air conditioner. They also took him to different suppliers who explained which were the important characteristics of components he should look for when choosing a supplier in the UK. Another stage was for him to assemble an entire simulated air conditioner set in order to understand each step of the process. When he came back to TCP, the company was starting to manufacture the first air conditioners, under the supervision from people who came from Japan. That was a sort of continuity of training as the Japanese would carefully disassemble each unit looking for mistakes and, in the event of finding them, would explain which were the problems.

After that initial period, training for the design engineers has been mostly on the job. The role of the Japanese managers at both departments has been fundamental for such training. At the ACD, the Design and Development manager emphasized the importance for engineers to understand the processes involved in their jobs and not only which the desired outcomes are:

“Q. How is the day by day work? How do the young engineers learn to design?

A. Basically on the job training, do you understand?, OJT. If a young engineer has some problem he would ask to me. But I never give them the quick answer, I always ask them "Please, consider by yourself at first and make some answer by yourself, and after that ask me". I never gave them the quick answer, no good.

Q. Why do you think it's not good?

A. That is a training. If they know that result, only result, that's not the experience. They have to get the procedure, how to solve the problem. That's very important, result is not so important.

Q. Do you think they could take too much time trying to learn the procedures?

A. Yes.

Q. What would happen with the result if they spend too much time?

A. No problem. This is how to grow up a young engineer.”

Although the engineers in the beginning did not like such approach from the manager, they tend to appreciate it as they get more experience:

“So if you come up with something he'll (the manager) just say, "Please try", even if he thinks it will not work, he is still saying "Please, try it" and you can see the work for yourself, why it won't work or whatever. So it's encouraged to if you've got an idea to try that and see if it's gonna be any good.” (Engineer at Design and Development Department ACD)

At the AVD the procedure is similar, with some engineers being sent to Japan for long periods of training. For instance, few months before the interviews one engineer had spent six

months in Japan following the development of a new TV model. The Engineering Director was expecting that he could do a similar job back at TCP, although his work would have to be sent to Japan for a final approval. The Director also expected that within some years they could develop a model at TCP without it having to be checked in Japan.

#### 4.4.4 Teamwork and Communication

The design activity is related to many other activities within and outside the company. Inside, design engineers are in close contact with colleagues from both manufacturing and quality departments, aiming at developing products which are easy and cheap to assemble, and which also meet required quality standards. Outside, they are in contact with suppliers for specifying and choosing components, and with the sales company in order to attend requirements from the market. Moreover, within the design departments themselves, engineers frequently work in groups when designing a new product or a modification in a current product. Therefore, the ability to work in teams is important for those professionals.

The introduction of a new model is an example of teamwork, where a project leader is appointed by the design manager and is responsible for co-ordinating the whole project. Such activity includes assigning tasks for members of different departments, determining the components which will be bought locally and, consequently, which suppliers need to be contacted, agreeing with the sales company dates for launching the product, and, chiefly, checking whether each participant of the project team is doing his task according to the schedule. At the ACD the Japanese manager usually assign that position of project leader to a different engineer each time.

According to one engineer they try to do their jobs without asking the manager for help. That would occur only when they see that the deadline is under the risk of being missed. That behaviour, where each member of the team knows his responsibility, is considered important for successful teamwork. Even so, the Engineering Director AVD considers that there still is a difference between the British and Japanese concerning that issue:

“... a design group although it will try to work as a whole team and although I try to keep everything, to some extent, some team identity in terms of the group, recognition of everybody's individual responsibility is quite difficult and the Japanese people are much

better at this than the English people, anyway. They will recognize "This is my responsibility, I can do this or I must do this" and they will not steal time from other people. English people will do that, an European will also do that. For example, somebody from another area, somebody from here say "Excuse me, can you help do this" and goes on and may be half a day. That type of thing wouldn't happen in Japan, because "I can't afford", the question often wouldn't be asked because they would know "His job is important, don't interrupt him", it's quite difficult to recognize, I must admit I think myself I... I have a good memory for example for numbers, but a poor memory for addresses, so if I'm writing a... in the past I can easily imagine I would ask my colleague "What's the address of Phillips Company in London?", and OK as he tells me I write it down. Now, I wouldn't think of doing that, I would make sure I had it written, I changed my disciplines to make sure I don't take anybody else's time if I don't need it. And I think that's a Japanese way of working. So they have respect for each other's time, which I don't think is so well developed in Europe, and people are quite happy to take time from somebody else, to ask unfair questions sometimes of other people because it means they can't carry out their full job. This is a problem to some extent, because design people are always working 2 or 3 months or even a year in advance, maybe they have nothing that's essential today. So it's quite easy for somebody here (in another section) to ask for a solution from somebody there, knowing this man knows the answer, it's quite easy to ask. At sometimes there is no choice, but another times it's better for him to look longer because he has the time to do it, and he doesn't."

At the same time, members of the design departments also consider it important to be aware of what other members of the team are working at. In case of any problem occurring or a decision that need to be made and the person responsible for the area is not present, it is sometimes necessary for others to act. That can only happen if everybody is well informed about other's work. Communication then becomes an important issue. An engineer at the Design and Development Department ACD comments:

"So, one thing which we have to try to guarantee is that if you know what each other is doing then if one of them is away, somebody comes to you with a problem you say "Oh, yeah, that's because... (...) ... it's very important to try to work as a team and the biggest problem is actually try to ensure that everybody knows what's happening at the same time. So we normally discuss every day or two between us where we are, any problems we've got. Because obviously there are so many things that your task's got no problems and it turns out that it could be another two weeks for getting it and they are expecting it today."

Communication within the teams is also fostered by the requirements from both Japanese managers for engineers to write reports on any major technical issue they have been involved with. Such reports can be later used by other people for finding solutions for problems already dealt with by the team in the past or as part of a checklist of problems that should be avoided when developing a new model. An engineer observed that his manager had been

pushing strongly for the team to write such reports. The manager expresses his view on the discussion of technical issues with his team:

“Q. Is the communication more formal or informal?”

A. Basically informal. So I ask them to become formal basis. They always discuss with no data, just the brain or some guess. So, I ask them to make the report.

Q. Do you prefer to discuss in a formal way?”

A. If I hold that meeting, I already made some report. Not only talk.”

Communication between the Japanese managers and the teams is also an important issue. Although there are not too many problems in relation to technical matters, where the vocabulary is well known by everyone involved, there has been some problems in other areas. In one case, the manager is widely considered to have language difficulties and that has caused some friction with both his team and people from other departments. Within the team, time and the daily contact has smoothed out the interaction. An engineer commented that members of the team usually double check any information coming from the manager that they think may be not very clear. But he also observed that every new member who joins the team has to go through a difficult period of adaptation to the manager, usually with the help of other members. The solution found by TCP has been to hire a British manager to work between the manager and the team, in the same line as described in section 4.3.4 above. It is considered that the Japanese manager would find it easier to communicate to this local manager and let him to interact with the team and other people.

#### **4.4.5 Development of Local Design**

The development of local design has been steady at TCP in its initial years. Within the company, engineers are eager to assume responsibility for more tasks but managers have to remember that the pace of development has to be always synchronized with Japan. The undertaking of a wider number of functions, like testing local components for TVs, demands considerable investments in equipment and also an accumulation of design knowledge within the company. It is a lengthy process where long term employment of design engineers is considered essential. The presence of a Japanese specialist is expected to last for the foreseeable future. With such small and young design teams, four engineers and a student at the ACD and six engineers at the AVD, it is difficult to accumulate a large amount of

experience. A Japanese manager draws a comparison between TCP and Fukaya when a mistake occurs:

"Usually we have meetings every week (at TCP), on Monday, so we review last week's results. I never chase individual, but program we must have, we must solve. If that is human mistake maybe just forget, but even if it is a human mistake, of that was a man that made the mistake 3 times, that's something wrong. That's a mistake.

Q. If this happens now and suppose that in half an year you hire another graduate, would this person know about this thing, that there is a way, do you store the decision?

A. You mean the transference of the experience?

Q. Yes.

A. That's a problem. Because usually in Japan, the engineer tends to work for so long time, so that's the experience or knowledge of the problem, it can be transferred verbally, or face to face, so without documentation... but here without documentation it can not be transferred to the new man. That's the problem. So all such sort of example, data, reports, that must be recorded as a report. If not, everything is gone, if that man leave.

Q. In Japan would you also record as a report or not?

A. Yes. Someone knows that, anyway. If someone meets a similar problem, they can contact the man related to that. We can not record every problem, but if we have the problem in the market that must be recorded, and we create a new model, we must review, anyway, previous problems in the market. Of course, only serious problems are recorded. But when we design the chassis, we must review previous problems that we met in the field. Check, check, "That's OK, that's OK". So this is quite important.

Q. And how this process of decoding would be done, people would write?

A. Usually in the document. That is recorded for the, for example, "Problems recorded in the market". When of the design review, usually we'll do, but ... here is not quite often but in Japan usually when they design a new chassis, as a step of the checking design section must review all related problems they met in the past in the market. They check that. They must confirm that new chassis should not have such sort of problem.

So, and also because there are lot of such sort of error, hidden know how or hidden experience or such sort of things, it's now in the individual memory, that sort of thing can be transferred verbally, face to face in Japan, because engineer can work for a long time. If some engineer have some difficulty to solve the problem he can consult the experienced engineer, who had the same experience before. But here, this is quite difficult. Maybe we are working individually, basically, here. Engineer, engineer, engineer, engineer (pointing to separate places). This is my area. How to leave with such sort of worry, is quite important. But generally speaking, we can not prevent someone to leave the company, we can not stop. So we must keep records, as much as possible, of serious problems."

The same manager considers that before any expansion of the design department at the AVD he needs to establish what he calls "core engineers", people who have in-depth knowledge of their jobs, and estimates that that would take some five years more.

The influence of the Japanese managers on the engineers can be exemplified by an engineer at the ACD mentioning the same planning cycle (plan-do-see) referred to by Japanese managers on section 4.3.6 above:

"I think I've learned to tackle problems, a sort of procedures, you go and do all the test, you don't do sort of half the test and come with half the information and try to base the decision just on part of the information, sort of sit down and then try to see what happens. So it's plan-do-see, you follow that sort of procedure, which is a good thing."

Also, the incentive given by managers for people to try their own ideas have helped the build up of self-confidence by the engineers. The same engineer tells about his manager:

"Initially he would make decisions and we would have to go along with him, but now ... initially when you start working you're not too sure your level of competence or whatever so you tend to ... (?) until you judge they're doing OK, I think now they sort of say "It's up to you", but initially they sort of say "I think we're gonna do it this way", and after "It's OK" or "You need to change this". Now they say "You're an engineer, you decide". So, it's got better, sort of get more of an equal, the same as he is. Probably we still ... (?) to have a problem or not too certain. But we're get in more and more left to our own decisions. And you ... if you make a wrong decision he'll still back yourself, if you go to him he sort of say "Oh yeah, you did that, that's normal, isn't it", so you "Yeah, OK", and he "You didn't have these facts at the time when you based your decision" or "You made the right decision". So he will stand you as long as the reasons for making that decision were right in the first place. I mean, that's a good thing to know, because you can sort of go and say "OK, I made a mistake but it was because of this". It does help to have someone else alongside as well. It's good for that point."

Such accumulation of experience by local engineers has allowed them to take responsibility for an increasing number of activities, although not as fast as they would like. Even though, they acknowledge the changes, as when an engineer at the ACD says:

"I've said, with the fan motor, initially was Japan going to France and then flying back and they would discuss with France. So initially we had no idea of what was happening with all these changes, but now we discuss directly. It's good that way. So it's improving all the time. It can improve more. We haven't to stop there. Get into the circuit design and decide that for sales, obviously I need to know a lot more about it. (...) ... because we adopt the CAD system which initially all drawings were done in Japan and shipped over here but now we've actually got an exact replica of the CAD system they have in Japan. I think it costs about forty thousands pounds. So we now can understand the CADs much easier and try different things. I mean, there is an ongoing investment then, in this sort of equipment, capital. It benefits us really. I can see more things coming over here. But I said, we need the equipment but we also need the knowledge as well, I mean, Tats is very helpful, he can give us his knowledge, but sometimes we may need to go after the information in Japan..."

Q. When you have to make contacts with Japan, do you have to make them through Tats?

A. Sometimes we go through Tats because it has to go purely Japanese. So if you write a fax they can not understand, sometimes I know the person and I could fax them, but it still has to go through a liaison person to ease, he reads the faxes and then passes on to other people or come back with a reply. Sometimes, because of the time difference, we can send on at five o'clock today and tomorrow morning we can have the answer, other times it takes a bit longer, sometimes they'll ask us to carry out a test and send a report. But there is no real complains, all work is OK, there is no problem. If we need any help

they are there for us, but I see it much better than it was in the early days, we can make decisions here, a lot more now."

Thus, although being a slow process whose benefits are not immediately clear, the establishment of the design centres has put TCP in a stronger position as a manufacturing company. In the words of the Managing Director:

"It's basically engineering strength, not just in designing the product but in supporting manufacture and in supporting the market."

#### 4.5 Summary

This chapter has described two processes occurred at TCP in the last few years: the establishment of the Air Conditioner Division, and the establishment of local design at both divisions of the company. The description has also covered the most prominent values and characteristics of the company, as defined by its senior managers, and some strategic objectives of Toshiba in relation to its TV and air conditioner businesses. The main objectives of the company at the outset of each process were highlighted. Particular attention was given to the context in which the processes have developed, to the interaction between members of the teams involved in the processes, and to factors which have either facilitated or made the development of the processes difficult.

## Chapter 5

### LEARNING IN A CROSS-CULTURAL ENVIRONMENT

This chapter presents the analysis of the two processes described in the previous chapter: 1) the establishment of the ACD, and 2) the establishment of local design at TCP. The analysis seeks to identify and discuss the main conditions which have enabled the occurrence of organizational learning at TCP. The first section discusses whether TCP has accumulated any knowledge with the development of the processes. The second section discusses the establishment of the ACD by: a) identifying the main triggers and objectives of the process; b) identifying what has been learned by TCP, and c) proposing and discussing the main enabling conditions for organizational learning. The third section discusses the establishment of local design at TCP, following the same steps as the previous section. The fourth section presents a general view of all enabling conditions proposed and their relationship with the evolution of the processes. The fifth and final section briefly discusses the inter-divisional conflicts identified within TCP and the necessity for managers to overcome them, as they represent obstacles for the occurrence of learning at the company level.

#### 5.1 Has TCP Accumulated any Knowledge?

Before discussing the enabling conditions for organizational learning, it seems necessary to question whether TCP has actually accumulated any knowledge or, in other words, learned anything with the development of the processes studied.

Regarding the establishment of the ACD, the company has learned not only to produce air conditioning sets according to specifications coming from Japan, but also to make adaptations in these sets in order to make them more suited to the markets TCP serves. In relation to the local design activity in both divisions of the company, it is also possible to conclude that TCP has gone through a learning process, this time about how to make changes

in the design of its products, which, among other things, render possible the adaptations mentioned above. In the case of the AVD, the company is also capable of designing and developing an entire TV set.

In order to enable TCP to carry out those technical activities, its members have had to learn a number of skills which involve both technical content and social relationships. Examples of these skills are the tasks workers perform when producing air conditioners, the design of a modification in a air conditioner or TV set, and also the everyday social interaction between British and Japanese while at undertaking these tasks, which has been particularly important at the ACD.

A company can only learn through its members (Simon 1991), both through their daily processes of work and through the experiences they bring into the company from their outside lives. Looking at the products of a company we can readily perceive the presence of technical knowledge; however, it is difficult to be aware of the presence of any sort of social knowledge; the social processes occurring during the development and manufacture of the products. Nevertheless, these social processes are the basis of the achievement of any technical knowledge, and can be very challenging by themselves. This seems to be the case with the processes studied, due to the fact that both involved the introduction of a new activity, with the participation of professionals from different nationalities. Thus, innovation and cross-cultural issues were important traits in the evolution of the processes. In order to identify and discuss the enabling conditions for organizational learning in these processes, attention will be given to both their technical and social aspects.

A number of characteristics of TCP should be highlighted in order to better understand the main triggers, objectives and development of the processes studied. First is its status as a wholly owned subsidiary of Toshiba. Despite the presence of many British managers in the company Board, including the Managing Director, TCP's main strategic decisions are either made in or sanctioned by Japan. Second is the fact that TCP is exclusively a manufacturing company, all commercialization of products is done by other companies which either belong to Toshiba or act as its representatives in other countries. As a consequence, TCP has no direct contact with the markets it serves, being dependent on the sales companies for that.

Third is the narrow international experience in terms of manufacturing abroad that people from the Air Conditioner Division in Toshiba Japan had before starting the operation in Plymouth. Fourth and finally, the reader should bear in mind the history of the company as it was described in the previous chapter, particularly its start following the failure of the joint venture between Rank and Toshiba, and the start of the ACD following the closure of the MWOD.

Before discussing each of the processes, let me recall the main values and characteristics of TCP, as expressed by its managers. Values: profit making, company before private life, excellence in manufacturing, care for employees and the local community, preserving Toshiba's image. Characteristics: good communication, teamwork and flexibility required from employees. It is with those values and characteristics in mind that the processes will be discussed.

## **5.2 Establishment of the Air Conditioner Division**

### **5.2.1 Triggers and Objectives**

The main triggers for the establishment of the ACD were the decision taken by Toshiba Japan to open a manufacturing plant in Europe and the closure of the MWOD in Plymouth. From the description given in the last chapter it is possible to conclude that the closure of the MWOD had great influence in the final decision for locating the plant in Plymouth. Some of the values of the company were made evident for both employees and local community. Examining the personal files of the Managing Director I could see how the local press praised the company for opening the air conditioner business and, not only keeping the jobs of workers from the MWOD, but actually creating new jobs locally. Mr Williams also told me that executives at the company's headquarters in Japan were very pleased with the positive image the company got from its handling of a delicate situation. Within the company, the decision was received with great relief. Although nobody had any experience with air conditioner manufacturing, the circumstances in which the site was chosen for the

operation meant that staff were grateful for having their jobs secured and, as a consequence, were willing to collaborate with the company.

The broad objective set for the ACD at its outset was to produce air conditioners with the quality standards set by Toshiba Japan, at competitive costs, and according to the schedule set by the sales company. This objective can be broken down into a number of intermediary objectives which were steps for achieving the main goal. For instance, the first step was learning to produce air conditioners. The implications of these steps for workers and engineers were that they had to acquire a series of technical skills, specifically linked to each step to be accomplished. Training has played an important role in this acquisition of technical skills.

The division has been led by Japanese managers since its outset and their management style is somewhat different from that of the managers who used to run the MWOD. Thus, people who work at the division had to unlearn certain behaviours and learn different ones which are in line with the Fujiworks (the air conditioner factory in Japan) style of operation. In the same way, Japanese managers have had to adapt themselves to workers and engineers who are culturally different from Japanese ones, as was extensively described in the previous chapter. The point to be highlighted here is that this mutual individual adaptation has been fundamental in allowing the company to achieve its production objectives. Moreover, it is possible to infer from the interviews that it has been a more complex undertaking than the technical side of the job.

### **5.2.2 Content of Learning and Enabling Conditions**

The process of establishment of the ACD can be divided in two stages: a) the set up of the operation until the first units were produced and approved by the Japanese, around Christmas 1991; and b) the normal running of the division. During the first stage, people within the company basically learned to produce air conditioners. The content of learning was very different for British and Japanese personnel involved. The British were mainly dealing with technical learning, how to manufacture products according to the specifications set by the Japanese. On the other hand, the Japanese who would stay after the start of normal

production were mainly developing their knowledge of the English language, while following the plan for setting up the factory. There were not too many opportunities for interaction between Japanese and British managers at this stage. As the Assistant Managing Director ACD explained, the schedule was too tight to allow for discussions and explanations to the locals about what was being done. There was also the presence of a large number of Japanese at that moment, which probably made them feel more 'at home'.

The conditions I see as being central for enabling organizational learning during the first stage are discussed below.

*Codified knowledge* refers to the fact that Toshiba Japan already had knowledge about the production of air conditioners which could be immediately transmitted to members of TCP. This codified knowledge constituted the basic content of the training period in Japan for TCP members.

*Intention* relates to the willingness and commitment from British workers to follow the instructions laid down by the Japanese. It seems that the context was influential in relation to the intensity of such commitment, as even when the British did not agree with the content of their training period in Japan, they complied with what was being asked from them. Intention also relates to the commitment of managers who worked at the set up of the operation, both British and Japanese, as the schedule was precisely met. It is not uncommon that, when a new operation starts, people involved are enthusiastic about collaborating, but in this case the enthusiasm seems to have been even higher, due the circumstances in which the division was set up. The eagerness showed by British managers to learn about the air conditioner operation can also be captured by the concept of intention.

*Training* in Japan was important for introducing the workers to the routines they would have to perform during the manufacturing process. Training content was largely technical, involving the diffusion of codified (Boisot 1986) or explicit knowledge. It was complemented with the presence of Japanese workers during the first weeks of operation, when they could help local workers facing initial difficulties. Although I did not interview shop floor workers, it was possible to gather from managers' interviews that, despite the

language difficulties faced by workers when trying to communicate, such interaction was instrumental in fine tuning the working routines, and involved the transmission of uncodified or tacit knowledge, when Japanese workers effectively showed how certain tasks should be done.

*Unlearning* at this stage was mainly related to workers replacing the routines they used to perform when assembling microwave ovens with new ones for manufacturing air conditioners. On the one hand, that was facilitated by the fact that the new routines were being used for a different product, one which demanded different skills, so there was no major conflict between old and new knowledge. Clearly the old knowledge was no longer very useful, then it was not difficult to discard it. On the other hand, the approach adopted by the Japanese, of starting the training from the most elementary steps of production, risked putting the British off. Context variables such as the fact of being trained in Japan and the already mentioned circumstances in which the ACD was set up helped to keep the workers' interest during the initial stages of the training period, although there still are a lot of complaints. Unlearning was cemented when workers returned to Plymouth and test production started under Japanese supervision. As each finished unit was disassembled, and every minor error was identified and pointed out to the person responsible for it, it became even more clear that the new routines would have to be strictly followed. This approach by the Japanese embodies the presence of another important condition for learning at this stage, namely *control*.

*Openness* at this stage relates to the behaviour of British managers and workers in accepting the lead of the Japanese without restrictions. As the Managing Director explained, the honesty of the British team in admitting their lack of knowledge and, at the same time, showing their willingness to collaborate, positively impressed the Japanese. The combination of *openness* and *intention* to learn appears to have accelerated the pace of transference of knowledge from the Japanese to the British.

*Flexibility* was an evident characteristic of the behaviour of local members, as was spontaneously acknowledged by Japanese managers. At this first stage, it was demonstrated in the initial allocation of staff to the various functions within the new division; many

workers were given very different tasks from those which they were used to performing. Managers also had to learn about a very different business than that they were used to deal with in the previous years.

*Time* for execution of the first stage was short and schedules were tightly controlled by the project leaders. Thus, *time*, or *lack of time*, was instrumental in the occurrence of behavioural changes in the sense that there was a set plan to be followed and on many occasions managers and workers would follow instructions without fully understanding the reasoning for the behaviour. Again the reference from the Assistant Managing Director ACD about the lack of time for discussions and explanations to the locals about what was being done is a good example of the way things developed at that stage. On the other hand, the reference from a British manager about the lost opportunity of discussing with the Japanese about the shortcomings of the training period in Japan, is an example of how the lack of time was also a factor that may have hindered further organizational learning about cross-cultural training.

The second stage started with the return to Japan of the Japanese who went to Plymouth to supervise the first weeks of production. It is worth repeating here the passage where the Assistant Managing Director ACD, who is Japanese, describes what happened then:

"After Christmas holidays there were few Japanese here, so British people had to stand up by themselves, together with few permanent Japanese workers here. Therefore it was absolutely necessary to discuss many things. But speed was very slow, even though I had become much lower tempered at that time."

Now the British would have time to better understand what they were doing, and the Japanese would have to adapt themselves to the daily routine of the job, closely working with teams composed almost entirely by British members. Teamwork became a pre-requisite for achieving the division's business objectives. This situation represented additional contents of learning for everybody involved. The difficulties described in the previous chapter, mainly related to communication and cross-cultural differences, became more evident.

For many local workers and managers the technical challenge was just beginning. After learning basic working routines necessary for manufacturing air conditioners, the aim now was to extend the understanding of those routines, in order to be able to identify problems and make improvements. New activities were also being gradually introduced, like making

modifications in air conditioning sets to attend market demands, as required by the sales company. The point to note here is that all those routines were being embedded (Granovetter 1985) in the internal context of the ACD, which was having its broad characteristics chiefly defined by the Japanese managers in charge of the division. However, those Japanese managers, regardless their will, could not simply reproduce the Fujiworks style. The ACD is part of TCP, a company with its own history and structure. Moreover, TCP is a company located in the UK and mainly staffed with British people, with their own individual and collective views of the world. The internal context of the ACD is unmistakably related to the broader contexts of TCP and the society around it, and all its members are simultaneously influenced by and influencing those contexts (Giddens 1984, Whittington 1992).

The technical side of the routines was not the subject of much contention; on the contrary, local people were usually happy with the opportunity of learning the new skills. On the other hand, the managerial side of the division would sometimes generate disagreement. In trying to implement managerial systems at the ACD, Japanese managers discovered that the most effective route was through previous discussion of ideas with British managers. There seems to be two main reasons for that. First, when defining general issues like duration of holidays or extra-time work, they had to put forward systems which would be acceptable for local workers, and sometimes these were contrary to Fujiworks systems. Second, in the everyday contact with their teams, communication was a clear problem for both sides. A face to face contact with a local manager resulted in an effective way of getting to know local practices. But, perhaps even more important, this sort of interaction allowed discussion to occur and, as a consequence, adequate systems could be proposed. Face-to-face contact is the richest medium to convey information, greatly reducing equivocality (Daft and Huber 1987, Daft and Lengel 1984). Misperception, misinterpretation and misevaluation are usual characteristics of cross-cultural communication (Adler 1991) and frequent face-to-face contacts appears to be one of the best ways of reducing the occurrence of such problems. Two extra factors made communication specially difficult at that time. First, the Japanese had only been in the UK for a short period of time, and command of the idiom was still a problem. Second, the managerial systems were in the process of being defined and, therefore, were not yet codified. According to Boisot (1986) "uncodified information is generally more

difficult to transmit in other than face-to-face situation", which also gives support to the practice adopted at the ACD.

For British managers involved in these close interactions with the Japanese, this was also a singular opportunity for understanding the latter's managerial style. If the Japanese were becoming acquainted with local practices and adapting their style to the situation, these British managers were also being influenced by the style of the Japanese. Some of the quotes in the previous chapter clearly show this. In this way, definition of managerial systems in a cross-cultural environment was part of a process where influences from both sides were present, although the Japanese influence was larger due to their more powerful position, regarding to both hierarchy and technical knowledge. What is more, in the first years of the division, those systems were essentially dynamic, in the sense of being continually redefined by the actors involved, who were also redefining their own perspectives as a result of daily experience. Examples of this include: a) TCP's Managing Director expressed his perception about the Japanese being gradually more on the company's side against the parent company in Japan than they were originally; b) the ACD's Assistant Managing Director mentioned his concern with potential conflicts with the headquarters in Japan as "they are thinking by Japanese only" (sic); c) a British manager said that after working with the Japanese he learned that "if the organization is gonna survive and protect everybody, those people have rather got to be filled with work"; and d) reading the excerpt below from an interview with a Japanese senior manager:

"Q. Do you think there are also personal differences in the way people work (between Japan and the UK)?

A. Little, little difference. In Japan if a manager say "White" (showing something black), they (the subordinates) say "White". In the UK even if a manager say "Black is black", they don't agree. This is much different.

Q. How do you adapt yourself to this difference?

A. Now I became a little bit an English personality. I allow the opinion of the person and can wait the long time. In Japan I ask my colleague the answer in one day, in the UK basically within one week. And if I never hurry them, no answer, forever. In Japan, if I ask once they make that answer even if I don't push. That is a different culture.

Q. What do you do here, do you push the people or do you wait?

A. Sometimes I push, but little bit I became an English.

Q. What do you think about this?

A. Now I can't say which is better. Sometimes one is better, sometimes the other is better. This is nationality.

Q. When you return to Japan, do you think you could work in the same way that you work here or you would have to change back?

A. I can not return back to the Japanese way, genuine Japanese, I think."

With regard to what has been learned by TCP with the evolution of the second stage of the process, the main points are: a) the company is able to produce a number of models of air conditioners, attending different markets as Europe, where there are marked differences in climatic conditions among countries, and the Middle East; b) the company has expanded its product range much faster than it was initially planned, which demonstrates its technical evolution; c) workers at the ACD have adopted many Japanese practices like cleaning the shop floor and giving maintenance to the equipment they work with; d) workers keep continuously improving productivity through the activity of cross-functional groups, in what is called 'small groups activity'; and, e) local managers have increasingly assumed responsibility for tasks previously undertaken by the Japanese, in a step-by-step localization of management.

Another demonstration of learning is the notable improvement in cross-cultural communication, but it is difficult to tell whether that should be considered as organizational or exclusively individual learning. This improvement is clearly a result of time spent working together. On the one hand, it is possible to imagine that if the Japanese are replaced by other Japanese, the latter will probably face similar problems of adaptation in relation to language and customs as the former did, which supports the individual learning hypothesis. On the other hand, looking at the pattern of the AVD, which has a longer history, it is possible to perceive that, although each Japanese who arrives indeed takes around one year to settle in his job, the division has already got used to such replacements and work continues without much disturbance. It is true that the number and influence of Japanese at the AVD is lesser than at the ACD and, indeed, one of the reasons for that is exactly the possible difficulties resulting from a large number of influential professionals being regularly replaced. But two characteristics of the AVD pattern can be interpreted as a result of organizational learning. First is the perception of some Japanese that many British at the AVD, particularly the top managers, are good in dealing with the Japanese, letting them feel comfortable when they arrive in Plymouth and, as a consequence, facilitating their adaptation. Second is the

adaptation of the division to the regular replacement of Japanese through the very reduction of their influence in the everyday routines. Therefore, the improvement in cross-cultural communication can be interpreted as a combination of individual and organizational learning. Each new expatriate manager will inevitably have to go through a period of individual adaptation where individual learning plays the central role. But, at the same time, those who remain working at the company learn how to deal with new expatriate managers, and institutionalize ways for avoiding disruption of work as much as possible. One of these ways is to leave to newcomers a role where they do not depend very heavily on oral communication with many people for undertaking their job.

