

E-Business and Organisational Change: A Structural Analysis

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Thesis submitted for the award of the degree
of Doctor of Philosophy

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2004

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ABSTRACT

The focus of large-scale e-business development has shifted to the large 'blue-chip' corporations. However, large companies not only have to tackle a new technology that could permeate the entire organisation and along its supply chain, but they have to deal with new business models, revised processes, additional marketing channels, mounting cost pressures, and heightened service expectations from customers. This is particularly difficult for large multinationals that span the globe with their rigid bureaucratic structures, elaborate power networks, and ingrained cultural properties. Hence, the aim of this research is to investigate how the introduction of e-business interacts with the existing structures of a large established company. Structures are interpreted as rules and resources, which are the medium and outcome of human actions.

It is argued that the introduction of e-business constitutes a significant technology-driven organisational change and a review of the literature reveals an absence of such studies in e-business. In order to capture a comprehensive and dynamic understanding of how organisations undergo such a change, this research applies structuration theory as a meta-theory to explore the relationship between agents and structure, using an interpretive qualitative paradigm. An extensive longitudinal case study examines the establishment, operation and termination of a special-purpose e-business unit, named ConsumerConnect-Europe (CCE), at the European corporate headquarters of the Ford Motor Company.

This thesis provides a narrative of the entire life cycle of CCE, focusing on its business-to-consumer division. The narrative is analysed in detail using structuration theory with its concerns for the dimensions of signification, domination and legitimation. The discussion initially addresses the research sub-questions related directly to the case study and then turns to the main research question: how does the introduction of e-business interact with the existing structures of large established companies? In answering this, it examines the broader natures of e-business, human agency in organisational change, organisational structures, and the duality of organisational change. These natures form the content of contributions and are linked to the theoretical and practical contributions of the thesis. Methodological contributions are primarily in the operationalisation of structuration theory.

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DEDICATIONS

To my family...

To my grandmother, Choi King Ling, for her inspiration, love, faith, and strength.

To my parents, Anita and David Chu, for their enduring love, support, and guidance.

To my siblings, Carol, Kenneth, Tenniel, Carrie, and Vincent for their permanence, warmth, and laughter...

Catherine Chu, 2004

ACKNOWLEDGEMENTS

This thesis would not have been possible without the love, support, and faith of several key individuals. I would like to express my foremost gratitude to my supervisor, Dr. Steve Smithson, who always guided me out of my eleventh hour and spent a great amount of time, reading, editing and discussing my work. Over the years, he has been an endearing friend and intellectual inspiration. I could not have wished for anymore.

I would like to thank with all my heart my family — especially my grandmother, Choi King Ling; my parents, Anita and David Chu; and my siblings, Carol, Kenneth, Tenniel, Carrie and Vincent. My grandmother and Carrie has been a particular source of inspiration, laughter, and encouragement. I am also most grateful for the thoughtfulness, dedication and support of Charles Tsai.

I am deeply appreciative of Phil Horlock, Andy Eggleston and John Hitcham, who sponsored my access into Ford Motor Company to conduct my case study. They significantly facilitated my fieldwork and were most helpful. I would also like to thank all the participants and interviewees in my case study for their time.

Many academics at the London School of Economics have also provided me with assistance and guidance along my way. From the Management department, in which I completed my undergraduate studies, I would like to wholeheartedly thank Dr. Rafael Gomez; Dr. Michael Barzelay; and Dr. Thomas Kirchmaier. The advice and support from my postgraduate department, Information Systems, has been tremendous. I would like to express special thanks to Dr. Shirin Madon; Dr. Chrisanthi Avgerou, Prof. Robert Galliers, Dr. Susan Scott, Dr. Nathalie Mitev, Dr. Ian Hosein, and Dr. Antonio Cordella. I also want to thank my peers, who have been particularly supportive and encouraging: Dr. Carol Hsu; Dr. Robert Willison; Dr. Erica Wagner; Riad Fawzi; Evi Kopanaki; Ruth Halperin; Minyi Huang; Ash Khanna; Prodromos Tsiavos; Dr. Frederick Wamala; Dr. Masao Kakihara; Daniel Osei-Johene; Dr. Mary Darking; Maha Shaikh; and Farooq Haq. In addition, I would like to express my gratitude to Dr. Steven Sabat, from Georgetown University, who first recognised my potentials and inspired me to embark on the PhD route.

I would like to thank my examiners, Prof. Frank Land and Prof. Philip Powell for their interest in my subject, their engagement in a stimulating viva and their helpful suggestions for minor changes.

Finally, I would like to thank my friends, Ken Ihara and Raphael Maiopoulos, for their encouragement and editorial suggestions, and many friends for lending their ears during the trying times.

LIST OF ABBREVIATIONS

<i>Abbreviations in Case Study</i>	
ADS	Acceleration Development Solution Group
ASC	Acceleration Solutions Centre
AMC	Acceleration Maintenance Centre
CBG	Consumer Business Group
CCE	ConsumerConnect-Europe
CC-US	ConsumerConnect-US
FCSD	Ford Customer Services Department
FMC	Ford Motor Company
FoB	Ford of Britain
FoE	Ford of Europe
GM	General Motors
LR	Land Rover
PAG	Premier Automotive Group
PTG	Process Technology Group
SUV	Sports Utility Vehicle
TSO	Technology Solutions Owners
VW	Volkswagen
<i>Abbreviations in Narrative Structure</i>	
CE	Contemporaneous Event
E1	Event 1: Establishment
E2	Event 2: Operation
E3	Event 3: Termination
LE	Later Event
PE	Prior Event
RE	Related Event

CHAPTER 1: INTRODUCTION

While the dust has largely settled on the boom and bust of the dot-com 'revolution' (Howcroft 2001), e-business remains a very important area of activity. Businesses continue to invest heavily in both business-to-consumer (B2C) and business-to-business (B2B) applications and the number of transactions continues to increase. Governments around the world are embarking on ambitious e-government applications (Dutton 1999) and the Internet and Web remain the bedrock of current information systems (IS) development and operational activity. Unlike previous technology, e-business presents a more pervasive potential within the organisation and has attracted both a fascination and a willingness to experiment with the industry.

While many of the early dot-com companies have disappeared, the focus of large-scale e-business development has shifted to the large 'blue-chip' corporations. At the height of the e-commerce boom, these old 'dinosaurs' were derided by many commentators, who continued to talk up the hype (and the share prices) surrounding their nimble dot-com competitors. Large corporations have had to make significant organisational changes in order to assimilate e-business into their existing structures, processes and cultures, while competing with dynamic dot-com companies against a backdrop of very mixed fortunes for e-business as a whole. E-business is not just a new technology that has the potential to permeate the entire organisation, and to reach beyond the organisational boundaries to customers and suppliers, but also brings with it new ways of working, new cost pressures and a new channel for interacting with customers, whose expectations have grown.

Large organisations not only have to implement the technology and associated systems and applications; in many cases they also have to develop new strategies and development processes and possibly change their entire structures and cultures. Although formal organisational structures are man-made and can be (and often are) changed by senior management in the face of changing circumstances, the other, more subtle, social structures of interpretive schemes, domination and legitimation (Giddens 1984) require much more than just re-drawing the organisational chart.

Most organisations have already faced, or are currently facing, significant organisational changes as a result of e-business, and these changes are inherently more complex and difficult for large organisations.

1.1 *State of Current Research*

At the time of writing, e-business encompasses ‘something old and something new’ (Clegg et al. 2004). In other words, there is a recognition that, while e-business offers new business potential, most of the traditional concerns that have occupied researchers in business, organisational, human and technological sciences remain relevant. Despite this, much of the e-business literature can be categorised as ‘star-gazing’ or highly prescriptive and normative. Much of the empirical research available comprises relatively limited surveys, often of student users, and material that is more suitable for developing marketing strategies, rather than organisational change.

The implementation of e-business, a highly generic and pervasive technology that is relevant for both internal and inter-organisational systems, is a much larger problem than the implementation of conventional information systems. As such, for most organisations, e-business can be classified as a technology-driven organisational change (or ‘technochange’ – Markus 2004) in a high risk, high reward situation. It therefore requires rather different change management to traditional IS project management. Consequently, in order to study and capture the richness of the implementation of e-business, a strong organisational change perspective is needed.

Such a perspective is lacking in the current literature and there are few studies of the relationship between organisational change and e-business, possibly because the dot-com phenomenon stole the early limelight. There is thus a real gap, in terms of inadequacy and incompleteness, in the information systems literature and, in particular, a dearth of detailed case studies. For that reason, the research area of this thesis is *e-business and organisational change*.

Organisational change is a long-standing research topic and a chronic problem in practice, which is mainly the preserve of organisational behaviour. Researchers in that field have mostly adopted one of three themes: content, context and process. The content approaches provide useful insight in terms of the type of changes being made, but they mostly adopt a fairly static approach that fails to address the complex dynamics of change or the interactions among the various factors. For their part, the process approaches focus on action and address many of the failings of the content approaches, but at the cost of neglecting the context of the change. Meanwhile, researchers following a more contextual approach tend to emphasise the structural constraints on change, while downplaying the power of human agency. I argue that

a combination of these themes is needed to provide a comprehensive understanding of change and its dynamics.

1.2 Structuration Theory

In my view, structuration theory (Giddens 1979, 1984) provides the desired combination of approaches to understand the process of technology-driven organisational change (in my case, e-business) and its interaction with the existing structures of organisations. This theory attempts to resolve a fundamental division within the social sciences between those researchers who give primacy to the power of human agents to influence social phenomena and those researchers who emphasise the power of social structures to influence those same phenomena. Rather than regarding agency and structure as independent and conflicting elements, Giddens treats them as a *mutually interacting duality* whereby people draw on structures for their actions and interactions but, in so doing, produce and reproduce those social structures. In other words, agents build, use and reproduce social structures through their actions but those actions are enabled and constrained by the structures. Furthermore, he regards structuration (i.e. “conditions governing the continuity or transformation of structures, and therefore the reproduction of social systems”(1984, p.25)) as a continuing process rather than as static properties of social systems. This fits with the notion of change as an ongoing process. Hence, I use structuration theory as my primary theoretical model as it also forms a valid meta-theory that resolves the weaknesses of the content, context and process approaches. Furthermore, this theory is pitched at the appropriate conceptual level to understand the complex and neglected area of e-business and organisational change.

With this theoretical basis and the research area of e-business and organisational change, the *main research question* becomes,

“How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?”

E-business here represents any business activity where the key organisational functions (e.g. sales) take place predominantly on the Internet or other computer network, (Castells 2001). My interpretation of *structures* is much richer than mere organisational charts. I adopt Giddens’s conception of structures, discussed at length in Chapter 3. He views them as the rules and resources that are instantiated only in action and that are the medium and outcome of the reproduction of actions. Giddens distinguishes three dimensions of structure:

signification, domination, and legitimation. These are mediated by three modalities (interpretative schemes, facilities and norms) respectively, drawn on by human agency in its constitution of interaction (i.e. communication and the application of power and sanctions), which in turn reproduces and changes the social structures.

The main research question captures Giddens's fundamental conception of duality. The word 'interact' refers to the mutual interaction between the human agents' attempts at implementing e-business and the existing organisational structures. These structures can enable or constrain the attempts of human agents, yet human agents can also change and reproduce these structures. The second part of the question serves to sharpen the focus by explicitly seeking explanations for the problems.

Another important concept in Giddens's theory is his distinction between structural contradiction and conflict. The former arises from tensions within and between social groupings and contains the potential for conflict, while the latter refers to the actual struggles between actors or groups. Structural contradiction and conflict tend to be particularly relevant in an organisational change context.

1.3 Research Methodology

Since the epistemological and ontological base of interpretive research match the basic principles of structuration theory, this research adopts an interpretive paradigm,. In effect, the fundamental aim of interpretive research is to:

“understand how members of a social group ... enact their particular realities and endow them with meaning, and to show how these meanings, beliefs and intentions of the members help to constitute their social action” (Orlikowski and Baroudi 1991, p.13)

In addition, the adoption of an interpretive paradigm fits my personal beliefs and matches the approach of other structural researchers.

Like much interpretive qualitative research, the main research embraces a strategy based on the deployment of *an in-depth interpretive case study*. The distinctive need for conducting a case study arises out of the desire to understand a contemporary complex social phenomenon in which the variables are largely unknown. Case studies are the preferred research strategy to answer “how?” and “why?” questions and to gather data from multiple perspectives and multiple sources.

Yin (1994) recommends a single case study if the case is of revelatory nature (i.e. when the researchers have the opportunity to access phenomena that have not been previously observed). I had the unique opportunity to access Ford Motor Company (FMC), one of the oldest and largest global car manufacturers, to study its large-scale introduction of e-business.

This is a fascinating case study. It started at the height of the e-commerce boom, when the CEO of FMC, Jac Nasser, decided to heavily promote e-business throughout the organisation, as he expected this technology to transform the industry and to change the company from being manufacturing-led to consumer-led. To achieve this end, Nasser created a new business unit, named ConsumerConnect, to serve as the central cross-brand provider of e-business solutions. With its creation began the story of my main episode: *Life Cycle of ConsumerConnect-Europe* (the European division of ConsumerConnect). This life cycle encompasses three stages: *establishment, operation and termination*. The story can be summarised as:

Driven by the then CEO, Jac Nasser, ConsumerConnect-Europe (CCE) began with some sense that there was an urgency to integrate e-business within Ford and that a radical change/intervention into Ford's existing business strategy, processes, and culture was required in order for Ford to retain its future competitive position and market share in the automotive sector. CCE started with grand agendas within agendas, but it had a hard time creating a local practice of e-business, as there was a lack of experience, understanding and detailed strategy for e-business. The agendas implied creating synergies, which other parts of the organisation were not prepared for, but were forced to comply with. The specific way in which CCE went about creating synergies created a lot of conflict. In effect, the problem came to be the intervention itself and hence, when Nasser's position weakened, CCE was eventually eliminated. (From *Section 5.2 Overview of the Life Cycle of CCE*)

The main episode started in June 2000 and ended on December 31st, 2002, when CCE was officially closed down and the remaining parts reabsorbed into traditional departments. For the case study, I made frequent visits to CCE from August 2001 to January 2003 and although I was not present during CCE's establishment, I was able to gather recent accounts from my interviewees in the early stages of my fieldwork.

As CCE entered more turbulent times and was heading towards its termination, and as my principal sponsor was replaced, my access became restricted to CCE's business-to-consumer operation, Drive (later renamed E-ssembly). Consequently, the scope of my study was split into two interrelated levels. At a macro level, I studied the general life cycle of CCE and, at a more specific level, I focused on the Drive/E-ssembly operation and the departments with

which it worked (Ford of Europe Marketing, Ford IT, Volvo, Land Rover, Ford of Britain, etc.). Such a case study of FMC's e-business endeavours not only holds both intrinsic and instrumental value but also offers prospects to generate specific implications and contribute rich insights.

In terms of research techniques, I applied semi-structured interviews, observation and the examination of documentation. In designing the interview questions, I derived four research sub-questions from the main research question. These four research sub-questions are directly associated with the case study:

- i. *What was it about the structures of Ford Motor Company that made ConsumerConnect-Europe's intervention vulnerable to collapse?*
- ii. *What was it about ConsumerConnect-Europe's own structures that made it vulnerable to collapse?*
- iii. *What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?*
- iv. *What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?*

This bridging of the main research question and interview questions through research sub-questions, together with the ultimate simplification of interview questions into layman's terms, were critical in capturing the essence of the story and the data required for analysing the mutual interaction between structures and human actions. Consequently, the interview questions were not worded in the vocabulary of structuration but, depending on the interviewees' responses, the answers often encapsulated several elements of structuration theory. These were extracted and analysed.

1.4 Objectives of the Research and Target Audience

Evidently, the aim of this thesis is to answer the main research question and the research sub-questions delineated above. Through addressing these questions, this thesis hopes to make a contribution to the understanding of the problematic issues concerned with technologically-driven organisational change and to diminish the gap in the literature of e-business related organisational change. It hopes to enrich our comprehension of the nature of organisational structures (interpreted in Giddens's terms) in large established organisations, the nature of agency in organisational change, the nature of the duality of organisational change, and the nature of e-business. Through the stucturational analysis of the case study, this research aims to generate specific implications relevant to other organisations and other contexts, and to

reveal intrinsically interesting rich insights. With increased awareness and appreciation, this research aims to provide some practical contributions and approaches to resolving the difficulties.

Furthermore, through the application of structuration theory, this research also hopes to build and extend the operationalisation of this theory. It is a supplicating aspiration that this research would assist other researchers in their task of developing intellectual tools for the study of IS and organisational change. As part of such a development, this research wishes to also contribute methodologically to IS research, through the manner in which the research techniques are deployed. In particular, it emphasises the importance of sensitivity to interviewees and of the careful construction of interview questions in order to maximise the interview sessions. Moreover, it hopes that other researchers would find benefits from replicating the narrative structure and the descriptive 'multivoiced' style employed in this research to effectively recount a complex episode in a coherent fashion.

Hence, the *target audience* of this research has a wide range. Those who may find this thesis relevant include academics and practitioners interested in technology-driven organisational change. In particular, those who are specifically interested in e-business implementation in large established organisations should find this research insightful. Researchers interested in a case study of a large blue-chip organisation, of an automotive manufacturer, or of Ford Motor Company and its e-initiatives would see the relevance of this research. In addition, researchers considering the employment or operationalisation of structuration theory should find this research beneficial. Finally, researchers conducting case studies in large established organisations should appreciate the methodological considerations.

1.5 Plan of the Thesis

This thesis follows the preceding series of elements: Chapter 2 is the Literature Review; Chapter 3 is the Theoretical Framework (structuration theory); and Chapter 4 is the Research Methodology and Design. Due to the length and complexity of the case study, the Findings are split into two chapters. First, Chapter 5 recounts the prior events and the establishment of ConsumerConnect-Europe (CCE). Second, Chapter 6 narrates the operation phase of CCE, with an emphasis on its B2C operation. It describes the problematic issues encountered and the contemporaneous and related events, and the perceptions of the various stakeholders. Chapter 6 concludes by recounting the contemporaneous events that accompanied the

termination of CCE and its eventual termination. It also follows the views of the stakeholders regarding the termination and briefly alludes to later events beyond the main episode.

Chapter 7, the Analysis, provides a detailed structural analysis of the case study. It analyses each phase of the CCE life cycle chronologically. In the establishment phase, it examines the structural contradictions among the various stakeholders. In the operation phase, it investigates the emergence of conflicts arising from the structural contradictions in terms of the following issues: centralisation versus decentralisation; matrix structure; chargeback model; empowerment; relationship building; management of acquisitions and joint ventures; consulting; IT and business gap; octopus-nature of e-business; and finally e-business gap with traditional IT and traditional business. In the termination phase, it analyses how CCE's initial structures contradicted the traditional structures of FMC and, when the opportunity arose, the traditional structures were returned with a vengeance to close down CCE. It ends with a summary of the failures and achievements of CCE.

Chapter 8, the Discussion, moves the analysis to a higher level of abstraction. Still using structuration theory to analyse the case data, the chapter addresses each research sub-question before turning to the main research question. In answering the latter, it uses structuration theory to discuss the natures of e-business, of human agency in organisational change, of organisational structure, and of duality of organisational change in general terms. The chapter concludes with an evaluation of my experience of using structuration theory within this study.

The final chapter, Chapter 9, the Conclusion brings the thesis together by summarising the whole document and highlighting the contributions of the research, in terms of content (including theory), methodology and practice. Finally, it concludes by addressing the limitations of the study and proposing avenues for further research.

CHAPTER 2: LITERATURE REVIEW

2.1 *Introduction*

Despite its chequered history, witnessed by the boom and bust of the dot-coms, e-business remains an important new technology that continues to receive considerable attention from entrepreneurs, executives, investors and academics. This chapter reviews the literature on e-business, concluding that e-business should be viewed more as an evolution than a revolution or just plain hype. Nevertheless, e-business clearly has significant implications for the operation and structure of organisations (and entire industries), and its assimilation constitutes a major challenge to traditional businesses. As, at one level, e-business can be regarded as an information system, I review the key literature on information systems implementation in organisations. Since, however, its importance and pervasiveness suggest that e-business can also be regarded as a major organisational change, I then compare the literature on organisational change with some of the important issues concerning the introduction of e-business.

2.2 *Definition and Potential of E-business*

The early history of the Internet and the World Wide Web, from their origins in Arpanet and the development of HTML (hypertext markup language – Berners-Lee et al 1994), has been recounted elsewhere (Berners-Lee 1996; Leiner et al. 1997; Braa et al. 2000). As is commonly known, since the introduction of the first browser in 1993, the Internet has grown very rapidly and has facilitated, in addition to e-business, the creation of online communities, electronic bulletin boards, electronic mail, electronic file transfer, personal broadcast networks, etc. Access to the Web (or the Net) has evolved beyond personal computers to cellular telephones, personal organisers and videogame consoles, as well as to home appliances, vending machines, and automobiles.

In its early days, the Internet had a certain revolutionary or anarchic culture, captured nicely by Coyne (1998):

“The dominant ethos is now romanticism: a focus on subjectivity, a new metaphysics of proximity, a revival of the early socialist dream of community, a disdain for the constraints imposed by the body, embracing the holistic unitary patterning of chaos theory, the representation of the object world, a hope for its ultimate transcendence through the technologies of cyberspace, and a quest for a better, fairer more democratic future” (p.349).

However, the Internet quickly became commercialised as business focused on the considerable potential for electronic commerce (Dos Santos and Peffers 1998). E-commerce can be defined as “the buying and selling of information, products, and services via computer networks” (Kalakota and Whinston 1996). I prefer to use the term ‘e-business’ as it represents a broader concept: “support for any kind of business transactions over a digital infrastructure” (Bloch et al. 1996 – see also Wigand 1997 and Castells 2001). This notion of e-business seems more relevant to organisations and implies “the use of networks and Internet technology for communications and transactions between various groups of stakeholders” (Watson et al. 2000), emphasising the central role of electronic networking (Straub and Watson 2001). In introducing some of the potential of e-business in the next paragraphs, I follow the usual categorisation of business-to-consumer (B2C) and business-to-business (B2B).

Consumer markets were the first to experience the pressures of e-business. The promises in these markets fuelled the dot-com boom of the late 1990s and the failure to realise these promises contributed greatly to the following bust. Nevertheless, the computing and communication capabilities of the Web offer (Berthon et al. 1997; Maddox 1998; Ranchhod and Gurau 1999; Strausak 1998):

- High speed information transfer and high levels of interaction
- New information products (e.g. MP3 music) and new applications, such as comparison engines (for comparing prices and recommendation technologies, used by companies like Amazon to suggest books to consumers (Kauffman and Walden 2001))

These capabilities in turn offer attractive potentials for businesses operating in consumer markets (Riggins 1999; De Kare Silver 2000; Bakos 2001):

- A new marketing channel
- Automated service delivery and lower marketing costs
- Elimination of the limitations of physical space and time
- One-to-one marketing, mass customisation and real-time pricing
- Increased control of the channel and better customer relationship management
- Opportunities to transcend local markets into regional, national, and global markets
- New business models (e.g. electronic auctions)
- Disintermediation or opportunities for electronic intermediation

With the B2C market failing to yield the expected profitability, attention shifted to the B2B (business-to-business) market. It was believed that this market was larger and that organisations would be quicker than consumers to adopt the technology. There was certainly a demand for a low-cost efficient interorganisational network. During the 1990s, considerable

attention was focused on coordination between organisations as outsourcing and globalisation produced lengthy global supply chains.

“The revolution of the 1990s is driven not by changes in production and transportation, but by changes in coordination. Whenever people work together, they must somehow communicate, make decisions, allocate resources, and get products and services to their right place at the right time” (Malone and Rockart 1991, p.128).

Thus, supply chain management, with its increased emphasis on interorganisational relationships (Holland 1995), became a major preoccupation of organisations. Improvements in information technology have reduced such coordination costs (Malone et al. 1987) according to transaction cost economics. This includes the widespread use of electronic data interchange (EDI) for supply chain management in the 1980s and 1990s in particular industries (Reekers and Smithson 1996). However, EDI suffers from standards problems (Whinston 1997), an inherent rigidity and high costs (Economist 1999).