The conditions I see as being central for enabling organizational learning at TCP with the second stage of the process are discussed below.

*Intention* was present in all actions which led to the learning mentioned above. Even in the case of activities which were not originally planned, like the quick expansion of the product range or producing for the Middle East market, there was intention from managers to find ways for increasing the division's revenues, and from workers to cope with the new demands. Intention does not necessarily imply advanced planning. It may refer only to the commitment to pursue an activity, even if this activity was triggered by an unexpected factor or the agent has no full awareness of its possible outcomes. The adoption of working practices which originated in Japan, like the small group activities, the daily cleaning of the working place and the maintenance of equipment by workers, also show intention from employees in collaborating with the requirements from management. Regarding the localization of management, both Japanese and British managers seem to be committed to the process.

*Openness* and *flexibility* were important for overcoming cultural differences. Whilst in the first stage the onus of adaptation was essentially placed upon British members, in the second stage British and Japanese had to adapt to each other. As systems could not be simply imposed from the Fujiworks style, managers had to find integrative solutions (Follett 1963) which would suit both the Japanese and British approaches. The objectives of understanding, redefining and improving working routines within a cross-cultural social setting created a new 'law of the situation' (Follett 1995) which required inputs from both cultures. Therefore,

openness relates to the development of the capacity for perceiving differences and flexibility relates to finding integrative solutions to these. These are characteristics which need to be present in both parties within a cross-cultural interaction and, moreover, need also to be reflexive. Quite frequently a person may be willing to perceive the other's perspective, but unaware of his/her own behaviour, as this is usually considered as 'normal'. So, openness not only relates to perceiving the other but also to perceiving the self.

*Time* appears to be very important for raising such cross-cultural awareness. In practically all interviews it was possible to perceive that it took time for people to improve cross-cultural interactions. This seems to be caused by the fact that people tend to behave in accordance with the patterns of their own culture. Changes in such behaviour are dependent on cross-cultural awareness, and awareness is essentially linked to cognition. Thus, time appears to be an important ingredient for cognitive changes to occur. This conclusion again brings the discussion on individual and organizational learning, as with expatriates managers being regularly replaced, the newcomers would usually need time to adapt themselves to the cross-cultural environment. It would be useful for organizations if they could improve the cross-cultural awareness of their expatriate managers, so as they would need less time to adapt to the host country conditions. This is an issue that I shall return to in chapter nine when discussing implications of this study for practitioners.

Time has also been important for the localization of management at the ACD. Two issues are relevant here. First, Japanese managers wanted to make sure that, besides learning technical issues related to air conditioner manufacturing, local managers would internalize the systems implemented at the ACD which, as explained before, are strongly based on Japanese managerial practices. That is the main reason why the company has sent some British managers to Japan to attend courses where the Japanese culture and the Toshiba organization are discussed. Second is what the Japanese managers call the age gap existing at the ACD. They reckon that it will probably be necessary for themselves or other Japanese managers to stay for quite a long time in line management positions at the ACD until the current engineers are experienced enough to assume managerial positions. Time would then be also important for preparing those engineers. The two issues just mentioned characterize the adoption of a *gradual approach* by the Japanese in relation to localization of management.

*Cross-functional teamwork* is present in the small groups activity. These groups usually work in productivity and/or quality improvement initiatives, which involve members from different sectors within the division. Each group chooses a problem to tackle and, most of the time, the solution involves sectors different from the one where the problem is most felt. For instance, assembling of parts can be made easier with some modifications in the design of an air conditioning set. Workers from the assembling sector would suggest the change and design engineers would evaluate its feasibility and its impact on the set and also for the tasks of other sectors in the company. These cross-functional contacts have also yielded other benefits for the company in the form of workers having better knowledge about the tasks of others, which makes coordination easier. Some interviewees observed that the relatively small size of the ACD and the fact that the whole division is located at the same building make such cross-functional contacts more frequent and also facilitate coordination.

*Autonomy* has been given to workers who take part in the small groups activities for choosing the processes which will be targeted in those activities. On the other hand, *control* was exerted by managers at the start of the small group activity for making sure that workers would not propose changes in product content instead of manufacturing processes. After the objectives of the activity became clear to workers involved, such sort of managerial control was no longer necessary, as groups would only select for implementation suggestions which deal with improvements in processes.

Autonomy has also been increasingly given to local managers and engineers to make decisions, as a step for localizing management. Japanese managers consistently mentioned their purposeful gradual withdrawal from a number of tasks they judge local managers to be ready to undertake.

*Leadership*, mainly from the Assistant Managing Director ACD, has been an important factor for the growth of the ACD in its initial years. Mr Ninomiya was personally involved with the transference of responsibility for attending the Middle East market from Fujiworks to TCP, keeping the ACD full with work in a moment where the European market was not good. His demanding style of leadership has decisively collaborated to put the growth of the division ahead of which was initially envisaged, accelerating the pace of learning within the ACD.

## 5.3 Establishing the Local Design Centres

### 5.3.1 Triggers and Objectives

The main triggers for the establishment of the local design centres at TCP, which were described at section 4.4.1, are summarized below:

- a) the growth of the Japanese economy and the difficulties for Toshiba in finding enough design engineers in Japan;
- b) growing demand for sophisticated TVs, with higher profit margins, and the lack of design engineers who could be mainly dedicated to those models;
- c) appreciation of the yen, making: c1) salaries of Japanese engineers comparatively higher than in other countries, and c2) Japanese components increasingly expensive;
- d) local design could reduce production costs at TCP as product adaptation to local components could be made faster;
- e) TCP would be able to better attend its markets through faster modifications in products;
- f) TCP was facing problems with the Income Tax Authority in the UK regarding the payment of royalties and technical support to Japan which was being considered excessive by the Authority.

The objectives initially set for the design department at the ACD were related to small modifications in the products in order to attend market demands, selection of local components to substitute imported ones, helping the manufacturing division with manufacturing problem-solving, and making any adaptations to the design of products which could result in cost savings for TCP. At the AVD, besides these objectives, the department has also developed some TV models, which are sent to Japan in order to be approved. Although the design activity has officially started around the same time in both divisions, at the AVD there were already some engineers working at design previously and, therefore, the division has a larger experience in design than the ACD.

For the Japanese managers who head the design departments, training the young local engineers is one of their most important objectives. This task is viewed by them and by some top managers of TCP as fundamental for strengthening the engineering skills of a

manufacturing company. It is also regarded by the Japanese managers as a naturally slow process, taking between five to ten years for a graduated engineer to become a really good professional. The Japanese fear that the mobile labour market in the UK, when compared with Japan, can spoil their efforts, as an engineer may leave the company after few years, attracted by a better salary. In any case, the approach given to the development of engineers is for a gradual and slow process which, sometimes, disappoints the engineers who would prefer a more exciting perspective.

### 5.3.2 Content of Learning and Enabling Conditions

The establishment of local design has indeed resulted in strengthening the engineering skills at TCP. The objectives set for the design departments have been gradually achieved, with good prospects for expansion. However, the investments in equipment and personnel which have been made for enabling the design activity are considered high, particularly for the AVD, which is struggling with difficult market conditions. As a consequence, pressures mount on the design departments for producing results which should not only pay for the investments but actually represent cost savings for the company. As the design activity has basically started with recently-graduated engineers, it may take some years of training before they can consistently produce such results, despite having already implemented some changes which saved money for TCP. Therefore, a conflict between the short term results wanted by some managers and the long term perspective adopted through the policy of hiring recent-graduates can be perceived within TCP.

With regard to what has been learned by TCP with the local design activity, the main points are: a) better technical knowledge about the sets which are modified or designed locally; b) competence for making design changes which have attended demands from the market, saved money for the company or made the manufacturing of the sets easier; c) competence for solving problems related to manufacturing, using knowledge achieved through design; and, d) formalization of knowledge through documentation of activities related to design, including tests of products and problems presented by products after being launched in the market.

The conditions I see as being central for enabling organizational learning at TCP through the process are discussed below.

*Intention* relates to the commitment of Toshiba Japan and TCP in developing local design. This commitment is expressed through the investments made by the company in equipment and personnel; through the presence of Japanese design specialists as head of the design departments in both divisions; through the desire expressed by design engineers to undertake a larger number of tasks; and through the growing number of design activities actually shifted from Japan to Plymouth.

*Training* has been given to local engineers, some times in Japan, but mostly on the job, in Plymouth. Training is usually an opportunity for transmission of codified or explicit knowledge, but on the job training can offer more than that, as the continuing contact and discussion between the trainer and the trainee within the working environment also allow the sharing of tacit knowledge. The periods of training in Japan have offered both opportunities. Some engineers, particularly during the first year of local design, were sent to Japan for introductory training, whose content was largely related to an overview of their job. Others, or the same ones in a later period, have followed the later stages of development of a new model in Japan, with the objective of reproducing the same steps when the model is launched by TCP. This experience generally involves a few months stay in Japan, when the TCP engineer actually works with a Japanese team and has the opportunity of sharing the experiences of developing a new model. In Plymouth, on the job training involves not only technical but also organizational aspects of the design activity. Thus, the Japanese managers constantly emphasize the importance of issues like careful documentation, personal planning of activities, and regular meetings with the whole team so that every member is informed about what the others are doing. The idea is to instil into the engineers both technical knowledge and a working style which is similar to that the managers are used to in Japan.

*Leadership* from the Japanese managers has helped the development of the engineers. These managers have considerable experience and technical knowledge about the products each division produces, and are a reference for the engineers. The approach taken by managers of giving incentive to engineers for solving problems by themselves, together with support in

case they make mistakes is conducive to learning and enhancement of self confidence. It is a good example of learning by doing.

*Autonomy* is considered by managers as an important characteristic of a good engineer. As was described in the previous chapter, engineers are always stimulated to develop and test their own ideas for problem-solving before asking the opinion of the manager. But Japanese managers still complain that local engineers usually wait for instructions before taking action, whereas they would rather prefer if engineers made their own decisions. It is important to perceive that this concept of autonomy does not mean isolation. On the contrary, it implies an awareness about the work of colleagues so that each individual can take action which benefits the whole. The idea that each individual should be a specialist in his job and only the manager should take care of integration is in frontal conflict with the concepts of the Japanese managers at TCP. For them, each individual is, above all, member of a team and, as such, should always be aware of the work of other members. Managers do coordinate, but at a higher level, giving guidelines for the work of the team. This is perhaps one of the cultural differences most strongly felt by Japanese managers, as some quotations in the previous chapter have shown.

Autonomy also relates to a feeling expressed by some local members in relation to the headquarters in Japan. They would like TCP to be more independent technically from Japan, in the sense of, for instance, being able to develop its own TV models without having to send them to be approved in Japan. The desire for autonomy nurtures the motivation for learning amongst local members, so as to prove their trust worthiness and being allowed more autonomy. The development of local design would help in achieving such a position. However, local members know that any step in this direction must be approved by Japan. Thus, this sort of autonomy has to be constantly balanced with *control*, which is mainly exerted by the two Japanese who head the design departments in both divisions. Some local managers consider that the presence of these Japanese is important, amongst other reasons, to give to headquarters the necessary confidence in the development of the local operation. As the managers who are responsible for control are also responsible for local development, a natural path, as development grows, would be to ease control, which, in a sense would be a proof of successful local development.

*Inexperience* from the young engineers has made it easier for managers to shape the working environment within the design teams. There is no need for unlearning. Thus, besides the capacity for quickly absorbing technical knowledge, as would be expected from recent-graduates, organizational skills are also more easily learned as they do not conflict with any previous working experiences. A good example of this was given by an engineer at the ACD when he mentioned the plan-do-see cycle, which was also mentioned by the Japanese managers at the division, as something good he has learned in his job.

*Teamwork* is a highly appreciated characteristic within the design departments. It has been always pushed by the Japanese managers as an important component of the job. Again, the working inexperience of young engineers appears to have facilitated the setting of a working style based on teamwork. Teamwork has been both a stage and an outcome of learning processes. It is a stage because many design activities depend on teamwork to be successful. Each new engineer who joins the design teams depend on the others to learn his job. Its is an outcome in itself, as engineers have to learn how to work in teams, being constantly reminded about that by managers. Practices like the weekly meetings where each member of the design teams relates to the others what he/she is doing aim exactly at fostering teamwork. The same can be said about the rotation of project leaders for introduction of new models.

*Codification* is an important way for diffusing knowledge, making individual knowledge accessible to others. Within organizations, codification makes possible the transformation of individual knowledge into organizational knowledge. At TCP, the insistence from Japanese managers for engineers to write reports every time they face and solve a more complex problem is a way of codifying their knowledge and making it available to others. The Japanese managers consider this activity even more important due to their fear that an engineer may leave the company. If at least part of his/her knowledge is not registered in company files it would also leave the company with the individual. These files are then part of the organizational memory, whose content can be later retrieved by other members of the organization. Furthermore, the repeated act of writing reports and building the files constitutes a standard operating procedure, and is in itself part of the organizational memory (March and Simon 1958).

A *gradual approach* has been adopted by managers, particularly the Japanese, in relation to the design activity. The choice of hiring recent graduates and training them in design, although TCP already had some design engineers at the AVD, is a clear sign of such an approach. It appears to have been adopted both because of the relevance of design for TCP and the desire from Toshiba to keep tight control over the activity. Both reasons justify the intention of having professionals fully trained within the company, according to its technical and organizational standards. A gradual approach is directly related with the use of *time*. Like the second stage of the establishment of the ACD, learning here is also dependent on cognitive understanding, which usually takes time to occur. This is true for the technical content of the design activity and even more important for the organizational routines. As I indicated earlier in the chapter, such an approach may create a conflict between managers and engineers as the latter, after few years of work, tend to desire a faster career development than they have within the company. It is interesting to perceive that the gradual approach for developing the design activity is simultaneously responsible for the hiring of recent-graduates and the possibility of conflict between them and their managers. It would be interesting to follow the development of the design activity within TCP to see how this latent conflict evolves.

#### **5.4 Enabling Conditions for Organizational Learning: a general view over the processes studied**

Table 5.1 presents the enabling conditions for organizational learning I have identified in the processes studied at TCP. The two processes have in common the fact that both relate to the start and evolution of a new activity, and involve the active participation of British and Japanese staff.

**Table 5.1**

**Enabling Conditions for Organizational Learning  
in the Processes Studied at TCP**

Enabling Conditions for Organizational Learning	Establishment of the Air Conditioner Division		Establishment of Local Design
	First Stage	Second Stage	
Intention	x	x	x
Leadership		x	x
Training	x		x
Unlearning	x		
Openness	x	x	
Flexibility	x	x	
Lack of time	x		
Time		x	x
Gradual approach		x	x
Cross-functional teamwork		x	
Teamwork			x
Autonomy		x	x
Control	x	x	x
Codified knowledge	x		
Codification			x
Inexperience			x

The division of the establishment of the ACD in two stages seems appropriate since quite a few conditions present in one stage are not present in the other. This appears to be related to the different objectives for learning in each stage. In the first stage, the objective was mainly to reproduce the procedures for manufacturing air conditioners. The presence of codified knowledge which could be immediately transmitted through training was essential for accomplishing the objective within the schedule proposed. The tight schedule resulted in lack of time and, as a consequence, pressure for reproducing the routines regardless of the level of comprehension people had about them.

Training usually aims at enabling comprehension, essentially bringing cognitive change before action. However, the combination of training and lack of time may result in scarce comprehension before action. In such situation, although training can provide a base for reproducing routines, it is in action that people really develop their understanding of them. An example of this was given by an ACD design engineer who had been trained in Japan immediately after joining TCP. After few years in the job he told me he would like to go back to Japan and this time ask 'good questions to them'.

For achieving the objectives of the first stage, openness and flexibility by the British and codified knowledge and control by the Japanese appear to be the most relevant conditions. The characteristics of the second stage were, however, more similar to the characteristics of the establishment of local design, involving the development of a working relationship between British and Japanese, and the definition of organizational routines. Indeed, there are a larger number of common enabling conditions between the second stage and the establishment of local design than between any of these two and the first stage. Leadership was probably more relevant due to the longer time scale, which increases the importance of setting directions.

Time is a condition present in all three columns of Table 5.1, although in the first stage it is in the form of lack of time, and, in the other two columns in an opposite form, which I called simply time. This apparent contradiction can be explained by the fact that whilst in the former the desired results of learning were essentially behavioural, in the latter cognitive

understanding was an important part of the learning process and, as I already pointed in this chapter, time seems to be essential for that.

Autonomy is also a condition present in these two processes. It seems reasonable to suppose links between autonomy and time, in the sense that the endless character of some of the objectives of these processes, like improvements in both routines and design, leads to the necessity of allowing people involved to benefit from both time and autonomy, in order to achieve these objectives.

Other common condition between the second stage of the establishment of the ACD and local design is teamwork, cross-functional in the case of the former, and within the department in the later. Both in the small groups activities and in the design departments teamwork help to improve coordination of activities. By stimulating discussion and problem-solving, teamwork is an essential condition for organizational learning. It allows both creation and acquisition of knowledge, as solutions for problem can be created during discussion or a team member can provide a solution for a problem another member is facing. Thus, teamwork can enable all four modes of knowledge conversion suggested by Nonaka and Takeuchi (1995): a) socialization, from tacit to tacit knowledge, when one team member show another one how perform a task, even if can not explain it in words; b) externalization, from tacit to explicit knowledge, when a team member explain to another how to solve a problem; c) combination, from explicit to explicit knowledge, when two team members discuss their views over a problem and propose a joint solution to it; and d) internalization, from explicit to tacit knowledge, when a team member takes a suggestion given by another member and applies it to his tasks.

Intention and control are present in all processes. Although most of the strategic decisions for TCP are made in Japan, and that was the case for both processes studied, after the decisions were made clear, objectives were set, and in some cases expanded during the process. So, intention to achieve the objectives was always present, and it seems to have existed in all staff involved with the processes. Control is the other side of the coin, an activity performed to measure the practical achievement of objectives. Control is also related with the presence of autonomy, establishing boundaries to it.

Unlearning in the first stage of the establishment of the ACD and inexperience of design engineers are contrasting conditions which can be interpreted as different adjustments of agency in relation to structure. When historical circumstances heavily influenced the decision for establishing the ACD in Plymouth and employing workers from the previous MWOD, unlearning became a condition for organizational learning to occur, although it was not problematic for reasons already discussed. Even facing such structural constraints, managers acted to shape the internal structure of the ACD according to the objectives set for the operation. One such action was the redistribution of previous MWOD personnel in the various functions within the ACD. In the case of local design, having more freedom to act, managers have opted for hiring inexperienced engineers, which made unlearning unnecessary.

Finally, in the second stage of the establishment of the ACD, mutual openness and flexibility were important conditions for facilitating cross-cultural integration. Communication seems to be the main cause for difficulties in cross-cultural interaction, and time and frequent face to face contacts the most effective ingredients for overcoming those difficulties. However, those two ingredients are not sufficient, being dependent of openness and flexibility for yielding good results. Openness and flexibility are personal characteristics, but companies can both try to assign managers with such characteristics for foreign posts and foster the development of those characteristics in managers. Raising awareness of cross-cultural differences seems to be an important step in fostering that development.

## **5.5 Overcoming Inter-Divisional Conflicts**

One last issue deserving discussion in this chapter is the existence of conflicts between managers of the two divisions at TCP. Although this was not a subject of any specific investigation, it became quite clear during the interviews related to the establishment of the ACD. The relevance of the issue for this thesis is the potential barrier for organizational learning that it represents. The more the conflict grows, the more difficult it will be to

integrate the two divisions in the sense of sharing managerial experiences which can be useful for each one and for TCP as a whole.

The main problems seem to be related to the absence at the ACD of managers who are members of the division's Board but are based at the AVD. It appears that these managers have difficulties in accepting the forceful managerial style of the Assistant Managing Director ACD and have opted for being absent from the ACD management until he is replaced by another Japanese who, they hope, will be more tractable. However, two problems arise from this attitude. First, managers at the ACD feel let down by the absence of the AVD managers, as if the latter are not really interested in the ACD business despite occupying Board positions. Thus, regardless of the replacement of the Assistant Managing Director, the former are already forming an unfavourable opinion on the attitude of the latter. This may well develop in a strong resistance against any participation from the AVD managers in a later stage. The conflict is resulting in the development of a 'divisional identity' at the ACD, which takes the place of an organizational identity. People at the ACD may well see their colleagues of the AVD as an outside group, which can hinder the development of organizational learning.

Second, the attitude from the AVD managers is based on the previous situation of the MWOD, when its Assistant Managing Director behaved as a subordinate of the Assistant Managing Director AVD. But in the world wide Toshiba organization, the air conditioner business is attached to a different division than the television business and, therefore, it is quite reasonable that managers coming to that division will not feel subordinated to managers from the television division. Thus, the next Assistant Managing Director ACD may have a softer style than the current one, but still not behave as a subordinate to the AVD.

The question then appears to require an unlearning process for the AVD managers, who have to face the new reality of TCP. That will probably mean a more constant presence of those managers at the ACD so as to be better acquainted with the business. Although the TV and the air conditioner businesses are quite different, TCP is a single company which should take advantage from managerial experiences from both divisions.

At the end of this discussion I should address the secondary research question present in Chapter 1 and indicate whether the processes studied fostered the development or improvement of any organizational capability at TCP. The answer clearly appears to be yes. With the establishment of the ACD, TCP is now able to manufacture air conditioners. The expansion of the product line ahead of the initial schedule is an evidence of the technical competence achieved by TCP. The fact that the ACD-TCP is one of the first Japanese manufacturers of air conditioners to be established in Europe is regarded by its managers as an advantage over competitors. The company has already accumulated some important knowledge about the European market and established a local network of suppliers, being better positioned to attend the market than competitors who export their products from Asia, or have installed a manufacturing unit in Europe after Toshiba.

The establishment of the local design centres in both divisions of TCP has allowed the company a better and faster understanding of the European market requirements. Product adaptation is now made much faster than before, because of the proximity between design and both manufacture and market. TCP has already saved money through product modifications introduced by the local design teams and, with the passing of time and acquisition of experience by the local engineers, the benefits are expected to grow.

## 5.6 Summary

This chapter has presented a discussion of the two processes occurring at TCP and described in the previous chapter. The objective has been to identify the main triggers and objectives of the processes, and to discuss the main conditions which have enabled the occurrence of organizational learning within the company. The conclusion has been that TCP has successfully achieved the objectives set for each process, although they are still in the course of development.

The main difficulties identified for the occurrence of organizational learning are related to cross-cultural adaptation, with communication being particularly problematic. As a process essentially related to individuals, difficulties may have a resurgent character as Japanese

managers are continuously replaced. Managers from both nationalities appear to be aware of such risks and have tried to institutionalize ways for reducing the difficulties, notably by setting localization of management as a priority for the division and by placing a local manager in constant contact with each Japanese manager as a way to facilitate communication.

Inter-divisional conflicts are evident and present a latent problem for the management of the company. Such conflicts can endanger the development of learning at company level and should be dealt with sooner rather than later. As the ACD settles in its development, integration of the two divisions may become an important way of building managerial capabilities for TCP as a whole. The opposite route, letting the conflict escalate, even in a latent stage, may divide the company and result in large management efforts being wasted in internal conflict settling. Moreover, the stronger the negative feelings are, the more difficult it is to find solutions which really integrate the parties, with compromise and grudge being probable outcomes.

## Chapter 6

### CHANGING TIMES

This chapter describes the processes of change which occurred during the last few years at Semp Toshiba. The first section presents a brief history of the company and some recent developments in the consumer electronics industry in Brazil. The second section gives an account of the main values and characteristics of the company, as viewed by its managers. The third section describes the development and implementation of three related processes: a quality programme, a stock reduction initiative and changes on the assembly line. These three processes have had as a consequence an increase in the productivity level of the company. The fourth section describes the process of change in the commercialization policy of the company. All the following description is based on the interpretation of the interviewed managers about these developments.

#### 6.1 Background

##### 6.1.1 History of the Company

Semp was founded in 1942 in the city of São Paulo with the objective of importing radios to Brazil and providing technical maintenance for them. At that time, there were a considerable number of such companies in Brazil, then called "commercial importers", which used to provide the same service as Semp, for different ranges of products. By the end of the 1940's, Semp was the main supplier of radios to the Brazilian market.

In 1951, Semp produced the first Brazilian television set (TV). Following a strategy of vertical integration of its production line, by the end of the 1950's Semp was manufacturing 80% of all parts for its TVs. Until the end of the following decade there was only a small number of television producers in Brazil, both national and multinational companies. With the advent of colour television and the rising of standards of living in the country in the early

1970's, a larger number of multinational companies started to produce TVs in Brazil. In 1972, Semp moved most of its manufacturing plant from São Paulo to Manaus, which is located in the Northwest region of Brazil, 4000 kilometres from São Paulo. The objective was to take advantage of a government scheme which aims at promoting the industrial development of the region, by allowing companies located in Manaus to pay lower taxes and also to import components for their production lines at lower customs tariffs than in other regions of the country.

In 1975, perceiving the increased difficulty of being successful in a more competitive market, Semp's president, Mr Afonso Hennel, son of the company's founder, decided to open negotiations with foreign companies which could provide technology for Semp. Such negotiations were inspired by two basic principles: 1) the company did not want to buy technology in a one-off agreement; and 2) the company did not want to spend money to have access to the technology. The second condition opened the door for the formation of a joint venture, where the foreign company would become a partner in the ownership of Semp. Semp contacted mainly large Japanese companies, Matsushita, Hitachi and Toshiba amongst others, which already were its suppliers, but were not yet producing TVs in Brazil.

In 1977 an agreement was formalized between Semp and Toshiba. Following this agreement, Toshiba acquired a stake in Semp by investing in the company two thirds of the amount of capital already invested by Semp. The company was renamed as Semp Toshiba SA, having Semp as the major partner, with 60% of the shares, and Toshiba as the minor, with 40%. Of the Semp shares, almost all belong to Semp Toshiba's president, Mr Afonso Hennel, which gives him legal control of the company with more than 50% of the shares.

Semp Toshiba initially aimed to compete in the same markets as Semp, that is, TVs and audio equipment, although the agreement had given Semp Toshiba exclusivity over the introduction of any of Toshiba's consumer products into the Brazilian market. According to Mr Afonso Hennel, the management of the company, both in the technical and the administrative areas, was initially shared between the partners. But both partners soon perceived that the Brazilian market had such specific characteristics that foreign managers

would need a long period of adaptation before being able to work efficiently. Mr Hennel explains what then followed:

"So, our administration has predominated, because we've got a system of open books with Toshiba, they have the access, there is no problem, everything we do is perfectly accessible to their knowledge. So, we ended up managing the company in the same way we used to do before. And indeed, that has been very good because each one of us, in associative terms, each company, has offered what it has of best to offer. Toshiba had a large technological experience, we had experience in the market and also in technical maintenance, reasonable manufacturing processes and a very good managerial experience."

Concerning the presence of Toshiba personnel at Semp Toshiba, at the top level there have always been two directors from Toshiba. This is part of the joint venture agreement. One is a Vice-president, who is the leading Toshiba representative at Semp Toshiba and is responsible for a liaison role with Toshiba Japan on matters related to the general management of the company and also the sourcing of Toshiba components to Semp Toshiba's production line. The other is the Technical Director, who is responsible for assuring the technical standards of Semp Toshiba's products. In the first few years after the start of the joint venture, there were approximately ten technical staff from Toshiba Japan working at Semp Toshiba, mainly electrical and mechanical engineers specializing either in television or audio equipment. They were responsible for transferring technologies related to assembling and testing the products. In the case of TVs, there was also the necessity of adapting to the Brazilian broadcasting standard, which was done jointly with Brazilian engineers.

The Japanese engineers would stay in Brazil for a period of three and a half years on average, being then replaced by other Japanese engineers. Their number remained about the same, ten people, until the end of the 1980's, when Toshiba decided to stop producing audio equipment world-wide. As a result of that decision audio engineers who used to work at Semp Toshiba went back to Japan. Toshiba also suggested to its Brazilian partner that Semp Toshiba should stop production of audio equipment in Brazil. However, as Semp had a solid tradition and a good share of the Brazilian market, the final decision was for Semp Toshiba to continue with this product line. Also at the end of the 1980's, Semp Toshiba introduced video cassette recorders (VCRs) into its product range.

Since the beginning of the 1990's the number of Japanese staff at Semp Toshiba has been reduced even further. Besides being very expensive to pay for their salaries, the company reached the conclusion that, after 13 years of joint venture, the Brazilian staff had enough expertise to handle the functions previously executed by the Japanese. As a consequence, in addition to two directors, the company has today only one Japanese engineer left, who heads the TV development sector. On the other hand, every time that a new product is launched or a new technology is introduced, some members of the Brazilian staff are trained either by going to Japan or by Japanese engineers who go to Brazil.

The top managers of the company visit Toshiba at least once a year. In those visits, the Brazilian Vice President, who is responsible for marketing, usually looks for new products that might be launched in Brazil. The Industrial Director, sometimes together with the Industrial Manager of the Manaus plant, usually visits Toshiba assembly plants in several countries. The objective is to look for industrial processes which might be applied at the Manaus plant. Semp Toshiba's President, during his visits, usually discusses strategic issues of the Brazilian operation and seeks to strengthen the relationship between the partners. In the same way, senior managers of Toshiba frequently visit the joint venture in Brazil. These visits have facilitated the understanding and the building of trust between the partners and, as a consequence, made the flow of information between the companies easier. The fact that Semp Toshiba has made a profit in seventeen out of eighteen years of its operation has undoubtedly helped to generate a climate of mutual goodwill between the partners.

### **6.1.2 Recent Developments**

In 1990, the then recently elected Brazilian government decided to stimulate competition in certain sectors of the economy through a programme of gradual lowering of import taxes. In some sectors, despite the presence of a large number of internal producers, the product technology was generally far behind international standards and production costs were high. That was the case with audio equipment. As a consequence, in a period of only eighteen months, this market was 'invaded' by imported products, which were of better quality and of the same price or even cheaper than their Brazilian equivalents. With the withdrawal of Toshiba from this sector, Semp Toshiba had to resort to producers from other countries,

mainly Asian, as a source of product technology. Other Brazilian producers were not so agile and had to shut down their operations.

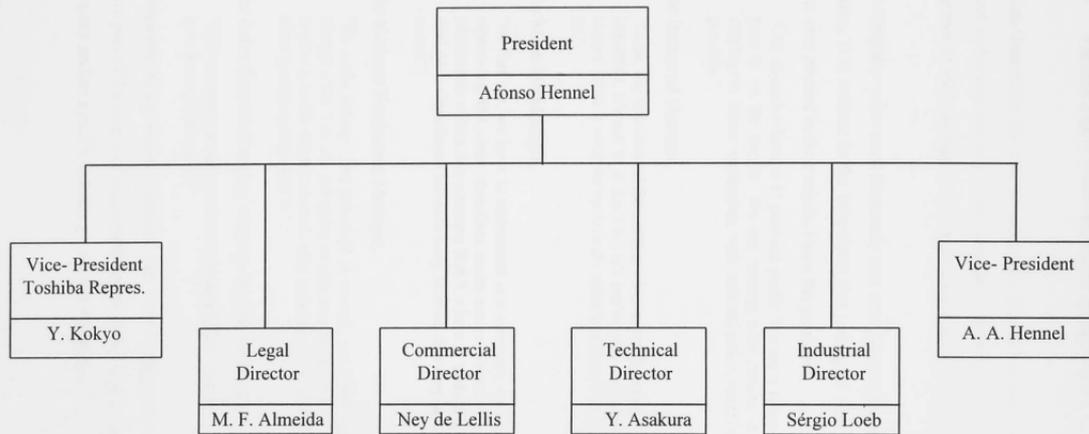
In the case of TVs, there were more variables attached to the issue. On the one hand, the product technology was not so far behind average international standards, as was the case of audio equipment. On the other hand, despite the existence of both a large number of producers and fierce competition among them, production costs were still very high, again compared to international standards. Although the size of the product and its weight makes it costly to external producers to export them to Brazil, the differences in production costs could make that business attractive for them. Thus, there has also been a real threat for TV producers in Brazil, which has forced them to squeeze their cost structures.

In the last three years Semp Toshiba has introduced a new line of products, which is called "office automation" by the company. These comprise fax, cordless telephones and cellular telephones. There is a plan to introduce notebook computers shortly. All products in this line are produced abroad by Toshiba and shipped to Brazil for assembly. Hence the introduction of this product line did not require any Japanese engineer to work at Semp Toshiba. Today, there are only three employees of Toshiba Japan working at Semp Toshiba. They are: a vice-president, a technical director and a technical adviser on TV production.

To sum up, since the beginning of the 1990's, two important competitive pressures were put on Semp Toshiba and other companies in the consumer electronics sector in Brazil. One was to reduce production costs to match, in the first stage, external competitors and, at the second stage, internal competitors which, by trying to match companies abroad, set new internal standards. The second pressure was related to the levels of product technology. The 'invasion' of imported products has sharply raised the standards expected by consumers. An image of latest technology, associated with high quality, has increasingly become a requirement for the commercial success of products. It is against this background that the two processes that will be later described in this chapter have developed. To conclude this section, Figure 6.1 present an organizational chart of Semp Toshiba.

Figure 6.1

Semp Toshiba SA



## 6.2 Values and Characteristics of the Company

Before describing the two processes, an account of how the interviewees defined the main values and characteristics of the company will be given. As was explained in Chapter 3, the objective of such account is to help to situate the interviewees' descriptions of the processes.

The company value most frequently and strongly emphasized by the interviewees was profit making. It is evident in the interviews that managers who work at Semp Toshiba have this value ever present in their minds. From the president,

"Our objective here is to produce profit. We are a company which puts emphasis and priority on the results. We are running after results. And we try to make that our employees imbue themselves with such objective, reaching efficiency levels as high as possible.",

to the Industrial Director,

"Look, the objective of the company has never changed, it's to make money. This is our objective, it's not to make TVs, it's not to give employment, our objective is to make money. This is what we have to do, what has always been and I think it will continue to be.",

to the Materials Manager,

"So that's it, we have to understand in a company, its strongest point must be its clear objectives, but clear objectives mean macro objectives, and nobody has any doubts whatsoever within this company that it is here to make a profit, it needs to make a profit. And each department needs to keep in mind that they are a profit centre and not a costs centre.",

to the National Purchasing Manager,

"To make money. The president is around, and when we feel it in the pocket things change a bit. You are not going to give an account to a holding company, you are going to give it to Mr Afonso Hannel, who is there and wants to know why you didn't do it and when you are going to do it.",

to the Sales General Manager, who has been in the company for seventeen years,

"This company always worked to make profits, it always demanded a bit more from us in order to make a profit".

Perhaps one factor which reinforces this value is that Semp Toshiba adopts a reward policy where part of the salary of each employee is related to the results of the company. Thus, if the company makes a profit, salaries go up, but if it makes a loss, salaries also go down.

Amongst other values that were also frequently mentioned, there are three which are both related to each other and to profit making. They are: a strong work ethic, attainment of results and being highly competitive. The passages below give an example of how such values are ingrained in the managers minds:

"The company has a very lean structure, it is like a football game, there is a man to man marking, so you've got to do everything rightly, I think that is a good definition. ... The Industrial Director has a mentality towards being always looking at what the larger companies are doing. He gives you freedom to work, and that is good because his demands are very strong. (...) The important thing is to gain market share, be competitive." (National Purchasing Manager)

"You must not try to have too many activities out of work because, at the end of the day, we dedicate more than the normal working hours to the company. (...) For the company, the important thing is keep itself well placed in the market, managing at least to keep its position in the market." (Industrial Engineering Manager)

"This is a company where, essentially, you work a lot. ... You have the possibility, as the structure is extremely lean, to better perceive this causal relationship between your performance and the results, but, on the other hand, you've got the onus of having to give a direct account of the results because you are responsible for your result. ... there is no way of saying 'It was not possible', and also it is not our function to say 'It was not possible because of such and such', it has to be possible. Here, there is no possibility of being a bit different, either you are or you are not, because the company is clearly defined for one side.(...) Continuity, to keep present in the market, to keep its market share, to attain results." (Office Automation Sales Manager, who has been in the company for two years)

"the difference of the people who are successful in this company is that they never have limited themselves to knowing only the information that they need for carrying out their activities. ... if you want to be successful you've got to do what the company wants, that is to say, it is like there are 10, 12 presidents within this company, we think like he thinks, or like our director, who thinks like our president does. ... we are people who 'wear the shirt of the company', people who live anxious, people who take their problems back home, so this is what happens here. I am one of such people, I really like the company." (Sales General Manager)

"(here) you take the corner, you run into the box, you head the ball and you score the goal. You understand? It's a very high degree of dedication." (Promotions Manager)

"This company is a highly competitive one, a company ready to face challenges and prepared to face them." (Industrial Director)

"one has to maximally avoid to be a burden for the tasks of the others. ... So that is what I would like my employees to know. You've got to arrive on time, and leave when it is possible to leave, but arrive on time." (President)

But in an interesting balance, another value which was mentioned was cautiousness, mainly in relation to the external environment.

"Every time that we face a problem, the first thing that we try to do is identify the position on the other side and to elect, within that position, what must be respected for a good solution of the problem." (President)

"Our president always tells us: never promise what you can't do, it is not your image that you are damaging, it is that of your company. ... so that is the way we have been working, the company has forecasts but cautious forecasts. I actually think that many times we did not earn much more for not being so daring, but, on the other hand, we also loose much less because we make fewer mistakes, we grow slowly but we grow well, with a firm foot. ... Some times, at heart we did not agree in loosing that deal, but it seems that something was worked inside our minds saying 'no, you can't do that', and we did not make the deal." (Sales General Manager)

Such impression is shared by the Japanese Technical Director. When asked about what he thinks that the company does well, he said 'investment', but praising the cautiousness of the president on making such decisions.

"Last year other companies made a lot of investment, Semp Toshiba very few, but now it is very easy to make investments. He - the president - has a good opinion for investment, our company. For example, when there is a big inflation - as it was the case in the previous year - we cannot make huge investments." (Technical Director)

Whilst people who work in different areas of the company mentioned similar values, the characteristics of the company seem to be defined by the interviewees from the standpoint of their functional positions. As an example of that, managers who work at the Commercialization Division emphasized the good relationship that Semp Toshiba has with its clients as one of its most important characteristics. Such relationship has helped the company to sell its products despite sharp fluctuations occurred in the market.

"(one thing that we do well is) this level of relationship that we manage to keep with our retailers, a commercial relationship which has allowed us, in some specific circumstances, to minimize hurdles which could surge up on our path. The level of conflict tends to become very small as function of such relationship." (Sales Promotions Manager)

"Our sales give us a lot of work but I think the company does it well. So, what the company does well is its products and, I'll tell you again, this relationship with the retailers. Now, this took many years to nurture, you have to create trust. How many times I told 'no' and the chap (the retailer) became angry but I kept the no.... The chap becomes angry with me in that moment but, indeed, at the end of the day he feels that we are really a serious company." (Sales General Manager)

For the managers who work at the Industrial and Technical departments and, therefore, are more directly related with the internal environment of the company, the characteristics which were most frequently regarded as important were its lean structure, fast implementation of

decisions and clearly defined objectives. The lean structure was already mentioned in some passages above, as it ties up with the work ethic existent in the company. It is also linked to fast implementation of decisions, as the former helps the latter. The following three passages exemplify such perception:

"it is a very fast company, it's a company which has a broad vision of the market, we launch what the market needs, we follow quickly. ... The president, together with the board, define and quickly the next level, which are the managers, knows what is the position. We follow directly in the meetings, each one takes his slice and starts working towards the objectives of the company. ... The responsibilities are clearly defined. And more, people have freedom to work. If you have a project, you can ask in any sector of the company, ask whoever you want for finding out about the issue." (Logistics Manager)

"we are assessed by our performance in relation to an objective, it's painful but you know that. To work by objectives is painful because they day will come, the day when you've got to give an account, and on that day there are no excuses." (National Purchasing Manager)

"this is a owner's company, it's not something like the owner is away. The objectives are always clearly defined, there are no doubts about where we want to arrive. So, it's a company which is willing to, which sets its plans and is willing to accomplish them, bear in mind the level of accomplishment or our objectives. Last year it was 99.9%." (Industrial Director)

However, the Japanese Technical Director made some observations related to the centralization of the decision-making process and how that can yield different outcomes.

"decision-making is fast, but if the director is busy decisions can be much delayed. That's the opposite, isn't it? Other people cannot decide everything ... few people can make decisions, the majority can't. ... In Japan decision-making is divided. More important decisions, more important people have to make them, but small items have to be divided in order to get more detailed analysis." (Technical Director)

### **6.3 Increasing Productivity**

There has been an increase in productivity at Semp Toshiba in the last few years which is closely related to the development and implementation of a quality programme, a stock reduction programme and changes in the organization of the assembly line. These three sub-processes were implemented at the same time and are intertwined in both their development and consequences.

### 6.3.1 The Immediate Context

In the late 1980's, inflation in Brazil was absolutely out of control, reaching a peak of 80% a month in February 1990. The National Purchasing Manager explains one of the impacts of this on the company:

"We had a terrible inflation and were obliged to keep high levels of stocks due to insecurity in relation to our suppliers. Thus, we had to add that cost to the final cost of products because the cost of money was very high."

Another consequence of high inflation for the company was the necessity of holding monthly price negotiations with each one of its suppliers. Those negotiations also represented a substantial overhead cost to the company's products. On top of that, smuggling, mainly of VCRs produced in Asia and entering Brazil through the border with Paraguay, was also representing a threat for internal producers in general. What had started as a relatively small quantity of VCR sets, was rapidly growing in number, because, as they did not pay any taxes, their price was much lower than their Brazilian equivalents.

In March 1990, the recently elected Brazilian government introduced an economic plan aimed at cutting the inflation rate. One of the measures of the plan was to drastically reduce the amount of currency in circulation by blocking the access for both individuals and companies to any amount in excess of US\$1,000.00 in their bank accounts. The consequence of such measure was a strong reduction of consumer expenditure. Companies faced recession during the following two years. At the same time, the government announced the gradual lowering of import taxes for products in many industries, creating pressure for companies in Brazil to reduce their production costs. Moreover, by allowing such imported products to compete in the Brazilian market, the government wanted to push Brazilian companies into improving the quality of their products.

Some industries, like semiconductors, were just too far behind international standards to be able to compete, even with high import taxes. This particular industry was dominated by multinational companies which, operating in a closed local market, had not made investments in the previous ten years. Companies like Semp Toshiba started to import those components directly from international sources, with prices being about half or even one third of those

charged by the companies located in Brazil. Frequently, those international sources were companies which were also operating in Brazil. As a result, those companies, in their great majority, decided to shut down their local operations and continue to make their money through selling from abroad.

In other industries however, either imports were not so competitive, or there were also local companies which did not have the option of producing from abroad. For many companies, the response to the new environment was to engage in quality and productivity programmes and Semp Toshiba was no different in this respect. The pressure for cost reduction in its audio equipment line was really hard. The Industrial Engineering Manager talks about their worries at that time:

"What did we have to do? We had to manage, in one way or another, to try to lower our costs, otherwise we would loose that market share, that was common sense amongst ourselves. We had many meetings for a long period of time, the committee basically would discuss cost reduction. 'How much is our cost and how much is a similar imported product?' So that was a parameter that we knew, the difference between what we were doing and where we needed to arrive. Thus, there was a consensus amongst ourselves, because the government was lowering the import tariff, so we knew that now it would be 20%, for instance, at that time it was higher."

Internally, the Industrial Director had left the company in 1989. After a period of around six months without a Director, the President of the company invited his brother-in-law, Mr Sérgio Loeb, to assume the post. Mr Loeb was then working as Industrial Director at an auto parts company. He remembers the way things were at Semp Toshiba when he first came:

"When we arrived at the company it was going through a very difficult period on management terms. On financial and direction terms there has never been a problem, but in management yes. The previous occupant of the post had left and it had not been possible to substitute him, to ensure the continuity of activities. So, there was a vacuum for six months which was sufficient to mess up the company's structure a bit and leave it without a clear direction on the industrial side. When I was appointed, the President established the objective of getting the train back on the rails, and that meant to produce the best possible product, with the best quality level and at the lowest cost. As I had the previous experience from the automotive industry, where the concepts which were introduced here were already deeply settled, what it was done was to transplant those concepts to this company."

The concept he is talking about is total quality management. According to Mr Loeb, he had such objective in mind since he started working in the company, therefore prior to the government's economic plan, but he did not tell that to his subordinates because he thought they would not understand it. His strategy was to go step by step, promoting change gradually. He defines his first two years in the company as a period of 'mutual

acquaintanceship', of adapting the company to a new reality, of starting to reduce the level of stocks.

### **6.3.2 The Quality Programme**

In the early 1990's, Semp Toshiba used to produce a broad range of models, both in its TV and audio equipment lines. The idea was to be present in every segment of the market. There was no real concern about standardization of components amongst different products. Thus, with such a large number of models and components, the company used to have around 400 different suppliers of parts. In its manufacturing plant in Manaus, production was scheduled to run a single monthly batch for each product. The stocks of components used to range between 30 and 50 days, for components produced in Brazil, and 2 months for imported parts. Even so, lack of control over the stock meant that the production line would frequently stop due to lack of some components.

In order to meet the President's demands, Mr Loeb planned to introduce a quality programme at both Semp Toshiba and its suppliers. He set up an internal committee which would be responsible for that programme. The committee was jointly headed by the Quality Manager, who was used to dealing with internal quality issues, and the National Purchasing Manager, who was used to dealing with suppliers. The committee decided to divide the task by creating two separated programmes, one aimed at Semp Toshiba and the other aimed at suppliers.

Inside the company, the committee created two task forces, one in São Paulo and one in Manaus. Each task force was divided into small groups, each one composed of one representative from each area involved in the process which would be subject to the quality programme. Those processes were defined by the company according to specifications of the quality standard ISO9000.

The members of the committee started their work by visiting other companies which already had implemented the standard, bringing people from outside to give training and lectures to the members of the task forces, making a film about a quality programme, and hiring a

consultant on quality. The National Purchasing Manager explains the objectives of such actions:

"All those things to motivate the people, because we were changing everything we had made until then. We had fear of throwing away the old and losing the reference, for us it was also something new."

Members of the task forces were people with at least some years of experience within the company, albeit being generally young. Each member had to describe both his and his sector's tasks and how they used to perform them. For that, they had to go to their sectors and ask people, including the managers, how they used to work. Some people took that opportunity to make suggestions about how they thought things should be done. The managers had to discuss these suggestions with both their staff and members of the committee and, in the end, some changes in the processes were actually made. Each area representative then presented his area processes to the other members of the small groups, and integrated these processes with those from other related areas.

The occurrence of different opinions within the task forces was mainly related to understanding the standard and to belief in the value of implementing the programme. Such differences were generally solved through discussion within the group, although it took around six months for people within the small groups to feel comfortable enough to make suggestions for change. The main difficulty, however, was for the area managers to allow their subordinates to take time to participate in the small groups. At the beginning, people inside the company used to see the programme as another worthless fad. Again, perseverance through time played a very important role in convincing people that that was a lasting initiative. Members of the committee held monthly meetings with area managers to follow the progress of the implementation. However, a continuous concern of the committee was to not interfere in the areas, to allow their people to bring their processes into discussion, in order to the results be acceptable for people involved. There was also a Dissemination Group [*Grupo de Divulgação*] whose job was to show to the whole company what the quality programme was, what was to be done and how it would be done. This job was carried out mainly by affixing posters throughout the company. Although the committee considered such

dissemination as important, it was carried out without making too much noise in order to avoid startling people.

The committee also gave training to people from all sectors of the company. The training was initially prepared for people who worked at the São Paulo site. Some adaptation had to be made in order to make it suitable to workers in Manaus, as there were some cultural differences between the two sites, mainly related to the educational level of employees, which is higher in São Paulo.

For implementing the programme, the committee had the support from the Board of Directors. Nevertheless, even at Board level it took some hard work for the committee to convince people. The main reasons were the amount of investment necessary for implementation and the fact that such programme does not usually bring any visible results in the short term. The heaviest investments were in buying new equipment for quality control and in training the staff. As was mentioned before, Semp Toshiba traditionally has had a conservative view on spending.

Two external factors that also helped the implementation were the continuous discussion in the Brazilian media about the importance for companies to be certified on the international quality standards, and a legislation from the Amazon state which threatened companies in Manaus which were not certified on ISO9000 by the end of March 1995 that they would lose their tax incentives.

During the implementation of the programme, the committee also created auditing groups which were responsible for following the process and checking its execution. Those groups were trained in auditing and the main difficulty was for people to understand the quality system as a whole. Thus, the quality standard specifies auditing procedures in particular sectors of the company (e.g. procurement), but such sectors usually have many interfaces with other internal and external sectors. Therefore, the auditing groups had to understand such interfaces. In the words of the National Purchasing Manager:

"It is necessary to understand more or less the mechanism of the company. (...) Now I have to assure the certifying company (the company which issues the quality certificate)

that I'm really doing what I'm telling them that I do at the system level. Now you start to open even more your vision to see how things work."

Even after having received the ISO9000 certificate, twice a year the company has to go through an external audit which checks if the company's processes are following the quality standard. According to the National Purchasing Manager, there is always room for improvements:

"To be able to make an improvement in something, that must be running all right. It's a different concept, people generally think that there is an improvement because an error has been found. No, the idea is not to have the error. Improvement is a study about something which is running all right, there is when you gain something. Otherwise you're gaining nothing, you're just fixing an error."

A detail which was always emphasized by Mr Loeb during the implementation of the ISO9000 standard was that the company should not lose its characteristic of fast decision-making processes. The concern was related to the fact that the quality standard requires a good deal of formalization in the company's processes, hence the risk of slowing down the company's pace. In Mr Loeb's words:

"People, initially, tried to shield themselves behind the ISO, 'Look, the ISO doesn't allow that', to justify not doing things. It was then made very clear to all managers that the characteristic of informality should be respected, our speed should be preserved and we would need to have somebody coming after and collecting the pieces which would eventually be left behind. That is to say, if I give a specific orientation and don't go through all the pre-determined steps, somebody will come after me and document everything.(...) The standard in our conception is beneficial, no doubt about that, but we must remember its origins. Why was such standard created? To protect the European industry from Asian competitors. But people are smart, because they have adapted themselves to the ISO and so what? They create new ones. There is a new version of the standard which is more strict and that will also be surpassed."

At the external level, the company decided to demand quality related measures from its suppliers. For that, Semp Toshiba invited all suppliers for rounds of talks where certain objectives were proposed for them to meet. Those objectives were related to both new quality standards, where the suppliers rather than Semp Toshiba would in future be responsible for inspecting the quality of components, and new delivery timetables, where the components would be delivered in smaller batches and at shorter intervals to the company. As a consequence, some of the production costs, like inspecting the quality of components and partly stocking them, would be shifted from Semp Toshiba to the suppliers. As was already

anticipated by Semp Toshiba, many suppliers refused to assume such costs and their relationships with the company were brought to an end. However, according to Mr Loeb, he was expecting to cut the number of suppliers by half after a few years, but in the end the cut was much deeper. From a total of 400 suppliers, Semp Toshiba used to have 220 within what they then called A, B and C suppliers, which were responsible for 95% of the purchases. In the first cut, made only by the Purchasing Department, that number came down to 160. The company then started to work more closely with the remaining suppliers, explaining its new quality policy and the necessity for suppliers to both increase the quality of their products and reduce their costs. Semp Toshiba established a set of quality standards, generally the ISO9000, and asked its suppliers to find an external institution which could orientate them towards how to achieve such standards. The large majority of the suppliers either thought that that was a cost which was not worth incurring or simply did not have the financial resources required for undertaking such measures. As a result, after three years of the programme Semp Toshiba has now 32 suppliers within the A and B categories, which are responsible for 95% of the purchases. To achieve such results, many other steps had to be taken, like the reduction of the product line and the standardization of parts amongst different products. The reduction of the product line will be discussed in more detail later in this chapter, during the description of changes in the commercialization policy of the company.

### **6.3.3 Reducing Stocks**

For the people inside Semp Toshiba such measures represented a substantial change in the way they were used to work with their stocks. When Mr Loeb started to talk about cutting the stocks level of the company, the idea was received with a certain scepticism. The initial objective was to change from one to two deliveries of components a month. The Logistics Manager, who is responsible for guaranteeing that the components purchased by the company are available at the production line, remembers the general feeling:

"we thought that it was almost impossible for ourselves to make that factory work, to have that responsibility and not have the material there, ready for us to do whatever we liked. Are you with me? It was sort of difficult to understand that. If, when we used to have 45, 30 days, the line used to stop, we thought that if we reduced the stocks we would lose much more production."

Mr Loeb promoted some changes in the structure of the Industrial Division, mainly towards a more horizontal design, where managers would have better defined and also more comprehensive responsibilities. He also hired some managers to fill positions where he felt the company was weak. One of those managers was the Materials Manager, who co-ordinates all the purchasing activity, both national and international. He came straight from a strong competitor of Semp Toshiba, a large multinational company where he had worked for nineteen years. There he already had had experience of the processes which were being introduced at Semp Toshiba, like quality programme, stocks reduction and just in time production. He gives an example of a change in the structure of the company and the consequences:

“So, a production manager, he was becoming anxious when he realized that he now had a small stock, he was used to see a very large one. ‘Look, it will finish, production will stop, look...’, are you with me? So we left his focus inside the factory, in things which were under his responsibility, and we went on reducing that stock. He started to get used with the idea that he would have the material on the day when he would need it, he wouldn’t have it before, it was not coming before, right?”

He also emphasized that in order to make those changes successfully, it was very important the establishment of simple and clear rules for people to follow in order to undertake their tasks. People had to know that if they did anything differently something would go wrong.

The process of reducing the stocks was led by a group of six managers: the Industrial Director, the Logistics Manager, the Materials Manager, the National Purchasing Manager, the Industrial Engineering Manager and the Product Development Manager. All of them work in São Paulo but each one has a corresponding manager in Manaus. The group used to hold a daily meeting where the current issues of the company were discussed and, in addition to that, in case of any urgent problem a meeting was called in order to solve it. Within the group, the way adopted to overcome resistance to the plan was mainly through peer pressure. People who were more convinced of the possible benefits of the changes usually would keep talking about that to other managers. The Logistics Manager explains how such pressure would work when new ideas were being discussed:

“This is impossible.’ (one would say) But it’s not impossible. If one says, other says, another also says, you start to see that the impossible is possible. Even if ones says no, you’ve got three saying yes.”

And those within the company who were not convinced were replaced, at least for that project. An essential ingredient of such strategy was, however, the initial success achieved. As positive results started to appear resistance was broken and changes would go further. Once the fortnightly deliveries of supplies were running smoothly, the company moved towards weekly deliveries. Thus, although the changes initially seemed quite radical, they were actually implemented in gradual steps, each one based on a previous success, and that also assisted in the development of the process.

There was no necessity of hiring new employees to handle the more frequent deliveries. Instead, what happened was a redistribution of tasks throughout the month. Most of the national components for the production line were purchased either at the Southeast or the South region of Brazil and delivered at the company's facility in São Paulo. They were then prepared and transported through a very long distance in order to reach the factory. 70% of the components used to be transported by surface, which means 4 days by lorry from São Paulo to Belém plus 8 days by ship up the Amazon river from Belém to Manaus. The remaining 30% were transported by air, in a overnight flight between São Paulo and Manaus. With the reduction in the intervals of deliveries and with less stock available for production, such transport mode was modified towards an inverse situation where most parts purchased in other regions of the country are now transported by air.

At Semp Toshiba's factory in Manaus, to the amazement of almost everybody in the company, there were fewer production stops. Managers realized that with fewer stocks they had better control. It was easier to identify problems with specific suppliers and, as a consequence, to also have better control over them. From an initial situation where the stocks used to range around 40 days for national components and 2 months for imported ones, the company moved to work with 3 days of stocks for components purchased in Manaus, 5 days for those purchased in other Brazilian regions and 21 days for imported ones. Another factor which helped the whole change was that in the last few years some suppliers have established new manufacturing plants at the Manaus region in order to better meet the growing demand. That has now allowed Semp Toshiba to have 60% of its national supplies purchased locally and also to start to move to daily deliveries of the biggest components.

#### 6.3.4 Changes in the Assembly Line

Concomitantly with the two processes mentioned above, there were also some changes in the assembly line at the Manaus factory, always aiming at increasing the productivity of the company. Those changes are mainly related to three processes: outsourcing of some production activities, increasing mechanization of the assembly line, and the implementation of a Japanese technique for small but constant improvements called Kaizen.

Until the early 1990's the main concerns of managers at the Manaus factory were related to meeting the targets for quantity of sets manufactured, which were defined by the sales plan, and to improve the quality of products. The assembly line was characterized by the intensive use of labour. The Industrial Engineering Manager recollects the environment:

"The question of productivity was not that important, there was a direct proportion that we used: if today we make 500 sets and we need 10 employees, if we need to produce 1000 we hire 10 more people. (...) We had no worries about production costs, I'm not talking about costs of materials, I'm referring to the environment at the production line, at that time if we took 1:00 hr, 1:15 hrs or 1:30 hrs to produce something there was not that much difference."

With the recession of the Brazilian economy in 1991-92 and low cost imported products, mainly audio equipments, "invading" the market, production levels at Semp Toshiba had a slight increase in 1991 but a sharp reduction in 1992. The company laid off some 40% of its personnel at the factory in Manaus and started to take measures in order to increase its productivity and reduce production costs. Those measures were based on two objectives: firstly, to produce faster in order to have a high turnover of stocks, considering that materials are responsible for 70% of the production costs; secondly, to have a more rational production line, without too much rework and quality problems, and that meant a production line with fewer and better prepared personnel.

To achieve such objectives, it was decided that the company should concentrate in its core activities, that is, assembling products. Therefore, secondary activities were gradually being left for other companies to do. As that was a new initiative, Semp Toshiba did not have qualified suppliers which could assume such activities. The strategy adopted was to choose small companies and give them all the support they would need to be able to undertake the tasks. Thus, Semp Toshiba's engineers went to those companies and made all the

specifications necessary for the tasks, equipment was lent by Semp Toshiba to those companies, and all the procurement activities were undertaken by Semp Toshiba in order to assure both low prices and quality of components. Semp Toshiba's employees who used to be involved with those activities were either shifted to other tasks within the factory or laid off and employed by the new suppliers. Acting this way, the company aimed to avoid resistance against the lay offs (remember that 40% of the personnel had previously been laid off) and also to save on training, as the employees who went to work at suppliers already knew how to do the tasks. The rationale of such measures was that small suppliers, as opposed to Semp Toshiba, had very low overhead costs. The activities transferred to those suppliers were simple ones, without much technical content. An example is preparation of cables. In that activity, the supplier would receive all material from Semp Toshiba, would cut and prepare the cables, and return them ready to be assembled into the products.

With a small number of outsourced activities which involved more complex tasks the company initially had some quality related problems. The solution found was to keep a Semp Toshiba's employee working within the supplier until the problems were solved.

As time went by, an increasing number of activities were outsourced. In 1993 production was growing again. Then, instead of hiring new employees to cope with the growth, the company tried to outsource more activities, this time without laying off personnel. The rationale for such action was twofold: firstly, the company did not want to go through a continuous cycle of hiring and laying off people according to market fluctuations. The experience with the massive lay off of 1992 had been bad enough. Secondly, the factory had limited space. Through outsourcing, some space could be made available for activities which added more value to the product than those which were being outsourced.