The Internet, on the other hand, offers a global information network, based on simple open standards, that fits the demands of most supply chains (Strader 1999). Firms can connect into each other’s business processes flexibly and cheaply (Economist 1999). Effective use of this technology promises much for supply chain management and B2B e-business in general (see also Lucking-Reiley 2001):

- Improved integration and new and improved relationships with suppliers and customers based on shared information (Clegg et al. 2004)
- Global supply chains, open 24-hours
- New business models (such as ‘build-to-order’ to eliminate inventory, used by Dell Computers and also a key target of the automotive industry (Howard et al 2003))
- Reduced coordination and transaction costs by simplifying processes or moving them to trading partners (e.g. customers inputting their own orders). British Telecom claims that buying goods and services online reduces the direct costs by 11% and the transaction costs by 90% (Economist 2000)
- Reduced inventory costs through improved coordination
- Reduced errors in orders and invoicing. Cisco reports its error rate fell from 25% to 2% when it switched to online ordering, saving the company \$500m (Economist 2000)
- Increased speed (e.g. real time updating of catalogues and the use of a single data source (Clegg et al. 2004))
- Lower distribution costs for certain products or services. For a bank, the marginal cost of a transaction over the Internet is only a cent, compared with 27 cents via a cash machine, 52 cents by telephone, and \$1.14 by bank teller (Economist 2000)

The architecture initially favoured for B2B e-business was based on public exchanges, but these had trouble realising the volume and liquidity levels predicted. They were scarred from price wars, poor quality, sensitive timing of deliveries, problems of customisation,

painstaking efforts to sift through many tenders from unknown suppliers, and additional costs of paying an intermediary (Wise and Morrison 2000). Furthermore, supply chains continued to suffer from coordination problems between stakeholders (Howard et al 2003). However, according to recent reports, B2B exchanges are now making a comeback through private exchanges (invitation-only networks that connect a single company to its trading partners) as firms continue to prefer building longer-term relations with a limited number of suppliers (Hoffman et al. 2002; The Economist 2004).

As noted above, e-business as a technology offers certain potential benefits in both the B2C and B2B markets. However, e-business and everything related to the Internet, became sucked into the dot-com boom of the late 1990s, fuelled by grandiose claims, such as this one by Bill Gates (1996, p.181):

“The Internet will extend the electronic marketplace and become the ultimate go-between, the universal middleman...often the only humans involved in a transaction will be the actual buyer and seller...this will carry us into a new world of low-friction, low-overhead capitalism.”

There followed a spiral of myths concerning the Internet and heavy speculative investment in e-business. Because of its importance in influencing the business and investment climate at the time (and for some years afterwards), I address the issue of whether e-business should be considered a revolution, evolution or hype in the following section.

2.3 *E-business: Revolution, Evolution, or Hype?*

An OECD report, “Measuring Electronic Commerce” (OECD 1997), made a systematic inventory of the different reports concerning the market size and growth of electronic commerce. This found that the predictions ranged wildly for the year 2000 from \$580m to \$775bn.

Many stock analysts, entrepreneurs and technology vendors, choosing the upper end of this range, convinced hosts of investors that an economic miracle was under way and the valuation of “virtual” firms was driven to the level of an Internet bubble (Perkins and Perkins 1999). Analysts valued Amazon.com Inc. at a stunning \$18.3bn in April 2000, even though the company claimed a mere \$1.6bn in annual revenue and had yet to earn a profit. Similarly, eBay Inc.’s market capitalisation was \$19.6bn, despite its unremarkable \$11m profit from just \$225m in 1999 revenue. To put these valuations in perspective, consider the valuation of Sears, Roebuck and Co. in 1999, which was a mere \$14.2bn even though it earned more than

\$1.3bn in net income on an annual revenue exceeding \$32bn. Likewise, Federal Express Corporation, a traditional “heavy asset” company, was valued at only \$10.9bn, despite garnering almost \$700m in profits from nearly \$18bn in sales (Figueiredo 2000). This incredible market capitalisation was not limited to companies whose business models were rooted in the Internet (e.g. Amazon, eBay, Yahoo!, Priceline), but also extended to IT suppliers (e.g. Intel, Microsoft, AOL, IBM, Cisco). It seemed that investors preferred to own a small and unprofitable e-commerce company rather than a well-established and significantly more profitable company (Figueiredo 2000). This situation persuaded some established firms to seriously assess whether they would lose out to these upstarts that were leveraging their lofty valuations into tangible capabilities through acquisitions (Venkatraman 2000).

Many commentators supported the notion of an e-business revolution (Coltman et al. 2001). The Web was a breakthrough that allowed users to access information in a standard and user-friendly way across various technical platforms and connected “islands of information intensive networks” (Scheepers and Damsgaard 1997). The rhetoric of e-business often claimed to be reshaping almost all industries, to the extent that we were witnessing a paradigm shift (Wigand 1997; Howcroft 2001) and we were set to move into ‘hyper growth’, with trade over the Internet reaching trillions of dollars (Coltman et al. 2001).

However, in spring 2000, the Internet bubble began to burst. The 80% rise in the NASDAQ index in slightly over a year was never likely to be sustainable (Coltman et al. 2001) and, by March 2001, the NASDAQ was back to its pre-bubble level (Howcroft 2001). Investors scaled back drastically and intense pessimism loomed (Grover and Saeed 2004): “just as the hyperbole of the 1990s was clearly overblown, the pessimism of 2001 is also an overreaction” (Coltman et al. 2001, p.57). I now turn to a brief examination of the myths that were the medium and outcome of the dot-com bubble.

2.3.1 Understanding the Myths of E-business

It is important to recognise that the notions of the Internet driving e-business and, conversely, of e-business propelling the use of the Internet imply an inherent technological determinism (Howcroft 2001). In a similar vein, Dos Santos and Peffers (1998) suggest that the activities of a firm’s competitors, as well as those of technology vendors influence e-business adoption decisions. Such determinism assumes both that technology drives societal change and that those concerned (organisations and consumers) will accept the technology. This disregards the practical problems for organisations of developing business strategies that employ the

technology effectively (Hawkins et al. 2000). Utilising the technology is much more difficult than obtaining it and, while the Internet may represent a revolution in communication, this is not the same as a revolution in the conduct of business. Such determinism also disregards the long history of difficulties in implementing sophisticated information systems (see below), as well as the particular characteristics of different industries.

A revolution “can be defined by the breadth and depth of the changes it makes in the everyday lives of individuals” (Coltman et al. 2001, p. 58). Predictions of e-business being a revolution were mostly based on espoused theories (i.e. what people said about the technology), rather than theories-in-use (i.e. how people actually used the technology) (Argyris and Schön 1978). I follow Howcroft (2001) in using the term “myths” (c.f. Coltman et al.’s (2001) “hypes”). As a by-line, many of these myths were used to manage and motivate IT personnel (Tapia 2004).

2.3.1.1 Myth of the New Economy

Many believed that e-business was one of the three pillars of the ‘new economy’ (or weightless economy - Quah 1997), together with knowledge management and partnering strategies (Moore 2000). However, others remained unconvinced, arguing that in their industry, “e-business will at best be a long time coming, and the ‘old economy’ approaches [would] succeed for a number of years.” (Moore 2000, p. 25).

This ‘new economy’ was associated with many changes from the ‘old economy’ (adapted from Coyle and Quah 2002):

Economy-wide characteristics

- from stable to dynamic markets
- from national to global competition
- from hierarchical to networked organisational form
- from manufacturing core to services core structure
- from raw materials and physical capital to human and social capital as sources of value

Business

- from mass production to flexible production
- from capital/labour to innovation/knowledge as key drivers of growth
- from mechanisation to digitisation as a key technology driver
- from lowering costs through economies of scale to innovation, quality, and speed along the whole supply chain as sources of competitive advantage
- from low-moderate to high importance of research/innovation
- from arms-length relations with other firms to alliances, collaboration and outsourcing

Consumers

- from stable to rapidly changing tastes
- from job-specific skills to broad skills and adaptability
- from a craft skill or degree education to lifelong learning
- from adversarial to collaborative workplace relations
- from stable employment to one marked by risk and opportunity

Government

- from the government imposing regulations onto businesses to the government encouraging growth opportunities
- from command and control to market tools and flexible regulation
- from 'nanny state' to enabling state government services

This 'new economy' tended to be equated with information and communication technology (ICT) and its consequences in particular sectors (Shu 2001), which brought up the problem of measurement. Coyle and Quah (2002) warn against applying conventional measures to the 'new economy'; growth accounting techniques do not capture the totality of social and economic change. They argue that it is extremely hard to measure productivity in the service sector and especially to construct price indices when the quality of goods improves drastically. Similarly, there are severe problems in measuring intangible capital and improvements in well-being, particularly at the macro level. Traditional growth accounting assumes that the physical capital stock is the relevant measure and that the impact of a technological improvement occurs in the same year as the increase in capital. It makes no allowance for the slow percolation of new technologies (a more evolutionary view). In short, Coyle and Quah maintain that the current statistical system was designed to measure productivity in the old standardised mass economy and that this is a poor measure of the new economy. They suggest an alternative approach: through the demand-side rather than through the supply-side. They believe that current changes have little correlation with supply-side productivity; rather, changes are related to the consumption side. Thus, they offer a range of indicators¹ to measure the wider impact of new technology upon consumers, business, and the macro-economy.

Whether we are in the 'new economy' remains part of a heated debate. New economy supporters proclaim that the Internet is altering the world so radically that the old economics textbooks needed ripping up, while sceptics argue that computers and the Internet are not

¹ Such indicators include searching for employment online, financial services online, flexible work patterns, computer literacy, availability of venture capital, corporate outsourcing, inward and outward foreign direct investment, employment growth by skill level, skills and earning inequality, government R&D spending, the uptake of broadband Internet, and government online.

remotely as important as steam power or electricity. In their view, IT stands for “insignificant toys” (*The Economist* 2000). Although the extent of global and weightless activities is increasing, these activities do not represent a significant threat (Cameron 1998 in Howcroft 2001) and it remains to be seen how technological advances will bring about significant social, cultural and political changes (Freeman and Louca 2001). The reality probably lies somewhere in between (*The Economist* 2000). The economic benefits of the Internet and e-business could be large, but like the telegraph in the 1830s, e-business has hardly turned conventional economics on its head. It is not within the scope of this thesis to proceed further with this debate; its mere existence is indicative of the situation of e-business over the last five years.

2.3.1.2 Myth of Success

Commercial success is conventionally based on profit making but this seems to have been forgotten in the early days of e-business, as many stock market analysts preferred empty promises of potential success on a massive scale. Webster (2000) argues that, although rapid change was taking place, this variance was “for the most part a matter of the continuity, consolidation, and extension of established relations” (p.70). He asserts that history matters and repeats itself, observing that the dot-com ‘revolution’ was similar to other speculative bubbles, such as the South Sea Bubble, the Railway Mania of the 1840s, and the Wall Street crash. Similarly, Ferguson (2001) notes the many superficial resemblances between the dot-com bubble and the over-optimism about the new automobile and refrigeration technology of the 1920s. “Success was an outright postulation” (Howcroft 2001, p.197). As Coltman et al. (2001) argue, many of the fundamental rules that have governed businesses for centuries (e.g. supply versus demand, market competition, segmentation, pricing, contracting, and the nature of governance in the firm) remain as pertinent now as they were when Adam Smith depicted the workings of a pin factory.

2.3.1.3 Myth of the Entrepreneurial Geek

This myth is based on the assumption that e-commerce enables technologically savvy individuals to enter new and exciting markets and secure considerable wealth quickly (Howcroft 2001). This anti-establishment concept was romanticised in the hacker as a counter-cultural hero in the early 1990s (Ross 1990 in Howcroft 2001). Similarly, Carmel (1997) praised this entrepreneurial spirit for contributing to an American hegemony in packaged software. However, the publicity of such ‘rags to riches’ tales is ironic, given the increase of monopolistic corporate power (Freeman and Louca 2001). As in the old economy,

a large proportion of new e-businesses fail within the first few years (Howcroft 2001). This, combined with the lack of business experience within many Internet start-ups meant that the failure rate for dot-coms was always likely to be high. The deconstruction of the entrepreneurial geek does not imply that there are no opportunities for such people within cyberspace, but that enthusiasm for technology often results in the neglect of commercial realities.

2.3.1.4 *Myth of First Mover Advantage and Winner-Takes-All*

Despite the rhetoric of first mover advantage (Howcroft 2001), it is commonplace for 'followers' to capitalise on the mistakes of innovators. In a highly dynamic and uncertain technological, commercial and financial environment the probability of making such, often strategic, mistakes in innovation is very high. Many pioneering efforts may prove poorly guided, leaving opportunities for others to capitalise on the experience (Tellis and Golder 1996). The related claim that digital markets would be less forgiving than traditional ones and that the "winner takes all" is equally dubious (Coltman et al. 2001, p.70).

Nevertheless, Grover and Saeed (2004) found that *mature*² pure Internet companies (i.e. those with significantly longer history that accrued resources from the Internet boom) have been more successful than late entrants (see also Parthasarathy and Bhattacharjee 1998). These mature companies had ample access to capital and high media coverage to build brand image, and were given slack resources to learn, experiment and improve business infrastructure and processes. However, the success of Amazon and e-Bay must be balanced against the failures of e-Toys, Boo.com, Clickmango and Boxman (amongst many others).

2.3.1.5 *Myth that Brands Would Die*

This myth suggests that the low set-up and distribution costs of e-business would enable the virtual storefront of a one-person business to reach as many customers as bigger firms, and hence, that brands would die. However, evidence suggests that the role of the brand has retained its importance. Commercial surveys report that consumers regard brand names as a significant factor in their online buying decisions and Internet pure plays have invested heavily in traditional brand-building. According to Bellman et al. (1999), brand names can act as substitutes for information gathering, help online buyers locate specific products, communicate trust and security, and offer expectations of quality. This is especially important for the time-starved and wired-lifestyle (Bellman et al. 1999). Furthermore, there is

² In contrast to *risky, moderate, and novice companies*

little evidence that individuals use the Web to search more exhaustively, despite its lower search costs. This has been attributed to cognitive lock-in (i.e. once a customer has invested in learning how one site works, there is little incentive to incur the costs of learning others) (Coltman et al. 2001) and the effective customer interfaces of online stores (Lohse and Spiller 1998). This is more prevalent among bigger brands as SMEs lack resources to invest in effective websites (Levy et al. 1998). Consequently, the strength of the brand continues to be significant. Moreover, major traders with expertise and power in specific markets have led some of the most significant e-business applications. The earliest corporate promoters of e-commerce were mostly already involved with EDI and were in a strong position to implement e-business. This, together with their market visibility and brand power, put them in a commanding position (Hawkins et al. 2000).

2.3.1.6 Myth of Level Playing Field

This myth suggests that scale is irrelevant as “the virtual marketplace enables small firms to compete on the same terms as larger players as the consumer shifts to cyberspace” (Howcroft 2001, p.198). Internet would create a flatter, more competitive landscape and online firms would be less pressurised to grow and gain from economies of scale. However, this brings similar advantages for large firms and there is little evidence that smaller firms can reap disproportionately larger savings. The “amount of strategic, physical, and monetary resources a company can bring to the competitive arena” (Coltman et al. 2001, p.68) remains critical. Grover and Saeed also found that scale matters, as e-business requires considerable initial investment. Levy et al. (1998), in a multiple case research study, reveal a reluctance among SMEs to spend on technology beyond the ‘bare minimum’ for basic administration and transaction processing as they often lack time to indulge in future business developments, including the exploitation of technology. Moreover, the cost of gaining and maintaining a significant Web presence is beyond the financial and technological capabilities of many SMEs. The claim that ICTs produce more open and dynamic market structures and lower barriers to entry seems misguided, since it discounts the costs involved in creating and maintaining business relationships, establishing trust, adapting to different operational routines, and founding interpersonal relationships that help to resolve difficulties and misunderstandings with clients (Hawkins et al. 2000).

2.3.1.7 Myth of the On-Line Shopping Experience

This myth alleges that the Internet would impact all forms of business and that the greatest impact would be in consumer markets. This myth “presumes that the future of shopping is

on-line” (Howcroft 2001, p.201). However, despite the convenience of purchasing online, only a small proportion of consumer spending has migrated onto the Internet. The participation of women, who are the primary traditional shoppers, was slow to materialise in the virtual market-place (Howcroft 2001). As women increasingly return to work, the notion of online shopping may be appealing, but it has failed to emerge in reality. Indeed, for many consumers, the process of shopping is in itself a social and cultural leisure activity rather than a dreary necessity. Furthermore, the profile of the typical Internet user should be compared to that of traditional mail order buyers. While the former are university-educated, thirties males, commanding substantial salaries, the latter are mostly low-income females aged 25-44 (Howcroft 2001). Although increasing numbers of women are using the Internet, Bhatnagar et al. (2000) found that long-term web users (primarily males) were far more open to online purchasing. However, an online pilot project for a national department store (Sauer and Burton 1999) failed to attract younger technologically competent men or older professional men and the store’s key customer segment remained off-line professional women.

2.3.1.8 Myth that Prices Would Fall

This myth suggests that increased competition and improved price discovery would transform market efficiency and thus dramatically reduce the price of goods and services traded online (Coltman et al. 2001). Despite high hopes, perfect competition is more the exception than the norm in the electronic marketplace as the assumptions of perfect competition (i.e. no barriers to entry; many buyers and sellers, none of whom can individually influence the market price, homogeneous products; and perfect information) do not hold (Whinston 1997). Grover & Ramanlal (1999) demonstrate how IT and the Internet can be used by suppliers to extract consumer surplus through price discrimination and market segmentation, in addition to strategies of customer ‘lock-in’ and aggressive pricing to wipe out the competition. In many markets, entry barriers remain and, following the demise of many dot-coms, markets tend to become oligopolistic. Although the networked economy can provide opportunities for lower prices, the same infrastructure can also be used to collect customer and competitor information that maintains an incumbent’s oligopoly power. Differentiated (branded) goods remain important and perfect information is lacking due to the inefficiency of search engines, information asymmetry and bounded rationality. Oorni (2003) casts doubt over the economic efficiency of electronic markets for travel services. Certainly some categories of goods (e.g. books, CDs) lend themselves more readily to online shopping and are therefore more susceptible to e-based competition. However, e-retail continues to present relatively minor risks to established physical retailers (Rosen and Howard 2000).

2.3.1.9 *Myth of Disintermediation*

This myth suggests that through Internet technology, every manufacturer would be able to sell directly to the public and traditional intermediaries would be eliminated (Coltman et al. 2001). While it is likely that intermediaries who fail to add value will disappear, the phenomenon of disintermediation is a complex one that varies considerably between industries and extends to re-intermediation and infomediation (Hagel & Reyport 1997; Picot et al. 1997; Chircu & Kauffman 2000) depending upon circumstances and market structure.

2.4 *Discussion*

Having explored the myths, it is relevant, in seeking to judge the revolutionary aspects of e-business, to consider the actual outcome of e-business in economic terms. It might be expected that now, in 2004, appropriate statistics would be available to compare against the forecasts and to answer the question of revolution, evolution or hype definitively. However, this is not the case as can be seen from a consideration of *Table 2.4-1*, a brief list of example forecasts concerning the online market for the USA, and *Table 2.4-2*, figures from the US Census Bureau. The forecasts from reputed commentators vary considerably and are very difficult to compare with national economic statistics.

For both forecasts and actual outturns, everything depends upon what is included, how it is counted and the assumptions underlying the growth projections. This problem is also highlighted by *The Economist* (2004) which argues that it is unclear in many cases whether such huge 'markets' as financial services, EDI, ticket sales, pornography, online dating, eBay and a host of other services (e.g. tracing ancestors, gambling - worth perhaps \$6bn worldwide) are included. The impact of this 'counting' problem is enormous. This difficulty at the national level echoes the problems of the 'productivity paradox' (Brynjolfsson 1993; Brynjolfsson & Hitt 1998) where the impact of IT investment on national productivity is unclear.

Even at the firm level, the evaluation of the outcomes of IT investment is also a chronic unresolved problem (e.g. Land 1976; Powell 1992 & 1999; Farbey et al. 1995; Smithson & Hirschheim 1998) as it is extremely difficult to identify and value the consequences of IT implementations. Similarly, the evaluation of websites, Net-based systems and other aspects of e-business remain problematic (Koufaris 2002; Palmer 2002; Straub et al. 2002a; Straub et al. 2002b). Furthermore, while there have been some failures in e-business projects, provided that a company survives and learns from its experience, this can be an intermediate step to future success (Huang et al. 2003).

Table 2.4-1 Forecast Figures for USA

Year Forecast Made	Forecast Figures	Sector	Statistical Source
2004	\$316bn by 2010, 12% of US retail sales	B2C	Forrester Research (Aug 2004)
	22% of consumer electronics sold via Internet	B2C consumer electronics	
2003	\$721bn by end of 2003	B2B	eMarketer (April 2003)
	\$1.01tr by end of 2004		
1999	\$20.2bn by end of 1999	B2C	Forrester Research (Sep 1999)
	\$184bn by 2004		
	\$100bn by 2002	B2C	Forrester Research (Economist 1999)
1998	\$350bn by 2002 -Net gain in economic output \$10bn to \$20bn by 2002; -Savings of 5-10% of sales -Inventories shaved by \$350bn	B2C	Forrester Research (Business Week June 1998)

Table 2.4-2 Actual Figures from US Census Bureau (in billions)

	Value of Sales in USA (in billions of USD)									
	2002		2001		2000		1999		1998	
Description	Total	E-com	Total	E-com	Total	E-com	Total	E-com	Total	E-com
Retail Trade (mostly B2C)	3,230	44	3,157	34	3,070	28	2,879	15	2,645	5
<i>E-com % of total</i>	<i>1.36%</i>		<i>1.08%</i>		<i>0.91%</i>		<i>0.52%</i>		<i>0.19%</i>	
Merchant Wholesale Trade (mostly B2B)	2,742	319	2,701	286	2,744	248	2,540	209	2,380	174
<i>E-com % of total</i>	<i>11.63%</i>		<i>10.59%</i>		<i>9.04%</i>		<i>8.23%</i>		<i>7.31%</i>	
Selected Service Industries (B2C & B2B)	4,863	41	4,756	36	4,640	36	4,264	24	3,930	14
<i>E-com % of total</i>	<i>0.84%</i>		<i>0.76%</i>		<i>0.78%</i>		<i>0.56%</i>		<i>0.36%</i>	

There are two important issues here: firstly, even taking the lower-level estimates, e-business is still a very significant technological development and, secondly, the 'hype' that accompanied the higher-level estimates significantly coloured the business climate during the late 1990s. While now, five years later, it may be clearer to distinguish the real from the rhetoric, it should be remembered that, at the time, decision-makers in industry had no reliable way to gauge even the most extravagant claims for e-business.

Although the developments in interconnectivity represent a major technological innovation and a 'revolution' in communication, it is not so clear that they constitute a paradigm shift in the way business is conducted. As Castells (1996) argues, a true technology revolution is not only one in which new technologies are induced, but also one which is characterised by the pervasiveness of these technologies into all domains of human activity. In other words, a revolution is not just an exogenous source of impact, but it is also the fabric in which such activity is woven — besides introducing new products, it is process oriented. In short, a revolution is a historic transformation in the deliberation and consideration of quotidian life and is brought about through the diffusion of transforming catalysts, which are either ideas or technologies. It is not the catalysing technology that is in itself revolutionary, rather, it is the complementary development of an ability to distribute and embed the benefits of this technology throughout the economy that makes it revolutionary — an ability that is social rather than purely technological (Coltman et al. 2001).

Since many of the myths discussed above have failed to materialise, it is hard to argue that a paradigm shift has occurred. For some industries, the Internet has brought important new business models (Hedman & Kalling 2003; Seddon et al 2004) and considerable changes (Venkatraman 2000); for example, the MP3 format in the music industry. Similarly, Amazon is more than an electronic bookseller while electronic auctions, electronic share trading (e.g. eTrade), online grocery shopping (e.g. Tesco) and B2B exchanges are growing steadily. Clearly some industries and some countries (e.g. USA) are more affected by e-business than others. Some have seen, or are seeing, stepwise changes while most are going through more gradual evolutionary changes.

The above discussion of e-business myths helps explain the exuberance that drove the Internet investment boom and also the reason for which many traditional companies jumped, more or less blindly, into e-business investment. Without doubt, these myths are rooted in some aspect of reality and some change is clearly underway. However, myths also tend to shape the future and problems arise when people base their decisions solely upon myths (Howcroft 2001).

Nonetheless, most companies were eager to experiment with e-business: “driven by a combination of fashion and fear” (Clegg et al. 2004).

Based on the available evidence, I would reject the charge that e-business is mere hype. E-business has now been around for ten years and has been widely implemented. However, it does not seem to meet the criteria to be judged as a ‘revolution’; at least, not yet. The impact of e-business does not merit comparison with that of the steam engines of the Industrial Revolution on social and economic life in the 18th and 19th centuries. Perhaps the kindest point to be made in this debate is the significant time lag between the initial employment of the steam engine and the full impact of the Industrial Revolution. In other words, it could be argued that ‘the jury are still out’ regarding the revolutionary aspects of e-business. Hence, it should be considered as an incremental, yet rapid, evolution.