The second group of measures were directed at the main assembly line. They arose from the perception of the need for more flexibility in the production line. While before, the company used to run a single production batch a month for each product, now the idea was to be able to quickly change the production mix in order to better meet the demands from the Commercial Division. With a mainly manual assembly line, there was no standard production time, there were errors and problems related to quality, and each time the

production mix was changed it was necessary to stop the line and reset the whole process. The first step towards mechanization was the introduction of automatic insertion machines, which assemble most of the components on the circuit boards. That noticeably reduced the number of errors and quality problems. With the increase of demand, more insertion machines were introduced. The workers substituted by machines were generally shifted to other tasks in the factory. The second step was to mechanize the two master assembly lines. Until 1991 those lines were manual, where each worker would do his/her part of the assembly task and manually pass the product to the next worker. The company installed conveyor belts on those lines, trained the workers in each process and established production times. Such production times are now always compared with the Toshiba Fukaya assembly plant in Japan. At the end of 1994 the assembly time of a TV set was, on average, 15% slower at the Brazilian plant compared with the Japanese. For 1995, the objective at Semp Toshiba was to reduce its average time in 10%. However, the objective is not to reach the Japanese average time because, in spite of the continuing process of mechanization, the low wages in Brazil still justify a much more labour intensive, and therefore slower, production line than the one in Japan.

The third group of measures are related to the introduction of the Japanese technique of continuous improvement called Kaizen. Such technique is used at all plants of Toshiba subsidiaries around the world. It was brought to Semp Toshiba by the current Technical Director who was acquainted with the technique from his previous experience at the Fukaya plant. Having brought videos about Kaizen and training material, he gave the initial training for people at Semp Toshiba. The Kaizen process has been led by the Technical Director and the Industrial Engineering Manager. The latter defined the techniques as:

“a philosophy where you take something and do it a bit better today, and keep doing it better, more and more. So, gradually you get results, you’ve got a summation of small improvements and you end up with a big result, though on the long term, not on the very short term. So it’s not an activity of innovation, it’s an activity of improvement”.

and he also drew the attention to the fit existing between such a philosophy and Semp Toshiba’s conservative approach to investment.

The implementation of the activity consisted in the formation of groups of shop floor workers and their supervisors, who used to undertake production tasks which involve different sectors

within the Industrial Division. Each group has one representative of a different sector and the objective is to discuss possible improvements in those tasks. For that, the group firstly elects a target for improvement and afterwards discusses how that target can be reached. Targets are set every six months and the group meet at least once a month to discuss progress. Each member usually takes one hour a week to dedicate himself to the Kaizen activity. The main difficulty has been to have that one hour out of the production line.

According to the Industrial Engineering Manager, workers usually enjoy taking part in Kaizen activities because they can see that they have been responsible for an improvement. Every Kaizen activity has to be technically and economically justified and its progress is documented. Thus, at the end of the activity the results are visible to everybody. The company also gives some incentives for participation and suggestions. One is an annual election of the best activities carried out during the year. In order to have everybody represented, at least one activity from each group is selected. Then, there is a competition and the three best activities, from both Manaus and São Paulo, are selected. Members of each selected group are then invited for an event where they present their activities to a large audience from the company, including the Board of Directors, and receive a thanks letter from the director and a prize, usually a product from the company. Besides that, there are also other forms of incentive. Each time a worker makes a suggestion which is accepted by his/her group to be object of a Kaizen activity, that worker writes his/her name, function and suggestion in a notebook at the factory. In addition to that, he/she pumps air inside a football ball which lays beside the book. The objective is to blow out the ball. There are also boards distributed across the factory with photos of the groups' members, names, implemented suggestions and achieved results.

Within the Kaizen groups, there are generally many suggestions about how to improve a specific issue. The choice of the suggestion which will be implemented is made through group discussion. In case of disagreement, the bottom line is always what is better for the company, what the company will gain in quality or economic terms. There is a concern about not making comments like 'Your proposal won't be carried out because it's no good' to workers whose suggestions have not been chosen, in order to not inhibit them to make other

suggestions. The group usually prioritize the suggestions given and, in the case the first choice has proved to be inadequate, the second is then carried out, and so on.

The company controls the suggestions given in order that they are kept within the objectives of Kaizen, that is to say, to improve processes and not to change the content. An example of that is when there was a problem with the painting of some products and it was suggested that the paint should be changed. That idea was refused because the colour of the product was chosen according to market requirements, therefore it was not subject to change. The objective was to improve the painting process.

The Japanese Technical Director highlighted the importance of Kaizen for the mechanization of the production line:

“Kaizen is important. When we introduced machines, automation, we had to simplify the tasks before. If you don't do that the investment is too high. Kaizen is for processes, first you've got to do it, after you can invest, change to machines.”

According to him, Toshiba has an annual Kaizen event where Kaizen activities from subsidiaries all over the world are presented. That is a way for employees from different plants to learn from each other. Inspired by this event, Semp Toshiba has created its annual Kaizen event mentioned above.

In 1994, a Kaizen specialist from Japan went to Brazil to give training. He spent fifteen days in Manaus and three in São Paulo. The training was focused on how to spot items for potential improvement. The Industrial Engineering Manager commented:

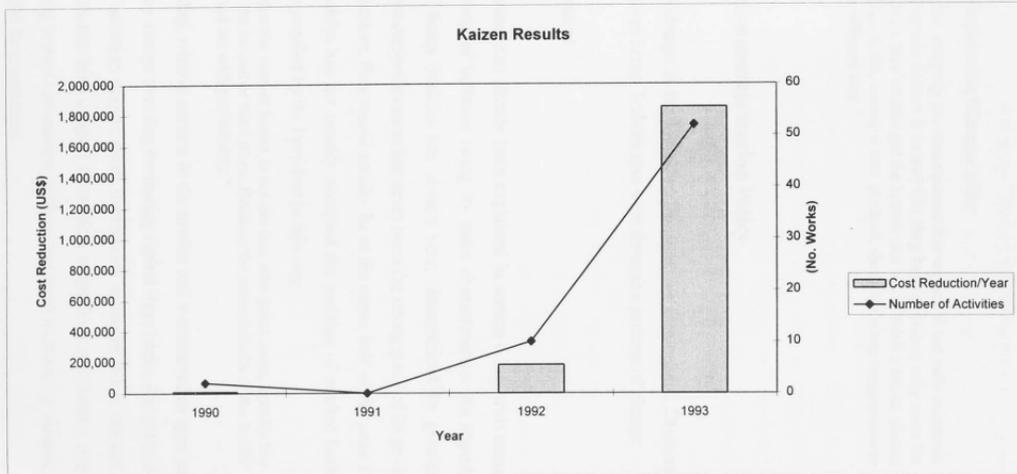
“This is very difficult, if you are inside your working environment you're already used to things and somebody who comes from outside can look and see what you're looking but not seeing. (...) but the more important is that he not only spotted but also showed people how to spot, what has to be observed (...) We made a joke and told him that he was a Japanese with a big eye, he could see many things.”

Such visits from productivity specialists have been made frequently. In March 1996 a welding specialist went to Manaus to give training so that the TV and VCR welds comply with Toshiba's quality standards. In April 1996 another technician went to give training in maintenance and prevention of problems in the new automatic insertion machines. Figure 6.2 shows the results of Kaizen activities from 1990 to 1993. The activities in 1990 were just a

Figure 6.2

Kaizen Results

	1990	1991	1992	1993
Cost Reduction/Year	9,300	0	183,160	1,850,694
Number of Activities	2	0	10	52



try and in 1991 there was no activity. Kaizen formally started in 1992, and during 1993 it saved US\$ 1,850,694 for Semp Toshiba.

Besides that, the Industrial Engineering Manager adds:

"When we look inside the company the consequence that we see is not only economic but the involvement of people. Before it looked like they had no brains, only arms for work. Now besides the arms they've also got the brains, one has to think a bit, so always when they have something to do, mainly a new product, there are many suggestions to do it better, to do it in a different way."

## **6.4 Changes in the Commercialization Policy**

During the same period of change at the Industrial Division, the Commercial Division and the commercialization policy at Semp Toshiba also went through a process of change.

### **6.4.1 The Immediate Context**

The immediate external context has already been explained in section 6.3.1, with economic recession and unstable levels of inflation being its main characteristics. As regards its commercialization policy, Semp Toshiba has always been characterized by prioritizing profitability. Therefore, price competitiveness has never been the strong point of its products. Compared with their competitors, they would usually be at the upper half of the price range for each model. Semp Toshiba has not usually occupied the position of market leader in Brazil. Such an approach is justified by the President in this way:

"So, that's why I say that the market leader is not the one who gains more, usually the one who gains more is the second or third place. Because the commitments of the leader are with market share and not with profitability."

This emphasis on profitability, relative success in the market and a conservative approach to financing, with the company always avoiding borrowing capital from banks, has given Semp Toshiba a stable financial situation despite sharp fluctuations in the Brazilian market. The same conservative approach has been adopted in relation to production volumes, with the company carefully following market movements, without too steep increases or decreases in volume, when compared with its competitors.

Distribution of its products in large and medium cities is made mainly through large regional chains of stores. In small cities they are usually sold at local stores. The company also has an extensive network of technical assistance shops. In Brazil it is usual to take domestic equipment for repair when they have problems. There are no rental shops like in the United Kingdom.

The company had a large product range with small quantities of each model being produced. Some models had only slight differences in relation to others. The reason for adopting such a strategy was that the company considered that it was easier to sell small quantities of a product rather than large ones. In order to avoid clashes between similar products, the company would distribute them across the country. This strategy, however, presented two problems. First, it made production costs very high, as was explained at section 6.3.2, and, second, although it indeed seemed to be easier to sell small quantities of each model, when a specific model was successful salesmen never had enough volume to meet the demand. Retailers felt unhappy with that and would frequently complain to salesmen that it was awkward that when they wanted to buy large quantities of a product the company could not help them. This was an obstacle for the construction of stronger relationships between Semp Toshiba and retailers.

For consumers, the image of Semp Toshiba's products was generally associated with the image of Semp, a traditional national manufacturer of reliable and popular products. Such image had basically been constructed upon the lasting presence of Semp in the Brazilian market, as the company had never run big advertising campaigns in the media.

Regarding the structure of the Commercial Division, there used to be a Commercial Director, two General Sales Managers and some Regional Managers, all of them working at the company's headquarters in São Paulo. There were also one or more representatives in each Brazilian state who were responsible for sales in that state or region of the state. These representatives were, with few exceptions, self-employed salesmen who would receive monthly quotas of products from Semp Toshiba to sell.

In 1989, the Commercial Director was replaced. The new Director, Mr Ney de Lellis, had previously been a representative of Semp Toshiba for many years in the state of Rio Grande do Sul. Therefore, when he came to work as Director he had knowledge both about the company and the daily work of the sales force. In comparison with previous Commercial Directors, his style was perceived by his subordinates as being more open to suggestions coming from them.

#### **6.4.2 Changing the Image and Structure**

In the late 1980's, the company decided to change its image with consumers towards one identified with more sophisticated products. It took two measures in the attempt to achieve that. First, it launched a range of modern products based on Toshiba's models from abroad. The consequences of such action will be described later in this chapter. Second, it started a media campaign with frequent presence in both television channels and magazines. This campaign was aimed at associating the company's products with modern Japanese technology. At that time there were quite a few Japanese electronic manufacturers in Brazil. On trying to emphasize the Japanese links of the company but also to differentiate it from other Japanese producers, the advertising agency responsible for the campaign created the slogan "Our Japanese are more creative than the others' Japanese". The television advertisements had always a jocular tone which proved to be very successful in achieving the objectives.

In 1989, as soon as he took over as Commercial Director, Mr Lellis started to identify the main commercial problems of Semp Toshiba in different regions of the country. The structure of the Commercial Division was based on the assumption that the smaller the geographical area a Regional Manager was responsible for the better, as he would be able to give more attention to his representatives and clients. However, Mr Lellis and his two General Sales Managers perceived two problems related to such structure. Firstly, there were too many layers between the Director and the salesmen and, as a result, the flow of information in both directions was usually slow and also information originated at one end of the chain would lose some content before reaching the other end. Secondly, Regional Managers were too restricted to their geographical areas of responsibility. On facing a

problem, that would usually be spread across the whole area, making it difficult for them to find solutions.

At the same time, Semp Toshiba was finding it increasingly difficult to sell its products. Price was becoming a key issue for customers and with the company not willing to sacrifice its profitability policy, its salesmen had to spend much more effort in selling products than its competitors. Despite all the effort, Regional Managers were frequently unable to accomplish the sales quotas set by the company. It was then usual that the company would sack managers and replace them with people who were considered well known in the market, that is to say, who had good relationships with some important retailers. On doing that, the company aimed at strengthening its relationships with those retailers. However, some of those new managers used to adopt practices which were not in line with those of Semp Toshiba and, as a consequence ended up being sacked as well.

Mr Lellis then decided to cut the level of Regional Manager, with few exceptions, and to have a larger number of representatives. The idea was that representatives should be responsible for a smaller number of clients, being able to visit them more often. On the other hand, at the top level, the company would have fewer people for both facilitating the information flow and having a more comprehensive idea of the commercial business. An example of the latter objective would be when Semp Toshiba, on facing commercial problems in a particular region of the country, would try to implement measures which were working well in another region. Such macro-vision was not possible under the previous structure where regional managers would try to find solutions within their limited sphere of responsibility. Also, under the new structure, the few top managers would usually be people who had been with the company for many years, and this would give more consistency to the implementation of the commercial strategy. As a consequence of the cut, the two General Sales Managers would now be responsible for a much wider body of activities. To be able to undertake them, besides working harder they had to give more autonomy to representatives, mainly in relation to discount margins for negotiating with retailers. Whilst before any variation in discount would necessarily have to be discussed with managers, now the company would immediately set the maximum discount margins for representatives and they would work out the best deal with retailers.

### 6.4.3 Crisis and Change. An Unusual Step

With the company's decision to launch up to date models the product range was extended even further. Unfortunately for Semp Toshiba, the timing of that decision was bad. In 1992, the worst year of recession in the early 1990's, inflation was again high in Brazil. Facing a combination of economic recession and very unstable prices, consumers opted for low price as the key factor for making their expenditure decisions. Sales for Semp Toshiba almost came to a halt. The President then took an unusual step. A General Sales Manager recalls:

"Semp Toshiba was doing very well and, suddenly, it started to go backwards. Everything stopped. So, that was a period when the President of the company did not only held meetings with the Board of Directors, but he would also call some people that he trusted. He didn't want to listen only to directors, he also wanted to listen to the base who were at the battlefield, and those were the managers. (...) I think he was wary of people always telling him the same things, he started to take people from lower levels and let them speak, and the company started to speak. And one of the things we've always argued for, and I've always supported, I thought that our product line was too large, we should produce less models with more quantity.(...) why insist with a client to buy products which are difficult to sell? We should offer him what is easier to sell, if nothing because in what is easy to sell you can get a better price."

These meetings with a broader group of people made clear the existence of conflicting views within the company. Freedom to speak had, as a counterpoint, the fact that some people would have to listen to critical comments. However, those comments were generally made with respect for hierarchy and the work of others. They were important in convincing managers more reluctant to accept the necessity of changes in the company's strategy. After some time, the President decided to get rid of the company's stock of finished products. He concluded that it was better to sell them at a loss than to keep them, calculating that he would rather make a loss but get some money to invest in saleable products. The company went to the retailers, checked the competitors' prices and in three months sold its whole stock.

At the same time, people from Commercial Division also asked retailers which models were selling better in that period of crisis and fed that information into the company. It was then decided that the company would concentrate its production on those models, increasing their volumes and eliminating those which were difficult to sell. However, the decision of increasing production volumes during a period of crisis in sales was a risky one. As the company had a stable financial situation, the President decided to take the risk, although not to the extent desired by the Commercial Division. Thus, he would authorize smaller increases

than the Commercial Director was asking for and would also maintain a continuous monitoring over the progress of sales. If the company managed to sell the whole production, he would then authorize another increase in volume. Such increases would generally be resisted by people from the Industrial Division as they represented a completely new production strategy. Therefore, the changes described in section 6.3 were also triggered by that commercial pressure.

In the same period, the President also gathered all the employees together and reminded them of Semp Toshiba's policy of sharing profits. If the company didn't manage to sell its products and incurred in a loss, salaries would go down in relation to previous years. That served as an extra incentive for harder work within the company.

On trying to concentrate its production on fewer models, the company also started to pay more attention to the strategies of competitors. An example of that was a TV model launched by Philips, which was characterized by a very simple remote control, containing only the basic functions of switching on/off, volume and channel. Through market research survey, Philips discovered that most consumers would use only such functions and that it could reduce its production costs by manufacturing a model with such characteristics. With a lower price than its competitors, that model was an astonishing commercial success. Retailers commented to Semp Toshiba's salesmen about how the model was selling well and the company then launched a similar one, which was also extremely successful.

Another change in the commercial strategy was related to the introduction of new models. Usually, when the company launched new models or products, that decision would be made by both the Marketing and Industrial Divisions, without any consultation with the Commercial Division. For instance, when Semp Toshiba decided to launch modern Toshiba products, the selection of models was based on the commercial success of such models abroad. However, a good number of them actually turned out to be a failure in the Brazilian market. The strategy was then changed towards consulting the Commercial Division. The latter would then listen to purchasing managers of the main retailers, people who are considered to be very knowledgeable about the preferences of the local market. Thus, when a new model or product is now introduced, the company invites some of those purchasers,

shows them a mock-up model and asks for their opinion. They then criticize and make suggestions for improvements according to their experience and also by comparing it to models produced by Semp Toshiba's competitors.

After the media campaign was considered to be well established, Semp Toshiba looked for other ways of reinforcing its image in consumers' minds. The advertising agency did a market survey and found that for consumers the most important characteristic for a TV was reliability. The company then tried to find out what steps it could take in order to associate such characteristic with its products. It was then recalled that a few years before, Mitsubishi had a very successful promotion where it gave four years guarantee for its products. Semp Toshiba then decided to do a bit more and offer five years guarantee, initially only for the more expensive parts of some models. The Quality Department measured the number of products' faults and concluded that the rate was relatively low. The promotion was given the 'go ahead' and was initially valid for a limited length of time. Media campaign continued to use the same slogan, but would now also emphasize the product quality and the five years guarantee. The result was extremely successful. Some competitors tried to do the same, with guarantees extended to the whole product, but most of them went back to the usual one year guarantee after the end of their promotions. That move from competitors made Semp Toshiba extend its guarantee to the full product and also to the whole product range. By the end of the initial period of promotion, that was so strongly associated with products that the company decided to extend it for a further five years.

#### **6.4.4 Relationship with Retailers**

As it was mentioned before Mr Lellis had two characteristics that differentiated him from previous Commercial Directors, a vast knowledge about salesmen's work and an openness in relation to his subordinates. A General Sales Manager thus describes such openness and some of its consequences:

"...our relationship with Ney (the Commercial Director) is truthful, we don't speak only what the director wants to listen, so much so we live in friction, friction that I'm saying is totally professional. That is a freedom that he's always given to us, we totally respect the hierarchy but we tell the truth, there has always been such sincere relationship. So much so that it's sometimes wearing out, it's difficult to convince him, or even for him to convince us. We get into friction, friction that I'm saying is within all the respect that he deserves, here we've got such freedom. So, look, he gives such freedom because the

main interest...he is the person responsible for the area, you understand?! So, that same relationship he has had with us, we've given to the representatives, we don't allow things to be formal."

With Semp Toshiba's decision to increase production volumes during a difficult period for sales, Mr Lellis knew that, despite dealing with more saleable products, the sales activity would need to reach higher levels of effectiveness. The objective of reducing production costs and, as a consequence, products' prices was being achieved but the company's prices were still higher than most competitors. The profitability principle was never abandoned.

Mr Lellis sent his two General Sales Managers to travel all over the country to meet sales representatives and also to visit the fifty largest chains of retailers. There were several objectives behind such action. Managers had to closely monitor the behaviour of representatives. Being generally self employed, representatives earn their living by selling Semp Toshiba's products. Their income vary with sales volumes. For them, the easier products are to sell, the better. Thus, although they had welcomed the company's change towards more saleable products, they would usually resist the increased sales quotas Semp Toshiba was assigning to them. Despite the potential for larger income those volumes could represent, they also meant a much harder sales performance. Overcoming that resistance from representatives was considered by Semp Toshiba's managers as one of the main difficulties in the whole process of changing the commercialization policy. General Sales Managers went on explaining representatives that they should now visit clients more frequently and try to sell Semp Toshiba's products as a package. Prices should be the last thing discussed. Representatives should emphasize the product quality, the heavy advertising campaign backing the products, the five years guarantee, the large technical assistance net of shops and the good distribution channels the company had. Resistance from representatives was confronted with threats made by managers of replacing them with other people. As sales volumes were increasing, the position of a Semp Toshiba representative was becoming very attractive and the threat could carry more weight. The Commercial Director also spoke directly to some representatives trying to convince them to embrace the more aggressive commercial strategy. Some representatives who did not comply with the new strategy were either replaced or had other representatives assigned to work in the same area, dividing the

sales volumes. The General Sales Managers also enticed representatives from competitors or even from different industries to come to work with Semp Toshiba. One of the managers recalls the changes:

"So, there was also a recycling process of our representatives. They were aged, they were from different times, it's not about their chronological age, aged regarding to the sort of relationship, they didn't nurture the relationship. We thought that the fundamental thing was the relationship with the client, it was to get up with the client in the morning, have lunch with the client and go to sleep with the client. This is important, because he starts to trust you. (...) that's something we worked hard on."

The frequent contact between General Sales Managers and representatives also made it easier for the former to transmit changes in the sales strategy, like credit policies. Managers acknowledged that with such contacts adaptation to market requirements in relation to commercial policies became much more agile. They could be readily present in regions of the country where representatives were facing problems, in order to help them to sell.

On their visits to large retailers, the General Sales Managers had two main objectives. One was to explain the new strategy of the company and try to build a more stable relationship. They proposed partnerships where Semp Toshiba would provide all the backing through its sales package and retailers should increase the volume of their orders. Through its Promotional Department, the company would also help retailers in selling the products by sharing the costs of advertisements in newspapers, training the retailers' salesmen and promoting prize competitions involving those salesmen which would give incentives related to sales performance. The second objective of visiting was to monitor the performance of representatives. Thus, the General Sales Managers would ask retailers whether they were happy with the representatives who worked with them. They would also gather information about competitors' best representatives in order to, if necessary, entice them to work for Semp Toshiba.

Semp Toshiba has also regarded its distribution policy as an important part of its commercialization strategy. With the constant fluctuations of Brazilian market, bargaining power frequently shifts between producers and retailers. Thus, when the market is growing fast, producers cannot attend to all the demands from retailers and, therefore, have the power to favour some chains of stores. On the other hand, when the market is slowing down,

producers depend on orders coming from retailers who then have power to get better purchasing conditions.

Following the idea of a partnership between the company and retailers, Semp Toshiba has proposed a policy of mutual help aimed at reducing the impact of such market fluctuations. The company would do its best to supply retailers by treating all its clients equally, that is to say, without offering better conditions to any of them. Also, during periods when demand was high, the company would provide retailers with at least the same volumes they had been ordering in the past. For their part, retailers should help the company during periods when demand was low by placing orders at least at a minimum level. The principle behind the policy of equal treatment to all clients was the intention of keeping a wide sales base. By not giving special conditions to any retailer the company did not create resentment among other retailers. However, such actions were received with resistance by many retailers as other manufacturers could offer better commercial deals, like bigger discounts or even leaving products on consignment. Also, at the beginning some retailers did not believe that Semp Toshiba was actually not offering a better deal to competitors.

A factor which helped to break resistance by retailers was the constant presence of Semp Toshiba's managers at clients. They have visited clients regardless of the market conditions. This contrasts with some competitors' managers who are available only when the market is bad and therefore the producers need orders from retailers. A General Sales Manager explains:

"That's when you win the bloke over to your side, you understand, we are always in the client, always present, in bad times, in good times. In good times is for saying 'You remember that you helped me? So now I'm going to help you'. In bad times, 'You remember, now I need you, you can't compare me to the others, I didn't let you down', those are things that others do, they vanish."

Such presence has also been important because while competitors usually send their representatives or their regional managers to visit clients, Semp Toshiba has frequently sent its General Sales Managers and even, to very important retailers, its Commercial Director. Again a General Sales Manager explains:

"You know, they were used to talk to the manager subordinated to the manager...never with the...so with us they were talking directly with the company, because look, they were talking to the General Manager, above him there is only the Director and the President. The President is the owner of the company, he wants to know just the final

result. So, that's it, the one who commands is the Director. In the majority of times there were myself and the Director, other times myself alone, that is to say, it was the second man of the company who was there. So that was a difference for us. While we would find the third, the fourth man of competitors, we were the second, so the chap gives more importance to us, I am more important than the regional manager of the competitor. If they were using the same weapon, sending people from the same level, who knows we would be dividing a bit more of the space. So, what we did, the 50 largest mainly we did a close marking. So, I think that then we were those who basically commanded the business."

Another strategy used by the company for widen its sales base was, through its large number of representatives, making an effort to attend small local retailers. One General Sales Manager explains such strategy:

"What we had was a larger number of salesmen in a smaller space, for them to have to go four, five times in the same client, to win by insistence, and many clients put orders by visits, the smaller do that. The small client, when you visit him, he feels obliged to put an order. And the large majority of our competitors don't loose time with small clients. So he also 'Well, he doesn't come here, I don't care about him'. Now, with Semp Toshiba no, many times he 'I bought five TVs, I sold only two but, OK, send two to me, replace at least two'; you understand our move, so that is a strategy that we've applied."

#### **6.4.5 Within the Commercial Division**

A few other points related to the work at the Commercial Division are worthy of mention. The first is the fact that the Japanese have not interfered in the commercial policy of Semp Toshiba. As the company produces only for the Brazilian market and has been usually profitable, both partners of the joint venture agreed that this part of the business should be handled exclusively by the Brazilians.

A second significant point is that inside the Commercial Division communications are very informal. There is practically no schedule of meetings. Managers meet whenever they think it is necessary and they can go into the Director's office at any time they think it is important to talk to him. One of the few formal meetings is when the company gets all its representatives together to show the general numbers and to discuss the different commercial performances in various regions of the country. That occurs twice a year. Even the frequent trips of General

Sales Managers around the country to visit retailers and representatives have their itineraries usually decided only one week in advance, according to necessities of the moment.

A third point is that with the increase in production and sales volume of the last few years, the company again hired a Regional Manager who works at the headquarters and is responsible exclusively for the city of São Paulo. However, a General Sales Manager emphasized that he keeps a close contact with that manager "trying to transform him in one like us".

## 6.5 Hard Data

To conclude this chapter, below there are some figures which present the evolution of production volumes, productivity, market share and turnover of Semp Toshiba during the last few years.

Table 6.1 presents the number of sets produced of the company's main products between 1990 and 1995.

Table 6.2 presents the production of colour television by size during the same period. Note the concentration of production on both 14 and 20 inches models after 1993. Note also the reintroduction and increase of production of large size models in 1994 onwards, as a result of the recent period of stability in the Brazilian economy. Such stability has allowed the return of consumer credit which facilitates sales of those more expensive models.

Figure 6.3 presents the evolution of productivity at Semp Toshiba between 1990 and 1995.

Figure 6.4 presents the evolution of Semp Toshiba's market share in TVs and VCRs between 1990 and 1995, and the evolution of turnover and sales by employee between 1993 and 1995.

**Table 6.1****Semp Toshiba - Sets Produced**

PRODUCTS	1990	1991	1992	1993	1994	1995	TOTAL
TV	316,259	325,614	276,625	430,000	613,470	918,590	2,880,558
Audio	306,534	311,347	150,716	235,710	229,115	214,715	1,449,137
VCR	82,050	97,598	73,691	111,810	174,304	306,800	846,253
Cordless Phone				6,990	61,610	163,315	231,915
Cellular Phone					2,556	1,459	4,015
Fax				6,900	5,446	3,850	16,196
TOTAL	704,843	734,559	501,032	792,410	1,086,501	1,608,729	5,428,074

**Table 6.2****Semp Toshiba - TV Sets Produced (by size)**

TV (inches)	1990	1991	1992	1993	1994	1995	TOTAL
10"	41,140	28,804	16,450	29,275	23,600	16,000	155,269
14"	85,425	108,198	100,248	169,350	239,090	355,398	1,057,709
15"	950	3,400	4,000				8,350
16"	85,146	79,682	22,356				187,181
20"	81,877	97,580	125,501	216,375	326,240	502,698	1,350,271
21"	14,090	1,800	240			325	16,455
28"	7,634	6,150	7,830	15,000	24,540	15,360	76,514
29"						27,057	27,057
34"						1,752	1,752
TOTAL	316,259	325,614	276,625	430,000	613,470	918,590	2,880,558

Figure 6.3

OPERATIONAL PRODUCTIVITY

	1990	1991	1992	1993	1994	1995
Production per Employee - Year	328	410	398	728	1,126	1,292
Production per Employee - Month	27.37	34.16	33.14	60.69	93.83	107.68
Average No. of Employees	2,146	1,792	1,260	1,088	965	1,245
Annual Production	704,843	734,559	501,032	792,410	1,086,501	1,608,729

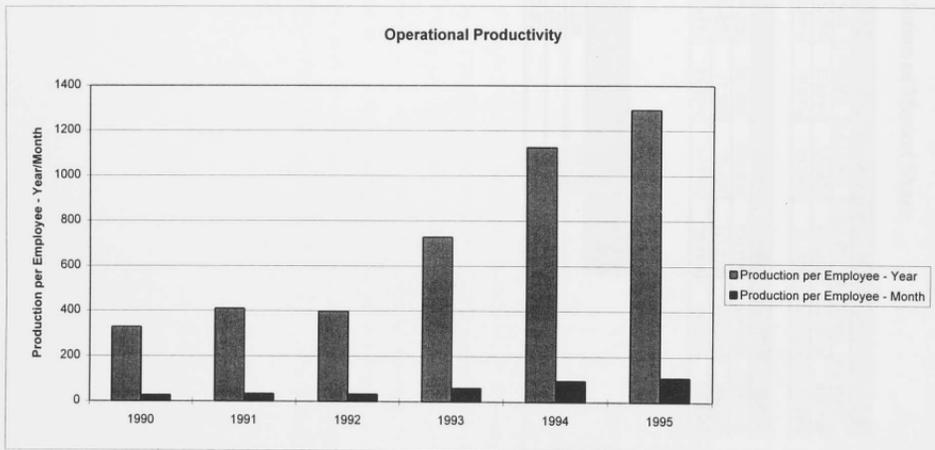


Figure 6.4

Evolution of Market Share

TV Production	1990	1991	1992	1993	1994	1995
Brazil	2,891,000	2,990,000	2,624,000	3,824,000	5,470,000	6,204,000
Semp Toshiba	316,259	325,614	276,625	430,000	613,470	918,590
Market Share	10.94%	10.89%	10.54%	11.24%	11.22%	14.81%

VCR Production	1990	1991	1992	1993	1994	1995
Brazil	494,000	581,000	696,000	554,000	816,000	1,234,000
Semp Toshiba	82,050	97,598	73,691	111,810	174,304	306,800
Market Share	16.61%	16.80%	10.59%	20.18%	21.36%	24.86%

	Turnover US\$ thousands	Sales by Employee US\$
1993	385,000	337,700
1994	531,600	522,500
1995	719,600	589,122

Another relevant item of information is that the most important business magazine in Brazil every year elects the best companies in different industries, based on six indices related to financial and productivity measurement. That has happened since 1975, and, in its sector, which comprises electric material, household electric goods, communication equipment, bulbs and accessories, Semp Toshiba has won the first prize in 1993, 1994 and 1995 (Exame 1993, Exame 1994, Exame 1995). In 1996, Semp Toshiba won the first place not only in its sector but in the overall competition, being elected the best company in the country (Exame 1996).

## **6.6 Summary**

This chapter has described two processes occurred at Semp Toshiba in the last few years: an increase in productivity, and changes in the commercialization policy of the company. The description has also covered the most prominent values and characteristics of the company, as defined by its senior managers. Particular attention was given to the context in which the processes have developed, including the wider context of changes in the Brazilian economy. The changes described have involved not only Semp Toshiba, but also other companies with which it has close relationships, such as suppliers and retailers. The description has attempted to show the relationships between the processes, the role of main actors involved, actions which led to changes, resistance to changes and factors which have facilitated the processes.

## Chapter 7

### VIRTUOUS CIRCLE

This chapter presents the analysis of the two processes described in the previous chapter: 1) the increase in productivity levels, and 2) the change in the commercialization policy of Semp Toshiba. The analysis seeks to identify and discuss the main conditions which have enabled the occurrence of organizational learning at Semp Toshiba. The first section discusses whether Semp Toshiba has accumulated any knowledge with the development of the processes. The second section identifies the main triggers for the processes. The third section is the core of the chapter and discusses each process by: a) identifying its main objectives, b) identifying what has been learned by Semp Toshiba, and c) proposing and discussing the main enabling conditions for organizational learning in each process. The fourth section presents a general view of all enabling conditions proposed and their relationship with the evolution of the processes. The fifth and final section establishes some links between the processes and the decision-making and organizational theory literatures, drawing the reader's attention to the presence of factors related to both structure and managerial agency for the inception and evolution of the processes.

#### **7.1 Has Semp Toshiba Accumulated any Knowledge?**

The first point to be addressed is whether Semp Toshiba has acquired or created any knowledge with the evolution of the two processes. It was already mentioned in Chapter 3 that the criteria for choosing the processes studied were their relevance for the company and their learning potential. In Semp Toshiba's case, its highly successful performance in the last few years, and the association established by the interviewees between the changes resulting from the processes and the company's performance indicate the occurrence of organizational learning. It is quite reasonable to assume that the cost reductions yielded by the increase in productivity, the successful media campaign and the changes in the commercialization policy were directly related to the improvement in the company's performance. In the view of its

managers, Semp Toshiba has changed many of its procedures, some of them in a quite fundamental way, and those changes have proved highly beneficial for the company, its owners and its present employees. In other words, from the outcomes of the processes it is possible to infer that these have fostered a number of dynamic capabilities (Teece, Pisano and Shuen 1992) within Semp Toshiba which have put the company in a very strong competitive position in its sector. What requires better understanding is which aspects of those changes can be regarded as central for the achievement of the outcomes, and this is what this chapter discusses.

On analysing the processes studied, the first characteristic which caught my attention was the perception that if I considered each sub-process individually they would appear quite ordinary. Some of them are managerial practices widely implemented in companies around the world in the last fifteen years or so. However, their aggregated impact on the competitive position of Semp Toshiba has been remarkable. And that is not due to the company's competitors being inefficient or the competitive environment slack. On the contrary, the sector is highly competitive, with the presence of many important world players and the recent arrival of some aggressively competitive companies. It is highly probable that at least some of those managerial practices are present in these companies, although with possibly different outcomes. The Brazilian market, mainly for TVs, has been growing at impressive rates in the last three years but Semp Toshiba has managed not only to follow this growth but to actually gain significant market share (see Figure 6.4). Thus, the study became even more interesting for me. What is it that made each process studied so successful and, moreover, the combination of them yield such remarkable outcomes? Which characteristics of their evolution can be deemed as central for achieving such outcomes?

Bearing in mind the changes in the external environment described in the previous chapter, let me recall some of the values of Semp Toshiba's internal environment, described in section 6.2: profit making, strong work ethic, attainment of results, being highly competitive and caution in relation to the external environment. In addition, there are also the characteristics of lean structure, fast implementation of decisions, clearly defined objectives and good relationships with retailers. It is with these values and characteristics in mind that the evolution of the processes will be discussed.

## 7.2. Triggers

It is possible to identify a number of triggers for the two process of changes at Semp Toshiba, some external and some internal. Externally, the changes in the Brazilian economy from 1990 onwards, with the reduction of import tariffs and the 'invasion' of the market by imported products indicated to companies located in the country the necessity of a change in the basis of their performance towards better cost management and product quality. The recession in 1992-93 made sales an increasingly difficult task and reinforced the importance of price as a competitive factor. Internally, the appointment of Mr Loeb as Industrial Director in 1989 represented the arrival of a manager with both experience in the industrial and managerial processes which were later implemented in the company, and a positive leadership style spontaneously acknowledged by all his subordinates who I interviewed. The appointment of Mr Lellis as Commercial Director, also in 1989, represented the arrival of someone with a deep knowledge of both the market and the work of salesmen, and also a person who was able and willing to listen and discuss ideas with his team.

Although the changes in the economic environment of the country impacted many sectors, and consumer electronics was one of the most strongly affected, actions taken by the different companies in response to these changes varied remarkably. As was mentioned in the previous chapter, whilst some companies in the audio sector almost immediately closed down operations for failing or not willing to adapt to the new environment<sup>1</sup>, Semp Toshiba took that opportunity to outsource all its audio line to Asian producers and continue to be present in the sector. Another swift action from Semp Toshiba was related to the procurement of components for its TV and VCR lines. With the lowering of import tariffs, the company has managed to buy components for very attractive prices in the international market, with an agility which was praised by a Toshiba representative in the company. Such agility has greatly helped the company in reducing its production costs. Mr Loeb observed that he had to replace the manager responsible for the international procurement sector three times until he found someone who could do the job in a way that conformed to the necessities of the company.

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<sup>1</sup> See Johnson (1987) for a discussion of how managers of the clothing firm Foster Brothers had difficulties in adapting to a modified competitive environment.

Another distinctive movement for the company was the decision to increase production volumes as a way of cutting costs during a period of recession. These decisions are an example that, although objective changes occurred in the macro economic level, companies in the same industry responded differently to them. Some of these environmental changes had an institutional character, as when the Amazonas state government required the ISO9000 certification for companies installed in the Manaus' Free Trade Zone. That can be seen as an example of coercive isomorphism (DiMaggio and Powell 1991), with government exerting pressure for change on companies towards more competitive products. However, even when some of the attitudes adopted by companies in the same sector were similar<sup>2</sup>, as many consumer electronics companies in Brazil embarked on programmes aimed at reducing costs and increasing quality and productivity, the success achieved varied. Such different outcomes support the notion that managers have a considerable degree of discretion regarding the relationship between the company and the environment (Child 1972) or, in other words, that managers have some power to enact their environments (Weick 1969). In the case of Semp Toshiba, the assessment of the environment, the making of decisions and their implementation have resulted in the successful management of processes of change. Although these processes have involved the whole company, they were internally started and given the guidelines for development by the two directors previously mentioned.

### **7.3 Objectives, Content of Learning and Enabling Conditions**

The establishment of objectives in principle relates to the outcomes expected by agents at the outset of processes. However, many of those objectives are usually set or expanded during the unfolding of the processes, as managers frequently have no clear idea about the outcomes they expect at the initial stages of decision-making processes (March and Olsen 1976a). In general, that seems to be the case in the processes described in the last chapter. There is the particular case of the stock reduction and quality programmes, where Mr Loeb claims knowing beforehand exactly what he intended. It is difficult to know the truth about this particular point, as the research was carried out after the development of the processes. In any

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<sup>2</sup> Spender (1989) discusses how managers in the same sector tend to share a common set of strategic recipes which may prevent them to adopt innovative action when facing changes in the competitive environment.

case, the two sub-processes referred to by Mr Loeb are well known parts of Total Quality Management programmes and it is not inconceivable that he had indeed envisaged the objectives in anticipation. On the other hand, understanding of such objectives deepened as the processes developed. Nevertheless, what is important to discuss here is how the objectives were established and the implications they had within Semp Toshiba, in the sense of being either a 'natural' development of the situation or something that could challenge the status quo. The following sub-sections will present the processes and sub-processes studied and discuss: a) the objectives and their implications for people involved and for the company; b) what has been learned by the company with the process; and c) the conditions I deem central for the occurrence of organizational learning in each process. Due to the characteristics of the processes, I decided to break down the stock reduction process into its three constituent sub-processes and discuss the changes in commercialization policy as a single process.

### **7.3.1 Quality Programme**

For the quality programme, the internal objective was to obtain the ISO9000 certificate and there was no dispute about this. Nevertheless, the implementation of the programme brought changes to some routines within the company, and that was occasionally resisted by the people involved. For the first time, some managers had to discuss with subordinates the tasks their area performed, and to consider changes suggested by them. That was an opportunity for people to make explicit the tacit knowledge they had about their jobs. However, the coordinator of the programme told me that people usually felt wary of making criticisms in the presence of their managers about the way routines were performed. It took around six months of meetings for people to feel comfortable enough to speak freely. Considering that the programme did not represent any serious threat to the power of managers, it is possible to perceive how difficult it is to overcome the usual barriers hierarchy represents within organizations. This contrasts with the usually rosy image that much of the business literature on the 'learning organization' gives about the possibilities of change within organizations, usually glossing over questions of power.

Externally, the programme faced much more resistance, as suppliers frequently would not agree with the idea of assuming responsibilities and investments related to quality which had always been considered as a function of Semp Toshiba. For them, accepting or rejecting the programme indeed represented a vital decision, at least concerning their relationship with Semp Toshiba.

With regard to what Semp Toshiba has learned with the quality programme, the main points that can be highlighted are: a) formalization of all procedures comprised in the programme, which demanded the review of each component of the procedures, and consequent optimization of routines mentioned above; b) better understanding of systems within the company and the consequent broadening of the knowledge base on internal integration, partly as a result of the auditing regularly executed in all areas included in the programme; c) continuous improvement of the procedures, also as a result of auditing, as the company is reassessed every six months in order to have the quality certificate reissued; and, d) ability to make the programme compatible with the company's characteristic of fast decision-making and implementation. After receiving the ISO9000 certificate, the company extended the quality program to areas not covered before, like products' design, in order to qualify to receive more comprehensive certificates as the ISO9004. That was accomplished in 1995. This has given to the quality initiative within the company the character of a continuous learning process, where there is an external stimulus, the quality standard; an internal drive which establishes the obtainment of a certificate as an objective; a learning process for adapting the company to the requirements of the standard; and an internalization of the new know-how. A more comprehensive standard is then set as the next objective, starting off a new learning process.

The conditions I see as being central for enabling organizational learning through the quality programme are discussed below.

*Intention* relates to commitment which the group responsible for the programme had throughout the whole process, despite the initial difficulties and the relatively long period of time it took for them to feel the real possibility of a successful outcome. It also relates to the

support the company's Board gave to the programme, including the approval of investments, despite the lack of visible outcomes in the short term.

*Cross-functional teamwork* relates to the fact that both the committee which steered the implementation of the programme and the task forces were composed of members from different areas within the company. That allowed a wide range of knowledge about the company to be brought into the discussions and implementation, facilitating integration. This also helped in the sense of people in different areas not seeing the programme as a property of one specific area.

*Autonomy* given by the Board to the committee to set all implementation strategy for the programme. Autonomy also given by the committee to the areas to define their procedures and possible changes in them. Within the areas, such autonomy meant that there was no interference from the committee in the decisions about how they should work and, this made the implementation of the programme, even when it brought changes, more acceptable for the people involved. For the committee, autonomy meant the possibility of implementing the programme in the way they judged best fitted for the company. However, this autonomy had clear boundaries established by both the objective of obtaining the quality certificate and the directions contained in the instructions related to the ISO9000 standard.

*Control* was exerted by the Board over the committee and by the committee over the task forces. Both had objectives to achieve and deadlines to meet. Control can be seen as opposite to the autonomy mentioned above, but striking a balance between the two was an important step in implementing the programme. Such balance was central in meeting the demand from the Industrial Director that the implementation of the quality programme should not put at risk the company's characteristic of fast decision-making. Control was also exerted over the suppliers who agreed to promoting quality measures in their own companies.

*Openness* was another characteristic shown by the committee, particularly when accepting suggestions from members in the task forces about how to overcome resistance from areas managers, which led to the policy of non interference. Openness was also important in adapting the content of training for workers in Manaus. This characteristic helps to create an

environment propitious to the sharing of ideas, which is described in the organizational learning literature as the sharing of mental models (Kim 1993, Senge 1990a).

*Time* as ally relates to the fact that the committee allowed a large period of time for people in their areas to bring their procedures into discussion, to the degree necessary for them to feel comfortable enough to reveal their opinions in the presence of their managers. This was considered by interviewees as being of fundamental importance in helping changes in procedures to occur. On the other hand, this did not mean that the programme had no implementation deadlines, but rather that the autonomy given to the committee allowed that the initial difficulties related to the active participation of employees was taken in consideration when fixing deadlines.

*Gradualism* was an approach adopted during the implementation, with changes being made step-by-step, but at a steady pace. So, the committee managed to strike a balance between too sudden changes, which would have to be imposed and possibly resisted, and a very slow pace, which would give room to discredit the process. The nature of the changes, affecting as they did the daily routines performed by people, required a period of internalization of the modified praxis, and that was made easier because the changes were the result of discussions involving the very people affected.

*Unlearning* occurred when routines were changed. Although the quality program has started from top level within the organization, the changes in routines within the areas were a result of internal discussions and, therefore, the unlearning process was not forced from outside. In this case, changes in routines involved both cognitive and behavioural changes for the people involved. The aforementioned use of time appears to have been important for the evolution of such smooth unlearning process.

*Training* was largely used for informing personnel about the programme and preparing at least one employee from each area to take part in the task forces. Training involved the diffusion of explicit knowledge and the internalization by participants of the programme's goals.

*External information gathering* was used at the initial stages as a way to make members of the committee more knowledgeable about the programme. Both visits to other companies and talks given by consultants and members of companies which had already implemented a programme were used.

*Institutional support* from external agents had an indirect but important effect on calling people's attention to the debate on quality and also on reinforcing the objective of obtaining the certificate. The former happened in the early 1990's, when important newspapers continuously published articles about the ISO9000 standard and quality programmes in their business sections. The latter when the Amazonas state government required the ISO9000 certification for companies installed in the Manaus' Free Trade Zone. The influence of institutions on organizations has been the object of growing attention in both organization and economics literatures, but it can be more subtle than these analysis usually acknowledge. For instance, information acquired while reading a newspaper on a quiet Sunday morning at home can sometimes have more impact than the same information received in a memo circulated at work. Internally, the already mentioned overt support from the company's Board to the implementation committee can also be viewed as an institutional support, as the initiative carried the weight of the company's name and was recognized as such by employees.

*Dynamic objectives* relates to the way that, after receiving the ISO9000 certificate, the company then sought to obtain other quality certificates involving a larger number of procedures. Such engagement demonstrates the commitment of top management to furthering quality improvements, which has as consequence a continuing learning process related to quality.

*Codification* relates to the formal description of routines performed by each area. It was a requirement for obtaining the quality certificate, but the involvement of many employees in the activity of codification represented an extra opportunity for transforming tacit into explicit knowledge. Moreover, the description can be used as both a memory of each area's routines, so that new employees can refer to them when learning their jobs, and a control instrument, as the routines are audited periodically.

### 7.3.2 Stock Reduction

For the stock reduction process, the initial objectives were set by Mr Loeb and they perplexed his subordinates. The hierarchical style of Semp Toshiba appears to have assisted in overcoming such perplexity, in the sense that the objectives were not immediately resisted by managers. They were received with scepticism but managers knew that they had to discuss with Mr Loeb possible ways of achieving them. The hierarchical style does not mean that subordinates have no voice in decision-making, but rather that in the lack of a consensus among the team the final word always belongs to the superior, and, after a decision is taken, all people involved must direct their best efforts towards the objectives. Thus, the clear hierarchy is a characteristic of the company culture, but the willingness to involve subordinates in discussions which lead to decisions and, consequently, in actions necessary to implement them is a characteristic of the management style of the Industrial Director. Therefore, it seems reasonable to infer that top managers have some discretion to act within an existent organizational culture in ways which respect the basic principles of this culture but also leave room for attitudes which are not usually associated with it. Acting in this way, top managers can provide a context where other members of the organization can feel encouraged to contribute with their own experiences (Fiol 1994, Hedberg 1981, Mintzberg and Westley 1992, Nonaka 1994). In the case of the stock reduction process, such context involved a paradox between an objective which appeared to be unachievable for the team and the necessity of finding a consensual way of achieving it. Child (1997) propose that

“... it may be necessary to sustain certain paradoxes for learning to take place as a collective phenomenon in organizations, such as the need to achieve consensus from a diversity of views and the preservation of some continuities within the process of introducing change”.

This seems to be quite applicable to the situation of the stock reduction process at Semp Toshiba.

With regard to what Semp Toshiba has learned with the process, the main aspects are: a) a different mindset concerning the relationship between stock and production, from high stock meaning safety for production, to low level of a balanced stock (items in the right proportional quantities) meaning cost saving and production flexibility; b) better control over suppliers, with low stock they must deliver products at the right time and with the

required quality, and, also, with fewer suppliers and supplies it became easier to identify problems; and c) knowing that stock management could be done in a different and more efficient way resulted in a willingness to make further improvements. This last issue has been vital for establishing the continuity of the process, as the company has consistently set new lower targets for its stock level. On trying to improve its stock management Semp Toshiba has found new ways of increasing its productivity levels, in a process similar to what happened at Toyota (Coriat 1993).

The conditions I see as being central for enabling organizational learning through the stock reduction process are discussed below.

*Newcomer as source of innovation*, in the person of Mr Loeb, who brought into the company the idea of reducing stocks. The role of newcomers as diffusers of information and, therefore, as sources of innovation, is acknowledged in the organizational learning literature (Huber 1991, Levitt and March 1988). The Industrial Director borrowed the idea from previous working experiences and also from his visits to other Toshiba's plants, scanning the environment and acting in a way similar to what the innovation literature calls 'boundary spanner' (Aldrich and Herker 1977, Tushman and Scanlan 1981).

*Intention* relating to the commitment of all six managers involved in the process, especially the Industrial Director who kept saying to the team that the objective was feasible, when the others did not believe it.

*Leadership* exerted by the Industrial Director throughout the whole process. Bringing new ideas, establishing objectives, debating suggestions coming from managers, coordinating the managerial team, proposing solutions to some problems, personally thanking managers and employees for their collaboration every time an objective was reached, were attitudes which provided a context where teamwork could flourish and organizational learning occur.

*Cross-functional teamwork*, starting from the team which guided the process, was paramount for its accomplishment. This team included managers from four different areas within the Industrial Division and, as tasks were being defined, cross-functional teams of workers were

involved in their implementation. Furthermore, as could be observed in the previous chapter, the three sub-processes which led to improved productivity were closely interconnected and involved different areas and tasks. Coordination, achieved through teamwork was vital. As one sub-process impacts the others, improvements in any of them frequently involved changes in the others. Thus, cross-functional teamwork was an important source of variety in ideas for problem solving. There is also the question of teams working interdependently between the two sites of the company, which are geographically very distant from each other. This adds another dimension, space, to the coordination of teams.

*Partnership with Toshiba* has been important as an exemplar and as a support. The former comes through the visits of Semp Toshiba's managers to Toshiba's plants, from where most of the ideas which started the processes were drawn, and is an example of *external information gathering*. In this case the concept of external is relative as Semp Toshiba is a company affiliated to Toshiba, and such status allows its managers full access to Toshiba's plants. The latter is exemplified in the assistance Toshiba gives to Semp Toshiba in the procurement of parts from foreign suppliers. Although the negotiation is done by Semp Toshiba's personnel, the global brand name of Toshiba and its previous relationship with some of those suppliers has helped build a direct relationship between Semp Toshiba and them. Thus, sometimes in an indirect way, the partnership with Toshiba has helped the company towards an easier integration into international markets for components following the lowering of import tariffs in Brazil. As was mentioned before, agility has played a decisive role in lowering costs.

*Unlearning* was crucial for the evolution of the stock reduction process. From the three sub-processes which led to the increase in productivity, this was the one which involved the most radical change in the way people worked. The objectives proposed actually pointed in the opposite direction to established practices and beliefs. Within the team which guided the process, peer pressure from those who were more quickly convinced of the merits of the new ways of operating, was an effective attitude towards unlearning. However, two other issues appear to have been even more fundamental for unlearning to occur. One was the use of *power* over those who resisted more strongly to the changes. Thus, some middle managers were relocated to other functions in the company when top managers felt they were not acting

in accord with the new requirements. This sort of forced change may have not changed the beliefs of the individual who was relocated, at least initially, and, therefore, unlearning has not occurred at this level. But when the manager who took over started to act differently from his predecessor, it is possible to say that the company has unlearned because its praxis has truly changed. So, at the organizational level there has been a forced unlearning.

The second way in which unlearning has occurred was the use of *success as leverage*. As the changes were gradually implemented, for instance, intervals for deliveries of supplies were reduced from monthly to fortnightly, and then to weekly and so on, people started to perceive that the new procedures were not only feasible but also were bringing benefits for production, and resistance was broken. The point here is that some interviewees admitted that, at the beginning, even when people were acting according to what was expected from them, they were actually not convinced that the changes would be successful. Thus, at that stage, a behavioural change had occurred but a cognitive change had not. After the first positive results were visible, people indeed started to believe in the value of the changes and, then, it seems reasonable to say that a cognitive change had occurred.

*Dynamic objectives* relates to the continuous resetting of objectives for stock management and suppliers' delivery intervals. During the interviews I felt that managers were proud of the results achieved, but still willing to improve on them. The use of *success as leverage* has made possible this constant resetting of objectives which, in turn, starts a new cycle of organizational learning. Adoption of static objectives would, in contrast, mean that after they were achieved people would be satisfied, until, perhaps, a new crisis or sudden environmental change sparked off a new series of actions. The adoption of dynamic objectives is in line with the concept of dynamic capabilities proposed by Teece, Pisano and Shuen (1992 p.18) as 'the capacity of a firm to renew, augment, and adapt its core competences over time'. An important observation regarding the adoption of dynamic objectives in this case is that it has come for managers as a natural next step after an objective has been reached. The idea of continuous dissatisfaction may sound thrilling in theory but can be quite annoying in real life. That is exactly where the use of *success as leverage* can make further improvement a natural step. The emphasis is on a positive value, more success, and not on a negative one, dissatisfaction.

*Gradualism* was a policy adopted during the process which has facilitated its evolution. Due to the character of the changes, their acceptance and feasibility of implementation would be in serious risk if they were promoted all at once. It is the gradual approach that has made possible the use of intermediate success as leverage for furthering the objectives. If one looks at the initial objectives and the outcomes of the changes, one might probably describe them as radical change, but when their development is examined in detail it is possible to perceive incremental evolution, which is a consequence of the gradual approach.

*Institutional support* happened when some suppliers of large components moved their production lines to the Manaus region, making possible a deepening of the process. Some of those components, such as TV cabinets, are now delivered several times a day, eliminating the necessity for Semp Toshiba to stock them. On the other hand, this brought with it the necessity of reorganizing the production line in order to receive components straight from suppliers. Such reorganization involves close coordination of activities with suppliers, expanding the learning process outside the formal boundaries of the company. Thus, a new level of inter-organizational learning is added to the process. Institutional support is also present when the company uses the Toshiba brand to negotiate with foreign suppliers.

Better *control* over both the stock and suppliers was, at the same time, part and consequence of the process. The evolution of the process allowed to the company better control which, in turn, allowed further development in stock reduction and coordination with suppliers.

### **7.3.3 Assembly Line**

Concerning the changes in the assembly line, the idea of outsourcing was brought in by the Industrial Director with the usual justification for such measures, that is, the company should concentrate on what it does best and leave low added-value tasks to smaller companies. The people who were immediately affected were the workers whose tasks were outsourced. The strategy of finding jobs for these people at the companies which took over the tasks avoided most of the problems related to laying them off. Other groups affected were the new suppliers, some of which did not even exist before starting to work for Semp Toshiba. For these small companies the process has represented a significant learning experience, as they

have to comply with production standards which, although generally simple, are more sophisticated than the ones they used before.

The acquisition of automatic insertion machines was jointly decided by Brazilian and Japanese directors as a consequence of the previous decision to increase production volumes and also as a way of avoiding human errors in product assembly. Their introduction on the assembly line was preceded by training and reorganization of work routines in order to adapt to the new machinery. The introduction of the Kaizen activity was suggested by the Japanese Technical Director. For the Kaizen, tasks objectives are decided by each Kaizen group of workers, but controlled by the company's managers.

With regard to what Semp Toshiba has learned with the changes in the assembly line, the main aspects are: a) purposeful optimization of the assembly line, with more flexibility, decreasing assembly times and higher productivity; b) knowledge successfully transferred to suppliers which took over the outsourced activities; c) a series of small improvements in the production processes as a result of Kaizen activities; and d) knowledge on how to identify points for improvement in production processes.

The conditions I see as being central for enabling organizational learning through the changes in the assembly line are discussed below.

*Newcomer as source of innovation*, in the person of the Technical Director who came from Toshiba in Japan where he had worked with productivity systems. Mr Asakura brought the practice of Kaizen into Semp Toshiba, was directly involved in the introduction of new machinery in the assembly line, and also organized the outsourcing of activities.

*Intention* relates to the commitment of the team responsible for implementing the changes. As it was described in the previous chapter, the initial objective was to increase productivity and reduce costs in order to be able to compete with imported products. Not only was this accomplished but also the company became one of the most productive in its sector in the country.

*Cross-functional teamwork* is a major characteristic of the Kaizen activity. Improvement in production processes are usually achieved through small changes in one sector of production which make the work of another sector easier. It is this understanding of the integration between different sectors within the production line which allows improvements to be achieved. In the outsourcing sub-process, production engineers worked with the new suppliers in order to set up their operations.

*Partnership with Toshiba* has been central for changes in the assembly line. Kaizen specialists from Toshiba have regularly visited Semp Toshiba to give training and make suggestions on how to improve productivity. All Kaizen programmes are inspired by Toshiba's Kaizen. Reorganization of the assembly line to facilitate the introduction of new machinery was supervised by the Technical Director.

*Gradualism* was also adopted in this process. It is, by definition, part of the Kaizen philosophy. It was also used for the outsourcing, where the company first tried it with a small number of tasks, acquired experience with dealing with small companies as suppliers, and then expanded their numbers. When quality problems occurred with some suppliers, the company left specialists working within the supplier as long as was necessary for the problems to be solved.

*Autonomy* is given to members of the Kaizen groups to decide which problems they want to tackle and how they will do it. This is considered important in order to foster creative solutions. Autonomy is also given to small suppliers which can work for Semp Toshiba's competitors, even when they are using Semp Toshiba's equipment. According to the head of the Industrial Engineering Division, some suppliers already suggested small changes in their products inspired by those contacts with other companies, in an indirect form of *external information gathering* for the company. This is, to some degree, similar to what Smith, Child and Rowlinson (Smith, Child and Rowlinson 1990) describe in the case of Cadburys, when equipment suppliers provided information about production technology to the company.

*Openness* is an important requirement for teamwork within the Kaizen groups. Members of the groups have to discuss and implement suggestions that sometimes were preferred by the

group over their own personal suggestions. Moreover, they also have to implement suggestions given by workers from other areas which alter their work routines.

*Control*, on the other hand, was exerted over the Kaizen groups in the initial stages, in order to establish limits for the changes that could be undertaken through their activities. In other words, the company made sure that workers suggested changes which basically considered the interest of the company, as defined by its owners, in first place. Control is also exerted over suppliers, mainly related to quality and delivery time issues. The changes in the main assembly line, involving mechanization, setting of production times and training of workers, all involved a tighter control over production, here comprising both processes and personnel.

*Training* was important for setting up operations in the small suppliers. Although in many cases a former employee of Semp Toshiba, who used to do the same task previously, was working in the supplier, in other cases that did not happen. Also, with the increase in production, some activities were outsourced and the workers responsible for them stayed in company doing different tasks. In this case, both those workers and the new suppliers had to be trained. There is also regular training given by Kaizen specialists from Toshiba.

*Dynamic objectives* is another characteristic of Kaizen. When one activity is finished, members of the group elect another process to be improved. The outsourcing and mechanization activities have also had their objectives expanded, as a consequence of the rapid growth in production volumes. The effect of dynamic objectives in this sub-process has been the same as in the others, renewal of the organizational learning cycle.

#### **7.3.4 Commercialization Policy**

The changes in the commercialization policy should be seen as complementary to those at the Industrial Division. If the success of the former heavily depended on the outcomes of the latter, the opposite is also true. The two processes, therefore, form a virtuous circle where intermediate successes fed the continuity of changes.