Nevertheless, having discounted (at least for now) the notion of a revolution, one still needs to recognise the pervasiveness and importance of e-business. Not only can it provide a new distribution channel or a new way to communicate, it can also be applied in many other ways: as a market space, as an information system, and as a tool for manufacturing goods and services. “E-business is a bit like an octopus: it has tentacles in all your operations” (Clegg et al. 2004). These tentacles spread throughout the organisation and along the supply chain to suppliers (Howard et al. 2003) and customers (Richmond et al. 1998; Hoffman and Novak 1997). It can facilitate the everyday activities of managers, from locating a new supplier to coordinating a project and collecting and managing customer data. Each of these potentials, in turn, impinges on corporate life in many different ways. It has been argued that the changes that e-business brings are more pervasive, radical, and varied than previous information technologies (Elliot and Loebbecke 2000; Kickul and Gundry 2001; Clegg et al. 2004), while Lyytinen and Rose (2003) refer to e-business as a ‘disruptive innovation’.

2.5 *E-business: Where are We Now?*

Since the bust of the dot-coms, the focus of large-scale e-business development has mostly shifted to the large ‘blue-chip’ corporations, with profitability mainly stemming from an extension of traditional business strategies (Coltman et al. 2001). Nevertheless, the rise of e-business has created a challenging environment for innovative organisational behaviour (Kickul and Gundry 2001) as markets and the technology can change even while the product or service is still under development (Iansiti and MacCormack 1997). Porter (2001) and Amit

and Zott (2001) observe that e-business can provide unique possibilities for value creation by firms.

However, unlike the nimble dot-coms, large companies not only have to tackle a new technology that could permeate throughout the entire organisation and beyond -- to their customers and suppliers, but in many cases also have to deal with new business models, radically revised processes, new channels for marketing and sales, new cost pressures, and heightened service expectations from consumers. This is particularly difficult for large companies that span the globe with rigid bureaucratic structures, complicated power structures, and ingrained cultural traits. Large corporations have to implement significant organisational changes in order to integrate e-business into their existing structural, power, and cultural properties. According to Daniel and Grimshaw (2002), the additional complexity of large companies means that the adoption of e-business may require additional considerations such as formal e-commerce strategy development processes (Daniel et al. 2001; Chaffrey 2002), the development of an appropriate culture (Boddy and Boonstra 2000; Coates 2001), and organisational restructuring (Gulati and Garino 2001).

According to Venkatraman (2000), Internet strategies range from using e-business as an information provider to adopting it as a technology platform, and from enhancing customer service to integrating the physical and digital infrastructure into the provision of a seamless service. The importance of innovation is emphasised by many writers (Swanson and Ramiller 1997; Cummings and Oldham 1997; Oliva 1998; Hodgetts et al 1999; Swanson 2002). Kickul and Gundry (2001) explore the changes in managerial roles and practices in the e-business environment, including the need for a diversity of people to channel creative assessment of e-commerce opportunities. The opportunity to tap into this diversity to foster innovation and organisational change has been noted by other authors (e.g. Amabile 1998; Cummings and Oldham 1997; Woodman et al. 1993).

In terms of prescriptions, Kickul and Gundry (2001) advocate the development of innovative internal management relationships through the employment of unusual and creative ways to recruit, retain and reward employees. They also advocate the formation of innovative relationships with key suppliers, customers and competitors (see also Morino 1999). Kelley and Rice (1999 in Kickul and Gundry 2001) found that the rate of alliance and inter-firm formation was directly related to the speed of new product introductions in new firms. El Sawy et al. (1999) argue that organisations should consider innovative enterprise architectures and IT infrastructures.

The design of websites and its impact on consumer behaviour remains an important research area (Moe and Fader 2001; McKinney et al 2002; Winter et al 2003) as does the adoption of e-business by SMEs (Brown & Lockett 2004). Within both B2C and B2B markets, the notion of trust is becoming increasingly important (Van der Heijden et al. 2003). Worries also remain concerning individual rights, legal safeguards and privacy.

At the time of writing, e-business encompasses 'something old and something new' (Daniel and Wilson 2003; Clegg et al. 2004). In other words, although e-business can bring about new and enhanced business capabilities, traditional concerns of business, organisational, human, and technological issues are equally pertinent. According to some writers 'best practice' entails certain dynamic capabilities, which roughly equate to "simple, experiential, and iterative approaches" (Daniel and Wilson 2003, p. 282). Zhu et al (2004) find that technology competence, firm size and scope and levels of competitive pressure are the key adoption drivers in e-business.

Nevertheless, it is likely that most organisations will face significant organisational changes due to e-business, if they have not already done so. In particular, changes will be much more complex and difficult for large organisations and yet there is very little in the literature on e-business and organisational change (c.f. Sauer and Yetton 1997; Galliers and Newell 2001; Chatterjee et al. 2002; Butler 2003). Hence, this research addresses the challenges in assimilating e-business in large established organisations. By itself, technology is without value; it is up to the business to adopt organisational changes to complement the technology. However, before considering major organisational changes, it is pertinent to consider e-business as 'just' another information system that needs to be implemented. Thus, I will briefly review the information systems implementation literature.

2.6 *Information Systems Implementation*

During the 1970s, an increasing number of information systems ran into difficulties during implementation, not for technical reasons but due to organisational and social problems, typically manifested as some form of resistance to change by potential users. While most IS practitioners focused their attention on ways of improving the reliability and accuracy of the underlying code (through, for example, the development of software engineering principles) and the management of unwieldy development projects (through improved project management techniques) little attention had been paid to the users. The latter, faced with

radical changes to their jobs and working environment from the new technology, proved to be not as malleable as the technology.

In order to address these problems, various researchers started work in this area, which became known at the time as implementation research (now – social and organisational issues) and formed the focus for the IFIP Working Group TC8.2. It was realised that the implementation of information systems often involved a significant organisational change as the structure, processes, skills and knowledge base of the organisation had to change to accommodate the new technology (Lucas 1975). This was organisational change induced by the implementation of the technology and in order to find appropriate theories and explanations for this resistance, researchers largely looked in the organisational change literature from organisational behaviour. The relationship between the two fields remains very strong (Robey and Boudreau 1999; Dewett and Jones 2001; Orlikowski 2001).

Much of the early implementation research focused on various aspects of the organisational context into which the information system was being implemented. Organisational politics were frequently cited as a problem (e.g. Keen 1981; Markus 1983; Franz & Robey 1984). Bardach (1977) outlined counter-implementation strategies used by users to delay or derail IS projects while Keen (1981) responded with a range of counter-counter-implementation strategies designed to force the project through. Markus (1983) found three basic causes of resistance: the internal psychological factors of the users, poor system design, and the interaction between the system and the users. Researchers became aware (e.g. Knights and Murray 1994) that, rather than being an unfortunate problem that crops up occasionally, organisational politics is an inescapable part of organisational reality. Politics is an important part of the construction, negotiation and reappraisal of self, collective, and organisational interests through which the fragile reality of an organisation is sustained, reproduced, and changed.

The relationship between the technology (and the developers) and the users (the rest of the organisation) was also examined in structural terms (Scott Morton 1991; Ferioli and Magliarese 1996; Truex et al. 1999; DeCanio et al. 2000; Peppard 2001; Schwarz 2002). Failures could thus be attributed to a mismatch between the new system and the existing organisational structure. Markus and Robey (1988) distinguish between IT structure driving organisational structure, organisational structure driving the structure of IT systems, and an interdependent emergent process. Much of the structure debate hinges on the concept of centralisation and decentralisation of both activity and decision-making (King 1983). This

became particularly relevant with the onset of end-user computing in the 1980s, when users began to purchase and develop their own systems relatively independently of the IS function (Gerrity & Rockart 1986). George and King (1991) argue that rather than IT causing either increased centralisation or decentralisation, the relationship is filtered through an organisation's history, context, and power structure.

Nonetheless, IT has been hailed as an important tool in changing traditional control and coordination processes in complex pan-national organisations (Finnegan and Longaigh 2002; DeCanio et al. 2000), as IT helps such organisations overcome barriers to the exchange of information among spatially and temporally separated entities. In addition, IT has facilitated tighter central control and a depersonalization of coordination mechanisms in these large multi-national corporations (Finnegan and Longaigh 2002).

With the growth of profit and cost centres and other sophisticated management accounting practices, the relationship between the IT function and users is no longer solely political or structural. It also has a financial aspect, depending upon the type of chargeback system employed (i.e. how to bill user departments for IT products and services) (Drury 1982). This does not just concern the amount (if any) charged, but also the extent to which user departments can negotiate the charges or shop elsewhere, that changes the nature of the relationship (Ross et al. 1999).

An alternative way of regarding the often tortured relationship with users was in terms of organisational culture, where this is understood as a collection of beliefs, behavioural norms and myths, based on a shared history. The troublesome gap between the information systems function and the rest of the business has been well documented (e.g. Taylor-Cummings 1998; Peppard 2001; Sabherwal and Chan 2001; Willcoxson and Chatam 2004) and has often been attributed to different cultures (Schein 1992; Ward & Peppard 1996; Schoenberger 1997; Reich and Benbasat 2000).

Over the years, as the technology became more sophisticated and more institutionalised, the development of new information systems often became part of a (larger) planned organisational change, rather than provoking an often unplanned change. Examples of this trend include the significant visibility of information systems in business process re-engineering (Hammer 1990) and, more recently, in improved supply chain management (Strader 1999). A further example of the implementation of sophisticated information systems as part of a planned organisational change concerns new organisational forms (Fulk

and DeSanctis 1995). Regardless of IT, the design of an organisation's structure in order to deliver optimum control, coordination and efficiency has been a longstanding problem, and many organisations have used IT to implement network forms of organisation (Dijksterhuis et al. 1999; Miles and Snow 1992; Rockart and Short 1991) including virtual organisations (Mowshowitz 1997; Cooper & Muench 2000) and boundaryless organisations (Kickul and Gundry 2001). Authors such as Drucker (1988) see IT as a strong driver for such restructuring.

While benefiting organisations, some change initiatives that involved IT were ostensibly aimed at improving the quality of working life of employees. For example, the notion of empowerment implies delegating decision-making power to lower-level staff, which in turn relies on appropriate information systems to supply the information on which to make those decisions (Psoinos and Smithson 2002). Similarly organisational learning (Argyris & Schön 1978) presupposes an effective mechanism for distributing and sharing knowledge (Argyris 1977). In a similar vein, Zuboff (1988) distinguishes between 'automating' and 'informating', where the latter uses IT to supply appropriate information to provide enriched jobs.

In terms of recommendations for practice coming from this research, many of the mainstream prescriptions seemed a mixture of the ad hoc, common sense, and tactics for winning the political game (e.g. Ginzberg 1978; Alter 1980; Lucas 1981). For example, Parr et al. (1999) link IS implementation failure to the lack of an IS champion or change agent, while Ginzberg et al. (1981) and Kydd (1989) trace it to the shortage of management support. A more substantive trend was pressure for user participation based on socio-technical principles (Land 1982; Land and Hirschheim 1983; Ives and Olson 1984). Ideas for bridging the gap between developers and users, and thus aligning the business and IS, have been put forward by many authors (e.g. Rockart et al. 1996; Feeny and Willcocks 1998; Peppard 2001) but the gap remains significant in many organisations. Scheepers (2003) identifies five key interrelated roles in the implementation of an intranet: the *technology champion*, to initiate the technology into the organisation; the *organisational sponsor*, to nurture the infant technology and the change agents; the *intranet coordinator*, to engage in organisation-wide coordination; the *intranet developer*, for advanced applications of the technology; and finally, the *content provider*, to create a critical mass of relevant content.

Currently used mainstream models within IS implementation research include the Technology Acceptance Model (Davis 1989) and variants of innovation diffusion theory (Rogers 1995; Swanson and Ramiller 1997; Swanson 2002). Studies based on context remain important

(Avgerou 2001). However, over the years, many researchers have widened their horizons in terms of looking for appropriate theories to explain the problems of IS implementation. Some have adopted institutional theory (Suchman 1995; Avgerou 2000) while others have used structuration theory (Walsham 1993 & 2002; Scheepers and Damsgaard 1997); actor network theory (Callon 1986; Latour 1991; Monteiro 2004); critical theory (Howcroft and Trauth 2004); Foucault's power-knowledge-discourse (Foucault 1977; Orlikowski 1991), phenomenology (Heidegger 1962; Ciborra 2004); and Habermas's communicative action (Habermas 1979; Cecez-Kecmanovic 2001).

After nearly thirty years of studying IS implementation, researchers have built up a significant body of knowledge, and practitioners have similarly amassed considerable experience in dealing with these problems, albeit without discovering a 'magic bullet' that prevents the problems reappearing. However, this knowledge and experience are mostly related to the implementation of individual systems, even though many such systems have been very large indeed.

Recently, Markus (2004) identified the use of IT for triggering significant organisational change in high risk, high reward, situations as being a special case, which she termed 'technochange' (for technology-driven organisational change). She argues that such situations need a different type of change management from the traditional project management approach to IS implementation (or conventional organisational change management). E-business would seem to fit squarely into this category. I would argue that e-business implementation, with its tremendous pervasiveness through the whole organisation and along the supply chains, is a problem of much greater magnitude than conventional IS. Hence, large e-business initiatives should be considered, not as an isolated information system but as technology-driven organisational change. It is thus pertinent to turn our attention to the broader literature on organisational change and relate this to e-business implementation.

2.7 Organisational Change

Organisational change is a long-standing chronic problem that has been studied with various theoretical lenses. Lewin and Volberda (1999) identify the perspectives of sociology, economics, and organisational theory.

In sociology, they note the two dominant views:

- *population ecology* (Aldrich and Pfeffer 1976)
- *institutional theories* (DiMaggio and Powell 1983; 1991)

From the economics lens, there are many approaches:

- *industrial organisation* (Porter 1980, 1985)
- *transaction costs economics* (Williamson 1975; 1996)
- *behavioural theory of the firm* (Cyert and March 1963)
- *evolutionary theory* (Nelson and Winter 1982)
- *resource-based theory* (Teece et al. 1993; 1997)

Lastly, from the organisational theory lens:

- *contingency theory* (Burns and Stalker 1961)
- *managerial/strategic choice* (Child 1972; Mintzberg 1979)
- *life cycle and punctuated equilibrium* (Tushman and Romanelli 1985)

Certain views are more inclined towards the role of managerial intentionality in organisational change, such as industrial organisation, behavioural theory of the firm, and strategic choice. Conversely, other angles, such as population ecology, institutionalism, and, to some extent, evolutionary theories, reject the ability of organisations to self-consciously change themselves significantly. Many of these single lens approaches tend to focus on a particular aspect of the problem, offering little assistance in combining multiple lenses.

Evidently, there are many angles from which to study organisational change and to comprehensively capture all of them in this review is impractical. For the sake of clarity, I follow the structure of a recent review by Armenakis and Bedeian (1999). They identify three overarching research themes that are common to all organisational change efforts: content, context and process (c.f. Pettigrew 1985; Walsham 1993). They also add a fourth theme, the nature of criterion variables, which relates to the assessment of change outcomes. I have commented above on the problem of evaluation in both e-business and information systems and consider this area outside the scope of this research. This section is thus organised around the following three themes:

- Content issues - the substance of organisational change (i.e. the “what” of change)
- Context issues - conditions in an organisation’s external and internal environments (i.e. the “why”, “where”, or “target of change”)
- Process issues - actions undertaken during the execution of an intended change (the “how” of change)

Within each theme, only the more significant or recent contributions from organisational behaviour are reviewed together with relevant issues from e-business. This is then followed by a discussion of the merits and drawbacks of each theme.

2.7.1 Content Issues

According to Armenakis and Bedeian (1999), this theme refers to the substance of the change, or the 'what' that is being changed. They focus on the two models described below and refer to Burke (1994) for a review of earlier models.

Burke and Litwin (1992) attempt to predict organisational performance through a 150-item diagnostic model. They explicitly distinguish *transformation* and *transactional* elements, which require long-term and short-term attention respectively. Transformational elements require new employee behaviour as a consequence of environmental pressures. These include leadership, culture, mission and strategy. By contrast, transactional factors focus on the psychological and organisational variables (e.g. management practices, structure, systems and individual skills/abilities) that influence the everyday motivation and performance of staff.

Vollman's (1996) model of the so-called transformation imperative illustrates the magnitude of the change process through an eight-by-six matrix specifying the myriad considerations involved in a change effort. The rows of the matrix consist of strategic intent, competencies, processes (and their measurement), resources, outputs, strategic responses, challenges, and learning capacity. These are set against six columns: three related to organisational dimensions (culture, configuration (i.e. structure) and coordination) and three related to organisational resources (people, information and technology). An analysis of columns against rows is intended to reveal the magnitude and linkage of a proposed transformation.

Both these models aim to define an organisation's overall character, mission, and direction, and both are comprehensive and appropriate for conducting organisational diagnoses. Their comprehensiveness, in terms of scope, fits nicely with the pervasive character of e-business. I would argue that e-business has both the transformation and transactional elements of Burke and Litwin's model and most of the 48 cells of Vollman's model are relevant to e-business. Examples from the e-business literature include the involvement of both senior and middle management, training and awareness (Chan and Swatman 1999) and the need for technical knowledge (Nambisan and Wang 2000).

In a slightly different vein, Corbitt (1997) discusses uncertainty and equivocality in the context of e-business implementation, where uncertainty refers to "the absence of information" (Corbitt 2000, p.120) and equivocality refers to the "existence of ambiguity and the existence of multiple, conflicting interpretations about a given organisational situation"

(Corbitt 2000, p. 120). The resolution of uncertainty requires e-business managers and users to be equipped with appropriate knowledge, while the resolution of equivocality requires discussions so that the stakeholders can agree on a common interpretation. For example, equivocality from management, demonstrated by a lack of commitment to e-business, combined with pressures from the environment, can intensify uncertainty and negatively affect e-business initiatives.

2.7.1.1 Criticisms

This type of analysis, like any type of factor-based analysis, is attractive as it posits a simple causality, open to the use of straightforward surveys and the statistical testing of relationships between variables, leading to a simple model of adoption that can be readily translated into practical guidelines (Kurnia and Johnston 2000). Although a list of elements/factors can provide useful insights, the sheer number of possible factors, and the complexity of their interactions in real situations, limits the usefulness of this approach (Tornatzky and Fleischer 1990; Damsgaard and Lyytinen 1998). While this approach recognises the human and social aspects of implementation, it has a rather static feel to it, with no consideration of the dynamics of the process of implementation (Walsham 1993). It assumes that the same state remains throughout implementation and that organisations are passive victims of technology, their own limited capability, and their external environment. In other words, there is no notion of emergence.

Attempts to address some of these concerns can be found in the process themes discussed below but, before addressing these themes, I will turn to an examination of *contextual research*.

2.7.2 Contextual Issues

As noted above, contextual research gives pre-eminence to the role of the environment in enabling and constraining change initiatives. However, Walsham and Waema (1994) note that content “can be regarded as an aspect of the organisational context at any particular instant” (p.153) and so the distinction between content and context is not always easy to maintain, as they are very interlinked: the context feeds into the content of change and the content attempts to change the context.

The context is traditionally divided into ‘inner’ (the organisation) and ‘outer’ (the industry or region) and concerns the conditions existing within these environments. The scope of the

inner environment depends upon the scope of the change itself; i.e. small-scale changes take place within a single department while large scale changes demand the consideration of the whole organisation or industry as a context. Thus inner conditions typically include the organisational structure, politics, and culture, while external conditions include governmental regulations, technological advances, and forces that shape marketplace competition.

The following review concentrates primarily on the internal organisational environment, which is more aligned to the scope of this research. My main themes comprise: organisational shape and size (i.e. structure); power and politics, and culture. It is important to note, however, that these three themes are very interrelated and are only separated for descriptive clarity.

2.7.2.1 *Size and Shape of Organisations*

Organisational size and shape, also referred to as organisational structure, is a long-standing, chronic problem (Taylor 1911; Fayol 1984 [1949]; Rapert and Wren 1998) especially for large corporations. The need to 'arrange' thousands of managers and employees, often split between numerous locations and functions across the world, in an effective and cost-efficient fashion is a non-trivial problem (Applegate 1994). Traditional hierarchies, especially 'machine bureaucracies' (Mintzberg 1979) suffer from inherent rigidity while divisionalised forms can be suboptimal and matrix organisations tend to be over-complex with built-in conflict (Mintzberg 1980; Applegate 1994; Harris and Raviv 2002). Furthermore, through natural evolution and change, the actual structure of an organisation may be different from the most recently produced formal organisation chart (Leifer 1989). Organisations have experimented with 'adhocracies' (Mintzberg 1983) and other new organisational forms (see above) but organisational structure remains a problem, especially for large organisations. In addition to the serious problems of coordinating and controlling large organisations that span the globe, there are considerable pressures on firms to grow in order to realise economies of scale and to develop internal resources, as well as to increase market power and profits.

A popular growth strategy is through mergers and acquisitions (Inkpen 2000) pursued for financial, managerial or even psychological (on the part of senior managers) motives (Houghton et al. 2003). However, despite the potential, many such mergers and acquisitions fail to achieve that potential (Kode et al. 2003; Vermeulen and Barkema 2001). Houghton et al. (2003) note the prevalence of a *reduced fit* with the acquiring organisation and top management in acquired firms developing a *crisis management attitude*. The concept of

cultural compatibility in the merger and acquisitions process is often discussed in terms of acculturation (i.e. “the merging of two distinct or autonomous cultures as the result of prolonged contact” - Houghton et al. 2003, p.102). Acculturation represents the dynamic interaction/contention between cultural differentiation (i.e. the desire to maintain a separate and distinct cultural identity) and organisational integration (i.e. the need for the two organisations to work effectively together). When these forces are of equal and significant strength, acculturative conflict occurs (i.e. employees of the acquired firm attempt to maintain their distinct cultural identity despite the need for integration) and is likely to lead to declining organisation performance over time (Houghton et al. 2003; Elsass and Veiga 1994).

An alternative to mergers and acquisitions for increasing size, competence and resources, is some form of temporary strategic alliance or joint venture (Johnstone & Lawrence 1988; Kanter 1992; Child 2002). Broadly defined, strategic alliances or joint ventures refer to “interfirm cooperative arrangements aimed at pursuing mutual strategic objectives” (Das and Teng 2000, p. 77). Such a strategy is less risky and burdensome in financial terms, although the temporary nature can produce unwanted uncertainty. Various researchers (e.g. Buchel 2003; Schuler 2001; Pearce 2001) have discussed the problems inherent in such strategies, ranging from ambiguity in the roles and capabilities of the partners to changes in the market. Despite the attractions of joint ventures in strategic, economic and technological terms, they also constitute a social, psychological and emotional phenomenon (Tallman and Shenkar 1994; Peng 2002) similar to mergers and acquisitions, and require significant relationship skills from managers.

Where the perceived problem is a shortage of specialist expertise, a widely used alternative strategy is the use of external consultants (Bloomfield and Danieli 1995; Sturdy 1997). While apparently much less expensive than appointing permanent experts to the staff, the use of such consultants is not problem-free (Caulkin 1997; *The Economist* 1997; Shapiro et al. 1993); for example, “the jibe that a consultant is someone who borrows your watch to tell you the time” (Jones 2003). Successful consulting relationships require clarity, commitment and professionalism on both sides (Ozley and Armenakis 2000).

The arrival of e-business, with its multi-disciplinary nature and organisational pervasiveness, represents a fresh jolt to the problem of organisational structure (Afuah 2003). Some authors suggest that radical innovations (Anderson and Tushman 1990; Christensen 1997) cannot be developed within existing organisation structures (Christensen 1997) because the uncertainty and competence destruction inherent in such innovations tend to strengthen inertia and

resistance. Yet, separating the innovating units can hinder them from making use of valuable resources and capabilities in existing organisations. So, other authors suggest that firms can and should be able to innovate within existing organisational structures (Brown and Eisenhardt 1997; Iansiti 1997). While some large companies have spun-off the e-business division or created completely autonomous innovating units, others have followed a more integrated approach (Chavez and Leiter 2000; Westerman 2002). The need for e-business expertise has led many organisations to enter into strategic alliances and joint ventures, as well as the extensive employment of consultants.

Lynn et al. (1999) found that smaller companies took advantage of their flexibility to make more use of new media, such as the Internet, for contacting their customers. This greater flexibility stems from simpler processes, structures, and systems, despite their limited resources, compared to larger firms (Chang and Powell 1998; Pollard and Hayne 1998; Keeling et al. 2000). Daniel and Grimshaw (2002), found that smaller companies adopted e-business for responding to competitors, providing enhanced customer services, and improving relations with suppliers, while larger businesses sought operational efficiency through e-business.

2.7.2.2 Power and Politics

A common definition of politics in the (especially older) management literature is the unsanctioned or illegitimate use of power to achieve unsanctioned or illegitimate ends (Mintzberg 1983; Mayes and Allen 1977; Gandz and Murray 1980; Enz 1988). It implies that this use of power is dysfunctional and aimed at thwarting initiatives intended to benefit the organisation for the sake of self-interest (Hardy and Clegg 1996). Gandz and Murray (1980) see organisational politics as subverting formal organisational goals, as well as being associated with conflict. This view is echoed by many writers (Pfeffer 1981; Pettigrew 1973). In many cases, disruptive political behaviour is a consequence of previous exercises of power that have failed to secure the appropriate support from others. Grievances may then be expressed by individuals or groups through denying consent and resisting official goals of the organisation. However, as I noted above, Knights and Murray (1994), amongst others, argue that politics is the norm within organisational life, rather than the exception, and should be regarded accordingly. I would subscribe to the latter view. In either case, organisational politics takes place within a strongly delimited set of conditions that include formal and informal rules and accepted customs.

Power and politics are typically enacted through (and influenced by) the organisational

structure, which is the normal basis of decision-making and resource allocation power. Organisations need to maintain a continuously shifting balance between conflicting pressures to centralise and to decentralise, and between the attractions of concentrating specialist functions together as opposed to facilitating cross-functional coordination. The maintenance of product (or brand) and project organisations, as well as regional (geographical) structures adds a further dimension to the problem (Bartlett and Ghoshal 1995). It is hard to combine flexibility (to today's changing markets) with cost minimisation (Ferioli and Migliarese 1996).

Those in favour of decentralisation received a boost in the early 1990s through the empowerment movement (Wilkinson 1998). Psoinos and Smithson (2002) define empowerment "as the decentralisation of decision-making authority". Like other such trends at the time, empowerment was sometimes little more than management rhetoric for removing a layer of lower/middle management and giving the employees increased responsibility and workload with little extra reward. As Argyris (1998) aptly comments, empowerment is a goal which organisations can work towards and approximate but may never quite reach. He asserts that empowerment still remains an 'illusion' and that its failed fruition is attributed to traditional management systems and their contradictions with the empowerment philosophy (e.g. to rhetorically empower but unable or unwilling to relinquish control) and to change programmes that were meant to introduce empowerment but that instead amplified these contradictions.

E-business, with its perceived importance and pervasive potential, represents a new piece of territory 'up for grabs' and thus open for political squabbles. It is liable to affect the distribution of resources and the centralisation/decentralisation of decision-making power. It also conceivably renews the potential for empowerment (Duane and Finnegan 2003), through increased information dissemination, communication, integration and collaboration (Coates 2001) — ideally, equipping employees with information necessary to make decisions. According to Ash and Burn (2001) successful e-business implementation requires employee empowerment, in addition to knowledge management, relationship building, and learning capacity. Dhaliwal (2001) argues that large organisations should nurture "electronic commerce intrapreneurship" (i.e. corporate entrepreneurship within IT units to promote e-business) to reduce established firms' tendency to stick with the familiar and delay/resist full-fledged commitment in the face of uncertainty (Day and Schoemaker 2000). However, the technology could equally be used as a control mechanism to monitor employees and centralise decision making (Psoinos et al. 2000). Thus, e-business implementation confronts

both the managerial and technical contradictions arising from the illusions and goals of empowerment.

2.7.2.3 Culture

Although anthropologists have studied societal cultures for more than a century, interest in taking a cultural perspective on organisations surfaced mainly in the late 1970s and early 1980s. Although several studies of organisational culture pre-date this period (e.g. Selznik 1957; Crozier 1964; Clark 1972), there was a burst of popular interest in new models of organising and managing, and accompanying it, a rebirth of managerial interest in corporate culture, partly inspired by the apparent success of Japanese organisational culture.

Five different themes of culture in organisational behaviour research are identified by Smircich (1983a): cross-cultural (or comparative) management, corporate culture, organisational cognition, organisational symbolism, and unconscious processes and organisation. In the first two streams, culture is viewed as a critical variable, something an organisation *has*, and researchers are concerned with establishing its relationship with other variables to help organisations manage their culture. In the last three streams, culture is a root metaphor for organisation (c.f. Morgan 1986 - organisations as cultures), something an organisation *is*, and researchers see it as an epistemological device with which to frame the study of organisation as a social phenomenon in a broadly interpretive discourse.

Moore (2000) suggests that e-business has its own distinctive 'e-culture'. He argues that this distinctiveness grew from the increased speed of operations, its global reach, its dynamic and responsive strategy to new business models, its 24-7 environment, its technological awareness, and its integration with partners along the entire value chain. E-business seemed to necessitate a new breed of IT/business people (Moore 2000; Kanter 2001). With its roots in the anarchism of the early Internet culture, e-business culture differs from traditional IT (which is more engineering based). The initial 'e-business culture' was dynamic but unstable, based around a new technology with significant but uncertain implications. Arguably, in most organisations, this culture has not yet been reinforced and institutionalised like other IT or business functions; there is therefore a potentially problematic culture gap with the traditional parts of the business.

2.7.2.4 *Criticisms*

Contextual research is highly insightful in that it systematically considers the variations in the organisational (and broader) context in which organisational change takes place. The above contextual themes of organisational topology, power and politics, and culture are intricately interrelated. For example, the creation of a joint venture may resolve the problem of increasing organisational size, compared to an acquisition, but it can lead to problems in the distribution of resources and complicate cultural problems. This interrelatedness in itself demonstrates the significance of context in the organisational environment.

Nonetheless, contextual analysis can fall into a uni-directional trap by allowing the context to enable and constrain actions but neglecting the potential of human actions to change the context. In essence, the contextual epistemology fits within the structuralist notion, which emphasises the predominant influence of social structures on social phenomena. Attempts at addressing the role of human actions in enabling change will be discussed next under process research, which gives primacy to human action in influencing social phenomena.

2.7.3 **Process Issues**

The process theme generally addresses actions undertaken during the enactment of an intended change (Dawson 1997). Such actions take place at the level of the external environment, firm and individual. Process designs generally use longitudinal or repeated measures in order to explain how a process, such as implementation, unfolds over time and is guided and affected by changes in related variables (Markus and Robey 1988).

2.7.3.1 *Phases in Implementing Change*

Research into the change process largely stems from Lewin's (1947) seminal work, which depicts a multi-phase model (i.e. unfreezing, moving and freezing) through which change agents progress as they implement change. However, this model seems unrealistic in a turbulent environment with almost continuous change, both to the system under review and collateral changes. The following section is based on Armenakis and Bedeian's (1999) review of recent process models in organisational behaviour; firstly, models for change agents to achieve change and, secondly, models for understanding change recipients' response to change.

A typical example of a 1990s model is Kotter's (1995) eight step model:

- i. “establishing a sense of urgency by relating external environmental realities to real and potential crises and opportunities facing an organisation;
- ii. forming a powerful coalition of individuals who embrace the need for change and who can rally others to support the effort;
- iii. creating a vision to accomplish the desired end-result;
- iv. communicating the vision through numerous communication channels;
- v. empowering others to act on the vision by changing structures, systems, policies, and procedures in ways that will facilitate implementation;
- vi. planning for and creating short-term wins by publicising success, thereby building momentum for continued change;
- vii. consolidating improvements and changing other structures, systems procedures, and policies that aren’t consistent with the vision; and
- viii. institutionalising the new approaches by publicising the connection between the change effort and organisational success.” (Armenakis and Bedeian 1999, p. 301)

A similar model is that of Judson (1991), while another attempt to offer guidelines for successfully implementing change is Galpin’s (1996) nine ‘wedges’ of a wheel model, which focuses more on generating and implementing recommendations.

Armenakis et al. (1999) articulate a model that emphasises the need to convert the change constituencies into change proponents. Their model comprises five components:

- i. “discrepancy (i.e. we need to change);
- ii. self-efficacy (i.e. we have the capability to successfully change);
- iii. personal valence (i.e. it is in our best interest to change);
- iv. principal support (i.e. those affected are behind the change); and
- v. appropriateness (i.e. the desired change is the right one for the focal organisation)” (Armenakis and Bedeian 1999, p. 302).

In general, the above process models consider either one or both of two broad aspects of the change process: (1) creating readiness for change so that resistance is minimised and (2) facilitating the adoption and institutionalisation of the desired change. The operational mechanism underlying both change aspects is to convey the change message.

2.7.3.2 Stages in Understanding Change

Besides studying the change process from the change agents’ perspective, another approach is to examine this process from the change targets’ perspective. Isabella (1990) proposes a model of how organisational members interpret events as change initiatives develop. The model offers four stages: (a) *anticipation* — the assembly of rumours and tidbits of information by individuals into a construed reality; (b) *confirmation* - the standardisation of events into a conventional frame of reference used to establish logical associations reflecting understandings that have seemingly worked in the past; (c) *culmination* – the contemplation of results from a comparison of conditions before and after an event, at which time managers

amend their frame of reference to include new information and omit invalid information; and (d) *aftermath* – the review and evaluation of the consequences of change by focal managers. Isabella's (1990) analysis is useful in understanding resistance to change as it not only identifies the construed reality of each stage, but also describes the processes that influence change targets. The model is similar to that of Jaffe et al. (1994)

By examining the potential reactions to change, these models offer guidance regarding the likely experience and reactions of change targets and offer insight into possible responses by change agents. For example, if organisational members are inadequately prepared for the change, then denial and resistance are more likely.

2.7.3.3 Criticisms

The above models are similar to those used within IS implementation. They emphasise the steps within the change process, based on the assumption that efforts to bypass steps seldom yield a satisfactory result and that mistakes in any step can slow the implementation efforts and negate hard-won progress.

These models incorporate some form of on-going process but present a linear perspective of change and are oriented towards a *synoptic* account of organisational change (Tsoukas and Chia 2002). Such accounts view change as an accomplished event whose key features and variations, and causal antecedents and consequences, need to be explored and described. They approach change from the outside and take the form of stage models in which the entity that undergoes change has distinct states at different points in time. They are useful insofar as they provide snapshots of key dimensions of an organisation at different points in time and explanations for those trajectories that organisations follow.

However, as Walsham (1993) argues, such a process focus provides a limited view of organisational change (in particular, the implementation of computer-based information systems), which involves the complex interaction of stakeholder groups and runs all the way through strategy development, investment evaluation, and systems development. In addition, process research has focused on a narrower range of variables than the content approaches. Supporters of the process approach claim to have found a consistent (albeit indirect) relationship between the quality of the implementation process and its final success.

Process research does not do justice to the open-ended micro-processes that underlie the trajectories described; it does not capture the distinguishing features of change — its fluidity,

pervasiveness, open-endedness, indivisibility, reflexivity, and emergent nature (Tsoukas and Chia 2002). Change is “the reweaving of actors’ webs of beliefs and habits of action to accommodate new experiences obtained through interactions” (Tsoukas and Chia 2002, p.567). Tsoukas and Chia envisage change as inherent in human action and organisations as sites of continuously evolving human action. Even routines themselves can be a source of change (Feldman 2000; Pentland and Rueter 1994) and thus change is a continuous process as actors try to make sense of and act coherently in the world. Furthermore, change often incorporates improvisation (Orlikowski 1996; Weick 1998) rather than predetermined plans. In this sense, the pervasiveness and continuity of organisational change can be seen as organisational “becoming”, while, in another sense, the organisation itself is a secondary accomplishment. In other words, organisation is “the attempt to order the intrinsic flux of human action, to channel it towards certain ends by generalising and institutionalising particular cognitive representations” (Tsoukas and Chia 2002, p.567). At the same time, organisation is a pattern that is constituted, shaped and emerging from the change itself. Thus, organisation aims at stemming change, but in the process of doing so, it is generated by it (Tsoukas and Chia 2002).

Such research gives primacy to human agents and their actions to influence organisational change without thoroughly considering the role of context in enabling and constraining those very options open to the human agents.

2.7.4 Concluding Remarks

The above review serves to identify the major strengths and weaknesses of each of the three organisational change themes. Although content approaches can provide a list of elements that can offer practical insights, their usefulness is limited in real situations by the sheer number of possible factors and the complexity of their interactions. Also, content tends to blur with context. Such approaches have a rather static feel, with little consideration of the dynamics of the process of change. On the other hand, the process approaches address the ‘static’ failings of content research but tend to present a rather superficial perspective of change, neglecting the influence of the context. Conversely, the context theme, albeit valuable in considering the variation in contexts in which organisational change takes place, is itself a partial viewpoint, placing a heavy emphasis on the structural aspects of change while discounting human agency. In summary, the content theme lacks an emergent perspective; the process theme needs to be more ongoing and consider the structural aspects; and the context theme needs to address human agency. Thus, in order to capture a more

comprehensive and dynamic understanding of why and how organisations undergo change, a combination of the themes is required.

Structuration theory (Giddens 1979, 1984) attempts to resolve the fundamental division within the social sciences between those who place their emphasis on the subjective influence of human agents and human action on social phenomena and those who place their emphasis on the exogenous objective influence of the structure of social systems on social phenomena. He views agency and structure not as independent and conflicting elements, but as a mutually interacting duality whereby the structure is drawn on in human interactions but, in so doing, social structures are produced and reproduced. Furthermore, he emphasises that structuration (i.e. “conditions governing the continuity or transformation of structures, and therefore the reproduction of social systems”(1984, p.25)) is an ongoing process rather than seeing structure as a static property of social systems. This complies well with the notion of change as an ongoing process. Hence, the primary theoretical model of this thesis is based on structuration theory and is discussed in the following chapter. This theory will be the meta-theory used in understanding the complex and neglected area of e-business and organisational change in large established organisations, which this thesis attends to.

2.8 Summary

This chapter reviewed a large amount of literature in the fields of e-business, information systems implementation and organisational change. The review suggests that e-business, without being a fully-fledged revolution, is a significant development in current business and can be viewed as technologically-driven organisational change. However, there are few studies in the literature that address the introduction of e-business into a large well-established organisation in such terms of organisational change. Thus there is a significant gap in the literature.

The review also suggests that information systems implementation remains a thorny problem, as does organisational change. The organisational behaviour literature concerning organisational change can be viewed in terms of content, context and process themes but each theme taken by itself is very limiting. Thus an approach that tries to combine these themes would be advisable. Such an approach is structuration theory, which is the theory I have adopted for this study of e-business and organisational change in large established companies and which I describe in the next chapter.

CHAPTER 3: STRUCTURATION THEORY

3.1 Introduction

As discussed at the end of the previous chapter, in order to understand the challenges faced by large established organisations in assimilating e-business, and the interaction of major new technologies with existing structures, a meta-theory that provides an emergent perspective and gives equal emphasis to both human action and structural properties is needed. Any theory illuminates certain aspects at the expense of others; however, among the various potential theories, structuration theory seems to provide the closest match to the objectives of this study. The main plank of this theory is to view human action and structure not as two independently given sets of phenomena but rather as a duality, whereby structure facilitates and constrains human agency, but in so doing structure is itself produced and reproduced. Another fundamental concept is structuration theory's ongoing perspective, in which structures are *instantiated* only in action; otherwise, they persist only as memory traces in human minds. The structures are drawn on by human agents as they act and interact in specific time-space settings and are themselves the outcome of those actions and interactions. This emergent perspective is especially useful in understanding the process of organisational change.

Other approaches were considered. The *phenomenological approach* (Introna 1997) seems too wrapped up in cognitive aspects, rather than structures, while the *cybernetic approach* (Flood and Jackson 1988) seems to focus excessively on systems and structures. Other candidate theories heavily used in information systems research include *Circuits of Power* (Clegg 1989), *Institutional Theory* (DiMaggio and Powell 1991), *Actor Network Theory* (Latour 1991, 1999; Callon 1986), and *Contextualism* (Pettigrew 1985; Walsham 1993). *Circuits of Power* provides useful tools for examining power structures but some elements (e.g. circuit of system integration) require highly detailed empirical research that would excessively constrain the scope of the study. *Institutional Theory* offers a solid approach to explaining long-term structures but is less forthcoming in explicating the sudden dramatic changes occurring as a result of e-business. In other words, it is more applicable to cases in which e-business has been institutionalised, to reflect on how it became institutionalised or the kind of institution it became. *Institutional theory* is relatively quiet on agency and is more focused on the context and the process of institutionalisation. *Actor Network Theory* offers the notion of enrolment but seems to lack the cultural aspects relevant to the organisational change required for the implementation of e-business. It does not fit the excitement, the highs

and lows of e-business and its application can be somewhat mechanical due to its stages of enrolment.

Contextualism (Pettigrew 1985; Walsham 1993) describes the interlinked nature of content, context and process in organisational change. Although the preceding chapter reveals that each theme (content, context, process) alone is insufficient and a more comprehensive theoretical outlook is needed, contextualism only fulfils part of the requirement. Structuration theory offers a more comprehensive, sophisticated, dynamic, and powerful theory, compared to contextualism. Not only does structuration theory, as will be clarified below, incorporate the interlinked nature of content, context and process, it surpasses contextualism through its notion of duality between structures and agency and its wide range of sophisticated concepts, including structural dimensions, contradiction and conflict, reflexive monitoring and unacknowledged conditions and unintended consequences. It also incorporates this ongoing and emergent perspective of change and stability. As such, structuration addresses the weaknesses of content, context and process themes posed in the Literature Review.

Hence, I decided to use structuration theory, which I describe in more detail below. This theory focuses on structure as well as process, takes the production of structure via action as much into account as the enablement/constraint of action from structure, and deals simultaneously with power, cognition, and legitimacy issues as interrelated aspects of the process with which organisational change and stability are constituted. While several lines of theory have been further developed towards a more sophisticated integration of structure and process as well as different aspects of social life³, they lack some of the balance and comprehensiveness that structuration theory offers.

Although structuration theory is a meta-theory in which to locate, interpret and illuminate other approaches, this thesis does not combine it with any of the above theories as one of the essential contributions of this research is in the operationalisation and application of structuration theory in the IS field. It is the first time that structuration theory has been applied at this depth in this e-business and organisational change research area. Evidently, any theory illuminates certain aspects and is relatively silent on others (Walsham 2002), and structuration theory is no exception. Nonetheless, it is ontologically strong and enables a comprehensive, insightful, sophisticated and ongoing and emergent examination of e-business

³ Perhaps more than others, neo-institutional theory has been developed towards an end which is similar to structuration theory (e.g. Powell and DiMaggio 1991); however, significant differences remain (Barley and Tolbert 1997). The same applies to most recent advances in (co-)evolutionary theories (e.g. McKelvey 1997).

as organisational change, facilitating the analysis of heterogeneous systems of meaning, power relations and norms, while offering a rich understanding (including history, content, process and context) and overcomes the decontextualisation of organisational change. As discussed below, structuration theory lacks a clear step-by-step methodology and has been criticised in its epistemology. Furthermore, it has little to say concerning individual cognitive processes.

This chapter begins by offering a brief background to structuration theory, followed by a sketch of Giddens's (1984) work. Then it examines the application of structuration theory in information systems and criticises its use within IS. Finally, it concludes with ways in which the theory can be operationalised in the context of IS.

3.2 Background

Structuration theory emerged as an important development in European sociology in the late 1970s. However, its origins can be traced back, according to Urry (1982), to the notion of the mutual constitution of society and the individual from Berger and Luckman (1967). Urry (1982) also identifies several different strands of structural analysis including the work of Bourdieu (1977), Bhaskar (1979) and Giddens. Yet, in the IS discipline, only Giddens's work has received any significant attention; for this reason, his conception of the theory will be my primary focus. Note though that this theory is a general theory of social organisation rather than a theory specific to IS. Moreover, as discussed later, Giddens has never directly discussed IS issues in his writings. To the extent, however, as Jones (1999) emphasises, "...that IS are seen as social systems, existing in social and organisational contexts that influence their development and use, and are also implicated in sustaining and changing these contexts, then structuration theory offers potentially significant insights on IS phenomena" (Jones 1999, p.103). Jones offers a comprehensive review of structuration theory and its use in IS and much of the following discussion builds on his work.

3.3 General Overview of Giddens's Structuration Theory

Structuration theory is set out by Giddens in three main works, *New Rules of Sociological Method* (Giddens 1976, second edition 1993), *Central Problems in Social Theory* (Giddens 1979), and *The Constitution of Society* (Giddens 1984), and is also discussed in *A Contemporary Critique of Historical Materialism* (Giddens 1981, second edition 1994). One of the principal aims of structuration theory is to resolve a fundamental division within social sciences, between those social theories, such as interpretative sociologies, which place their

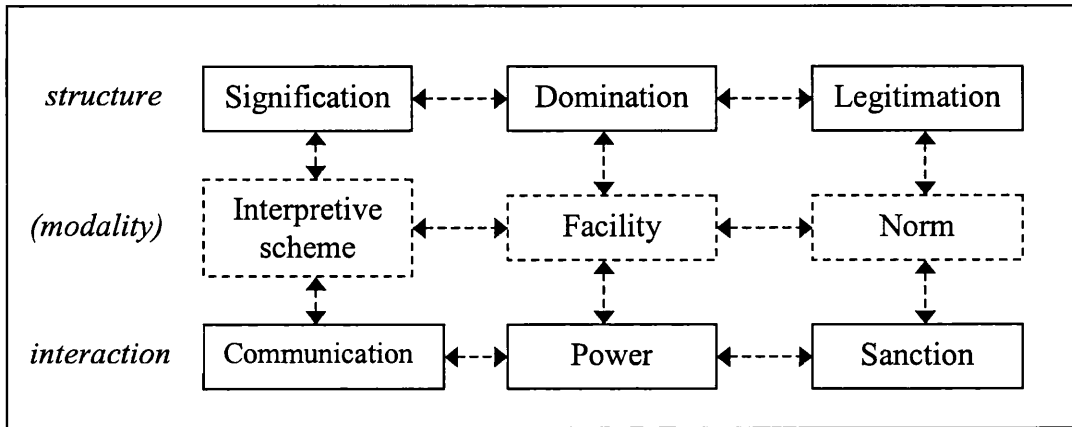
emphasis at the level of human agents and human action to subjectively influence social phenomena and those, such as structuralism and functionalism, which emphasise the structure of social systems as having an exogenous objective influence on social phenomena. Giddens attempts to resolve this agency/structure debate by viewing agency and structure not as independent and conflicting elements, but as a mutually interacting duality whereby structure is drawn on in human interactions but, in so doing, social structures are produced and reproduced. In other words, social structure is seen as being drawn on by human agents in their actions, while the human actions in social contexts serve to produce and reproduce the social structure. Social structure is a resource that can be deployed by human agents in their actions; this structure can be enabling as well as disabling. Hence, at the heart of the theory is the attempt to treat human action and social structure as a duality rather than a dualism. So rather than seeing human action taking place within the context of the “outside” constraints of social structure (a dualism), action and structure are seen as two sides of the same coin or as two aspects of the same whole (a duality).

This fundamental concept of structuration theory can be further illuminated by a schematic chart illustrating the analytical dimensions of the duality of structure as shown in *Figure 3.3-1*. In this diagram both *social structure* and *human interaction* (human actions amongst people) are broken down into three dimensions and are interlinked by three modalities. The three dimensions of structure are *signification*, *domination*, and *legitimation*, drawing from earlier works of Durkheim (1982), Marx (1970), and Weber (1978) respectively. These dimensions are mediated by the three ‘modalities’ (i.e. the inherent association between structure and interaction) of interpretative schemes, facilities, and norms. *Interpretative schemes* are standardised, shared stocks of knowledge that agents draw on to interpret their own and others’ behaviour and events in order to achieve meaningful *communication* (implies verbal and non-verbal interpretation and communication). *Facilities* represent agents’ access to or command over resources (material and human), which are the means through which intentions are realised, goals are accomplished, and *power* is exercised. *Norms* are the rules and values governing appropriate conduct and therefore articulate, sustain, and *sanction* (approve or disapprove) the established normative order. Norms range from deeply embedded (strongly held) to “normal” day-to-day practices. In my study, which end of the continuum a particular norm fits into should be clear within the context.

These modalities are drawn upon by actors in their constitution of interaction, but are equally the media for the reproduction of institutional properties of social systems. Hence, actors draw upon interpretative schemes in order to make sense of actions; standards of morality in

order to make judgements, and material and human resources in order to effect desired outcomes.

Figure 3.3-1 The Duality of Structure (Source: Giddens 1984)



It is important to note that the separation of these dimensions is simply for analytical convenience, since they are in practice intimately interlinked. For example, the operation of norms depends upon power relationships for its effectiveness and is deployed through symbolic and linguistic devices.

The actor's communication of interpretative schemes reproduces or challenges the *Weltanschauung* (worldview) of a social system, the use of power reproduces or challenges the mode of domination, and the exercise of moral judgement reproduces or challenges the order of legitimation. Together, the three modalities provide the macro-micro linkages between the levels of the organisation and its environment and the level of interpersonal interaction. As Giddens would describe it, the introduction of the level of modality provides "the coupling elements" whereby the bracketing of actors' strategic conduct or the properties of social systems are "dissolved in favour of an acknowledgement of their interaction" (1984, p.28). Hence, structuration theory provides a sophisticated relationship between action and structure. It is concerned with the way in which social practices both contribute to the production and reproduction of social structures and how these practices are themselves shaped by those structures.