At the Commercial Division, the changes were conducted by the Commercial Director, who had recently assumed his position, and the two General Sales Managers, who have worked at Semp Toshiba for many years. The first group of measures was directed at the structure of the division and their objective was to facilitate internal communications. As it was described in the previous chapter, managers concluded that information transmitted was being distorted by the excessive number of layers within the company. According to Edmondson and Moingeon (1996 p.24), "learning in organizations is dependent upon being able to transmit relevant information without distortion - to enable high levels of understanding and productive decision making". The immediate implications for people was the lay off of some regional managers, the hiring of more representatives and an increase in work load for the General Sales Managers. For the company it meant that top managers within the division would be closer to the market and this outcome influenced the decisions for other changes (Mintzberg, Raisinighani and Théorét 1976).

The reduction in the model range was suggested and initially supported by the same people, but they were inspired by talks with retailers about which products were selling well. In economic terms, it would only make sense for the company with the simultaneous increase in the production volumes of the remaining models. That depended on support from the company's President and agreement and cooperation from the Industrial Division. In that case, the openness from the President in agreeing to try the new strategy, and the role of the Commercial Director in convincing the President and the Industrial Director seem to have been fundamental. Another factor that may have helped is that the Commercial and the Industrial Directors assumed their positions in the same year and, therefore, started to work together. Added to their individual styles, that might have made ideas coming from the other area more acceptable, as there was no such thing as an 'old guard' and a 'newcomer' battling for power within the company. I personally witnessed an example of the good interaction between these two directors during an interview with the Commercial Director, when we were interrupted by a telephone call from the Industrial Director who asked the Commercial Director which products, quantities and dates for delivery he thought the company should plan for the following month. According to the Commercial Director, such sort of consultation was not a practice within the company before they two arrived. Also, in an interview with Semp Toshiba's President, he acknowledged the importance of those two

directors by defining Mr Loeb as someone more in tune with his (the President's) ideas than his predecessors, and Mr Lellis as a Commercial Director who 'sells the company's products to retailers', while his predecessors used simply to 'deliver those products', not negotiating for the benefit of Semp Toshiba.

In relation to the changes in the relationship with retailers, this is a process which has developed over time, again under the inspiration of the Commercial Director. The objectives have been the construction of a better relationship between the company and the retailers, based on trust and interdependence. Its implications have been enormous for Semp Toshiba, as it can be directly associated with the increase in market share achieved by the company in the last few years. For people involved, the most affected were the representatives, as their work load has notably increased. On the other hand, for the majority of them their sales volumes, and consequently their income, has also increased.

With regard to what has been learned by Semp Toshiba with the changes in commercialization policy, the points that can be highlighted are: a) faster and qualitatively better feedback from the market; b) better relationship with retailers involving mutual help to compensate market fluctuations; and, c) better control over the performance of representatives, including their relationship with retailers.

The conditions I see as being central for enabling organizational learning through the changes in the commercialization policy are discussed below.

*Newcomer as source of innovation*, in the person of the Commercial Director. In this case, Mr Lellis is a singular newcomer as he had previously worked as Semp Toshiba's sales representative for many years, but that is a function undertaken outside the company, a link between the company and retailers. What he seems to have brought into the company is a closer connection with retailers, the idea that the company should work in partnership with them. With his first hand experience of the market, he seems to be able to understand the retailers needs and, moreover, to reconcile these needs with Semp Toshiba's interests.

*Intention* relates to the commitment from the team, mainly from the Commercial Director and the two General Sales Managers, in convincing representatives and retailers of the new policy. The three of them were personally involved in frequently talking to both retailers and representatives. Even after the changes were accomplished, the General Sales Managers continued to travel around the country helping representatives which are facing difficulties, and listening to retailers' suggestions.

*Leadership* by the Commercial Director who brought a new way of commercializing to the company and guided his managers on how to achieve the objectives. The leadership style involved listening to what subordinates and retailers had to say and taking that into consideration when making decisions. Again his first hand experience appears to have been important as Mr Lellis would frequently discuss sales strategies with representatives with full knowledge about their jobs.

*Autonomy* given to representatives to negotiate with retailers, as a consequence of the cut on regional managers. Autonomy also given by the Commercial Director to the General Sales Managers to solve problems with representatives and retailers.

*Control* as a counterbalance to autonomy. Thus, representatives have autonomy to work out deals with retailers as far as they manage to accomplish their sales quotas. Also, feedback about the representatives, from retailers directly to the General Sales Managers, functions as a control over the quality of their work. The company has also a detailed control over the performance of each retailer in relation to Semp Toshiba's products and use it when distributing products.

*Openness* from the team to listen to suggestions at all levels. In a function were the contact with clients is direct and their satisfaction paramount for success, openness is a vital characteristic. That seems an obvious point but indeed difficult to be put in practice. Suggestions many times imply in direct or indirect criticism about the current policy. Openness relates not only to listen but to actually analyse suggestions and promote policies which take them into consideration. The example given by the Commercial Director's style appears to have inspired his team to behave in a similar way.

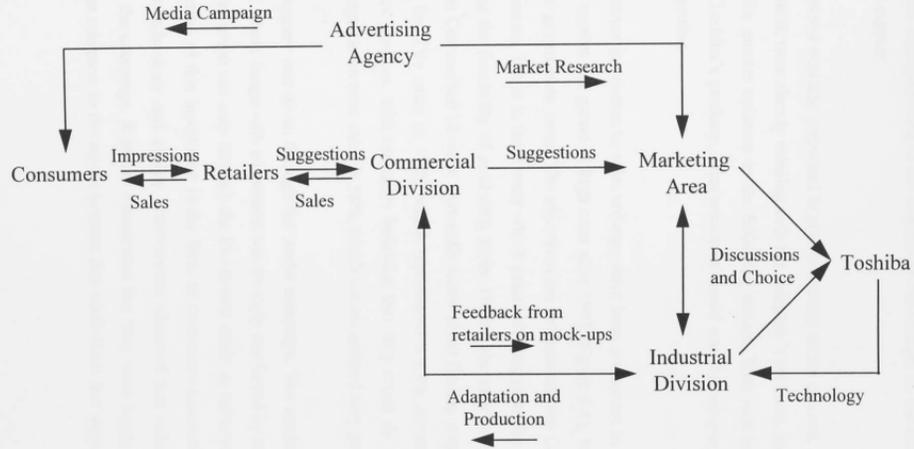
*Inter-organizational network* as a result of the new relationship with retailers. The presence of purchasing managers from the main retailers criticizing mock ups of products have greatly increased the company knowledge about market requirements. In a different arrangement, the marketing function of the company is practically undertaken by an advertising agency. The Brazilian Vice-president is responsible for the marketing area within the company and works together with the agency, which, besides doing the media campaign, collects information directly from consumers. These activities have also characterized the use of *external information gathering*.

Figure 7.1 depicts the flow of information which leads to the choice of models that will be produced by Semp Toshiba. Such choice is a result of matching the market requirements, as presented by both the Commercial Division and the advertising agency, the models produced by Toshiba in other countries and the feasibility of producing these models in Brazil, as defined by the Industrial Division. After being chosen, the models usually undergo modifications in order to be adapted to local conditions like components, broadcasting standard and external look.

*Unlearning* occurred mainly for representatives who had to change their routines towards more frequent visits to clients. The first attempts by the company's managers was directed to convince representatives of the necessity of working in a different way in order to sell the increasing production volume. However, those who did not changed after some time were either replaced or had to share their geographical areas with new representatives, reducing their number of clients. In this case, it is possible to identify the occurrence of a forced unlearning at the company level, as a result of the use of *power* by managers. At the individual level, the pattern was similar to what happened within the company with the stock reduction process. After the sales started to grow in different regions of the country, resistant representatives were convinced of the merits of the new policy.

*Time* was an important factor, as the process was not planned beforehand. It was basically constituted by a chain of decisions, where the outcomes of one led to the next. Objectives were defined during the development of the process. In this sense, *gradualism* can also be identified, not as an intentional approach, like in the sub-processes which led to the increase

Figure 7.1 - Information Flow for Choice of Models



in productivity, but as an intrinsic characteristic of the process. Time was also important in convincing some representatives of the benefits of the change, as the increase in sales over time cemented support.

*Success as leverage* was also important to give continuity to the process. For representatives and retailers which were already working with the company's products, increasing sales were an argument for greater volumes in the following orders. With retailers which were not selling Semp Toshiba's products, representatives would use the company success to try to attract their attention.

*Dynamic objectives* in relation to sales volumes have been a constant in the last few years. The Brazilian market has grown at high rates after 1992 (Figure 6.4), but Semp Toshiba's production has grown even more. The objectives are set between the Commercial and the Industrial Divisions, but it is the former which practically suggests the numbers, with the latter analysing the feasibility of producing them. During the interviews I could see how managers at the Commercial Division were enthusiastic about finding ways for achieving the initial targets for TVs sales in 1995, which represented a 63% increase over 1994. All comments were positive, with managers believing that they could do it. In the end, the company managed to increase sales in 50%, which was considered very good.

*Institutional support* was given through the media campaign. The institution here is Semp Toshiba itself, whose image with consumers was strongly reinforced by the campaign. Thus, the support was given not only through the investment made in advertisement, but chiefly through the return of this investment in the form of consumers associating the company's products with technology and quality. Interviewees observed that sales to retailers were facilitated by the campaign. Retailers commented that they were happy with the constant presence of the company in the media because that made them feel supported in their sales effort.

#### 7.4 Linking the Enabling Conditions for Organizational Learning to Process Development

Table 7.1 presents the enabling conditions for organizational learning I have identified in the processes and sub-processes studied at Semp Toshiba.

A few other points on the enabling conditions can be added to the discussion already made previously in the chapter. Five conditions are present in all sub-processes; intention, dynamic objectives, control, gradualism and external information gathering. Intention was evident in the sub-processes related to the increase in productivity, as managers planned in advance the changes implemented. Regarding the changes in commercialization, although managers did not plan them, and that is an issue that I will return to later in the chapter, intention to achieve the objectives in each stage was always present.

Control can be seen as one side of a coin, whereas autonomy is the other side. Control was mainly used by managers as an instrument for assessing the achievement of objectives. The presence of external information gathering shows readiness from the company in searching the environment for information which could help both the definition of objectives and the implementation of change. Gradualism was a chosen approach in the sub-processes which led to the increase in productivity, and an intrinsic characteristic of the changes in commercialization policy.

I did not include newcomer as source of innovation as one of the enabling conditions for organizational learning in the quality programme because, although the Industrial Director was responsible for the initiative of implementing the programme, many other companies in Brazil were also involved in quality initiatives at the time. It seems reasonable to assume that Semp Toshiba would, sooner or later, also implement a quality programme.

**Table 7.1**

**Enabling Conditions for Organizational Learning  
in the Processes Studied at Semp Toshiba**

Enabling Conditions for Organizational Learning	Productivity			Commercialization
	Quality Programme	Stock Reduction	Assembly Line	
Newcomer as Source of Innovation		x	x	x
Intention	x	x	x	x
Leadership		x		x
Cross-Functional Teamwork	x	x	x	
Inter-Organizational Network				x
Partnership with Toshiba		x	x	
Institutional Support	x	x		x
Unlearning	x	x		x
Power		x		x
Success as Leverage		x		x
Dynamic Objectives	x	x	x	x
Gradualism	x	x	x	x
Autonomy	x		x	x
Openness	x		x	x
Time	x			x
Training	x		x	
Codification	x			
Control	x	x	x	x
External Information Gathering	x	x	x	x

Cross-functional teamwork was germane to the evolvement of all three sub-processes within the Industrial Division. For the commercialization changes, a similar characteristic, inter-organizational network was, and still is, paramount for their successful implementation and continuity. Integration of different activities, being then internal, as in the first processes, or external, as in the second, is an effective way of both increasing the quality and speeding up processes. That can be an important source of advantage in a competitive industry like the consumer electronics. The processes studied, besides yielding the results directly related to each of them, seem to have allowed Semp Toshiba to achieve such integration. Furthermore, managers within the company appear to perceive the importance of such integration. They frequently praised during the interviews the freedom existing within the company for people to involve whoever is necessary for solving a problem. The same can be said in relation to the external network, with the current dominant mentality being characterized by a partnership with retailers. Thus, integration is a component of teamwork/network, but is also a consequence of it. A flexible structure, one which allows for integration, facilitates teamwork/network. But in perceiving the benefits the company can reap from integration, managers actively strive to build a flexible structure.

It is interesting to observe that while some conditions are present in all four processes/sub-processes, others are related to only some of them. On trying to understand what could link certain conditions to specific processes, I decided to question the type of changes occurred in organizational routines and also the dominant character of the development of each process/sub-process studied. Those two issues appear to be not only relevant for organizational learning, but also presenting different features within the processes.

In relation to organizational routines, it seems clear that the stock reduction and the changes in commercialization policy represented the most radical changes for people involved. A strong support for this conclusion is the occurrence of forced unlearning in both cases.

Taking the development of the two broad processes in consideration, while the increase in productivity can be described as a deliberate strategy, the changes in commercialization policy can be viewed more as an emergent strategy (Mintzberg 1994), in the sense that they were a result of measures which were decided separately, each one as a consequence of a

previous decision. But examining in more detail the sub-processes of the increase in productivity, it is also possible to conclude that, while the whole process may have been planned, the implementation of the quality program involved changes in work routines which were a result of proposals coming from the employees involved, which gives to the sub-process also an emergent 'side'. The same can be said about the Kaizen, whose practice, although planned by the company, is based on suggestions coming from workers, again an emergent 'side' of the process. Those conclusions support Mintzberg's (1994 p.25) observation that

"... few, if any, strategies can be purely deliberate, and few can be purely emergent. One suggests no learning, the other, no control. All real-world strategies need to mix these in some way - to attempt to control without stopping the learning process",

and also led me to try to identify the main source of knowledge in each process. The idea is that the source of knowledge can also help to understand why some of the proposed enabling conditions for organizational learning are only related to some of the processes studied.

Table 7.2 lists the processes/sub-processes, the dominant character of their development, their main source of knowledge and the type of changes occurred in organizational routines.

The joint analysis of tables 7.1 and 7.2 allows some insightful inferences:

- a) the importance of leadership and unlearning, including forced organizational unlearning, in the two processes where organizational routines suffered radical changes;
- b) the use of success as leverage in the same processes helped cognitive changes to occur and, as a consequence, consolidated the adoption of new routines;
- c) the importance of autonomy and openness in the two processes within the Industrial Division where workers are source of knowledge;
- d) autonomy and openness are also important in the commercialization process, but here they are linked to the role of the inter-organizational network as source of knowledge.

Table 7.2

**Dominant Character of Process Development  
and Source of Knowledge**

	Productivity			Commercialisation
	Quality Programme	Stock Reduction	Assembly Line	
<b>Dominant character of development</b>	Planned/ Emergent	Planned	Planned/ Emergent	Emergent
<b>Main source of knowledge</b>	<ul style="list-style-type: none"> <li>• Managers</li> <li>• Workers</li> </ul>	<ul style="list-style-type: none"> <li>• Toshiba</li> <li>• Managers</li> </ul>	<ul style="list-style-type: none"> <li>• Toshiba</li> <li>• Managers</li> <li>• Workers</li> </ul>	Network (clients, retailers, managers)
<b>Change in organisational routines</b>	Smooth	Radical	Not relevant for the process	Radical

From items a and b, it is possible to perceive a pattern where, in order to make radical changes in organizational routines, managers have forced change in behaviour. Successful outcomes from those behavioural changes were then instrumental for cognitive acceptance and learning. In items c and d it is possible to associate autonomy and openness with transformation of tacit into explicit knowledge.

The importance of time was identified at both the quality programme and the changes in commercialization policy. It seems related to the characteristic of emergent changes in these two processes. In the quality programme, changes were in part a result of suggestions coming from workers. As I mentioned before, time was necessary for workers to overcome hierarchical barriers and give suggestions for changes in routines. In the changes in commercialization policy, objectives were decided during the evolution of the process. Thus, although time may have not been consciously used for allowing changes to occur, it was an important factor in the process.

Finally, it seems never excessive to again draw the reader's attention to the fact that the resetting of objectives, or use of dynamic objectives as I called it, is what permitted the continuity of the processes as a cycle, giving to organizational learning a continuous character.

## 7.5 Final Remarks

Looking at the processes through a decision-making perspective takes us to the conclusion that the two broad group of processes can be considered strategic changes as they were taken at the higher levels of the company and they undoubtedly had strategic consequences (Mintzberg and Westley 1992). Considering the categories proposed by Hickson and his collaborators (1986), complexity and politicality<sup>3</sup>, the two processes can be assessed as carrying a high degree of complexity, with some variance among the sub-processes, and a low degree of politicality. Again, the hierarchical style of the company seems to have direct influence on the degree of politicality. It is possible to perceive from the values and characteristics of the company described at section 6.2 that the interviewees have always present the idea of accountability to superiors, of responsibilities clearly defined and necessity to achieve the objectives assigned to them. In an environment where there is no significant clashes between conflicting views about the objectives, people can concentrate on ways of achieving them. Thus, complex changes can be accomplished, as far as they do not challenge the power structure.

I have already made the point that if one looks at the situation of Semp Toshiba before and after the development of the processes studied, most probably the idea of radical change would come to mind. However, their development shows that, even when the outcomes represented a fundamental move from the initial situation, gradualism has always been an important characteristic. As a matter of fact, some interviewees who were directly involved

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<sup>3</sup> Complexity refers to how complex a decision is in term of three variables: rarity, which relates to the frequency with which similar decision recur; consequentiality, which relates to how much commitment and consequences a decision carries; and precursiveness, which relates to whether a decision sets precedents. Politicality is the degree to which influence is exerted through a decision-making process upon the outcome.

with the processes acknowledged that the company has 'changed a lot' during the processes, but also that there were no 'big leaps' during the processes. With his long term experience and view of the organization, Semp Toshiba's president perceives the changes as being a natural consequence of the evolution of the company. According to him, there was a "continuous search for many years which found a felicitous answer in a particular moment, with the solution of the problem of the Industrial Director and the Commercial Director". He considers that a combination of factors was decisive for the successful performance in the last few years, namely: a) those two managers coming to work in the company at the same; b) an availability of own capital, resulted from many years of careful financial management, which allowed the financing of the media campaign; and, c) the company being technically competent for the market, as a result of many years of association with Toshiba. His perception is similar to Pettigrew's (1985 p.1) observation that "the more we look at present-day events the easier it is to identify change; the longer we stay with an emergent process and the further back we go to disentangle its origins, the more we can identify continuities."

Although Mr Hennel thinks of the processes as being 'natural', his mention to a 'continuous search for many years' allows us to, at least, qualify the word 'natural'. The choice of the two directors does not seem to be only a case of serendipity, as Mr Hennel already knew both men for some years. What he defined as fortunate was the fact that both became available for Semp Toshiba at the same time. The characteristics of the managers he wanted for the two positions, however, seem to have been relatively clear in his mind.

It is also interesting to observe that the factors pointed by Mr Hennel involve both structure (capital, technical fit with the market) and agency (managers), which bridges insights from both structural (Lawrence and Lorsch 1967) and cognitive (Argyris 1993, Weick 1969) theories of organizational behaviour about what is responsible for organizational outcomes. Mr Hennel perceptions also give strong support the strategic choice framework (Child 1972, Child 1997) in its basic aim of balancing the influences of agency and structure in organizational analysis.

Regarding the role of Toshiba in the development of the processes, the current division of tasks within Semp Toshiba, with the Japanese being basically responsible for providing

product technology and assistance in production processes, leave them practically out of the daily management of the company. This is why their role in the processes studied is mainly as a source of knowledge. However, it is exactly the joint venture arrangement which allows Semp Toshiba privileged access to both hard (product technology) and soft (process technology) knowledge. It is important to stress that both types of knowledge are adapted to local conditions by people at Semp Toshiba, and also that successful adaptation seems to be a result of almost twenty years of partnership. The fact that only three professionals from Toshiba currently work at Semp Toshiba is an evidence of the trustful and mature relationship existent between the partners, as control by Toshiba is exerted more through systems than through personnel. It is also an evidence of the joint venture reaching a point of stability in relation to the number of Toshiba's personnel, as I was told that there is no intention of altering the current situation in the near future. After the company has achieved a reasonable level of knowledge in relation to product technology, and has established channels with Toshiba to facilitate technological development, its managers concluded that there was no point in having Japanese personnel working in technical functions. According to some Brazilian top managers, from the average five years of assignment abroad, the Japanese usually take two years for adapting to local conditions before feeling really comfortable. So, the net value of their presence in such functions is no longer worth, as they carry high costs for the company. Nevertheless, as I mentioned before, besides directly providing product technology, Toshiba has a very important role as an exemplar and as a support to Semp Toshiba. The huge growth of Semp Toshiba in the last few years, with profits reaching US\$155,500,000 in 1995, is responsible for a notable increase in the interest Toshiba has for the joint venture. This is demonstrated by an increase in the rank of the manager Toshiba send to be its highest representative at Semp Toshiba, taking the position of vice-president. Whereas before this professional would be a manager in Japan, now Toshiba always send a senior manager. The company's president explained me that this change resulted in more effective channels of communication between the two companies.

Finally, I should return to the justification given in Chapter 1 for my interest in studying processes of organizational learning, and ask which capabilities, if any, Semp Toshiba has built or created with the two processes. I think the answer is relatively straight forward in the light of the discussion contained in this chapter. The company has developed two strong and

interdependent capabilities: 1) being able to understand market requirements, and 2) the ability to manufacture products with high quality, at a competitive cost and which are technologically up-to-date. On the top of that, the company has managed to communicate to consumers that its products have such qualifications. What seems to be even more important for the company is that, so far, it has also managed to give a dynamic character to those capabilities, continuously refining them and developing a virtuous circle of organizational learning.

## 7.6 Summary

In this chapter the two processes described in the previous chapter have been discussed. The conclusion has been that Semp Toshiba has learned with the evolution of the processes. Factors related to both structure and managerial agency appear to be amongst the main triggers and responsible for the development of the processes. A group of enabling conditions for organizational learning through the processes has been proposed and discussed. While some conditions are related to all processes studied, other are related to only some of them. Features of the development of each process have then been suggested as being responsible for such variation.

Finally, as a consequence of the processes, the company seems to have developed capabilities which have put it in a very strong competitive position in its sector. Furthermore, the company has also managed to sustain such capabilities in a dynamic way, giving continuity to the processes of organizational learning.

## Chapter 3

# CONTRIBUTIONS TO AN UNDERSTANDING OF ORGANIZATIONAL LEARNING

## PART THREE

## CONCLUSIONS

### AI/AGI and Group Think

In Chapter 1 I have explored how the AI/AGI effect contributes to the ability to understand the role of the group in the workplace and the influence of organizational learning on group performance. This role is to improve the work of the individual group members and the quality of thought on the group learning outcomes. The effectiveness of AI/AGI is that it can improve the way we think and the influence of group learning on the quality of thought on the group learning outcomes. This role is to improve the quality of thought on the group learning outcomes. In this section I will explore the influence of AI/AGI on the quality of thought on the group learning outcomes.

## Chapter 8

### CONTRIBUTIONS TO AN UNDERSTANDING OF ORGANIZATIONAL LEARNING

This chapter presents a cross-case discussion of the enabling conditions for organizational learning proposed for the processes studied. In this discussion the theoretical contributions of this study are suggested. The chapter first considers some differences existent between both the companies and the processes studied, so as to enrich the contextual background of the discussion. Throughout the chapter the insights developed in this study are compared with those in the literature to understand how they support, diverge, or further build on existing relevant research. In so doing, I seek to enhance the generalizability into theory of the main findings of this research (Eisenhardt 1989, Yin 1989). The chapter is divided in three sections. The first section discusses some differences between TCP and Semp Toshiba. The second section highlights some differences between the processes studied. The third section presents a cross-case discussion of the enabling conditions for organizational learning suggested for the processes studied.

#### 8.1 TCP and Semp Toshiba

In Chapter 3 I have explained how the IBVs which participated in this study were selected. One of the criteria for selection was the existence of similarities between the companies, which could help me to compare the cases in the different companies. In this sense, the presence of Toshiba as the foreign investing company, the production of TV sets as their main economic activity, and the technology for producing TVs are all similarities between TCP and Semp Toshiba. However, there is also a number of differences between the companies which may bear upon the processes of organizational learning. In this section I will discuss these differences.

### 8.1.1 Ownership

Ownership is the first notable difference between TCP and Semp Toshiba. Whereas the former is a wholly owned subsidiary of Toshiba, the latter is a joint venture, in which Toshiba has a minority stake of 40%. At TCP, the major strategic decisions are taken in Japan, usually with the consultation of the company's managing director. After the decisions are made, the company has autonomy to decide how to implement them. Both processes studied at TCP had their origins in decisions made in Japan.

The structure of Toshiba's European consumer electronics business is also decided in Japan. Within this structure, TCP is exclusively a manufacturing unit. All commercial activities are under the responsibility of other companies. As TCP has always been a manufacturing company, this structure does not seem to be disputed by local managers. However, the study at Semp Toshiba has shown how the integration of the manufacturing and commercial activities has been important in the development of the company in the last few years. In the UK, I focused the research on TCP and, as a consequence, did not study the commercial function and the relationship between TCP and the sales companies. This is a limitation of this study. But from the information I could gather at TCP, it appears that the links between the company and the market are weaker than those observed at Semp Toshiba. Thus, it seems that TCP's status as a subsidiary poses some limitations for its autonomy of decision making, and may constrain the scope of learning about its clientele.

In contrast, at Semp Toshiba the combination of the ownership structure, where the local partner has a majority stake, with a profitable operation in most of the years since the joint venture was formed, has resulted in a very large degree of autonomy for local managers. This autonomy is expressed in the fact that all strategic decisions are taken locally, with the agreement of the vice-president representative of Toshiba. The fact that Toshiba does not interfere in a successful operation supports Killing's (1983) observation that parent companies tend to give more autonomy to a joint venture when its performance is perceived as successful. It is also evidence that Toshiba has a collaborative perspective in relation to the joint venture, that is, it is interested in a process of joint creation of value with Semp. As a result of this autonomy, decision-making at Semp Toshiba is not slowed down by frequent

consultation with Japan, and the company can fully employ its local knowledge in its operations. In a circular process, autonomy begets successful performance, which begets more autonomy. Furthermore, Semp Toshiba can develop complete learning cycles (Hedberg 1981), which embrace all aspects that are important for the success of its operations.

Another difference between the companies is the degree of localization of management. Although TCP is just a few years younger than Semp Toshiba, management is much more localized in the latter. At TCP, there is a notable difference between the two divisions, with the AVD, which is older, being more localized than the ACD. Added to the explicit intention of Japanese managers at the ACD to localize management, it shows that the passage of time plays an important role in localization. However, even if we compare the AVD with Semp Toshiba, the presence of Japanese managers is larger in the former. It is reasonable to expect the foreign investing company to have a larger degree of influence in a subsidiary than in a joint venture where the investing company has a minority stake. What is important in relation to organizational learning is that expatriate managers are regularly replaced and this invariably brings difficulties of adaptation for both the newcomers and those in the local operation who will work with them. Time appears to be one of the most important ingredients for overcoming problems related to cross-cultural adaptation. However, the regular substitution of expatriate managers acts against this logic, as it turns back the adaptation clock. Thus, ownership seems to be related to localization of management, and this, in turn, seems to be related to organizational learning. I am not arguing for a totally local operation, on the contrary, newcomers can be a valuable source of new knowledge. The point is that, from what could be observed in the companies participating in this study, after the administrative systems are established, expatriate personnel can better help the local operation if they are not directly involved with daily operational tasks.

### **8.1.2 Market Conditions**

The economic environment in which the two companies operate has been very different. Until few years ago, the economic environment in Brazil was rather turbulent, with high inflation being its main characteristic. The market for consumer electronics was closed for products manufactured abroad. Since the beginning of the 1990s, the market was open, and,

from mid 1994, inflation has been considerably reduced. In the UK and in Western Europe in general, the environment has been comparatively more stable. If, on the one hand, economic instability has created a risky environment for manufacturers in Brazil, on the other hand companies which have managed to cope with it have seen high return rates for their business. The relative stability of the last two and a half years has resulted in a huge expansion of the consumer electronics market, as was shown in Chapter 6. The opening of the market to foreign competition has created new standards of product quality, production costs, and manufacturing processes. Some companies already established in the country, like Semp Toshiba, have perceived the existence of a performance gap in their operations, which has created plenty of room for learning and growth (DiBella, Nevis and Gould 1996, Hedberg 1981).

In relation to TV sets, both companies operate in very competitive markets. Nevertheless, there is a fundamental difference between these markets. Whilst the European market is mature, presenting very low rates of growth, the Brazilian market has grown at very high rates in the last few years. Semp Toshiba has been able to increase its share in this growing market, which has resulted in sharp increases in turnover for the company. Added to the productivity gains of the last few years, the profitability of the company has soared.

As it was discussed in Chapter 7, success has played an important role for the continuity of the learning processes at Semp Toshiba. Favourable market conditions in Brazil have helped the company in the sense of allowing its top managers to set successively higher objectives which, despite the risks taken, have been largely achieved. I am not, however, denying the importance of the decisions and actions taken by the company's members. I have indicated previously that Semp Toshiba has consistently outperformed its competitors. If the processes studied in the company have been initially motivated by external difficulties and opportunities, which is in accordance with most of the literature on organizational learning, their continuity is mainly due to the internal drive of the company's top managers. I have pointed out in Chapter 2 that most of the literature does not acknowledge self-motivation as a trigger of learning. But, we can suggest from this study that internal drive is a significant propeller for learning.

At TCP, the difficulties the company faced in the European TV market have resulted in some managers feeling uneasy with the investments made in local design, as the return may only come in the medium to long term. Thus, business conditions may impact on the type of expectations people have on processes. The worse the conditions are, the greater the tendency of people to look at short term results. This situation resembles Senge's (1990b) point about managers concentrating on events and not being able to perceive the underlying cause of problems. However, when the difficulties are related to general market conditions, it is hard to blame managers for concentrating on short term results. There is a dilemma between attending the short term necessities and investing for long term growth. Either option, if taken to the exclusion of the other, appears to be problematic. Reconciling this dilemma may be a vital managerial learning process.