3.4 Key Issues in Structuration Theory

3.4.1 Duality of Structure

For Giddens (1979), the duality of structure refers to the "essential recursiveness of social life,

as constituted in social practices: structure is both medium and outcome of the reproduction of practices” (p. 69). His emphasis is on structuration as an ongoing and emergent process rather than structure as a static property of social systems. In order to stress this, Giddens adopts quite specific and non-standard meanings for certain key terms (1984, p.25):

- *Structure*: rules and resources, or sets of transformation relations, organised properties of social systems
- *Systems*: reproduced relations between actors or collectivities, organised as regular social practices
- *Structuration*: as explained above, conditions governing the continuity or transformation of structures, and therefore the reproduction of social systems

3.4.1.1 *Structure*

Structure consists of rules and resources, and exists in a manifest form only when it is instantiated in action; otherwise, it persists only as memory traces in human minds. Agents draw upon these rules and resources as they act and interact in specific time-space settings and these structures are themselves the outcome of those actions and interactions.

Social structures are not material entities. While human beings produce, reinforce and monitor these structures, they may not always be aware of omnipresent opportunities for change, as explained by Giddens, due to two types of consciousness: *practical* and *discursive*. The former relates to our ability to act in a knowledgeable way and the latter concerns our ability to explicitly describe actions and motivations. Giddens emphasises the former since human beings are seen to be more knowledgeable than "what they can say". However, the line between discursive and practical consciousness is fluctuating and permeable, both in the experience of the individual agent and between actors within a given context, as well as different contexts of social activity. Furthermore, humans cannot determine exactly the way in which structure is produced and reproduced due to unacknowledged conditions or unintended consequences of intentional action.

3.4.1.2 *Practical and Discursive Knowledge and Unintended Consequences*

Giddens regards human agents for the most part as *knowledgeable* about their actions. This may include “unconscious sources of cognition” (1979, p.5) as well as discursive levels of cognition, at which they are able to provide explanations (1984, p.7). This *knowledgeability* of social actors does not imply that agents are always in control of action, as Giddens emphasises the unacknowledged conditions and unintended consequences of action. Thus “the production or constitution of society is a skilled accomplishment of its members, but one that does not take place under conditions that are either wholly intended or wholly

comprehended by them” (1993, p.108).

Agents are purposive and knowledgeable. They know a great deal about why they act in the way they do. In their reflexive monitoring of their own and others’ actions, agents rely on both their discursive consciousness, which is concerned with being able to explicitly describe actions and motivations, and practical consciousness, which is the implicit stock of knowledge about how to act and how to interpret events and the actions of others. Both the discursive and practical consciousness are influenced, but not overwhelmed, by a primary need for a sense of security lodged in the agents’ unconscious. However, although many of the consequences of agents’ behaviour are intended and known, other consequences may be both unintended and unknown.

Nonetheless, the agent in structuration theory has the capacity to intervene and to thereby “make a difference” in an ongoing course of social practices, activities and events. Even in instances in which outcomes are achieved through the actions of others, subordinate agents maintain at least some minimal capability to “act otherwise” and are thus able to deflect, resist, or influence the activities of their superiors who depend upon their cooperation. Giddens refers to this complementarity of relations between subordinate and superior agents, as the “dialectic of control”.

The above description implies that social action can reproduce existing structure but also produce new structure. The model of human agency in this theory regards human beings as being able to monitor their conduct and its results in a reflexive way, which together with the inevitability of unintended consequences of intentional human conduct, implies that all action carries within it seeds of change; hence, all actions can both transform as well as reproduce existing structure. *Reflexivity* is seen as the “continuous monitoring of action which human beings display and expect others to display” (Giddens 1984, p.3). This reflexive monitoring of action depends upon rationalization, whereby actors, routinely and for the most part without fuss, maintain a continuing ‘theoretical understanding’ of the grounds of their activity (Giddens 1984, p.5)

3.4.1.3 Agency and Constraint

A number of authors (e.g. Bhaskar 1979) have criticised that structuration theory assumes an inappropriately voluntaristic view, not mentioning the unacknowledged conditions and unanticipated consequences of human agency. This criticism comes from Giddens’s contention that, unless drugged and manhandled by others, human agents always have the

possibility of doing otherwise. His critics suggest that structural constraints can more than simply put limits upon the feasible range of options open to an actor in a given circumstance. For example, they argue that landless peasants at the start of the capitalist era had effectively only one feasible option if they wished to survive: selling their labour. However, Giddens (1984) argues that no matter how oppressive and comprehensive (even up to the threat of death) these constraints are, they carry no weight without the acquiescence of those threatened with them, in this case the individual's wish not to die. Hence, the seed of change is present in every act, which in turn contributes towards the reproduction or transformation of social life (Giddens 1984).

Other critics question Giddens's view that social order is produced and reproduced entirely through individual action. For example, Harré (1983 in Jones 1999) suggests that in well-ordered institutions, such as monasteries, social rules may dominate social reproduction and that individual structural agency is thus insignificant or even absent. Furthermore, some have also argued that all aspects of structure may not be equally amenable to agency, implying that there may be a differentiated and limited topography for the exercise of agency rather than 'the endless recursive plain' (Storper 1985 in Jones 1999) or that some structural constraints may be relatively independent from agency (Layder 1987 in Jones 1999). As has been noted, Giddens would reject such views due to the distinctive character of structuration; IS analyses need to be sensitive in using Giddens's particular perspective.

3.4.1.4 Rules

The particular meaning of rules in this context is subjected to further elaboration (1984, p. 17-23) in which Giddens distinguishes between rules of social life and formulated rules. The former are techniques or generalisable procedures applied in the enactment/reproduction of social practices and the latter, such as those of a game or a bureaucracy, are "codified interpretations of rules rather than rules as such" (1984, p.21). Thus, formal organisational structure in the traditional sense can be seen as a set of formulated (bureaucratic) rules that overtly define certain power relations, but can take on various qualities through rules of social life.

3.4.1.5 Resources

There are two types of resources: *allocative* resources, which involve "transformative capacity generating command over objects, goods, or material phenomena", and *authoritative* resources, which involve "transformative capacity generating commands over persons or

actors” (1984, p.33).

One particular implication of Giddens’s conceptualization of structure relevant to IS research is that it is a “virtual order of transformative relations...that exists as time-space presence, only in its instantiations in practices and as memory traces orienting the conduct of knowledgeable human agents” (1984, p.17). Giddens argues, even in the case of the apparently material allocative resources such as land, which might seem to have a ‘real existence’, they only become resources when incorporated within processes of structuration. The rules and resources constituting structure exist only in the agents’ heads. To speak of structure as being inscribed or embedded in artefacts is therefore inconsistent with Giddens’s views, as it fixes one half of the duality in which action and structure are seen to be inseparably linked.

3.4.1.6 *Systems*

The social systems, in which structure is recursively implicated, comprise the “situated activities of human agents, reproduced across time and space” (1984, p.25). Analysing the structuration of social systems means studying the modes in which such systems (which are grounded in the knowledgeable activities of situated actors who draw upon rules and resources in the diversity of action contexts) are produced and reproduced in interaction.

3.4.1.7 *Time*

Time, for Giddens, consists of three intersecting planes of temporality in every moment of structuration: *durée* (i.e. the temporality of daily experience), Heideggerian *dasein* (i.e. the temporality of the life cycle, being-unto-death), and Braudel’s *longue durée* (i.e. the temporality of institutions). In this way, structuration ties together the individual and institutional levels of social practice and points to the recursive nature of social life.

3.4.1.8 *Routinisation*

The notion of structure being continuously produced and reproduced through action also leads to another key aspect of structuration, *routinisation*. As Giddens argues, routine is integral to the continuity of the personality of the agent as agents derive their ontological security through their engagement in predictable routines and encounters. Since these encounters are also constitutive of social institutions, they enable the continuity of social life. In other words, although structuration theory appears at first sight to be focused on the reproduction of structure in the mind, the broader social structures within societies are reinforced through

routinisation. However, as mentioned earlier, Giddens also emphasises human knowledgeability and the way in which human beings reflexively monitor their own actions, those of others, and consequences, both intended and unintended, the latter providing examples of the basis for social change as well as social stability.

3.4.1.9 Social Integration and System Integration

In addition, relevant to this routinisation is Giddens's concept of 'integration', which can be understood as involving "reciprocity of practices (of autonomy and dependence) between actors and collectivities" (1984, p.28). He distinguishes between two types: social integration and systems integration. The former concerns systemness, in terms of the definition given above, at the level of face-to-face interaction, and the latter refers to systemness at the level of relations between social systems or collectivities. Apart from the distinction between micro and macro spheres of analysis, the mechanisms of system integration presuppose those of social integration and highlight the significance of space and presence in social relations. From an IS perspective, this is particularly significant in view of the role of IT in the changing temporal and spatial character of organisations.

3.5 Structuration Theory in IS

Giddens himself has written very little that discusses IS directly except for a brief reference to the role of IT in time-space distancing where he suggests that email and video may substitute to some extent face-to-face interaction in achieving social integration. However, there is a particular problem for structural IS research which is not as prevalent in organisational research, and that is the material property of technology. Evidently, technology should not be understood simply as material artefacts only, but all computer-based IS have some component that has a physical existence.

Nonetheless, many IS researchers have made reference to structuration in their work. Jones (1999) provides a detailed survey of the main IS contributors and their differing applications of the theory; a selection of which are discussed next.

Although not explicitly an IS article, Barley's publication (1986, later extended in Barley 1990) is generally viewed as among the first to address IT using structuration theory. He examines the introduction of CT scanners into the radiology departments of two hospitals and how the same equipment resulted in very different organisational outcomes in two nominally similar environments, arising from the different social process or structuring that occurred in

each case. His paper traces the relationship between action and structure over time and how the introduction of the new technology disturbed the process of routinisation at the level of action, leading to changes in social structure. In essence, he shows how roles and social networks mediate technology's 'structural effects', arguing that technically driven social change is likely to be rooted in a technology's material constraints, but that these must be transformed into social forces if technology is to have a significant effect on social organisation. Furthermore, he introduces temporal boundaries (i.e. the start of each phase is delineated by significant changes in circumstances that led to contextual changes) in the structuration process, which is utilised below in the analysis chapter. Barley's application of structuration theory uses a rather limited version of the theory in its empirical analysis (Walsham and Han 1991).

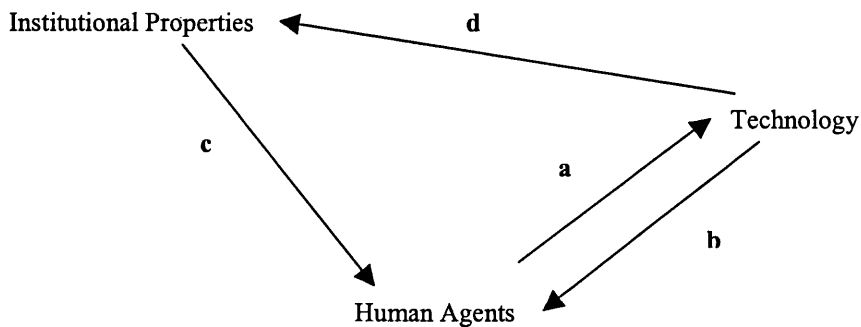
Other writers have contributed to the use of structuration theory in IS. Among the most prolific have been Walsham and Orlikowski. Walsham's work includes a review of the application of structuration in IS research (Walsham 1993; Walsham and Han 1991), analyses of case studies in various domains applying structurational concepts (Walsham 1993; Walsham and Han 1993), and the use of structuration as a sensitizing device in studies that employ other analytical approaches (e.g. Walsham and Sahay (1999) applied ANTI). His 1993 work locates structuration within a synthesized analytical framework for the interpretative study of IS and organisational change. This is used to analyse the linkage between context and process in multiple case studies of IS strategy, design, and policy development (Han 1993; Han 1994).

One of Walsham's latest works (Walsham 2002) finds that a structurational analysis provides a deeper examination of cross-cultural working in IS than other contemporary studies, which are mostly dominated by a Hofstede-type analysis. He also brings forth the discussion of Giddens's conflict and structural contradiction. Conflict refers to actual struggles between actors or groups, while contradiction refers to the potential basis for conflict, arising from "divergent modes of life" within and between social groupings. Contradictions do not inevitably lead to conflict unless actors feel that the differences affect them negatively and they are able and motivated to take action of some sort. In effect, Walsham's emphasis on structurational concepts of conflict and contradiction resembles certain aspects of resistance often found within the process-type organisational change literature. Ultimately, such emphasis on structural contradictions and conflicts is also particularly pertinent to my research focus of organisational change in large established companies.

Orlikowski has also contributed by applying structuration theory in a number of different contexts (e.g. Orlikowski's (1991) study of CASE tools in a consultancy; Orlikowski et al.'s (1995) work on electronic mail and conferencing technology in a Japanese R&D project group; and Orlikowski's (1995) study of Lotus Notes in two consultancies). Karsten (1995) also employs elements of structuration in a case study of the implementation of Lotus Notes in three organisations. Scheepers and Damsgaard (1997) apply structuration theory in four cases of intranet implementation and highlight the importance of the structures of signification, domination, and legitimation. They found that the theory lends itself well to explaining the interaction of actors during implementation but, at the same time, they found it less powerful in its predictive capability. Orlikowski and Robey (1991) discuss Giddens's ideas in the context of a contrast between subjective and objective treatment of IT in IS. Jones and Nandhakumar (1993) extended this by reflecting on the strengths and limitations of the theory and its application in empirical research. Orlikowski also applies structuration in the analysis of genres in organisational communication (Yates and Orlikowski 1992). Her work has employed structuration to varying degrees, from an explicit framework to a source of useful concepts.

Among Orlikowski's most ambitious attempts is employing structural insights to develop a model, the structural model of technology, which explicitly adds a central role for technology. In this model, "technology is created and changed by human action, yet it is also used by humans to accomplish some action". She coins this as the "duality of technology"; that is, technology is seen as "interpretatively flexible" as technology influences, and is influenced by, the social and organisational context. This characteristic, she argues, is neglected in traditional IS, which treats technology largely as a "black box". However, this "interpretive flexibility is not infinite", as it is constrained by the material characteristics of the technology, the institutional contexts of its design and use, and the power, knowledge and interests of the relevant actors. Her model depicts the relationships between institutional properties (i.e. structures of signification, legitimation, and domination), human agents, and technology. In *Figure 3.5-1* arrow 'a' depicts the notion that the design, development and use of technology is a product (or outcome) of human action. This fits with notions of the social construction of technology (Bijker et al. 1987). Arrow 'b' demonstrates how technology acts as a medium of human action, which facilitates and constrains that action. Arrow 'c' shows the institutional (structural) properties that influence how people interact with technology and, finally, arrow 'd' shows that, in certain cases, the institutional properties may themselves be influenced by the use of technology by people.

Figure 3.5-1 The Structural Model of Technology (Source: Orlikowski 1992)



However, as Jones (1999) notes, her model of technology does not fit easily with some of the essential principles of structuration. Although she argues that her model avoids seeing technology in exclusively material terms and emphasises its social construction, the definition of technology as material artefact confuses its ontological status. From Giddens’s perspective, institutional properties are ‘traces in the mind’, which are inseparable from the human agency with which they are mutually constituted, and the material aspects are resources only when drawn upon in processes of structuration:

“Some forms of allocative resources (such as raw materials, land, etc.) might seem to have a ‘real existence’ in a way which I have claimed that structural properties as a whole do not. In the sense of having a time-space ‘presence’, in a certain way such is obviously the case. But their ‘materiality’ does not affect the fact that such phenomena become resources...only when incorporated within processes of structuration. The transformational character of resources is logically equivalent to, as well as inherently bound up with the instantiation of, that of codes and normative sanctions” (Giddens 1984, p.33).

Hence, Orlikowski’s view of technology as material entity not only creates difficulties for the concept of interpretative flexibility but also suggests that structure may somehow be fixed into the technology and is separate from agency. This then turns Giddens’s carefully constructed duality back into a dualism. In her latter paper (Orlikowski 2000), she admits that having technologies “embody” social structures is problematic from a structuralist perspective because it situates structures within technological artefacts. This is a departure from Giddens’s view of structures having only a virtual existence that are only instantiated in activity. Hence, to view structures as embodied in artefacts ascribes a material existence to structures, which Giddens explicitly denies:

“...a position I want to avoid, in terms of which structure appears as something ‘outside’ or external’ to human action. In my usage, structure is what gives *form* and *shape* to social life, but is not *itself* that form and shape—nor should ‘give’ be understood in an active sense here, because structure only exists in and through the

activities of human agents” (Giddens 1984, p.25).

Furthermore, as Jones (1999) adds, this separation of agency and structure is also apparent from her model’s sequential view of the relationship between structure and action. Finally, Orlikowski’s model seems to give undue prominence to technology (Jones 1999) with three relationships, and only one with a reciprocal relation. In structurational terms, technology, if considered at all, is but a minor aspect of social practice.

Orlikowski attempts to rectify these criticisms in her “practice lens” model (Orlikowski 2000), which aims to resolve this material issue of technology. This model, which is much closer to Giddens’s original ideas, suggests that elements of technology (such as stored data and public display screens), are external to human action once they have been built into a technology. As inscribed, the properties of a technology constitute neither rules nor resources and thus cannot be seen as structures. It is only when such technological elements are routinely mobilised in use that we can say that they “structure” human action. In this way they become implicated as rules and resources in the constitution of a particular recurrent social practice. In other words, while a technology can be seen to embody particular symbolic and material properties, it does not embody ‘structures’, in Giddens’s sense, because structures are only instantiated in practice. Through regular engagement with a particular technology, humans interact with (some or all of) the material and symbolic properties of the technology. Through repeated interaction, certain properties of the technology become implicated in an ongoing process of structuration, while other properties can be circumvented, changed, or created. Thus users’ engagement with a technology is recursive—in their recurrent practices, users shape the technology structure that shapes their use. Hence, technology structures are not “out there” and external or independent from human agency; rather, they are virtual and emerging from people’s repeated and situated interaction with particular technologies.

Orlikowski (2000) names these enacted structures of technology ‘*technologies-in-practice*’. They are the “sets of rules and resources that are (re)constituted in people’s recurrent engagement with the technologies at hand”. This is an extension of Giddens’s definition of structure but with an emphasis on technology. Her model is tailored to the IS field and is helpful for researchers who want to gain a deeper understanding of the constitutive role of social practices in the ongoing use and change of technologies in the workplace. In other words, it is helpful for researchers who want to study the enactment of properties of a particular technology. However, it is less useful in my study of organisational change accompanying the implementation of the technology.

Another ambitious reconstruction of structuration theory to accommodate technology is DeSanctis and Poole's (1994) adaptive structuration theory (AST). However, according to Jones (1999) and other critics, AST bears very little resemblance to Giddens's ideas and hence is not discussed in detail here. AST's view of "structure within technology" and of technology possessing "spirits"; its identification of other independent "sources of structure"; and its concept of a dialectic of control between "the group and the technology" and of groups taking "appropriation moves" for the adoption of technology are contrary to Giddens's principles.

IS research has also used structuration theory as a meta-theory to "locate, interpret, and illuminate other approaches" (Walsham and Han 1991). In effect, any theory illuminates some elements of particular case situations and not others (Walsham 2002). As noted by Giddens (1984) himself, the use of structuration theory does not preclude the use of other theories in tandem, depending upon the particular domain of interest. For example, Walsham and Sahay (1999) draw on actor-network theory (ANT) to analyse elements of a GIS case. They added ANT as a "more detailed methodological and analytical device", incorporating not just an emphasis on "stakeholder groups, on context and process and their linkage, and on the view of technology as socially-constructed," but also on novel concepts such as non-human actors incorporated into actor-networks and the processes of translation and enrolment. Han (1993) has also examined Kling's web models and Pettigrew's contextualism in structuration terms.

Another use of structuration theory as a meta-theory, in Barrett and Walsham (1995), is as a means of "focusing research attention on actions, mental models and processes of reproduction and change" in their analysis of innovation in the Jamaican insurance industry.

This latter use of structuration theory is quite close to the structurally informed IS research, in which particular concepts from Giddens's writings are adopted. Walsham and Han depict concepts such as practical and discursive consciousness, routinisation, and unanticipated consequences. In a dialogue, Giddens himself has emphasised,

"...structuration theory can't be applied en bloc to research problems. It can only be of some help if the researcher makes use of two or three basic concepts or uses it as a sensitizing device" (Bryant and Jary 2001, p.230-231).

He asserts that structuration theory is not meant to be a series of generalisations about the

world. It consists of an array of concepts that “hopefully help us understand the basic logic of the social sciences and of how we should best analyse human behaviour” (Ibid, p.231).

3.6 Critiques of Structuration Theory in IS

Lack of specificity about technology was the focus of Monteiro and Hanseth’s (1995) critique of structuration research in the IS field. They argue that ANT, with its explicit commitment to the equal treatment of technological and human actors is more promising in understanding the relationships between specific elements of IS and organisational issues. However, they also concede that this may not be an intrinsic weakness of structuration and may provide a more appropriate analysis of institutional influences.

Rose and Scheepers (2001) find many problems with structuration theory, despite its ability to help sensitise and understand the social aspects. They highlight a central reservation (echoed by other social theorists) concerning the ‘conflation’ (i.e. the problem of reducing structure to action, or vice versa, and the consequent difficulty of documenting an institution apart from action) of structure and agency. Archer (1990) argues that conflating structure and agency weakens their analytical power and that in order to understand why things are the way they are, it is necessary to maintain the analytical distinction between the ‘parts’ of society and its ‘people’. She bases her argument in the ontological grounding of Realism, in which structure and agency are phased over different tracts of time (human actions over the short term and structures enduring), which allows their analytical separation. Rose and Scheepers (2002) further point out the criticism of Thompson (1989) about Giddens’s conceptualization of structure as being “loose and abstract in comparison to the structuralist tradition of social thought, where structure has a much more tangible function in constraining human action”. Thus, victory is offered to knowledgeable human action while, structures, as pre-constituted and relatively autonomous or determinant of action, is undermined. This debate is an ontological one. As mentioned earlier, at the very heart of Giddens’s rationale for structuration theory is to resolve the fundamental division between functionalist and interpretivist views, to propose a duality, rather than dualism, between social structure and action. To criticise that he gives victory to subjectivism is to neglect certain concepts, like that of routinisation, in his theory.

Another criticism, raised by Stinchcombe (1990), is how the theoretical base explains historical change. This critique is further developed by Archer (1990), in which structuration does not offer direct answers to why some social reproductions succeed and become

institutionalised, while others do not. However, another central theme of Giddens is that of time. Although social structures are constantly being instantiated, each moment in time is part of three intersecting planes of temporality: *durée*, *dasein*, and *longue durée*. The latter constitutes the temporality of institution, and in this way, structuration ties together the present moment with history and its institutionalised parts.

According to Rose and Scheepers (2001), there are three main problems with structuration theory:

- inaccessibility of the theory to IS researchers and practitioners
- the absence of specific theories of technology
- Giddens's own uninterest in the practical uses of his work

These are valid problems. The role of information systems in structuration, which is still evolving in the IS field, must be better understood. The theory does need to be more accessible to IS researchers; that is, it needs to be embedded in our discourse rather than that of social theorists. Orlikowski's (2000) practice lens model is a valuable effort in that direction. Furthermore, the theory does operate at a rarefied theoretical level and a bridge is needed to link the theory to the conduct of empirical research (see also Gregson 1989).

Similarly, Giddens's focus on the ontological content of social theory and his lack of a "methodological scalpel" and thus "failure to present a viable epistemology" (Hekman 1990 in Rose and Scheepers 2002), leaves empirical researchers in difficulty. In addition, Rose and Scheepers highlight Bernstein's (1989) criticism that structuration theory does not provide any base for developing a 'critical' stance (in the Habermasian sense), that is, for developing normative models of how things *should* be, as opposed to how they are. The theory then risks becoming a 'categorisation system' (Turner 1990) for the purpose of analytical comparison with the world.

In fact, Giddens does show a certain ambivalence towards the application of the theory although he does provide a ten-point summary of the key features of structuration (1984, p.281-4) that he argues suggest "guidelines for overall orientation of social research":

- i. All human beings are knowledgeable agents.
- ii. The knowledgeable of human agents is always bounded on the one hand by the unconscious and on the other by the unacknowledged conditions/unanticipated consequences of action.
- iii. The study of day-to-day life is integral to the analysis of the reproduction of institutionalised practices.
- iv. Routine, psychologically linked to the minimising of unconscious sources of anxiety,

- is the predominant form of day-to-day social activity.
- v. The study of context, or of the contextualisation of interaction, is inherent in the investigation of social reproduction.
 - vi. Social identities, and the position-practice relations associated with them are 'markers' in the virtual time-space of structure.
 - vii. No unitary meaning can be given to 'constraint' in social analysis.
 - viii. Among the properties of social systems, structural properties are particularly important, since they specify overall types of society.
 - ix. The study of power cannot be regarded as a second-order consideration in the social sciences.
 - x. There is no mechanism of social organisation or social reproduction identified by social analysts which lay actors cannot also get to know about and actively incorporate into what they do.