### **8.1.3 Organizational Culture**

A third factor of relevance is the organizational culture of each company. In this sense, it is appropriate to observe some aspects of their history. As it was described in Chapter 4, TCP was established after the failure of the joint venture between Toshiba and Rank. The circumstances in which the employees were selected, the emphasis put by the company on the necessity of both teamwork and commitment from employees, and the systems implemented have helped the development of a strong sense of company identity in the staff who joined the company at day one. For these people, their full commitment to the company has been rewarded by the guarantee of employment, which, though not explicit, has been the company's continuous policy. Many managers at TCP see themselves as working for Toshiba, a huge Japanese company which provides stability to TCP, helping it in case problems arise. An example of such a help was the establishment of the ACD without any staff being made redundant after the closure of the MWOD.

Two other important traits of the company culture are the concept of a single-status company, and the existence of the COAB as a forum where the company's decisions are discussed with employees. So, stability, teamwork and joint responsibility are some of the important characteristics of TCP's organizational culture.

At Semp Toshiba, Brazilian managers see themselves as working for a company owned by Mr Afonso Hennel, who is at the company every day, and wants to know whether each manager is doing his/her job as expected. The few Japanese managers are Toshiba employees seconded to Semp Toshiba. They see their role as bringing Toshiba's technology and other resources (good relationship with international suppliers, for instance) to help Semp Toshiba, and also as assuring that products conform Toshiba's quality standards. Employees have a share in the company's profit, so they know that the more profitable the company, the higher their income. Teamwork is considered important, but individual responsibility is made very clear. So, profitability, teamwork and individual responsibility are some of the important characteristics of Semp Toshiba's organizational culture.

Both cultures seem to be conducive to learning. The main difference between them is a more consensual style of management at TCP, as compared to a more top-down approach at Semp Toshiba. Although profitability is more emphasized at Semp Toshiba, it is also a concern at TCP. There is no one best culture regarding to learning. What appears to be important is the coherence of the culture, in the sense that its values make sense for the people within the company, being really shared by its members. It also important that factors which hinder learning do not abound, and this seems to be the case in both companies. As it will be discussed later in this chapter, several factors which facilitate learning were identified in both companies, showing the existence of similarities between their cultures.

## **8.2 Starting, Changing, Continuing**

An important difference existing between the processes studied is that whilst those occurred at TCP are related to the start of new activities, the ones at Semp Toshiba relate to changes in current activities. At TCP, both the first stage of the establishment of the ACD, and the first years of establishing local design were periods when members of the company were basically learning how to undertake tasks they had never done before. However, they did not have to learn from scratch, as in both cases there were people from Toshiba Japan coming to work in Plymouth to help in the implementation of the activities. These periods were, therefore, characterized by the transference of knowledge, most of it codified, between Japan and the

UK. They can be seen as examples of what Edmondson and Moingeon (1996 p.27) call 'learning how', "organizational members engaging in processes designed to transfer and/or improve existing skills and routines".

The second stage of the establishment of the ACD had a different characteristic. As was discussed in Chapter 4, during this stage administrative systems were being implemented. These systems were neither a copy of those in Japan, or those at the AVD. Their implementation basically depended on adaptation to the ACD conditions. Systems were being created rather than transferred. British and Japanese managers had different cultural and work backgrounds. They could not directly implement the systems they were used in a situation where they were working together. Cognitive changes were necessary before action, in the form of implementing the systems, could happen. In order to define what was suitable for the local operation, managers needed to understand why a system was suitable. Members of each culture had to confront their and others' ideas. Notions which were shared by members of one culture, not needing to be codified, had to be codified in order to be discussed with members of the other culture. Managers of each culture were respecting the others' identities, when trying to understand the others' perspective. But they were also trying to keep their own identities, when trying to have their perspectives taken into consideration. Managers from both cultures were simultaneously open to change, when adapting to the other culture, and wanting continuity, when trying to preserve some characteristics of their own culture. The development of blended administrative systems demonstrates both the existence of a shared identity and the joint creation of knowledge. This conclusion corroborates Child and Rodrigues's (1996) argument on the importance of social identities in the international creation and transfer of knowledge. It also bears similarities with Salk's (1992c) notion of 'integrative convergence' within cross-cultural teams, with the growth of cultural hybridization. However, it seems important to note that, with the growing localization of management, the systems may slowly change towards local practices. In fact, British managers commented that the Japanese influence at the AVD is much smaller than at the ACD, including that on some of the administrative systems.

At Semp Toshiba, both processes relate to changes in activities already undertaken within the company. This meant a greater requirement for unlearning than at TCP. Stages of learning

how and learning why succeeded during the different sub-processes. For instance, in the quality programme, people had to consider how they used to work, then why they worked in such a way, then how they could improve the work routines. The coexistence of change and continuity (cf. Child and Smith 1987, Pettigrew 1985) was a frequent characteristic of the processes studied. In the implementation of the quality program, the Industrial Director made clear that he did not want the company to lose its characteristic of fast decision-making. Even when some of the routines were changed radically, as in the case of changes in the commercialization policy, the company kept some of its most ingrained principles. For instance, despite being able to reduce its production costs, prices were kept higher than most competitors. The principle that every sale should be profitable was never abandoned.

This conclusion is relevant, as most of the literature on learning greatly emphasizes change, at the expense of continuity. It is only recently that some authors started to consider continuity as an important element of learning (Cook and Yanow 1993, Weick 1996). For instance, Weick and Westley (1996 p.448) maintain that "(L)earning may be most likely to occur when situations are explored but identities are exploited. People learn how to innovate, but they also learn how to reaccomplish their identity amidst a new set of threats".

Another characteristic of the processes at Semp Toshiba was the small involvement of Japanese personnel. Thus, differently from TCP, cross-cultural adaptation was not a very relevant issue.

### **8.3 Enabling Conditions for Organizational Learning: a Cross-Case Discussion**

In this section I will discuss the enabling conditions for organizational learning identified in this research, considering the similarities and differences between the cases studied. I will also compare these conditions to references in the literature in order to understand how they support, diverge, or further build on existing relevant research. Table 8.1 presents the enabling conditions for organizational learning identified in both companies.

Table 6.1

## Enabling Conditions for Organizational Learning

Enabling Conditions for Organizational Learning	Toshiba Consumer Products (TCP)			Semp Toshiba			
	Establishment of the Air Conditioner Division		Establishment of Local Design	Productivity			Commercialization
	First Stage	Second Stage		Quality Programme	Stock Reduction	Assembly Line	
Intention	x	x	x	x	x	x	x
Control	x	x	x	x	x	x	x
Autonomy		x	x	x		x	x
Teamwork		x	x	x	x	x	
Inter-Organizational Network							x
Openness	x	x		x		x	x
Flexibility	x	x					
Leadership		x	x		x		x
Training	x		x	x		x	
Codification			x	x			
Unlearning	x			x	x		x
Power					x		x
Time	x	x	x	x			x
Codified Knowledge	x						
Gradualism		x	x	x	x	x	x
Success as Leverage					x		x
Dynamic Objectives				x	x	x	x
External Information Gathering				x	x	x	x
Newcomer as Source of Innovation					x	x	x

Intention and control were the only conditions identified in all processes and sub-processes. *Intention* is here considered as both something which is done purposefully and commitment to something. As commitment was present in all processes, intention was identified even in processes which were not planned in advance. Nonaka and Takeuchi (1995) propose intention as one of the required conditions for organizational knowledge creation, and argue that strategy is the usual manifestation of intention. Their notion of strategy entails the conceptualization of a vision about what kind of knowledge should be developed, and its implementation through a management system. In Chapter 7, I pointed out that some processes at Semp Toshiba were characterized by an emergent strategy, where objectives were defined during the development of the processes. The definition of administrative systems at ACD-TCP can also be viewed as an emergent strategy. Writers on strategy, notably Mintzberg (1994), argue that a realized strategy usually comprises both intended and emergent aspects. The inclusion of commitment in the concept of intention extends the latter's explanatory potential. The other option, to separate commitment from intention, does not appear adequate, as intention without commitment is normally useless with regard to outcomes.

*Control* refers to both the establishment of limits to the actions of participants in the processes, and the assessment of outcomes. The former happened when managers wanted to make sure that workers would act within pre-established limits, in an attempt to control the range of possible outcomes. Examples of that are the types of changes which are stimulated at both the small group activities at TCP, and the Kaizen at Semp Toshiba (changes only in processes, not in the content of products). It has also happened in relation to the degree of autonomy given by Toshiba Japan to the design departments at TCP. Assessment of outcomes makes possible the generation of feedback during a process, so it can be adjusted in order to meet the initial or some modified objective. An example is the disassembling of air conditioning sets by Japanese technicians at the start of the ACD operations, so as to make sure that all standards were being followed by the local members. Another is the better control over stocks and suppliers at Semp Toshiba, which allowed the company to set new targets for both stock reduction and coordination with suppliers.

Control is not usually mentioned in the literature as a factor which can facilitate learning. In fact, learning is normally associated with autonomy and creativity, which are considered as opposites to control. This seems to be a consequence of the non political stance taken by the large majority of authors on learning. However, it seems quite naïve to think that those who hold power within organizations will not try to direct organizational processes towards objectives defined by them. Whether these objectives satisfy the interests of a larger or smaller portion of the organization's stakeholders is another issue. The point here is that if learning is considered to comprise processes and outcomes<sup>1</sup>, control seems to be a very important condition for its occurrence, for it allows intention to be directed.

DiBella, Nevis and Gould (1996) suggest 'concern for measurement' as a facilitating factor for learning, as it can help the provision of accurate feedback. Their concept is, therefore, similar to the category here labelled as control, when the latter refers to the assessment of outcomes. In this sense, control is partly supported by the literature. A remaining part, which refers to establishing limits to human agency, actually diverges from most of the literature.

Senge (1990a) makes reference to control when discussing the issue of decentralization of authority and power. He argues that organizations will increasingly be 'localized', extending authority and power as far from corporate centre as possible. He then questions how an organization can distribute business responsibility widely and still retain coordination and control. Senge acknowledges that control is important, but argues that the idea that people at the top are 'in control' is an illusion. A 'learning organization' would be characterized by "local control - countless local decision-making processes that continually respond to changes, so as to maintain healthy conditions for stability and growth" (Senge 1990a p.293). This type of control, 'localness', would only be possible through skilful coordination. Senge argues that sharing mental models and team learning are two important 'disciplines' which can facilitate coordination. Another important ingredient would be the role of central management, which should be in line with the roles of designer, teacher and steward, as discussed in Chapter 2 of this dissertation. Senge's approach to control is no more than an acknowledgement of its inevitable presence within organizations, and a suggestion that it

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<sup>1</sup> The concept of outcome as a moment in a process has been discussed in Chapter 3.

should shift to a local level in a 'learning organization'. This is different from what I am proposing in this study, where control is seen as a facilitator of learning. Senge's discussion on local control, nevertheless, lead us to another condition identified in this research, namely autonomy.

In the sub-processes where *autonomy* was identified, it basically relates with freedom for choosing a course of action. However, as it was stressed in the analysis of the cases, autonomy is usually balanced with control. Thus, groups of workers involved in small group activities at TCP, and Kaizen at Semp Toshiba have autonomy to choose the problems they will tackle, as long as these problems relate to processes of production. Similarly, the groups who implemented the quality programme at Semp Toshiba had autonomy to set the implementation strategy, but within the time frame set by the company's Board, and the boundaries established by the instructions of the quality standard. At the design departments at TCP, and the Commercial Division at Semp Toshiba, engineers and managers have autonomy for and are expected to solve most of the problems without consulting superiors, in examples similar to Senge's notion of 'localness'. In other words, autonomy has been balanced with control in the sense of management establishing the parameters of learning.

The way in which (how) autonomy and control are exercised determines the balance between the two and, crucially, whether these categories facilitate or hinder learning. It is, therefore, through skilful management that the right balance for a specific process is achieved. Different processes require different ways of exercising autonomy and control. It seems important to identify where the main sources of knowledge are in a process, and to give incentives for autonomy to these people. Knowledge can be both created within the company or acquired from outside sources. In the latter case, incentives to autonomy should be given to people who have the closest contact with the knowledge sources. An example of this was given by the Commercial Division at Semp Toshiba, when some sales managers started to invite retailers' buyers to see and comment mock ups of new products. Control, on the other hand, appears to relate to the degree in which context is shared by people involved in a process. The more people believe in common objectives, the more localized control can be. In this case, there is no strong need for external control to be exercised.

In the literature, Nonaka and Takeuchi (1995) regard individual and team autonomy as a condition for organizational knowledge creation. They emphasize self-motivation, creativity, and better diffusion of information as the main advantages of autonomous individuals and teams. In a similar vein to what I have discussed in the case of local design at TCP, Nonaka and Takeuchi argue that autonomy requires coordination with other individuals and/or teams.

*Teamwork* and *inter-organizational network* are, if considered together, a condition present in almost all processes and sub-processes studied. Indeed, as a social process, organizational learning requires the existence of a social network for knowledge to flow. Thus, it seems quite obvious that teamwork is an important condition for organizational learning to occur. It is difficult to conceive any organization nowadays which would not boast teamwork as one of its characteristics. But teamwork is not something ready that organizations can simply use; instead, they have to build the conditions for it to happen. In this research, teamwork was identified out of the analysis of the evolution of the processes, and not only from the references made by managers to it. What then appears to be relevant is to discuss the structures and processes which have allowed teamwork to happen.

At TCP, processes of staff selection emphasize the ability to work in teams and acceptance of flexible work roles, following practices widely adopted in Japanese companies (Wilkinson and Oliver 1992). Despite complaints from Japanese managers about cultural differences between British and Japanese in relation to teamwork, some of the quotations in Chapter 4 demonstrate how teamwork is continuously emphasized by managers. They also show the adoption of practices aimed at fostering teamwork, like the daily meetings in all sections.

In four of the sub-processes, teamwork was identified as cross-functional, in one as within the same department, and in another as extending to an inter-organizational network. The basic difference amongst these three qualifications is the scope of the network, but the importance of the social chain is similar in all cases. It stems from both a wider range of knowledge which can be brought into the process, and the diffusion of knowledge across the relevant groups.

In two of the sub-processes, the second stage of the establishment of the ACD-TCP, and the changes in the assembly line at Semp Toshiba, cross-functional teamwork was identified as part of the small group activities and the Kaizen, respectively. In fact, these are two similar activities which receive different names in each company. These are a common practice in Japanese manufacturing companies, where workers suggest and implement small changes in production processes, generally aiming at increasing productivity. Both TCP and Semp Toshiba promote these activities by both setting a structure which supports them, and giving incentives to workers who participate, as described in Chapters 4 and 6.

Productive teamwork was also identified within TCP's design departments. The Japanese managers insist with the young engineers on the importance of both being aware of the activities of the others, and also informing the teams about their own activities. This communication takes place both through scheduled meetings and informal discussions. In this sense, the practices which allow productive teamwork are being institutionalized in routines. Moreover, the teams members have spontaneously acknowledged the benefits of these practices, which guarantees their continuity.

In two sub-processes at Semp Toshiba, the quality programme and the stock reduction process, teams were formed as task-forces to deal with specific questions. These questions required cross-functional knowledge, thus influencing the composition of teams. Again, the company provided the structure necessary for the work of the teams. Achievement of success and revision of objectives towards higher levels appear to have motivated the teams to work together. In the commercialization process, there has been a different form of teamwork, identified as an inter-organizational network. In this case, Semp Toshiba managed to build a relationship with retailers whereby the latter see the benefits of their participation as informants of market tendencies. It is an informal relationship, but one which has brought vital informational inputs to the company. A learning process occurs not only through the functioning of the network, but also in the activity of sustaining it.

It is interesting to perceive that from all teams identified in the sub-processes, the only ones whose members remained constant are the design departments at TCP. The others were formed as task forces, dealing with specific problems. After the problems were tackled, either

the teams were disbanded or their objectives were changed, which sometimes also led to changes in the composition of the teams. It has been noted in the literature that the use of cross-functional task forces may help the development of mutual trust and confidence between departments, enhancing organizational integration (Child 1984). The inter-organizational network is a slightly different case, where the participants from the retailers vary according to the type of information the company is seeking.

In the literature, teamwork is emphasized by Senge (1990a), who defines 'team learning' as one of the 'five disciplines of the learning organization'. Senge argues that team learning has three critical dimensions: a) the need to think insightfully about complex issues; b) the need for innovative, coordinated action; and c) the role of team members in other teams. It is possible to identify at least some of these dimensions in the teams at both companies studied. The definition of administrative systems at the ACD and the changes in the commercialization policy at Semp Toshiba are examples of complex and innovative issues tackled by well coordinated teams. Regarding the role of team members as diffusers of productive teamwork practices, that can be identified at both the team who directed the implementation of the quality programme at Semp Toshiba, and the design teams at TCP. Members of these teams participate in other teams, like the design engineers from TCP taking part in the small group activities. In doing that, they connect both teams bridging information between them. Redundancy of information is regarded by Nonaka and Takeuchi (1995) as one of the most important conditions for organizational learning.

Another condition present in almost all processes is *openness*, which was identified as heedfulness for others' views. It is a condition which facilitates teamwork and learning. In conjunction with *flexibility*, openness was important in the processes studied at TCP when they involved cross-cultural relationships. In their initial stages, these relationships were problematic due to cultural differences and communication difficulties. Openness by members from both cultures facilitated the overcoming of the differences and difficulties. It was also important in both companies every time teamwork was involved, as the capacity to consider different perspectives allows for a wider range of knowledge to enter the processes. Examples are the joint creation of administrative systems at the ACD-TCP, and the changes

in commercialization at Semp Toshiba, where inputs from salesmen and retailers helped the reformulation of policies.

A climate of openness, meaning accessibility of information, sharing of errors and problems, and acceptance of conflict, is suggested by DiBella, Nevis and Gould (1996) as a facilitating factor for organizational learning. In the processes studied, sharing of problems and accessibility of information were particularly stressed by the Japanese managers at TCP. They have constantly argued for the importance of documenting the occurrence of problems so as they can be avoided in the future. Written documentation also guarantee that the information is available regardless the presence of the people who initially dealt with the problem. At Semp Toshiba, this practice does not appear to be a concern of the company. On the other hand, people have freedom to seek information wherever it may be within the organization. The informal environment appears to help this practice.

Sharing of errors is a more delicate issue. It can be partly included in the sharing of problems mentioned above, as engineers at TCP sometimes have to document problems which were originated by their or others' mistakes. However, this seems to happen only with technical problems. People are not generally willing to acknowledge the existence of managerial errors. This is also a limitation of the method adopted in this research. When describing processes occurred in the past, managers usually tend to hide any mistakes, unless their outcomes were amended. An example is the change in commercialization at Semp Toshiba, where managers acknowledged the mistakes of the past, but always referring to how practices are now improved.

Regarding acceptance of conflict, its mere existence was denied in almost all interviews, with the exception of the inter-divisional conflicts at TCP. One possible explanation is that the processes studied were generally successful, and, again, people tend to talk about positive instead of problematic aspects of the processes. Although the learning literature usually considers conflict as positive, for its allows a wider range of inputs, the idea of conflict is generally not well regarded within organizations. Diversity is perhaps a more appropriate term when discussing with managers. In this sense, some examples of divergent aspects within the processes were described previously, particularly cultural diversity at TCP. At

Semp Toshiba, mention was made only of the existence of some divergent views within the company when more fundamental changes were being discussed, like the reduction of stocks and changes in commercialization policy. In these cases, openness, as defined in this study, was indeed important for the successful development of the processes.

Senge (1990a) also regards openness as a fundamental characteristic of a 'learning organization'. He distinguishes 'participative openness', the freedom to speak one's mind, from 'reflective openness', the willingness to challenge our own thinking, arguing that both are important. However, whereas many managers stimulate participative openness through the sharing of views, actual decision-making is rarely changed because people do not easily change their ways of thinking. Senge maintains that this can be achieved through reflective openness, which requires the skills of reflection, inquiry, dialogue and dealing with defensive routines (cf. Argyris 1985).

If the processes studied are analysed using the two types of openness suggested by Senge, it is possible to identify participative openness in all processes where openness was regarded as being relevant, except for the first stage of the establishment of the ACD. Incentives for workers to give suggestions for the small groups activities and Kaizen, and emphasis on the importance of accepting suggestions are example of structures and processes which facilitate participative openness. It is possible to identify reflective openness in the definition of systems at the ACD-TCP, the quality programme and the changes in commercialization policy at Semp Toshiba. In these three sub-processes, staff involved had to question their own way of working and propose changes. More important, they had to question not only how they used to work, but why they used to work in that way.

*Leadership* was identified as an enabling condition for organizational learning in four sub-processes. Leadership is another category which is pervasive in organizations and, therefore, only to identify its importance for learning does not seem sufficient. It is necessary to discuss why it was important and which effects it had on the evolution of the processes. This was partially done in the analysis of the processes. Here I will go further in this discussion.

At the second stage of the establishment of the ACD-TCP, leadership was identified as important mainly through the role of the Assistant Managing Director ACD. Mr Ninomiya is regarded at TCP as a person who has influence within Toshiba Japan. His subordinates consider him a very demanding manager, but one who is involved with the business, providing stability for the growth of the division. It is interesting to perceive that whilst managers at the AVD have conflicts with him because of his very independent style, managers at the ACD like his stance of not deferring to the AVD. He sends a clear message to his subordinates that the ACD is a promising business, and that if they work well enough their employment should be safe.

At the design departments at TCP, the two Japanese managers are considered as experienced and technically qualified professionals. As the two departments are mainly formed by young engineers, the managers have more facility in shaping the culture. As it was discussed before, teamwork, autonomy (including for making mistakes), and self-confidence are valued by the managers. The result is an environment conducive to learning.

At the stock reduction process at Semp Toshiba, the importance of the leadership of the Industrial Director was recognized by all interviewees. His attitudes, as discussed in Chapter 7, provided a context favourable to learning. Particularly important was his continuous belief in the possibility of achieving the objectives, and the way in which he transmitted that to managers when they were lacking confidence.

At the changes in the commercialization policy, the most important characteristics of the Commercial Director were his knowledge about the market and his openness to suggestions. The combination of the two facilitated learning, with the adoption of new and more aggressive commercial strategies as the process evolved. He is also considered a demanding manager, but one who provides good conditions for subordinates to work.

Schein (1985) suggests a number of mechanisms through which leaders embed and transmit culture in organizations. One of the mechanisms which seems to suit the cases studied is what leaders pay attention to, measure and control. Schein argues that a leader's consistency of attention to particular areas is very important in shaping culture, as it signals to the

organization what is important. Chapter 4 described how Japanese managers emphasize the importance of the 'plan-do-see' cycle to all members of the company. This routine stimulates reflection and the test of assumptions, in a cycle which enables learning. The establishment of structures and processes which facilitate teamwork has a similar effect. At Semp Toshiba, the Commercial Director was consistent throughout the process about the importance of continuously following market demands for determining which products should be manufactured. He also helped the building of structures and processes which facilitated learning to occur, like the network with retailers.

DiBella, Nevis and Gould (1996) claim that involved leadership is a facilitating factor for learning. They argue that leaders have not only to create visions, but also to engage in hands-on implementation of the vision. The Industrial Director's attitudes at Semp Toshiba are a good example of such involvement. The success achieved in increasing the company's productivity, and the occurrence of learning which have allowed the extension of the process, give strong support to the authors' claim.

*Training* was important when codified knowledge had to be systematically transmitted. Training also can be relevant for transmitting organizational culture. At the local design departments at TCP, training is mostly on the job, which allows for both codified and uncoded knowledge to be shared. Thus, the insistence from Japanese managers that engineers document all the problems they faced and the solutions they applied (*codification* of their knowledge), effectively establishes a routine which becomes part of the organization's culture.

*Codification* of knowledge was also required during the implementation of the quality programme at Semp Toshiba. Organizational routines had to be described in written instructions, according to the requirements of the quality standard (ISO9000). Besides serving as parameters for the regular audit activities related to the quality programme, these instructions constitute an important part of the organizational memory (cf. Nelson and Winter 1982). Knowledge embedded in the routines can be transmitted through the instructions.

As it was mentioned earlier in this chapter, the processes studied at Semp Toshiba have required a greater deal of *unlearning* than those at TCP. The reason is that, at Semp Toshiba, the processes are related to changes in routines which were already being performed at the company, whereas at TCP the processes relate to the introduction of new activities. Two interesting insights from this study, which extend our understanding of unlearning, are the identification of forced unlearning at the organizational level, and the use of success to legitimate new knowledge and, consequently, facilitating its acceptance over the old. The former clearly suggests that learning and unlearning can be consolidated at different organizational levels. In both the stock reduction and the changes in commercialization policy processes at Semp Toshiba, the reallocation or dismissal of staff who were resisting change showed how the use of *power* resulted in forced organizational unlearning, while individual learning had not yet occurred. The use of initial successful results in both processes in order to convince managers who, despite acting accordingly to the instructions of top managers, were not convinced of the merits of the changes, indicates a way of promoting unlearning at the individual level, through cognitive changes provoked by the triumph of the new knowledge over the old.

It seems relevant to note that whilst the role of power has been subject of debate in the literatures of organizational theory (Clegg 1990), organizational culture (Fleury and Fischer 1989, Schein 1985) and organizational change (Wilson 1992), it is almost absent from the organizational learning literature, in which learning processes are usually assumed to be all 'sweetness and light'. The findings of this study, however, diverge from such a view, and indicate that power can be a significant issue in processes of organizational learning. These findings undoubtedly call for further research on this issue.

*Time*, including lack of time, was identified as a relevant factor for the occurrence of learning in five sub-processes. It is true that any process occurs over time, but the insight coming out of this study is that time has some specific and important relationships with processes of organizational learning. In the analysis of the first stage of the establishment of the ACD-TCP, lack of time was identified as a factor which helped the occurrence of behavioural changes, even if local workers had no full understanding about their jobs. These behavioural

changes were also facilitated by the existence of *codified knowledge*, in the form of instructions for manufacturing air conditioners, which could be readily transmitted.

In the other four sub-processes where time was identified as a relevant factor, cognitive changes had to occur before or simultaneously to behavioural changes. Thus, at the second stage of the establishment of the ACD-TCP, time was important for raising cross-cultural awareness and collaborating in the joint development of systems by British and Japanese managers. Time has also been important for the localization of management, as the Japanese want local managers to internalize the division's systems. When local design centres were being established at TCP, the importance of time was associated with the necessity for design engineers to understand both the technical content of their jobs and the work routines implemented at the departments. Only through continuous practice and discussion could this understanding take place. During the implementation of the quality programme at Semp Toshiba, time was required for staff to feel comfortable to bring their working procedures out into open discussion with colleagues and managers. In case of changes in the commercialization policy, time was required for the formulation of new strategies during the evolution of the process, and the persuasion of some representatives of the merits of the new policies.

From the analysis of these five sub-processes we can suggest that behavioural changes which do not require prior cognitive changes can be stimulated by time pressure. Two qualifications must be added to this suggestion. First, knowledge needs to be already codified or explicit in order to be transmitted to those who are supposed to change their behaviour. Second, with the passage of time, people will need to undergo cognitive changes which legitimize their behavioural change.

From the suggestion above we can then consider the opposite situation, that is, if cognitive changes are required before behavioural changes can take place, people will need time to undergo these cognitive changes. This seems to be the case when tacit or uncoded knowledge needs to be codified or made explicit. In the processes studied, the creation of administrative systems at the ACD-TCP, and the discussion of old routines and proposition of new ones during the implementation of the quality programme at Semp Toshiba are

examples of cognitive changes occurring before behavioural changes. But given competitive and financial pressures, time is usually an important contingency in most organizational situations. In these cases, it seems that cognitive and behavioural changes occur simultaneously. This simultaneity then suggests that two mutually reinforcing learning processes may be under way: 1) an initial cognitive change leads to new behaviour, and 2) the new behaviour leads to further cognitive understanding. The difference between this process and the previous one is that here people do not have enough time to undergo a comprehensive cognitive change before acting. Thus, a certain degree of cognitive change leads to action, and the process of acting, including some early feedback, leads to further understanding. In the processes studied, the localization of management at the ACD-TCP, the establishment of local design centres at TCP, and the changes in the commercialization policy at Semp Toshiba are examples of simultaneous changes<sup>2</sup>. In both situations, when cognitive changes happen before behavioural ones, and when they happen simultaneously, the probable result is a gradual evolution of the organizational process (cf. Quinn 1980).

The analysis of the relationship between time and organizational learning allows yet a third suggestion. If we consider the three types of learning proposed by CIBAM (1993); technical, systemic, and strategic, it is possible to think that technical learning follows either the sequence behavioural → cognitive or simultaneous cognitive and behavioural changes, whereas systemic and strategic learning follow either a cognitive → behavioural sequence, or simultaneous cognitive and behavioural changes. Considering the suggestions made previously, the effects of time constraints will vary between these three sequences.

Figure 8.1 exhibits relationships between types of learning and sequences of cognitive and behavioural changes. The large 'X' means the most likely sequence of cognitive and behavioural changes for a type of learning, whereas the small 'x' means a possible sequence. The figure is a tentative schema arisen from the findings of this study. The suggested relationships deserve further investigation.

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<sup>2</sup> In the changes in the commercialization policy at Semp Toshiba, managers and most representatives went through this process of simultaneous behavioural and cognitive changes. A few representatives who refused to change their behaviour because they did not believe in the new policies (no cognitive change) were removed, but this was an exception in the process.

An additional comment relates to the indication of a possible behavioural → cognitive sequence in systemic learning. This suggestion is based on the experience of some joint ventures in which systems are initially copied from one of the parent companies. In this case, managers within the joint venture may not be familiar with these systems, and understanding about the systems occurs after their implementation.

**Figure 8.1**

**Types of Learning and  
Sequences of Cognitive and Behavioural Changes**

Sequences of Changes	Types of Learning		
	Strategic	Systemic	Technical
Cognitive → Behavioural	X	X	
Behavioural → Cognitive		x	X
[Cognitive → Behavioural Behavioural → Cognitive]	x	X	x

*Gradualism* was a factor identified in almost all processes studied. It is not an issue discussed in the organizational learning literature, but it is debated in the strategy literature. Quinn (1980) argues that well-managed major organizations approach strategy through a series of 'strategic subsystems', each attacking a specific class of strategic issues in a disciplined way, but which are blended incrementally into a cohesive pattern that becomes the company's strategy. This conscious incrementalism would help the organization to: a) cope with both the cognitive and process limits on each major decision; b) build the logical-analytical

framework these decisions require; and c) create the personal and organization awareness, understanding, acceptance and commitment needed to implement the strategies effectively.

Whilst in most processes studied in this research gradualism was an intended approach adopted by managers, in the changes in the commercialization policy at Semp Toshiba gradualism was an intrinsic characteristic of the process, in the sense of not being a chosen approach, but even so describing how the process evolved. The significance of gradualism for organizational learning in some processes was related to the importance of time, that is, when the occurrence of cognitive changes was relevant, a gradual evolution of the processes allowed the necessary time for these changes. Also, if we consider that the processes at TCP relate to the introduction of new activities, a gradual approach was required for allowing time for people to define and internalize the new activities and systems. In establishing routines which incorporate practices they judge fundamental for the successful execution of work, Japanese managers at TCP are making these practices part of the organizational culture and, therefore, increasing the chances that they will last (Wilson 1992).

At Semp Toshiba, although some of the changes introduced can be characterized as radical in their consequences, gradualism has been important for their acceptance and extension of their objectives. In two processes time was not identified as an enabling condition for organizational learning, but gradualism was. The first was the changes in the assembly line, where the Kaizen activity played an important role. As explained before, Kaizen is based on small changes in production processes, with gradualism being an inherent part of the activities. The second process was the stock reduction. In this case, the identification of gradualism was perhaps only possible because the process has already developed during the last few years. When the initial objectives for stock reduction were proposed by the Industrial Director, they looked quite radical to the managers involved. Only through the analysis of the process, with the achievement of the initial objectives, and the setting of new and more ambitious ones, it is possible to describe its evolution as gradual.

The resetting of objectives was a factor identified only in the processes at Semp Toshiba. This may be related to the characteristics of the processes. At TCP, with the processes studied being related to the introduction of new activities, the objectives established needed a

longer period before being achieved, when compared with those at Semp Toshiba. Also, the demands for change posed by the economic environment in Brazil required urgency in the decision-making and its consequences. Feedback has been fast (Hedberg 1981), allowing corrections and expansions to be defined in relatively short periods of time.

These relatively short cycles at Semp Toshiba have then permitted the use of *success as leverage*. Each objective successfully achieved is transformed in a basis for a next, higher, objective. Organizational members who did not believe in the feasibility and value of some changes were convinced by the visible success achieved. As discussed in Chapter 7, the combination of success as leverage and the use of *dynamic objectives* have permitted Semp Toshiba to give to organizational learning a continuous character. This is an excellent example of outcomes as a moment in a process (Follett 1924). The continuity of the processes allows us to perceive that each objective achieved can be seen as an outcome only if we look at sections of a bigger process. If we look at the bigger process as a whole, each objective achieved is a new start, becoming part of this process. An ascendant enlarging spiral could perhaps visually represent this phenomenon.

The continuity of the processes also mean that change is becoming institutionalized, perhaps no longer being change, but rather continuity. Even so, learning keeps on occurring, as knowledge is being created. Contrary to what is commonly emphasized in the literature, learning does not need to be exclusively related to problem-solving, it may also refer to what goes right within an organization (Cook and Yanow 1993).

Another factor identified only in the processes studied at Semp Toshiba was *external information gathering*. It relates to the attention the company dedicates to the external environment in all its activities. It includes contacts with suppliers, other Toshiba's plants around the world, retailers and consumers. It allows both fast feedback on the company's products, and early awareness of market tendencies and different production processes.

At TCP, the non identification of external information gathering as a condition for learning does not mean that it is not important, or that the company pays no attention to the external environment. It relates with the stage of development of the processes studied. One of the

reasons for the establishment of the local design centres at TCP is exactly to increase its relationships with both local suppliers and the markets it serves. On the other hand, I have already commented that the non existence of a market function within the company may jeopardize the development of a closer relationship with its clientele. Currently, the sales companies channel market information to TCP, and the latter can concentrate exclusively on developing its manufacturing capabilities. This situation is, arguably, a short-term advantage, but it may well not continue to be so over the long-term.

The importance of external information gathering is supported by DiBella, Nevis and Gould (1996), who argue that the scanning imperative is a facilitating factor for organizational learning. By this term they mean "an ongoing effort backed by a well-assimilated acceptance of the importance of vigilance. Sound learning cannot occur without a foundation of enhanced consciousness or apprehension of the environment in which one is functioning" (p.42-43). In Chapter 2 of this dissertation, I have also mentioned Thompson's (1967) notion of 'opportunistic surveillance', the activity of monitoring the environment for opportunities, and how this can be a trigger of learning.

The presence of a *newcomer as source of innovation* was also identified as an important factor at Semp Toshiba. Three directors who joined the company roughly at the same time were the initiators of most of the processes/sub-processes studied. The role of newcomers as triggers of learning was also discussed at Chapter 2, with the mention of Huber's (1991) notion of 'grafting' as the hiring of new members who possess knowledge not previously available at the organization. Also, newcomers do not necessarily identify with existing routines and the thinking behind them, and, in case of change, do not have to go through a process of unlearning. This can also be linked to Nonaka and Takeuchi's (1995) suggestion that requisite variety, the existence of diversity within an organization, is an enabling condition for organizational knowledge creation. For instance, the Industrial Director at Semp Toshiba told me that some of the ideas related to manufacturing processes he introduced into the company were brought from his previous experience in the motor industry.

Table 8.2 summarizes how this study compares with the literature on organizational learning.

**Table 8.2****Findings of this Study and the  
Literature on Organizational Learning**

<b>Findings of this Study</b>	<b>How they Reflect on the Existing Literature</b>
Intention	Extend
Control	Part support, part diverge
Autonomy	Support
Teamwork	Support
Openness	Support
Leadership	Support
Training and codified knowledge	Extend
Codification and Organizational Memory	Support
Unlearning	Extend
Power	Diverge
Time and codified knowledge	Extend
Time and behavioural/cognitive changes	Extend
Time and types of learning	Extend
Gradualism	Extend
Success as leverage	Extend
Dynamic objectives	Extend
External information gathering	Support
Newcomer as source of innovation	Support

Finally, I want to briefly consider the secondary research question of this study, stated in Chapter 1: have the processes studied fostered the development or improvement of any organizational capability in the companies researched?

At the end of Chapters 5 and 7, I have already mentioned that both companies have developed new capabilities which have put them in a better competitive position in their respective markets. I have also indicated which capabilities were developed by each company. However, the conclusion that the learning processes studied brought these capabilities for the companies may be labelled as tautological, as the method adopted for choosing the processes was based on their outcomes for the companies. It is, therefore, important to make clear that I am not claiming that all learning processes bring new organizational capabilities, but the study supports the notion that invisible assets can be responsible for distinctive organizational capabilities. Most of the factors identified as enabling conditions for learning are related to the managerial styles and not to tangible resources of the companies. Moreover, it was through the evolution of the processes studied that the companies learned how to develop these assets.

#### **8.4 Summary**

This chapter has presented a cross-case discussion of the enabling conditions for organizational learning proposed for the processes studied. In order to enrich the contextual background of the discussion, some differences between the companies, related to their structure of ownership, market conditions, and organizational culture were first considered. Characteristics of the processes studied which bear upon the cross-case discussion were also highlighted.

In the cross-case discussion, the enabling conditions for organizational learning proposed for each process studied were compared, considering the similarities and differences between the companies and processes. They were also compared with the literature in order to understand how they support, diverge, or further build on existing relevant research. This last comparison is summarized at Table 8.2.

## Chapter 9

### SUMMARY AND IMPLICATIONS

This final chapter of the dissertation summarizes the main contributions of the study, indicates some policy implications, and suggests some directions for future research. It is divided into three sections. The first section recapitulates the objectives of the research, and summarizes the study's main contributions. The second section indicates some policy implications which arise from the study. The third and final section suggests directions for further research related to some of the issues discussed in this dissertation.

#### 9.1 Some Contributions and Limitations of this Study

This study was motivated by the perception of the increasing relevance of international business in the world economy, and of the fact that, in spite of the wide recognition that knowledge has become one of the most important organizational assets, there is scant understanding about the processes by which organizations can create or acquire knowledge. The importance of knowledge for organizations has been emphasized in the last few years by the development of the resource-based view of the firm, an approach to organizational strategy which proposes that firm-specific resources are critical factors for explaining what makes firms different from each other, and, consequently, what gives them competitive advantage. Authors adopting this approach argue that some of these firm-specific resources, specially those which are intangible, can be a result of processes by which a firm create or acquire knowledge about its operations, that is to say, processes of organizational learning. In the case of IBVs, some distinctive conditions add a number of issues on which these companies need to develop knowledge. Examples are the requirement to adapt products and processes to local market conditions, and the necessity of coordinating teams composed of people from different national cultures.

The study was guided by a central research question, which aimed at identifying and discussing some key enabling conditions for the occurrence of organizational learning in IBVs. Processes of organizational learning in two IBVs, TCP and Semp Toshiba, were identified, reconstructed and analysed. A secondary research question was whether these processes correlated with the development or improvement of any organizational capabilities for the companies concerned.

The literature review, presented in Chapter 2, provided a valuable framework for orienting the empirical research undertaken at TCP and Semp Toshiba. The main issues debated in the literature connected to the objectives of this study were incorporated into the interview schedules used for gathering data about processes of organizational learning in both companies, as explained in Chapter 3. Indeed, the analysis of the data indicated that some of these issues played an important role in the evolution of the processes, supporting findings from the existing literature. But the empirical research and data analysis also allowed a number of insights, discussed in chapters 5, 7 and 8, which extend our knowledge about processes of organizational learning in general, and those occurring in IBVs in particular. Below I summarize the more relevant of these new insights.

#### *Control and organizational learning*

The research indicated control as a factor which can facilitate the occurrence of learning. Control was related to both the assessment of outcomes in processes, and the establishment of limits to human action. Whilst the assessment of outcomes is mentioned in the literature as a factor which helps the provision of feedback and facilitates learning, the idea that establishing limits to human agency can contribute to learning actually diverges from the literature on organizational learning. However, in some of the sub-processes studied in this research, the exercise of control in this way proved to be an important mechanism for focusing organizational efforts towards objectives defined by top managers.

#### *Autonomy, organizational culture and sources of knowledge*

Whenever control was important for the occurrence of learning, it was skilfully balanced with autonomy. The study indicated two relevant characteristics of a productive use of autonomy within the companies studied. First, the existence of an organizational culture in which staff

who enjoy autonomy for specific actions share the objectives put forward by the organization's top managers. Second, autonomy was given to staff who either were important sources of knowledge for the evolution of the processes, or had the closest contact with the sources of knowledge when these were located outside the company.

*Use of power by top management in shaping processes of organizational learning*

Another finding of this research which diverges from the literature relates to the use of power by top managers for helping the occurrence of organizational learning. Power is a variable usually neglected in the literature on organizational learning. However, in two sub-processes studied in one company, top managers used their power to replace members of staff who resisted the changes involved in these processes. As the new staff started to behave according to the requirements of the new procedures, it is possible to say that the organization unlearned its past behaviour. The use of power in these cases was also a demonstration of commitment by top managers to the changes proposed.

*Use of intermediate success as leverage for furthering the processes of learning*

In one of the companies studied, a section of the staff, despite behaving according to the requirements of the new procedures, was not convinced of the merits of the changes introduced. Nevertheless, these changes generated very successful outcomes in a short period of time. Managers then capitalized on this success, initially to convince staff of the merits of the changes, and afterwards to motivate them towards higher objectives. Each time that objectives were achieved, they were upgraded towards more ambitious targets. This practice gave the processes of learning a continuous character. People had to constantly find ways of improving their performance, and so far they continue to be able to do so.

*Time, codified/uncodified knowledge, behavioural/cognitive changes*

The study indicated the existence of some specific and important relationships between time and processes of organizational learning. First, it suggested that when a learning process requires people to undergo behavioural changes without previous cognitive changes, as in the case of imitative behaviour, time pressure can stimulate these changes to occur. Second, the study suggested that when cognitive changes are required prior to behavioural changes, people will need time to undergo these cognitive changes. But as time is usually an important

contingency in organizational processes, the most common pattern appears to be for people to undergo cognitive and behavioural changes simultaneously.

#### *Types and processes of organizational learning*

Based on a typology of learning proposed by CIBAM (1993), which distinguishes technical, systemic and strategic learning within organizations, this study suggested that these three types can be related to different sequences of occurrence of behavioural and cognitive changes. Technical learning usually follows a behavioural → cognitive sequence. Systemic learning usually follows a cognitive → behavioural sequence, or simultaneous behavioural and cognitive changes. Strategic learning usually follows a cognitive → behavioural sequence.

#### *Communication within cross-national teams*

The study identified communication as the main problem for the work of cross-national teams. Difficulties of communication were reported by managers working in these teams as the main cause of misunderstandings. A relatively effective solution found in one company was the presence of a host country manager working as a close assistant to an expatriate manager. Their continuous face-to-face contact appears to greatly facilitate mutual understanding. Besides easing communication difficulties, this practice allowed the managers involved to better understand the other's culture and, therefore, reducing the probability of cross-cultural conflicts. The host country manager involved in this relationship would also work as a buffer between the expatriate manager and his team, which was generally composed by host country personnel. This practice also reduced the occurrence of communication and cross-cultural misunderstandings.

#### *Time and cross-cultural adaptation*

In IBVs, it is the normal practice to replace expatriate managers every few years. However, the study identified time as a vital component for overcoming problems related to cross-cultural adaptation. The regular substitution of expatriate managers results in difficulties related to cross-cultural adaptation for both the expatriate managers and the teams of host country personnel who will work with these managers. The study also noted that the companies have found ways of reducing these difficulties. One of them has just been

mentioned; another is to establish their production routines on a basis which is not dependent on expatriate managers, so as the replacement of such managers will not impact directly on the routines.

#### *Local and foreign knowledge*

The study has also indicated that the achievement of an appropriate balance between the contributions from local and foreign knowledge is both one of the most difficult tasks for the management of IBVs, and one that can create from the diversity of resources a synergy which can positively differentiate IBVs from other companies. There are no recipes which can be directly applied to all IBVs, but factors which appear to be important for achieving this balance are: a) identification of the main points of knowledge contribution from each party; b) establishment of structures and processes which create some autonomy for the sources of knowledge; c) the building of a shared sense of identity within the IBV, which means an organizational culture which reflects the creation of values espoused by members of different national cultures; and d) the predominance of an attitude of openness in relation to diversity of opinion.

The points summarized above and the identification and discussion, in chapters 5, 7 and 8, of both the enabling conditions for organizational learning and the organizational capabilities developed by each company, suggest that this study has achieved the objectives set out in Chapter 1. Given the existence of only a few studies which examine the processes of organizational learning, the analysis of the processes occurred at TCP and Semp Toshiba, and the attention dedicated to their context so as to provide a richer understanding of their development, are also methodological contributions from this study to the body of knowledge on organizational learning.

The main limitations of the methodology adopted for this study were discussed in Chapter 3. One other limitation seems to be relevant. The method adopted for selecting the processes studied, and the fact that the research was focused on those which had already occurred, meant that serendipity played a very small role in the processes discussed in this dissertation. I have already mentioned in Chapter 3 that people tend to over rationalize past events, leaving small room for acknowledging the role of chance. Although, in my interpretation,

none of the processes studied was triggered by chance, the point I want to make here is that serendipity may be important for some processes of organizational learning, particularly those characterized by exploration, as opposed to exploitation. However, it seems that only by following the development of processes in real time, would a researcher be able to assess the role of serendipity.

## **9.2 Policy Implications**

A number of policy implications can be suggested out of the insights from this study:

### *Leadership and organizational learning*

Top managers within organizations have a very important role in shaping the processes of organizational learning. This role is particularly important in the configuration of the organizational culture, and its transmission to other organizational members. Values embedded in the organizational culture should be consistent with the organizational objectives defined by top managers.

The active participation of top managers in the processes of learning indicates to other organizational members the issues in which they should concentrate their efforts. In processes regarded as essential for the success of the organization, top managers' participation may take the form of direct involvement, by setting objectives, creating structures which facilitate the development of the process, and exerting control over the achievement of objectives.

### *Control and organizational learning*

The idea that control can be both an obstacle to and a facilitator of organizational learning gives relevance to the way in which it is exercised during processes of learning. As assessment of outcomes, control is important for the provision of feedback. In this sense, it must be exercised at all levels within the organization, which implies that it must be embedded in organizational routines. This means that control must be delegated to those

performing the routines. However, productive use of control demands the understanding of the routines, for only from this understanding detected mismatches can be corrected.

On the other hand, control also acts as an instrument which keeps people confined to the performance of organizational routines, limiting alternative actions. These routines can be correctly performed, but their outcomes no longer desirable for the organization. In this case, control can hinder learning. So, control should not only be directed towards checking whether routines are being correctly followed, but also to whether these routines are resulting in desirable outcomes, which implies a higher level of control.

#### *Identification of the sources of knowledge*

Different learning processes have different sources of knowledge. These sources provide the fuel which keeps the processes moving forward. Organizations should identify these sources in order to provide structures and systems necessary for the development of knowledge. Autonomy appears to be a key ingredient for the creation of knowledge, one which should be granted to the sources of knowledge, but always balanced with control.

#### *Time and organizational learning*

Most learning processes involve change and continuity. Change occurs over time, but some types of change can be stimulated by time pressure. This appears to be true for behavioural changes in which the new desired behaviour can be based on an existing model (codified knowledge). In this case, the organization can provide the model and exercise time pressure on people for adopting it.

On the other hand, in most processes people will need to change both their behaviour and cognition. The less codified the knowledge concerning to the process, or, in other words, the less clear the objectives and procedures of the process, the more cognitive change and development people will have to undergo before modifying their behaviour. This means that more time will be necessary for people to change.

### *Success and cognitive change*

Changes can be resisted either because the new objectives and procedures are not clear for the people involved, or because the new strongly conflicts with the old. In both cases, initial success from the changes, if it happens, can be a powerful instrument for overcoming resistance. Thus, for the processes of learning in which resistance is expected, it seems important to consider strategies which can demonstrate success in the short term, as this may greatly facilitate the introduction of larger changes.

### *Managerial adaptation in IBVs*

At the start of operations of an IBV, it seems a common practice for the foreign investing company to send some expatriate managers in order to implement administrative systems in areas which the foreign company considers important to monitor. After these systems are in place, however, the study suggests that the expatriate managers should not occupy positions which interfere directly with the production routines of the IBV. This measure will avoid any negative interference in the normal operation of the IBV to arise from the regular replacement of expatriate managers.

### *Expatriate managers and cross-cultural training*

Companies should take advantage of the personal experience of expatriate managers. It has been seen in the cases studied that decisions and experiences related to non-technical issues are difficult to store and retrieve by means other than individual memory. Companies could build their own case studies from the real-life experiences of their managers. These managers could discuss their experiences with human resources staff who could then build the cases. Such cases could be used in training programmes for managers who will be sent abroad. Ideally, these training sessions would involve managers from more than one nationality for the case discussion be enriched with different cultural approaches. Managers whose experiences are portrayed in the cases could also take part in the training to give their own first hand interpretation about the issues. Cases which portray experiences from managers of the company are bound to raise interest in other managers. Another possible benefit from such a practice would be that managers would have formal opportunities to make a reflection about their own experiences and, perhaps, develop new knowledge out of this reflection.

### 9.3 Further Research

A number of avenues for further research can also be suggested out of the insights from this study. Some of these possibilities are related to the same companies which participated in this study. In this sense, this research could be extended to involve the Toshiba headquarters in Japan. Of particular interest would be the investigation of the company's policies in relation to expatriate managers, in which a number of issues could be examined. For instance, the preparation of managers who are going to work abroad, the repatriation of managers and whether their experiences are formally accumulated by the company for future use, the factors which determine the length of the stay of expatriate managers abroad, and whether there are differences related to the type of IBVs where the expatriate managers work. Another interesting point would be the strategic coordination of the network of companies abroad where Toshiba has equity stakes. In this case, the investigation could focus on learning processes at the corporate level. How does knowledge generated in local operations impact in the global policies of the company? Are successful policies adopted by one of the local companies a model for other companies?

Still within the two IBVs directly involved with this study, a number of other issues could be investigated. At TCP, the evolution of the conflicts between the AVD and ACD appears to be a process with great learning potential, besides being very relevant for the development of the company. Another interesting issue for further research would be to investigate the development of the ACD, and see whether Japanese influence will be weakened with both the localization of management and the replacement of original members by new ones who do not know the history of the company. Will new employees be so willing to collaborate with the company as those who came from the MWOD? With localization of management, what will be the evolution of systems and structures in which the Japanese managers were influential in designing? Such an investigation could provide relevant insights on the evolution of patterns of management within IBVs. Other possibly fruitful point of investigation is the development of local design and the relationship between TCP and its markets. As the evolution of local design appears to require an increasing contact with the market, and TCP depends on other companies for sales and market research, will the development of local design have any impact in this marketing structure?

At Semp Toshiba, the two processes investigated have had their scope successfully extended in the last few years. Will the company be able to give continuity to these developments? If so, which strategies will be adopted? Another interesting investigation could be on the relationship between Semp Toshiba and Toshiba Japan. If Semp Toshiba continues to be so successful in the next few years as it has been the past, will Toshiba try to source any managerial knowledge from the joint venture? Can the strategies adopted in Brazil be adapted to other emerging economies where the market for TV sets is expected to grow fast, as India and China, for instance?

Besides these points related to the evolution of the processes and companies studied, there are also other, more general strands of research which can be suggested from the insights developed in this study. In this sense, an exciting perspective would be to gain access to a company which is just starting its operations and follow in real time some of the more relevant issues suggested in this study. Thus, the relationship between time and learning could be monitored in technical, systemic and strategic types of learning. In a new operation, all these systems would have to be implemented, allowing a unique opportunity for keeping track of their development. Besides, frequent contacts with staff involved in the implementation of these systems would make possible an analysis of the behavioural and cognitive changes undergone by them. Moreover, these frequent contacts would also allow an understanding of the processes of codification of knowledge. If the researcher, or group of researchers, follows the development of a system, they can ask interviewees to articulate their views on this development. Over time, it should be possible to interpret how the knowledge produced by the interviewees was being codified. Coupled with other forms of data collection, such as observation and the examination of documents, behavioural changes could also be followed. An ambitious research project of this kind would perhaps be better agreed with a company, so as to take the form of an action research, in which the researchers could regularly discuss with the company's staff their reflections on the evolution of the processes. These discussions would probably impact on this evolution, and this impact, in turn, could be object of further research.

If this company were an IBV, issues related to cross-cultural adaptation could also be addressed. The idea that, when developing systems in a cross-cultural setting, people have to

codify their knowledge about procedures which are taken for granted in their own culture, in order to be able to communicate with people from other culture, is one which deserves more investigation. It can arguably be an opportunity for reflection-in-action (Schön 1983), one in which values and assumptions behind procedures can be questioned, leaving room for learning. Again, the perspective of action research seems appropriate, as researchers could discuss these values and assumptions with the personnel involved.

Another issue for research concerns the relationship between control, autonomy and learning. A research project could be specifically targeted at assessing this relationship in a number of companies, ideally in the same industry. In this case, procedures which have similar objectives within the different companies could be assessed so as to analyse how the relationship between control mechanisms and autonomy impact the processes of learning. Whilst a survey approach does not appear to be able to grasp the issues which could determine a successful balance between control and autonomy in relation to learning, a comparative study with a large number of cases within the same industry does. However, this approach appears to be feasible only if the research is focused on one objective, otherwise the amount of data may overwhelm the researchers.

The conjunction between types and processes of learning depicted in Figure 8.1 in the previous chapter should be further investigated in future research. The suggestion that different types of learning can be characterized by different sequences of cognitive and behavioural changes, is a new and interesting insight on the development of processes of organizational learning. Longitudinal case studies, in which the researcher could have frequent access to managers and workers appear to be the most appropriated method for undertaking such a research. It is, undoubtedly, a difficult research task, but one in which knowledge can be accumulated through a series of individual case studies, which can be done by different researchers, in different locations, easing off the burden.

This study has also indicated the existence of different relationships between technical and managerial knowledge and organizational memory. In contrast with technical knowledge, it is very difficult, if not impossible, to store managerial knowledge in organizational files, databases, or other hard devices. Organizational culture appears to be one of the more evident

embodiments of managerial knowledge. In most organizations, periods of succession at the top level may represent changes in managerial styles, with unlearning and learning as a consequence. In IBVs, the regular replacement of expatriate managers mean that succession occurs much more frequently than most organizations. This can be a problem for IBVs, particularly for successful ones, as the new managers will naturally want to introduce their managerial style. From this situation, a number of research questions can then be formulated. Is it possible to institutionalize a managerial style? If so, how? Through routines, systems and control? If so, how rigid would these systems be? Would they not make learning more difficult? Would it be possible to institutionalize a managerial system which enables learning, or these are two irreconcilable concepts?

The study also suggested differences in the autonomy of decision-making between a joint-venture and a subsidiary of a multinational corporation. With the globalization of business, large corporations have established IBVs in different geographical areas around the globe. These IBVs, particularly subsidiaries, are connected to a network, usually under the guidelines of the companies' headquarters. This study only involved two companies and, therefore, it is not possible to make any generalization concerning structural patterns in international business. However, it could be interesting to investigate this issue adopting a different methodology. Do subsidiaries have less autonomy for decision-making than joint ventures? If so, would this mean that joint ventures can more readily combine local and global knowledge? Such a research could be undertaken initially within one TNC, to see how it manages its global network. In a second stage, a number of other TNCs could be added in order to compare the different strategies and see whether there is a pattern, or it also depends on other factors, like industry, and TNC culture.

Finally, this study has indicated the existence of a connection between the processes of organizational learning and the development of organization capabilities. This connection surely deserves further research. Since the development of organization capabilities is currently attracting attention within companies all over the world, this seems to be the right moment to address this question. A possible way would be to gain access to a company which is consciously proposing the further development of existing capabilities or the creation of new ones, and then to analyse how the processes of learning are managed. In this

sense, most of the insights developed in this dissertation could be the object of analysis, testing the conditions which have been proposed here as facilitators of learning. Attention should also be directed into the way in which knowledge created in the processes of organizational learning is channelled into organizational capabilities, and whether these capabilities give the company any distinctive advantage in its markets.

These are but a selection of possible research lines which emerge from the issues discussed in this dissertation. Knowledge on processes of organizational learning is still incipient, and this warrants research for many years to come.

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## APPENDIX

A.1 Interview to Select the Events

A.2 Interview on Personal Career and Impressions about the Company

A.3 Interview to Reconstruct the Process

## APPENDIX A.1

### Interview to Select the Events

- Could you please name the events you consider critical for this company in the last five years?
- Could you please put the events in a chronological sequence?
- Could you please give me a brief description of the events?
- Who has been involved in the processes related with the events?

## APPENDIX A.2

### Interview on Personal Career and Impressions about the Company

#### 1. Current job

- What is your position in this company?
- What are your major responsibilities?
- How long have you held this position?
- What are some of the challenges you face?

#### 2. Career history

- Tell me about how you got to be doing this.
- How did you get started in your profession/job?
- What has prepared you for this job? (prior positions, educational background)
- What other jobs have you had? (at this company or at other companies)

#### 3. Perceptions of the significant operating values and beliefs of the company

- Tell me about what this organisation is like.
- What are its values, in your point of view?
- What is important to this company? How do you know this is important for the company?
- If I were a new employee, what are the important do's and don'ts that you would want me to know about?
- What does this company do well?
- What are your concerns about this company?

#### 4. Personal perceptions

- What do you particularly like in other people? (in general)
- What don't you particularly like in other people? (in general)

## APPENDIX A.3

### Interview to Reconstruct the Process

#### 1. Objectives of the process

- What were the reasons for the process?
- What were the objectives for the process?

#### 2. External environment

- What were the major competitive pressures the company faced when the process started?
- What did you think, at that time, the company could do in respect to those pressures?  
Do you have a different view now?
- Were there any different views regarding to the external environment?

#### 3. Internal environment

- Help me to understand what was it like to be in the company at that time the process started.
- What, do you think, was generally considered important for the company at that time?
- What was the mood in the company at that time?
- What was the strategy of the company regarding the business when the process started?

#### 4. Constitution of the team

- Who are the people chosen to participate in the process?
- Why are they chosen? Which criteria was used to select the people?
- Were additional people integrated to the original team? If so, why?

#### 5. Teamwork

- Could you describe how the team work together?
- What are the main difficulties within the team?
- What are the major positive qualities of the team?
- When there is a new idea about the work of the team, how is it discussed? (openly, only to legitimate a decision already taken, etc.)

- Who does usually bring new ideas? (managerial and technical ideas)
- What, do you think, is the general reaction to ideas, which are different from what is generally expected?
- Could you describe the processes of communication within the team? (lateral, vertical, cross-cultural, formal and informal)
- When there is a problem (technical or managerial), how is it discussed? How decisions are usually reached and implemented? (the boss communicates it, it is discussed to seek agreement, etc.)
- Were there different positions in relation to any particular aspect of the development of the process? If so: a.) what were these positions?; b.) how do you identify each group which held different positions?; c.) how did each group see the other?; d.) what means did each group use trying to convince the other?; e.) did the positions become more closer or more apart with the evolution of the process? Why do you think so?
- If there is someone or a group of people who are not satisfied with the solution for a problem, are they involved in the implementation of the solution? What is their attitude in relation to the solution?

#### 6. Memory

- Are the decisions and processes of implementation stored in any way? If so, how? (technical and managerial decisions)
- When a problem occurs, and it is similar to other already occurred, is the past solution applied? If so, how? (directly, reconsidered) How the past is retrieved?
- Do people discuss future challenges? If so, people from which level? Why and how do they discuss?

#### 7. Learning (direct question)

- What do you think you have learned from the process?

#### 8. Consequences

- What were the consequences of the process? (for the company, for the people involved)
- What do you think is important for a productive relationship within a cross national team?