Giddens in his later work (1989) describes four features of a 'structurationist programme of research'; in Giddens (1991, p.311), he simplifies the ten principles of 1984 to just three (i.e. contextual sensitivity, the complexity of human intentionality, and the subtlety of social constraint) and mentions four aspects of structuration that are most generally relevant to social research (i.e. reproduction of practices, dialectic of control, discursive penetration, and the double hermeneutic); and in Giddens (1983; 1984, chapter 6; and 1991, p. 213-18), he discusses various attempts by researchers to use structuration in empirical research projects.

At the same time, Giddens often underlines that structuration is not intended as a concrete research programme (Giddens 1983, p.77; 1990, p.311) and that his principles "are essentially procedural and do not supply concepts useful for the actual prosecution of research" (Giddens 1990, p.311). He is also critical of those who have attempted to import structuration theory as a whole into their research, preferring those "in which concepts either from the logical framework of structuration theory, or other aspects of [his] writings, are used in a sparing and critical fashion" (Giddens 1991, p.213). In fact, another favoured description of the role of structuration in empirical research is to use its principles as "sensitising devices" or to "provide an explication of the logic of research into human social activities and cultural products" (Giddens 1991, p.213).

Hence, as Giddens would agree, structuration theory is best considered as a meta-theory, a way of thinking about the world, rather than as an empirically testable explanation of social behaviour. It is a meta-theory in the sense that other theoretical approaches can be related to it and located within it. It is a meta-theory within which to locate, interpret, and illuminate other approaches (Walsham 2002). Despite the criticisms above, I would argue that structuration theory is potentially valuable in carrying out empirical studies in IS implementation and its interaction with social and organisational structures.

3.7 Operationalising Structuration Theory in IS

Scheepers and Damsgaard's (1997) paper analyses how intranet implementations shape and are shaped by social structures. They view Giddens's *structures of signification* as reflecting the "shared understanding of the function of an information system by a group of people" (Scheepers and Damsgaard 1997, p.11). They argue that a shared understanding of the intranet's function between actors (e.g. management and developers) is essential for successful implementation. If users fail to perceive the intranet as a useful resource, then resistance may occur. At a more micro level, users need a shared understanding of the intranet's functionality in order to use it effectively for communicating information. In terms of Giddens's *structures of domination*, they highlight the resources allocated (or withheld) towards intranet implementation, the importance of management support, and management's command over actors (developers and users) involved with the intranet. They found a variety of modes and methods through which domination is exercised in the implementation of intranets; for example, when management intervene in direct support for the intranet or when the working group has to "sell" the intranet concept to management to gain their support. Gaining this support facilitates developers in their actions while at the same time reproducing the domination structure. Finally, in the case of intranet implementation, *structures of legitimation* include aspects such as its justification (e.g. more informed action and interdepartmental coordination), its conformance to organisational norms and directives regarding implementation and use (e.g. the information to be included). The existence of challenges to organisational structures of legitimation is based on contingency factors such as homogeneity of the organisation, earlier technology introduction, and management traditions of the company. For example, some intranets start as "skunk work" projects by technical staff and this may lead to management intervention since they were not previously sanctioned.

Sydow and Windeler (1998) apply structuration theory in their evaluation of interfirm networks. Similar to Scheepers and Damsgaard (1997), they emphasise the duality aspects of the theory but unlike Scheepers and Damsgaard, they further elaborate the two sides of the duality (i.e. the structural and interactional dimensions). They show how *structures of signification* enable/restrict agents to make sense of the context they act in and to communicate this meaning and their views of ongoing practices to others. For example, network activities between the satellite and hub firm are regulated by formal procedures, some of which are incorporated into information technology. Agents in the network refer to

these rules of signification via interpretative schemes and use these interpretative schemes when communicating with other agents. Next, *structures of legitimation*, to which the same agents refer via norms, imply a normative component whereby “those who do not confine themselves to the procedures, schedules, and priorities agreed upon and inscribed into the information system will neither be granted access to interorganisational committees nor rewarded in any other way” (Sydow and Windeler 1998, p.271). Such rules also enable and constrain agents to act in their own interest as well as that of the network. Finally, *structures of domination*, comprise the means of production like knowledge, information technology, and access to relations with other economic actors. These resources, which agents mobilise to execute their particular purposes and to which agents refer via facilities, restrict and enhance the ways in which time and priority rules are followed in the network.

With respect to the interactional dimension, agents exercise *power* by applying facilities they have access to contextually and individually: be they allocative (e.g. money, information, knowledge, means of production) or authoritative (e.g. power over other agents). These facilities, which are actively selected, combined and used, enable network agents to powerfully recreate or transform interaction sequences. Hence, the agents’ access and use of facilities not only reproduces the structures of domination, but they also qualify themselves as (knowledgeable) agents (i.e. as actors who take into account what happens around them, what motivates their actions, etc., even if they cannot acknowledge all the conditions under which they act or control all the consequences). Next, agents simultaneously *communicate* in interaction where they reflexively apply interpretative schemes and draw upon rules of signification. By referring to these schemes in interaction, agents are able to make accounts, offer reasons, and give interpretations of behaviour, events, etc., and thereby reproduce the rules of signification. Finally, agents *sanction* behaviour, events, etc., by applying norms which are derived from rules of legitimation and, in their view, are suitable for articulating and sustaining what they, in a particular interorganisational context, consider right or wrong, legitimate or illegitimate. However, what is judged as right or wrong (or legitimate or illegitimate) is not always clear cut, as much depends on the status of the agent or branch in the network and its access to network resources and its influence in (re-)producing network rules. In essence, Sydow and Windeler (1998) argue that the reproduction of interfirm networks is a recursive process which is “constituted in and through interorganisational practices via the duality of structure” (p. 272). Again, aspects of this analysis of interfirm networks can be transferred to the context of e-business and organisational change.

In addition to the underlying duality notion of structuration theory, some authors also pinpoint

specific concepts from structuration theory that can be applied in IS research. For example, Walsham relates *resistance* to information systems to structural concepts of *structural contradiction* and its relation to *conflict*. Structural contradiction refers to a disjunction between principles of system organisation (e.g. differences in the perception of IT governance -- centrally or divisionally controlled), while *conflict* is the real activity arising from the structural contradictions. In other words, contradictions include divergent modes of life, such as cultural differences as highlighted in Walsham's (2002) cross-cultural study of software production and use. Contradictions may result in conflict when agents feel that they are adversely affected and are able to take actions. For example, in Walsham's analysis of a Jamaica-India software development case, structural contradiction arose from the different cultural backgrounds. Although the occupational cultures of both teams originated in software development, the local work cultures were significantly different. The norms of an Indian software house include high productivity and profitability and the software development is driven under strict project deadlines. Conversely, the norms of the insurer's MIS department in Jamaica involved application development by MIS personnel working closely with end users with application backlogs seen as being acceptable. This contradiction led to actual conflict as the participants had the ability to act in support of their perceived position. The Indian management team recognised their authority to control the project and to make the rules such as deadlines, while the Jamaican team were able to resist by giving reasons why more time was needed.

Furthermore, Walsham brings forth Giddens's emphasis on human knowledgeability and the way in which human beings reflexively monitor their own actions, those of others, and both intended and unintended consequences. The latter provides an example of the basis for social change as well as social stability. If an agent takes action and subsequently views the unintended consequences as negative, then it is likely that a different action will be taken in similar circumstances in the future, with a related changed structure in mind. This was evident in the Jamaica-India case, in that there was increasing recognition by all sides that cross-cultural issues were important and that they needed to be managed effectively. This resulted in various actions to mitigate the problems, including the removal of the Indian CEO and giving increased responsibility to users in the Jamaican MIS group. These actions not only reflected a pragmatic interest in getting a better job done, but they also embodied the changed attitudes, or in Giddens's terms, changed structures in the mind stemming from agents' reflexive monitoring, on the part of the Jamaican and Indian participants.

Continuing with the application of human *knowledgeability*, which is strongly linked to what

agents are able to “do” rather than what they can say. This distinction, in Giddens’s terms, as referred earlier, is between *practical* and *discursive consciousness*. Drawing a parallel to the socio-technical school (Mumford 1987), the implication of this for system design and development is that designers should not merely ask people what they do, but should also work with them in a direct way over a period of time in order to capture their knowledgeability. Furthermore, central to socio-technical design is changing what people do and this, in structuration terminology, involves disrupting the *routinisation*, which is a key element in an agent’s sense of security. The implication of this is that organisational change is more complicated than some system design approaches would imply and that structural concepts of knowledgeability, practical and discursive consciousness, and routinisation could be valuable ways of conceptualizing the basis of organisational change.

Recently, Poole and DeSanctis (2002) also attempt to operationalise structuration theory by delineating sever interlocking requirements and two modes of analysis. These are expanded in the following Methodology chapter.

Another IS issue where structuration concepts can be applied concerns *IS strategy*. Much strategy literature is prescriptive and based on rather simplistic models whereby strategy is generated within an organisation (Walsham and Waema 1994). Mintzberg (1978) coined the term “strategy formation” to depict the emergent nature of this process, grounded in the realities of organisational life. Strategy formation is particularly aligned to the underlying tone of structuration theory, where existing structure at both the organisational and societal levels conditions the actions of individuals concerned in the strategy formation process and these in turn produce and reproduce structure over time. At the level of action, the *knowledgeability* of stakeholders is balanced by the *unanticipated consequences of intentional conduct*, which are especially important in strategy. Skilled stakeholders are aware of this and incorporate *reflexive monitoring* in the complex process of IS strategy formation. Thus, structuration theory provides a potential theoretical basis for understanding IS strategy formation.

Finally, as mentioned earlier, Giddens himself specifically refers to information systems in the context of information storage permitting *time-space distanciation* and *reproduced structures of domination* and tying together various sorts of resources. The vastly increased capacity for information storage and retrieval due to advances in computer and telecommunications technologies permits not only much greater co-ordination of control across time and space, but also serves as an authoritative resource. This latter fits well with

Foucault's (1982) ideas (also supported by Zuboff 1988) of an electronic panopticon, which describes the phenomenon of increased information and visibility, brought about by computerised information systems, leading to improved monitoring of work and corresponding increases in efficiency, but also leading to contentious issues such as surveillance and control. Information systems are thus critical in the context of time-space distancing and in their application as an authoritative resource under structures of domination in structural terms.

Evidently, the use of specific structural concepts in IS needs to be related to the overall theme of structuration theory. The above examples highlight ways in which authors have adapted structuration theory in the IS context. The specific way in which this research operationalises structuration theory continues this work and is further detailed in the Methodology and Analysis Chapters.

3.8 Summary

This chapter describes the background and key concepts of structuration theory, focusing in particular on the aspects relevant to this study. It also reviews earlier applications of the theory in information systems research, showing how other researchers have operationalised the theory.

I have outlined the main criticisms of structuration theory but I would argue that its strengths outweigh the weaknesses, especially in the context of the current study, and this justifies my choice of the theory. The key strength of the theory lies in its emphasis on the inter-linked nature of human action (including interaction between people) and structure and its provision of operational concepts such as the three dimensions of structure and interaction via inter-linking modalities. Its main contribution remains the duality of agency and structure, and the (partial) operationalisation of appropriate linkage mechanisms. In a longitudinal case study, it allows not only for a description of the processual nature of the development of information systems, but also for the mutual unfolding between action and structure. The value of structuration theory as a meta-theory lies in its subtle view of human society. It is built upon a synthesis of a large body of earlier literature in social science and enables other approaches, both theoretical and empirical, to be located within it. Finally, it can be effectively transferred into the context of e-business and organisational change to provide an insightful method of analysis.

Hence, to refine the research area presented in the Literature Review chapter (i.e. to understand the complex and neglected area of e-business and organisational change in large established companies), the main research question of this thesis becomes:

How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?

As described in the Literature Review, e-business here represents any business activity where the key organisational functions take place predominantly on the Internet or other computer network (Castells 2001). Structures (organisational) are interpreted in Giddens's terms of signification, domination, and legitimation.

This main research question captures Giddens's fundamental conception of duality. The wording 'interact' connotes Giddens's mutually interacting duality between the human agents' attempts in implementing e-business and the existing organisational structures. These structures can enable/disable the attempts of human agents, yet human agents can also reproduce/change these structures. The second part of the main research question sharpens the focus of the first part, by explicitly seeking explanations for the problems.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

The purpose of this chapter is to present the research paradigm underlying this thesis, the research strategy, the selection of case study organisation, the research scope, and the research techniques. The chapter ends with a discussion of data analysis and presentation.

The research paradigm underpinning this thesis originates in the interpretive tradition. This entails a subjective epistemology and the ontological belief that reality is socially constructed. The research strategy adopted is a single embedded in-depth case study of a large established automotive company. Fieldwork began as part of my Masters programme in the summer of 2000 and continued more intensively and extensively as part of my doctoral research, from August 2001 to January 2003. The research techniques applied are those traditionally associated with interpretive qualitative case study research in information systems: the inspection of documentation, observation, and semi-structured interviews.

This chapter is divided into five main sections. First, it examines the interpretive research paradigm and this paradigm's linkage to structurational research. Second, it discusses the research strategy, incorporating the assumptions and characteristics of case studies and the selection of the organisation. Third, it presents the research techniques used and examines more deeply the range of respondents, the rapport building process, and the design of interview schedules. Fourth, it discusses the steps undertaken for qualitative data analysis, including data preparation, coding, and interpretation. Fifth, it outlines the narrative structure and the voice of descriptive realism applied to the presentation of my findings.

4.2 Research Paradigm

The design of a study begins with the selection of a topic and a paradigm. *Paradigms*, in the human and social sciences, enable us to understand phenomena. They serve to advance our assumptions about the social world, about how research should be executed, and about what constitutes legitimate problems, solutions, and criteria of 'proof' (Creswell 1994, p.1). Consequently, each paradigm implies certain ontologies⁴, epistemologies⁵, theories, and methods.

⁴ Ontology refers to the underlying assumptions made about phenomena under study (i.e. theories of reality (Cornford and Smithson 2004)).

In information systems, three paradigms dominate our field. They are the *positivist, critical, and interpretive* (Orlikowski and Baroudi 1991; Myers 2004; Flynn and Gregory 2004), otherwise classified by Guba and Lincoln (1989) as *conventional, critical and constructivist*, respectively.

A *positivist* paradigm implies the belief that, ontologically, reality exists objectively and independently from human experience. Epistemologically, “positivists are concerned with the hypothetic-deductive testability of theories” (Chen and Hirschheim 2004, p.201) and maintain that “scientific knowledge should allow verification or falsification and seek generalisable results” (Chen and Hirschheim 2004, p.201). Consequently, a causal relationship is usually displayed and a tight coupling among explanation, prediction and control is exhibited (Orlikowski and Baroudi 1991). Methodologically, positivists assert that in order to test hypothetic-deductive theory, researchers need to adopt a value-free position and employ objective measurement to collect evidence. Typical positivist methods include quantitative surveys, laboratory experiments, field experiments, forecasting, and simulation (Galliers 1991).

In contrast, within a *critical* paradigm, researchers believe at an ontological level that society is grounded on certain deep-seated structural faults that need to be explored (Orlikowski and Baroudi 1991; Ngwenyama and Lee 1997; Cornford and Smithson 2004; Howcroft and Trauth 2004). Epistemologically, critical researchers strive “to critically evaluate and transform the social reality under investigation” (Orlikowski and Baroudi 1991, p.19), while positivist researchers are content to predict the status quo. In other words, critical research aspires to be emancipatory, in that it strives to eliminate the causes of unwarranted alienation and domination and to thereby enhance the opportunities for realising human potential (Alvesson and Wilmott 1992a & 1992b; Hirschheim and Klein 1994). Ideologies that can fit within the critical paradigm include feminism (Wajcman 1991) and Marxism (Marx 1974) and are based on the philosophical positions of writers such as Foucault (1979), Bourdieu (1990) and Heidegger (1953).

Reviews of IS papers (Orlikowski and Baroudi 1991; Chen and Hirschheim 2004) have found that positivist research still dominates (as much as 81 percent) published empirical research, while Flynn and Gregory (2004) found that a very small (1 percent) proportion of papers

⁵ Epistemology refers to the type of (valid) knowledge that can be obtained about a phenomenon under study (Cornford and Smithson 2004).

adopted the critical paradigm. Instead, the interpretive paradigm and the use of qualitative methods has grown increasingly over the past twenty years. These are discussed in detail next as they form the ontological, epistemological and methodological base of this research.

In addition to the three traditional paradigms, Mingers (2001) recommends a pluralist paradigm of mixing research methods from different paradigms, but this approach seems neither advisable nor feasible in this case. The research is of an exploratory nature and structuration theory does not easily lend itself to pluralism. In addition, positivism with its assumption of a uniformity of nature across time and space, contradicts a fundamental structural notion -- an agent's ability to 'act otherwise'. Furthermore, it is not the intention of the researcher to produce generalisable laws nor to change social reality.

4.2.1 Interpretivism

The paradigm of interpretivism is grounded in classical hermeneutics⁶ and phenomenology. The fundamental principle of the hermeneutic circle suggests that all human understanding is achieved by iteratively considering both the interdependent meaning of parts and the whole that these parts form. This principle is fundamental to all other underlying principles of interpretive research (Klein and Myers 1999). Interpretivists claim that social phenomena must be understood in their own social context (i.e. contextualisation), which itself is constructed and reproduced through its own activities. The understanding of social action must then include the meaning that social agents assign to their deeds. Interpretivism is thus opposed to the natural science methods of inquiry that assume that the world is ordered by immutable laws. Interpretivism is an alternative to natural science research, which presupposes that social and cultural life is governed by laws external to social agents. While natural science attempts to explain phenomena, interpretivism attempts to understand human action through making sense of the meanings underpinning those actions (Walsham 1995). The practice of such an interpretive approach has extended the "taxonomy for IS research... and illustrates the point that the scientific paradigm [i.e. positivist paradigm] is not the only, nor indeed always the most appropriate basis for our research" (Galliers and Land 1987, p. 902).

Ontologically, interpretivism assumes that social reality is constructed through the negotiated meanings that actors give to their actions and situations. Epistemologically, interpretivism

⁶ Hermeneutics concentrates on the problem of interpreting texts and experiences from other cultures and from different historical periods.

holds that knowledge is the result of everyday concepts and meanings. Consequently, it implies that social actions should be accounted for by the same social actors (Orlikowski and Baroudi 1991). Researchers working under an interpretive lens approach the social world to grasp daily meanings and concepts and then try to reconstruct them in the language of their scientific discipline. Researchers thus require critical reflection on how the research materials and data were socially constructed through the interaction between the researchers and participants. They need to be sensitive to possible differences in interpretations among the participants as such interpretations are typically expressed in multiple narratives of the same sequence of events under study. Undeniably, they also need to be aware of possible biases and systematic distortions (Klein and Myers 1999).

Furthermore, researchers need to relate the idiographic details revealed by the interpretation of the data through the application of principles of hermeneutics and contextualisation to general theoretical concepts that describe the nature of human understanding and social action. In other words, researchers need to have the ability to abstract and generalise. However, researchers are also required to be sensitive to possible contradictions between the theoretical preconceptions guiding the research design and the actual findings with subsequent cycles of revision. Recently, Klein and Myers (1999) identified seven principles in conducting interpretive field studies in information systems (adapted from p.71-78):

- The fundamental principle of the hermeneutic circle – requires considering iteratively both the interdependent meaning of the parts and the whole that these parts form, in order to fully achieve human understanding.
- The principle of contextualisation – requires critical reflection of the social and historical background of the research setting, so that the intended audience can see how the current situation under investigation emerged.
- The principle of interaction between the researchers and the subjects – requires critical reflection on how the research materials and data were socially constructed through the interaction between the researchers and participants.
- The principle of dialogical reasoning – requires sensitivity to possible contradictions between the theoretical preconceptions guiding the research design and the actual findings with subsequent cycles of revision.
- The principle of multiple interpretations – requires sensitivity to possible differences in interpretations among the participants as are typically expressed in multiple narratives or stories of the same sequence of events under study.
- The principle of suspicion – requires sensitivity to possible biases in and systematic distortions of the narratives collected from the participants.
- The principle of abstraction and generalisation – requires relating the idiographic details revealed by the data interpretation to general theoretical concepts that describe the nature of human understanding and social action.

This last principle of abstraction and generalisation is elaborated in more detail in the discussion of the *strengths and weaknesses of case study research*. However, the essential

point is that in interpretive research, theory is used more as a 'sensitising device' to view the world in a certain way (Walsham 1995b), rather than as in positivist research, in 'refuting' or 'validating' a theory. Such an application of theory as a 'sensitising device' matches Giddens's own words in his proposition of how structuration theory should be applied. It is *not meant* to test the status quo (the *positivist* paradigm), nor is it meant to criticise and transform social reality (the *critical research*).

4.2.2 Structuration Theory and the Interpretive Paradigm

For the purpose of this research, an interpretive approach is selected as appropriate to the conception of e-business and organisational change as a duality. This conception implies that organisational change needs to be understood within the interpretive principles listed above:

“the aim of all interpretive research is to understand how members of a social group, through their participation in social processes, enact their particular realities and endow them with meaning, and to show how these meanings, beliefs and intentions of the members help to constitute their social action” (Orlikowski and Baroudi 1991, p. 13).

This underlying goal of interpretive research matches the innermost principle of structuration theory, in which agents shape their social structures and are in turn enabled and constrained by these structures across the various dimensions of time (i.e. the temporality of daily experience (*durée*); of the life cycle; being-unto-death (Heideggerian *dasein*); and of institutions (Braudel's *longue durée*)). These assumptions influenced the selection of an interpretive paradigm.

Many researchers who have employed structuration theory have also adopted an interpretive paradigm (see for example Barley 1986, 1990; Walsham 1993, 2002; Walsham and Han 1991, 1993; Barrett and Walsham 1995; Scheepers and Damsgaard 1997). Moreover, as exemplified in these examples and confirmed by Poole and Desanctis (2002), the most common empirical method used by structuration researchers is the interpretive qualitative case study. This method is expanded in greater detail below. Flynn and Gregory (2004) found that structuration theory ranked second (after actor network theory) among the most frequently used social theories in IFIP WG8.2 conference proceedings over the past twenty years.

Although there have been criticisms of the application of Giddens's structuration theory in empirical research, there have been further attempts at operationalising the theory. Most notable has been Poole and Desanctis's (2002) attempt. They argue that a full-blown

programme of structurational analysis should address the following seven interlocking requirements:

- i. Identification of structures;
- ii. Relationship of structures and their contradictions;
- iii. Analysis of the system, including effects of context;
- iv. Identification of structuring moves: production and reproduction of structures;
- v. Effects of process on context;
- vi. Analysis of actors and their roles;
- vii. Analysis of power dynamics and social ideologies.

Furthermore, they argue that a structurational analysis should incorporate one of two modes of analysis: *functional analysis* and *constitutive analysis*. The former examines “systems from the outside, from the perspective of the observer interested in understanding the factors that cause system behaviour and that yield outcomes” (Ibid, p.15). The latter attempts to obtain more of “an inside perspective on the system, to study the interpretations that give meaning to events and the actions and interactions that constitute the system, its processes, and actor responses to exogenous influences” (Ibid, p.15). This research generally adhered to these interlocking requirements and mostly employed the constitutive mode of analysis.

4.3 Research Strategy

The main strategy of the present research is an in-depth interpretive case study in one organisation. What follows is firstly a discussion of what is understood by an “interpretive qualitative research”. Secondly, the meaning of a case study and its taxonomy are developed. Thirdly, the ways in which the case study as a research strategy have been applied in information systems are discussed. Fourthly, the limitations of the case study as a research method are examined and contrasted to the conditions where case studies are the most appropriate method. Finally, the motivations and circumstances that influence the selection of the organisation for the case study are described, followed by an overview of that organisation, the research techniques and the research plan.

4.3.1 Interpretive Qualitative Research

The word interpretive is not a synonym for qualitative; qualitative research may or may not be interpretive, depending on the underlying philosophical assumptions of the researcher (Myers 1997). For example, according to Chua’s (1986 in Klein and Myers 1999) classification of research epistemologies into positivist, critical, and interpretive, qualitative research can be conducted in any of these epistemologies. As mentioned above, this research can be considered as interpretive, since it assumes that knowledge of reality is gained only through

social constructions such as language, consciousness, shared meanings, documents, tools and other artefacts. Interpretive research does not predefine dependent and independent variables, the way positivist research does. Rather, interpretive research focuses on the complexity of human sense-making as the situation emerges (Kaplan and Maxwell 1994) and attempts to understand phenomena through the meanings that people assign to them (Boland 1991; Orlikowski and Baroudi 1991).

In the case of this thesis, since there is little written information on e-business and organisational change, as shown in the Literature Review Chapter, Creswell (1994) recommends applying an interpretive qualitative paradigm. The variables for this study are largely unknown – unlike positivist quantitative studies, in which variables are known and theories may exist that need to be tested and verified. Additionally, in contrast to positivist quantitative research and as alluded to under Klein and Myers’s (1999) principles of conducting interpretive field studies, interpretive qualitative researchers operate under six main assumptions (Merriam 1988 in Creswell 1994, p. 145) (*See Table 4.3-1*).

Table 4.3-1 Six Assumptions of Interpretive Qualitative Research

<p><i>Ontological assumptions:</i></p> <ul style="list-style-type: none"> i. Interpretive qualitative researchers are interested in meaning — how people make sense of their lives, experiences, and their structures of the world. Reality is context-driven, subjective and multiple. ii. Interpretive qualitative research is descriptive in that the researcher is interested in process, meaning, and understanding gained through words or pictures. <p><i>Epistemological assumptions:</i></p> <ul style="list-style-type: none"> iii. The interpretive qualitative researcher is the primary instrument for data collection and analysis. Data are mediated through this human instrument, rather than through inventories, questionnaires, or machines. iv. Interpretive qualitative research involves fieldwork. Researcher interacts with that being researched. <p><i>Methodological Assumptions:</i></p> <ul style="list-style-type: none"> v. Interpretive qualitative researchers are concerned primarily with process, rather than hypothesis-driven outcomes or products. vi. The process of interpretive qualitative research is inductive in that the researcher builds abstractions, concepts, hypotheses, and theories from details.

4.3.2 Case Studies

Yin (1994) recommends the usage of a case study as a methodology “when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events and when the focus is on a contemporary phenomenon within some real-life context” (p.1). This fits my objective of understanding the changes an organisation undergoes upon the implementation of

e-business. A case study allows “an investigation to retain the holistic and meaningful characteristics of real-life events—such as organisational and managerial processes” (Yin 1994, p. 3), as opposed to other methodologies such as *survey*, *laboratory experiment*, or *field experiment*, in which variables are known and causal relationships are being established (Galliers 1991).

Although case studies are normally associated with qualitative research, they can also be used for the assertion of a positivistic epistemology and ontology (Stake 1994). Stake argues that not all case studies are qualitative and that within the interpretive and phenomenological approach, a case study is not a methodological choice, but the selection of the object of inquiry. Benbasat et al. (1987) maintain that case studies encompass the following eleven key characteristics (p.371) (*See Table 4.3-2*). However, it could be argued that characteristic *vi* and *xi* are not strictly accurate as Action Research, which is by definition case based, involves control and manipulation and case studies can be retrospective (i.e. not dealing with contemporary events).

Table 4.3-2 Eleven Key Characteristics of Case Studies

<ul style="list-style-type: none"> i. Phenomenon is examined in a natural setting. ii. Data are collected by multiple means. iii. One or few entities (person, group, or organisation) are examined. iv. The complexity of the unit is studied intensively. v. Case studies are more suitable for the exploration, classification and hypothesis development stages of the knowledge building process; the investigator should have a receptive attitude towards exploration. vi. No experimental controls or manipulation are involved. vii. The investigator may not specify the set of independent and dependent variables in advance. viii. The results derived depend heavily on the integrative powers of the investigator. ix. Changes in site selection and data collection methods could take place as the investigator develops new hypotheses. x. Case research is useful in the study of “why” and “how” questions because these deal with operational links to be traced over time rather than with frequency or incidence. xi. The focus is on contemporary events.
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Yin (1994) concurs with these principles. He defines the case study as an empirical enquiry focused on a particular phenomenon and its relation with its real-life context. He emphasises that data should be collected from different sources to ensure their integrity. In accordance with the standard qualitative approach, such gathering of data from different sources to corroborate, elaborate or illuminate the research in question is otherwise known as triangulation of data (Marshall and Rossman 1995, Patton 1990).

Yin (1994) distinguishes *ethnographies* from case studies in that the former take long periods of time and very detailed observational evidence. An ethnographer's method of collecting data is to live among those who are the data (Rosen 1991; Hammersley and Atkinson 1995). Case studies, by contrast, are conducted within a defined time frame and do not necessarily imply ethnographic techniques. Researchers conducting case studies may not even need to visit the organisation under study; they could collect their data by consulting secondary sources or interviewing over the phone, by mail or e-mail (Yin 1994).

The case study, as a research endeavour, has been subjected to criticisms for its lack of rigour and its limited basis for scientific generalisation (Yin 1994). The first criticism is the result of "sloppy" data collection and "biased views to influence the direction of the findings and conclusions" (Yin 1994, p.9). Hence, every case study investigator must work hard to report all evidence fairly. To guide this effort, this research incorporates multiple research techniques, discussed below, as well as structuration theory (Giddens 1984) as a sensitising device, in order to assemble a more holistic and comprehensive understanding of e-business and organisational change. The second criticism is misconstrued, as the role of an investigator in a case study is to expand and generalise theories (analytic generalisation), rather than to enumerate frequencies (statistical generalisation).

However, this goal of analytic generalisation has led to remarks that Yin (1994) (and others such as Benbasat et al 1987 and Lee 1989) takes on an implicitly positivist approach to qualitative case study research (Walsham 1995b; Klein and Myers 1999). Nonetheless, despite this element, there are still many points of agreement between researchers in the positivist and interpretive tradition with regards to case study research (Walsham 1995b). Furthermore, similarities between these traditions include the preference for case studies to conduct research strategy intended to answer "how?" and "why?" questions and to gather data from multiple perspectives (and if available, multiple sources) in an effort to gain a more comprehensive understanding of a contemporary complex social phenomenon.

Walsham extends Yin's proposition of case studies being "generalisable to theoretical propositions" (Yin 1989, p.21) to four types of generalisation in more implicitly interpretive case studies: *the development of concepts*, *the generation of theory*, *the drawing of specific implications*, and *the contribution of rich insight*. Regarding the development of concepts, Zuboff (1988) used interpretive case studies to develop the 'informate' concept. The generation of theory entails drawing from empirical work to construct theoretical frameworks.

The drawing of specific implications involves delineating from empirical studies certain tendencies that may serve as useful insights for related work in other organisations and contexts. Finally, the contribution of rich insights implies:

“This phrase is designed to capture insights from the reading of reports and results from case studies that are not easily categorised as concepts, theories, or specific implications” (Walsham 1995b, p. 80)

In other words, case studies in themselves could provide rich insights in a wide range of topics even if they do not seem to match the first three types of generalisation. Walsham stresses that:

“we should not be misled into too narrow a view of the generalisations which readers can gain from studying the reports and results from interpretive case studies, and the category of ‘rich insight’ attempts to describe these broader and more diffuse implications” (Walsham 1995b, p.80).

Indeed, Flynn and Gregory (2004), in their study of research trends over the past twenty years of IFIP WG8.2 papers, found that only 22 percent of papers developed concepts or generated theories, while the other 78 percent generated specific implications or contributed rich insights. These statistics suggest that interpretative researchers seem reluctant to generalise their findings into theory, and hones in on the significance of the last two types of generalisation. Similarly, for the purposes of this research, the last two types of generalisation (specific implications and rich insights) would be more applicable and achievable.

In terms of a taxonomy, Stake (1994) distinguishes three types of case studies: intrinsic, instrumental and collective. An intrinsic case study is selected when better understanding of a particular case in all its particularities is desired, rather than the undertaking of a case that would represent other cases or illustrate a particular trait or problem. The motivation for conducting an intrinsic case is the case study’s inherent interest rather than theory building. An instrumental case study is selected to provide insights into an issue or refinement of theory. However, because researchers simultaneously have several interests that often change, “there is no line distinguishing intrinsic case study from instrumental; rather a zone of combined purpose separates them” (Stake 1994, p. 237). Finally, the collective case study is the instrumental study extended to several cases. Stake sees “these three [categories] as heuristic more than functional” (Ibid, p. 238), as authors and reports seldom fit neatly into them.

Case study research can be composed of single or multiple cases. They can be embedded or holistic, where an embedded case study refers to the existence of more than one sub-unit of study, while a holistic one relates to the contemplation of a global programme or organisation.

For the purposes of this research, *a single embedded in-depth case study* is conducted. Yin (1994) recommends a single case study under three circumstances. Firstly, when it represents a critical case in testing a well-formulated theory, which has a specified set of propositions as well as circumstances within which the propositions are believed to be true. In this circumstance a single case may match all conditions to confirm, challenge or extend the theory. Secondly, when the case is unique or rare. Thirdly, when the case is of revelatory nature. This occurs when researchers have the opportunity to access phenomena that have not been previously observed. This last reason is one of the main reasons for the selection of Ford Motor Company (FMC) as the main case study.

4.3.2.1 The Selection of the Organisation

Ford Motor Company (FMC) is one of the oldest auto manufacturers, having been founded over 100 years ago (in 1903) and is the world's second largest auto manufacturer, after General Motors. At the zenith of the e-commerce boom, the CEO of FMC, Jacques Nasser, decided to heavily promote e-business throughout the organisation as he believed that this technology would drastically transform the industry, making it more responsive and efficient, and ultimately changing the company from a manufacturing-led company to a consumer-led company. Among the major auto manufacturers, FMC's investment in and commitment to e-business seemed to be equivalent to GM's, if not leading the way (Kerwin et al. 2000). Thus, the opportunity to gain access and conduct research in this large established organisation, ranked fourth among the Fortune 500 largest US corporations (Fortune 2004), and a leader among auto manufacturers in the introduction of e-business, is in itself of revelatory nature. Such a study not only holds both *intrinsic* and *instrumental* value, but also offers prospects to generate *specific implications* and to contribute *rich insights*.

Ford created a new business unit, named ConsumerConnect, which was charged to be the central cross-brand provider of e-business solutions. Organisationally, ConsumerConnect was positioned as one of seven large Consumer Business Groups, at the same level as Ford of North America. ConsumerConnect itself was divided into ConsumerConnect-US (CC-US) and ConsumerConnect-Europe (CCE). It encompassed several subdivisions, including business-to-business, business-to-consumer, telematics, and customer relationship management. The subdivisions were often developed from strategic alliances or joint venture

partnerships with new technology providers. Essentially, ConsumerConnect represented a very important new business group within a large traditional company, which rarely introduced any new business functions.

4.3.2.2 Gaining Access and Renegotiation

As part of my Masters dissertation, I had already gained access and conducted a short case study in CC-US during the summer of 2000, shortly after it had been established. In return for the staff's time and interest, I had sent them my Masters dissertation, with which they were impressed. As I had maintained contact and already had a working relation with my principal sponsor, the second ranked senior executive in CC-US with over 25 years of work experience within Ford, my proposal to extend my case study at the doctoral level was welcomed from the beginning. Since ConsumerConnect ran a similar operation in Europe, my sponsor recommended me to the Head of CCE, who then became my principal sponsor in Europe.

In my initial meeting with the Head of CCE, my supervisor accompanied me to lend further legitimacy to my research proposal. In that opening meeting, we discussed my proposal and research plan, which firstly entailed observing the department and analysing documents in order to familiarise myself with the context and then creating a shortlist of potential interviewees. We also resolved issues of confidentiality verbally (See *Appendix I*). The Head of CCE showed enthusiasm in my research and invited me to attend the next CCE executive meeting.

That executive meeting was attended by the senior managers of CCE and I was given the opportunity to introduce myself. After the meeting, I was given the documents that I requested (e.g. organisational charts, contact numbers, strategy statements, action plans etc.), provided with a staff access card and a Ford email account, and assigned to a desk. The subdivision heads were also very welcoming. In particular, a female executive, who took particular interest in advancing female workers in Ford, invited me to shadow her in order to get acquainted with CCE. The Head of CCE encouraged me to shadow any subdivision heads, to familiarise myself with the complex web of Ford, and to approach him for any contacts or help. Because he was a non-Ford-lifer himself, coming from a consulting background, he was sympathetic and understood the difficulties of getting to grips with a complex organisation like Ford.

However, after two months in the organisation, the tide turned. As discussed in the Findings

Chapters, Ford ran into financial difficulties and Nasser was ousted in October 2001. His replacement, Bill Ford, advocated a 'back to basics' strategy, threatening the viability of ConsumerConnect. My principal sponsor in Europe was asked to resign (in January 2002) and my access seemed threatened. However, since I still had contact with my US sponsor and I had already established relations with the European subdivision heads, one of whom replaced my European sponsor, I was able to renegotiate access. However, my new European sponsor limited the scope of my access to CCE's business-to-consumer operation, as he felt it was the strongest, most active, and most concrete operation, while the other subdivisions were becoming too politicised and were already disintegrating.

4.3.2.3 *Scoping the Study*

Upon my renegotiation of access, the scope of my study split into two interrelated levels. At the macro level, I studied the general life cycle of CCE and, at a micro level, I focused on its B2C e-business subdivision, named "Drive", which changed to "E-ssembly" as the joint venture model failed. I also studied the departments that E-ssembly interacted with, which included the parent, CCE, and also Ford of Europe Marketing, Acceleration Solutions Centre and Acceleration Maintenance Centre (i.e. Ford IT's e-business centre); Jaguar; Volvo; Land Rover; Ford of Britain; and Ford Purchasing.

My study ended with the official termination of CCE and its subdivisions on December 31, 2002. I made frequent visits to CCE from August 2001 until January 2003. Since I had maintained contact from my Masters dissertation in summer 2000, and I was able to gather a recent historical account of the events in ConsumerConnect from my interviewees, the official *time scale of my study is the entire life cycle of CCE* (including E-ssembly), from its establishment to termination, from *June 2000 to December 31st 2002*. Given that I was conducting my fieldwork mostly within the life cycle of CCE, I was also able to implicitly follow one of Pettigrew's (1990) important directives of longitudinal field research on change: *duality of time* (i.e. time as chronology and time as a social construction). Pettigrew asserts that "we have to study events and the social constructions of those events in the context of the important time cycles which help to provide the implicit rhythm of particular social systems" (Pettigrew 1990, p.273).

4.3.3 **Target Audience**

Those who may find this thesis relevant include academics and practitioners interested in technology-driven organisational change. In particular, those who are specifically interested

in e-business implementation in large established organisations should find this research insightful. More specifically, those interested in a case study of a large blue-chip organisation, of an automotive manufacturer, or of Ford Motor Company and its e-initiatives should see this research as especially pertinent. In addition, researchers considering the employment or operationalisation of structuration theory should relate to the methodology and analysis of the study. Finally, researchers conducting case studies in large established organisations may see many parallels in my work.

4.4 Research Techniques

In terms of fieldwork, I navigated through the process using a combination of plans and improvisation as recommended by Scott (2000), who declares that “field research is dynamic, and demands both *intuition* and *improvisation*” (Ibid, p. 27). The improvised angle was very situational and was always working in combination with the planned angle.

From the planning perspective, in order to first gain a general understanding of the organisational context, I began with observation in the organisational environment and analysis of internal and external documents. This was followed with semi-structured interviews, supported by further observation and document analysis. Such a combination of research techniques provides *data triangulation* (Denzin 1978; Janesick 1994) and is in accordance with standard qualitative research designed to tackle the validity and reliability of a case study (Marshall and Rossman 1995; Yin 1994). Yin maintains that “a major strength of case study data collection is the opportunity to use many different sources of evidence” (Yin 1994, p.91). Creswell (1994) also supports that “in many qualitative studies, multiple data collection procedures are used (p.149). Although triangulation may seem initially a rather positivist stance, it can also be applied to accommodate the *principle of suspicion* in interpretive research. As mentioned earlier, this principle requires sensitivity to possible “biases” and systematic “distortions” in the narratives collected from the participants.

This data triangulation (among different resources and within an interview itself) still respects the interpretive tradition, since people may tell me what they think I want to hear rather than what they really feel, which defeats the purpose of acquiring their personal interpretations. Hence, even within the interview, I tried to triangulate their own perceptions through different forms of question and I also compared their views with other sources (e.g. other interviewees, observational notes, and documents). Consequently, “any finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different

sources of information, following a corroboratory mode” (Yin 1994, p.92). Furthermore, with triangulation, the potential issue of *construct validity* is also tackled as “multiple sources of evidence provide multiple measures of the same phenomenon” (Ibid, p.92). Each of these research techniques is elaborated next.

4.4.1 Documentation

Prior to entering the organisation, I gathered and reviewed the organisational context through secondary resources such as newspaper, trade journals, consultancy reports, and financial reports.

Upon entering CCE, I collected and reviewed documents such as their organisational charts, mission statements, power-point presentations, action plans and internal Ford Magazines. As I became more established in the organisation, I had access to agendas, announcements, minutes of meetings, and administrative documents (e.g. proposals, progress reports).

Most documents were helpful in supplementing the technical jargon employed by the interviewees and filling in details (e.g. timelines, project goals, names, titles, roles). They were also useful in gaining insight into the official perspective, as opposed to the informal one typically provided by the interviews. As recommended by Yin (1994), I was careful *not* to accept documents as literal recordings of events or as unmitigated truths. I was conscious that certain documents were written for a specific purpose and audience, rather than for my research objective. However, certain inferences from and reflections on the communication can be made from such documents. Furthermore, documents serve as a means to “corroborate and augment [or question] evidence from other sources” (Ibid, p.81).

4.4.2 Observation

Qualitative observation is naturalistic in the sense that it records events of the quotidian life of the phenomenon under study. The essence of *direct observation* is noticing a phenomenon and recording it for scientific purposes. This implies that the observer does not intervene in the phenomenon (as opposed to participant-observation), does not manipulate or stimulate what is observed, and follows the flow of events – “Observations open the phenomenological complexity of the world and allow the researcher to witness connections and relationships” (Silva 1997). Adler (1994) acknowledges that one of the limitations of observations concerns their validity as they depend on the researcher’s own perceptions and interpretations. Another limitation is that observations often do not provide statistical significance; however, this

criticism is the same for interpretive research and the same defence can be applied. Similar to documentation, observational evidence is useful in providing additional information about the topic under study.

During the fieldwork at Ford, observation was carried out continuously and a field journal was kept, in which descriptive and reflective notes were distinguished. The former include notes such as “portraits of the informants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events, and activities” (Creswell 1994, p.152). The latter include personal thoughts of the researcher such as “speculation, feelings, problems, ideas, hunches, impressions, and prejudices” (Ibid, p.152). I was able to silently follow several staff meetings – six senior management meetings in CCE; one budget meeting; three E-assembly and Acceleration Solutions Centre (part of Ford IT) meetings; and one Acceleration Solutions Centre general meeting. In these meetings, I paid special attention to information pertaining to e-business, the perceptions of other Ford stakeholders, the way they talked, their attitudes, their gestures, and the layout of the room. I also shadowed two managers in CCE for a week. Informally, I was able to observe some of the staff from my desk, had lunch with many staff, took coffee breaks, went for after-work drinks, and commuted with them. In these informal interactions, I focused on the jokes, the attitudes, the interactions, and the composition of groups. After these informal encounters, I described and reflected upon the behaviour of groups.

While making my fieldnotes, I followed guidelines presented by Spradley (1980 in Hammersley and Atkinson 1995) in conducting ethnographic research. Spradley advised that records of speech and action be located in relation to *who* was present, *where*, at what *time*, and under what *circumstances*. To preserve a sense of context, he advocates using the following checklist (Hammersley and Atkinson 1995, p.185):

- “Space: the physical place or places
- Actor: the people involved
- Activity: a set of related acts people do
- Object: the physical things that are present
- Act: single actions that people do
- Event: a set of related activities that people carry out
- Time: the sequencing that takes place over time
- Goal: the things people are trying to accomplish
- Feeling: the emotions felt and expressed.”

4.4.3 Interviews

Walsham (1995) contends that interviews are the primary data source for interpretive case studies because as an outsider, this technique can best access the interviewees' interpretations of their actions and events, as well as their beliefs and aspirations. Yin (1994) also supports this view as interviews can provide important insights into a situation and can also serve as shortcuts to the prior history of the situation. However, interviews are "verbal reports only" (Yin 1994, p.85) and are subject to "common problems of bias, poor recall, and poor or inaccurate articulation" (Ibid, p.85). Thus, interview data need to be corroborated against other sources (Ibid; Gaskell 2000).

For this research, semi-structured interviews, as the primary data source, were conducted with the relevant members within CCE and E-ssembly, and associated stakeholders within Ford. *Semi-structured interviews*, as their name implies, lie between structured and unstructured interviews. In the former, the researcher pre-establishes a set of categories and questions that direct the interview. In the latter, the interviewee is allowed to express any view of the phenomena under study. For interpretive case studies, Walsham (1995) warns against erring on the side of over-direction or excessive passivity. He advocates a balance between the two in order to protect the interviewees either from feeling that the researcher is not interested in their views or from doubting the professional competence of the researcher.

4.4.3.1 Interview Selection and Scope

As a sole researcher with a constrained time frame, I had to *purposefully* select interviewees that would best address my research question within my research scope, rather than randomly select informants (Creswell 1994). The real purpose underlying this selection process was to maximise the opportunity to explore and understand the range of opinions and different representations of the research issue (Bauer and Gaskell 2000). Consequently, in order to gain confidence that a full range of views was covered, I had to interview people from different departments and at different levels. For example, from CCE, I interviewed key stakeholders such as the founders, senior executives, middle managers, human resource personnel, implementers and ex-employees. From E-ssembly, I interviewed decision makers, project champions, implementers, adopters, technical staff, budgeting staff, joint venture partners and branched out to its clients, to Ford IT, and to Ford Purchase.

The final list of interviewees was determined partly from a referral process by the interviewees, partly from the feasibility of obtaining the interview, partly from the

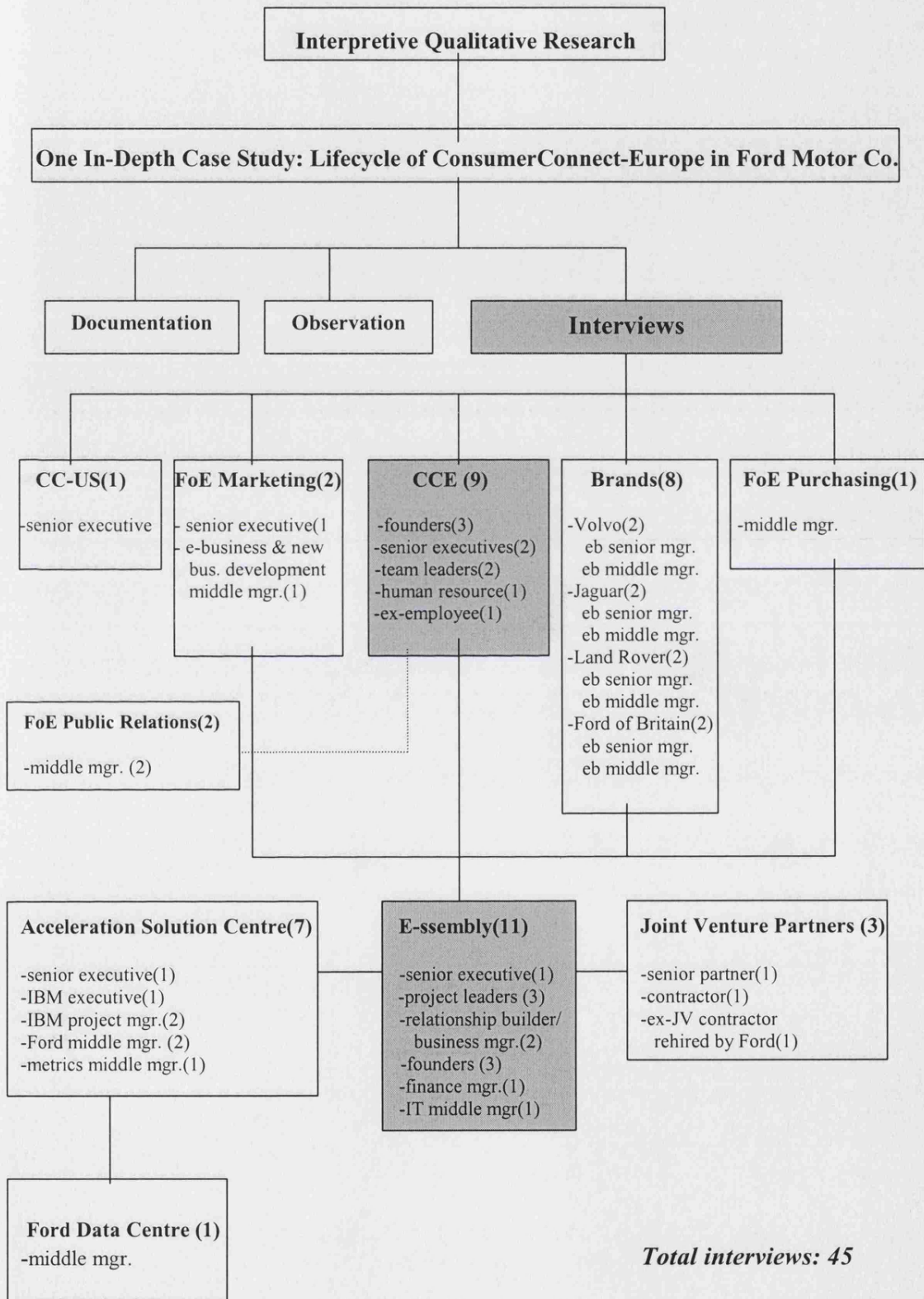
applicability of the interviewee to the research scope, and partly from a heuristic process in which the researcher felt that no particularly new insights or perspectives were forthcoming; “the point of meaning saturation” (Ibid, p.43). This point signalled the time to stop conducting further interviews as “all things being equal, more interviews do not necessarily imply better quality or more detailed understanding” (Ibid, p.43). Bauer and Gaskell (2000) mention two reasons to cease interviews once that point has been reached. Firstly, they believe that there are a limited number of interpretations or versions of reality. This is apparent when the first few interviews are filled with surprises, but as they progress, common themes begin to appear and few new insights emerge. Secondly, they point out “the issue of the size of the corpus to be analysed” (Ibid, p.43). To properly appreciate the corpus of texts and to go beyond a mere selection of several illustrative quotations, it is essential to almost live in and dream of them (Ibid).

Graphically, my interview scope (in relation to research techniques, strategy, and paradigm) is expanded in *Figure 4.4-1* and my list of interviewees is shown in *Table 4.4-1*.

Table 4.4-1 List of Interviewees

<i>Departments</i>	<i>Number of Interviews</i>
ConsumerConnect (inc. Europe & US; E-assembly)	21
Ford IT (inc. ASC, AMC, IBM, Compuware)	8
Joint Venture Partners	3
Brands (inc. Ford of Britain, Volvo, Jaguar, Land Rover)	8
Ford of Europe- Marketing	2
Ford of Europe- Purchasing	1
Ford of Europe Public Relations	2
Total	45

Figure 4.4-1 Interview Scope



4.4.3.2 *Building Rapport*

In an interview setting, the interviewees may feel self-conscious, hesitant and defensive. They may feel inclined “to limit answers to what is presumed to be relevant and informative and to adopt positions on issues that match a particular self-image” (Ibid, p.45). It was therefore essential for me to establish a *rappor*t with the interviewees, especially within the highly politicised and unstable environment of FMC, and to encourage the interviewees to talk openly. This was achieved through the establishment of a relaxed, interested and sympathetic atmosphere and through the order and style of the questions (the latter is discussed in the next section).

To some degree, it was easier for me, as a young female academic researcher, to establish a rapport compared to outside consultants or a joint venture partner. Long-term Ford employees generally held an aversion towards outside consultants and technology “whiz kids”, viewing them as arrogant outsiders who were not concerned with Ford’s best interests. In a predominantly male environment, I conveyed a non-threatening, sensitive and academic (rather than commercial “reduction in head count”) attitude. In the first few weeks, the staff were willing to explain the organisational context to me and once I earned their trust, they were content to discuss their deeper concerns and opinions openly.

I had few problems in securing interviews as I was able to use the highly politicised network by applying a referral technique to gain interviews and I was a non-threatening academic researcher. Some interviews were difficult to schedule but nobody declined an interview.

I had enhanced my interviewing skills through conducting twelve joint interviews in a similar area for a research project (i.e. “E-business Prospects: Findings from an Expert Panel” with the British Computer Society Socio-Technical Specialist Group) and had worked with senior research partners. Secondly, I had extensively tested and revised my interview schedules with colleagues before entering my fieldwork. For these reasons, I decided against conducting pilot interviews in Ford. However, within Ford, I started interviewing people with less significant roles first, and generally saved the most important interviews (e.g. with senior executives) for later. This ordering not only permitted me to refine my interview schedules and skills as I progressed, but it also enabled me to improve my comprehension of the overall context and issues before comparing them with the senior executives’ views.

On average, interviews lasted 90 minutes. Where more time or further clarification was needed, a second round was arranged. Second rounds, depending on complexity and

availability, were conducted either via telephone or face-to-face. In cases where queries were relatively simple, email was used instead of a second interview. With several key people, two rounds of interviews at different phases of ConsumerConnect's lifecycle (i.e. operation and termination phase) were conducted.

As Walsham (1995) emphasises, accessing people's thoughts and views requires good social skills and personal sensitivity. He supports Zuboff's interview approach, which I strived to maintain, involving a 'non-judgemental form of listening' (Ibid, p.78). As the rapport developed, the interviewee was more likely to be relaxed and expansive, to consider and discuss issues beyond surface opinions. Equally, I was able to probe for further details.

More specifically, I structured the interview carefully, starting with some introductory comments about the research, thanking the interviewee for participating, and requesting permission to tape record the session. I started the main interview with straightforward, interesting and unthreatening questions. I tried to show interest in the interviewee's responses and turned the interview into a conversation by picking up on points and asking for more details. Thus, the interview became "an interaction, an exchange of ideas and meanings...to this extent both the respondent(s) and the interviewer are involved, in different ways, in the production of knowledge" (Gaskell 2000, p.45).

Tape-recording was advantageous as it provided a more accurate record of an interview than note-taking, but with the disadvantage that the interviewee may feel inhibited by the presence of the machine (Walsham 1995). To counter this, at the beginning of the interview, I informed the participant that the device was solely for *aide-mémoire*, that everything they told me would be in confidence, and that I would switch it off whenever they wished, which only happened on one occasion. Usually, when interviewees felt that they had revealed something controversial, they would simply emphasise that the point made was 'just between you and me'. The recording device was an unobtrusive quiet digital recorder, the size of a highlighter. In the case of telephone interviews (interviews with Volvo staff in Sweden and with ConsumerConnect-US), I also recorded the speaker phone session.

When closing the interview, I ended with uncontroversial questions and asked the interviewees whether they had anything else they would like to add or emphasise. This gave the respondents time to 'come out' of the interview mode before leaving as well as an opportunity to add further comments when the tape recorder was switched off. I thanked the participants for their time, reassured them of confidentiality, and repeated how the

information would be used.

4.4.3.3 *Design of Interview Schedules*

The design of the interview schedule was based on research sub-questions derived from the expansion of the main research question, which itself was dictated by the overarching research purpose. It was developed partly from some of the theoretical conceptions in Giddens's framework, partly from themes arising from the Literature Review, partly from other well-established interview schedules, partly from intuition, partly from the study of interview handbooks, and partly from the case study itself. Extensive care was taken in building the interview schedules. It went through many editions and was tailored to each interviewee.

In building the interview schedules, in accordance with Wengraf's (2001) directives, *research questions* (i.e. main research questions and research sub-questions) were distinguished from *interview-questions/prompts*. In essence, the research questions 'govern' the production of the interview questions, but they are posed in the language of the research community, while the interview questions are formulated in the language of the interviewee. Consequently, Wengraf (2001, p.67) points out that

“it is almost always harmful to couch informant questions in the researcher language; informants have their own language, which the interviewer must learn in order to be effective. Interview questions should rarely, if ever, be simple ‘echoes’ of theory questions.”

Wengraf (2001) further proposed that to bridge the main research question to the interview questions, one should develop several research sub-questions that are related to the case study and aimed to gather a holistic understanding of it (see also Barzelay 2002). Such research sub-questions were developed and refined during my fieldwork, but each revision was related to earlier versions. The final four research sub-questions that became most relevant to the case study and that are examined in the Discussion Chapter were:

- i. *What was it about the structures of Ford Motor Company that made ConsumerConnect-Europe's intervention vulnerable to collapse?*
- ii. *What was it about ConsumerConnect-Europe's own structures that made it vulnerable to collapse?*
- iii. *What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?*
- iv. *What was it about the dynamic outer context that helped to turn these vulnerabilities*

into a downward spiral?

From each sub-question, one can then develop sets of interview questions appropriate for a type of respondent. In *Figure 4.4-2*, I have laid out this link from research purpose, to main research question, to research sub-questions. In *Figure 4.4-3* (interview questions for CCE) and *Figure 4.4-4* (interview questions for other stakeholders), I have continued the link from research sub-questions to a sample of interview questions. It is important to note that many single interview questions serve to answer *more than one* research sub-question, but for the sake of diagrammatic simplicity, they have been allocated to one main research sub-question below. Finally, since the interview questions were not phrased using the vocabulary of structuration, many of the interviewees' responses encapsulate several elements and dimensions of structuration, which I then 'unpack' in analysis.

Figure 4.4-2 Research Purpose -> Central Research Question -> Research Sub-Questions

<i>Research Purpose</i>	<i>Central Research Question</i>	<i>Research Sub-Questions</i>
E-business and Organisational Change	How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?	RSQ1: What was it about the structures of Ford Motor Company that made ConsumerConnect-Europe's intervention vulnerable to collapse?
		RSQ2: What was it about ConsumerConnect-Europe's own structures that made it vulnerable to collapse?
		RSQ3: What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?
		RSQ4: What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?

Figure 4.4-3 Research Sub-Questions -> Interview Questions for ConsumerConnect-Europe

<i>Research Sub-Questions</i>	<i>Interview Questions</i>
RSQ1: What was it about the structures of FMC that made CCE's intervention vulnerable to collapse?	<ul style="list-style-type: none"> ▪ What has been the effect of the change in senior management on CCE? ▪ How does Ford's overall strategy affect CCE? ▪ How does Ford' culture affect CCE? ▪ How do events within Ford affect CCE? ▪ What worked during your period at CCE? (e.g. allies, champions, receptiveness to innovation, employees, key events, outsiders, and turning points, etc.) ▪ What didn't work? (e.g. resistance, obstacles, regrets, outsiders, key events, and turning points, etc.) ▪ Are there differences in culture amongst the departments? Effects?
RSQ2: What was it about CCE's own structures that made it vulnerable to collapse?	<ul style="list-style-type: none"> ▪ What aspects of your job do you like? <ul style="list-style-type: none"> ○ If you could change certain aspects of it, what would they be? ▪ What makes a good/bad working day? <ul style="list-style-type: none"> ○ What is the ratio between good/bad working days? ▪ In your own words, what do you think the role/purpose/mission of CCE is? <ul style="list-style-type: none"> ○ How successful/unsuccessful has CCE been in achieving this role/purpose? ▪ How does CCE compare to other e-business suppliers/consultants? ▪ What were some of CCE's victories and failures? ▪ What sort of resistance did CCE face? How was resistance dealt with? Was resistance overcome? ▪ To what extent (i.e. not at all, a little, moderately, a great deal, totally) did the following factors adversely affect CCE's status within Ford? Why for each factor? <ul style="list-style-type: none"> ○ Existence as a separate unit; CCE's strategy; CCE's partnerships; attitudes from other departments; internal structure; employees; resources and budget; methods; communication skills; technology; organisational power; and culture
RSQ3: What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?	<ul style="list-style-type: none"> ▪ How would you describe the relationship between CCE and the other departments over the years? Why? ▪ How is resistance dealt with? ▪ What other mechanisms were employed to facilitate acceptance? ▪ What is your opinion of the different CCE functions going back to core functions? ▪ To summarise, out of this CCE story, what would you say would be the key lessons for Ford? <ul style="list-style-type: none"> ○ Key lessons for CCE?
RSQ4: What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?	<ul style="list-style-type: none"> ▪ How did early events outside Ford affect CCE? ▪ How do events outside Ford affect CCE? ▪ Is there anything that CCE could have done to survive? ▪ Who gains or loses from this reintegration back? ▪ How has CCE's standing in Ford changed over the years?

Figure 4.4-4 Research Sub-Questions -> Interview Questions for Other Stakeholders

<i>Research Sub-Questions</i>	<i>Interview Questions</i>
RSQ1: What was it about the structures of FMC that made CCE's intervention vulnerable to collapse?	<ul style="list-style-type: none"> ▪ What has been the effect of the change in senior management on CCE? ▪ How does Ford's overall strategy affect CCE? ▪ How does Ford' culture affect CCE? ▪ How do events within Ford affect CCE?
RSQ2: What was it about CCE's own structures that made it vulnerable to collapse?	<ul style="list-style-type: none"> ▪ In your own words, what do you think the role/purpose/mission of CCE is? <ul style="list-style-type: none"> ○ How successful/unsuccessful has CCE been in achieving this role/purpose? ▪ How does CCE compare to other e-business suppliers/consultants? ▪ What do you think about carving CCE out as a separate unit? ▪ What were some of CCE's victories and failures? ▪ Are there differences in culture between your department and CCE? Effects? ▪ To what extent (i.e. not at all, a little, moderately, a great deal, totally) did the following factors adversely affect CCE's status within Ford? Why for each factor? <ul style="list-style-type: none"> ○ Existence as a separate unit; CCE's strategy; CCE's partnerships; attitudes from other departments; internal structure; employees; resources and budget; methods; communication skills; technology; organisational power; and culture
RSQ3: What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?	<ul style="list-style-type: none"> ▪ How would you describe the relationship between CC and your department over the years? Why? ▪ What is your opinion of the different CCE functions going back to core functions? ▪ To summarise, out of this CCE story, what would you say would be the key lessons for Ford? ▪ Key lessons for CCE?
RSQ4: What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?	<ul style="list-style-type: none"> ▪ How do events outside Ford affect CCE? ▪ Is there anything that CCE could have done to survive? ▪ Who gains or loses from this reintegration back? ▪ How has CCE's standing in Ford changed over the years?

The development and refinement of the research sub-questions and the interview questions progressed throughout the fieldwork, as I regularly reflected on the data gathered, the organisational context, and the interview session. By cross-referencing interview questions with research sub-questions, I was able to determine whether the interview questions met the criteria of '*necessity and sufficiency*' (Wengraf 2001, p.74). This helped ensure that I would not squander too much of the limited interview time by asking irrelevant questions. However, as it was a semi-structured interview, not all questions were planned and some questions arose spontaneously in relation to the interviewee's responses. Nonetheless, I tried to always maximise the interview session by keeping my research objective in mind.

In terms of planning the sequence of the interview questions, I grouped the interview

questions along the interview logic, rather than in accordance with a research sub-question. This logic comprised of four stages: (1) discuss interviewee's background at Ford; (2) discuss interviewee's experiences in/with CCE (or E-ssembly); (3a) draw a schematic representation of the stakeholders involved in e-business and discuss their relations or (3b) discuss a questionnaire sent to interviewees in advance; and (4) quickly discuss the future of e-business in Ford. (See *Appendix II* for examples of Interview Schedules applied.)

Furthermore, not all questions in the interview schedule were posed to the respondent if I felt that such questions were already answered in an earlier part of the interview or were less pertinent to the interviewee. The interview schedules included in *Appendix II* contain more questions than were usually asked. These questions served as prompts, teased out missing elements, and kept interviews roughly on track.

In the interview schedule itself, several considerations were taken in the design of the questions. Firstly, I was careful not to raise leading or biased questions to avoid contaminating the response. Instead, for some questions, I offered a range of possible and legitimate answers so as to indicate to the interviewee why all of them might be reasonable and welcome by me (Wengraf 2001).

For example:

- In your own words, what do you think the role/purpose/mission of the ConsumerConnect Department was?
 - How *successful/unsuccessful* have they been in achieving this role/purpose?
- So overall, how would you categorise this past relationship? Would you call it a:
 - Forced alliance
 - Strategic alliance
 - Default (easiest available) option
 - Principle-agent relationship/money talks
 - Or something else?
 - Why?
- What does the future of E-ssembly look like? (e.g. bright, dim, bleak, dark)
 - If he is only positive....
 - Don't you have any concerns about the future? What are they?
 - If he is somewhat negative...
 - What specific concerns do you have about the future of E-ssembly?
 - If he is somewhat negative...
 - What specific concerns do you have about the future of E-ssembly?

Secondly, I applied vignettes (scenarios) in order to differentiate between perceived and actual power differences in relationship between CCE and its stakeholders:

For example:

- Please imagine this scenario: Say you have been negotiating with ConsumerConnect over an e-business project, and you have generally settled all the details, but before the signing of the contract, ConsumerConnect tells Volvo that they cannot deliver all that you want. What do you do?
 - Would it be possible for you to find another supplier? How easy would it be for you?
- Here's another scenario: Say you have already entered into an e-business agreement with ConsumerConnect. Now when the project starts, how easy would it be for ConsumerConnect to change/reduce the deliverables? How easy would it be for Volvo to change/add deliverables?

Thirdly, I applied *indirect questioning* (Wengraf 2001) to satisfy controversial research sub-questions (e.g. trying to extract information on “what was it about ConsumerConnect’s own structures that made it vulnerable to collapse?” from CCE employees)

For example:

(When asking ConsumerConnect employees)

- What aspects of your job do you like?
 - If you could change certain aspects of it, what would they be?
 - So overall, would you like to stay in this job? (If extreme negative: How did you end up in this job?)
- What makes a good/ bad working day?
 - What is the ratio of good to bad days?

Fourthly, for certain research questions, I employed *direct questioning* (Wengraf 2001), when there was “no point in indirectly beating about the bush” (Ibid, p.172).

For example,

- Among these factors, what would you say to be the most or among the most significant factor(s) that adversely affected ConsumerConnect? Why?
- What improvements can you suggest ConsumerConnect to make?

Finally, in line with the principle of suspicion of interpretive studies, I applied two other types of questioning in order to contrast, corroborate or fill in missing elements from the first two sections of the interview session. One type of questioning was to ask the interviewee to draw a visual representation of the departments they typically interacted with and then to discuss the relationships between the different departments. Probing questions followed the schematic representation.

For example:

- Who were the key decision makers?
- Which departments do you have to work closely with? How smooth or difficult are the interactions with these departments?
- What is E-ssembly's relationship with Jaguar, Land Rover, ASC? CC? Dealers? Marketing and Sales? Do you think ASC charges fair/unfair prices? If not→ Why not? How do you view their 80/20 rule? Is there anything else that bothers you regarding their charging methods?
- In this project, what sort of resistance did you face? How was resistance dealt with? Was resistance overcome?
- What other mechanisms were deployed to ensure the acceptance of the e-business system to achieve the outcome? (e.g. discourses, threats, training, money, new rules (explicit or implicit, etc.)
- Are there differences in culture amongst the departments in this diagram?
 - a. Define (in your own words) Ford's organisational culture.
 - b. Next, how is E-ssembly's culture different/similar?
 - c. Are there other departments that share a similar culture to E-ssembly?
 - d. Now within E-ssembly, are there differences in culture?
- Have the cultures of other departments changed as a result of interactions with E-ssembly or as a result of the introduction of this new e-business system (e.g. through interaction, different dress code)?
 - a. If changes→What have been the causes of these recent changes in the group norms or meanings?
- How would you describe other departments' attitude(positive/negative) towards E-ssembly? Why? Is this the same for ConsumerConnect-Europe?
- Are there any power relations/differences among the departments in this diagram?
 - a. OK, so which groups want to exert power over others in this diagram? Which group is subject to control then?

This type of visual representation and follow-up questioning was primarily applied in the earlier days of my field work when I was still coming to grips with the organisational dynamics and when CCE was still functioning in its operation phase. Once I had captured a more comprehensive understanding of the context and when CCE was in its termination phase, I conducted second round interviews and employed another type of questioning, the 'questionnaire' approach (*see Figure 4.4-5*) in the third part of the interview, to compare with interviewees' earlier responses.

Figure 4.4-5 Questionnaire – Evolution of ConsumerConnect-Europe

In your judgement, to what extent did the following factors ADVERSELY affect ConsumerConnect: (For each factor, I will ask you, “WHY?”) (Please tick the appropriate BOX in each case).

	NOT AT ALL	A LITTLE	A MODERATE AMOUNT	A GREAT DEAL	TOTALLY	DON'T KNOW/NOT APPLICABLE
Ford Factors						
1. Events outside Ford	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Events within Ford	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Ford’s overall strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Ford’s culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ConsumerConnect US	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ConsumerConnect Europe Factors						
6. Existence as a separate unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. CCE’s strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. CCE’s partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Attitude of other departments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. IT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Brands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. FCSD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Others?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Internal structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Resources and budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Communication skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Organisational power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. CCE’s culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Others?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each factor, I asked the interviewees 'why' they chose such a degree of significance, in order to better capture their structures of signification, domination and legitimation. This questionnaire proved to be a useful tool in summarising, revising, and filling-in issues mentioned in the earlier two sections of the interview.

In conclusion, from the above account of the various research techniques, strengths and weaknesses are apparent. Together, they helped mitigate each other's weaknesses and corroborated findings. Creswell (1994) and Yin (1994) summarise the qualitative data collection techniques, options, advantages and limitations in the following *Table 4.4-2* (adapted from Creswell 1994, p.150-151 and Yin 1994, p.80):

Table 4.4-2 Qualitative Data Collection Techniques, Options, Advantages and Limitations

<i>Data Collection Techniques</i>	<i>Options within techniques</i>	<i>Advantages</i>	<i>Limitations</i>
Documentation	Public documents (e.g. minutes, newspapers, charts) Private documents (e.g. emails, journals, letters)	Enables researcher to obtain the language and words of informants. Can be accessed at a time convenient to researcher—an unobtrusive source of information. Represents data that are thoughtful in that informants have given attention to compiling. As written evidence, it saves a researcher the time and expense of transcribing.	Retrievability—can be low Biased selectivity, if collection is incomplete Reporting bias—reflects unknown bias of author Access—may be deliberately blocked Requires transcribing or optically scanning for computer entry. The documents may not be authentic or accurate.
Observation	Complete observer—researcher observes without participating	Researcher has firsthand experience with informant. Reality-- researcher can record events in real time. Contextual—covers context of event. Unusual aspects can be noticed during observation. Useful in exploring topics that may be uncomfortable for informants to discuss	Time consuming. Selectivity—unless broad coverage. Reflexivity—event may proceed differently because it is being observed. Cost---hours needed by human observers. Researcher may be seen as intrusive. “Private” information may be observed that researcher cannot report. Researcher may not have good attending and observing skills.
Interviews	Face-to-face— one on one, in-person interview Telephone— researcher interviews by phone	Useful when informants cannot be directly observed. Informants can provide historical information. Allows researcher to “control” the line of questions. Targeted—focuses directly on case study topic. Insightful—provides perceived causal inferences.	Provides “indirect” information filtered through the views of interviewees. Provides information in a designated “place,” rather than the natural field setting. Bias due to poorly constructed questions. Response bias. Inaccuracies due to poor recall. Reflexivity—interviewee gives what interviewer wants to hear. Not all people are equally articulate and perceptive.

4.5 *Qualitative Data Analysis*

4.5.1 **Data Preparation and Coding**

Upon collection of the vast amounts of data from the research techniques described above, data were organised chronologically within organisational stakeholder groups. All data collected from interviews, documents, observational notes (including brief anecdotes or vignettes of specific events and actions) and secondary resources were then transcribed and prepared for coding, using Nvivo2.0, a qualitative analysis software package.

In the coding stage, a theoretical coding procedure (Strauss 1987; Flick 1995; Cornford and Smithson 2004) was largely applied. This procedure derives the themes from the interviews and then acts as a basis for comparison. This fits the situation when the selection of interviewees and the questions asked are related to a broad research question, which was the case for my fieldwork. This procedure is concerned with the social distribution of perspectives on a phenomenon or a process and is appropriate for the use of semi-structured interviews. For each text, the procedure first identifies concepts, and then categorises them into more generic concepts and relationships between concepts. Expressing these steps in more formalised terms, the steps of theoretical coding encompass (Cornford and Smithson 2004, 186-187):

- “Open coding- the original text is segmented and concepts (or codes) within it are identified by examining the text in detail. Initial categories (groups of concepts) are formed.
- Axial coding- the categories, concepts and relationships are then refined.
- Selective coding- refinement is continued at a higher level of abstraction in order to tease out the core category and the central storyline”

As open, axial and selective coding are carried out for each interviewee and text, themes and categories emerge on a situational basis and are organised on a chronological basis. Such themes are then compared across interviewees within their respective chronological moment and also against the research question and theoretical framework.

My rationale for adopting this coding approach was guided partly by this theoretical coding procedure and partly through intuition – it made sense to me. The themes that emerged during coding were guided by the data itself and partly by my research objective, my theoretical conception, and themes from the organisational change literature.

I was aware that in interpretive qualitative research, the research techniques and data coding

are not ends in themselves. Although systematic coding can facilitate data analysis, it is essential to 'step back' from the data and try to gain an understanding of the bigger picture and, through inspiration, make connections. Data analysis is by no means a matter of turning the handle and automatically enjoying the emergence of significance from the data.

In effect, data collection, coding, and interpretation are ongoing and iterative processes throughout the research (Huberman and Miles 1994). Coding is just an element in gaining insight into the research project and should not be applied so rigidly to the extent of falling into 'methodolatry' – a "preoccupation with selecting and defending methods to the exclusion of the actual substance of the story being told" (Janesick 1994, p.215).

4.5.2 Interpretation

At some level, an interpretive researcher is engaged in the interpretation process all the time (Schultze 1999). Even the conduct of semi-structured interviews presents an intense environment in which one contrasts one's expectations with the answers received in practice (Scott 2000). There is an intuitive self-reflection process in play during the interview. Myers (2004) stresses that in interpretive research, the distinction between the stage of data collection and that of analysis are not as discernible as in positivist research. He argues that an interpretive researcher's presuppositions will have some impact on what kinds of data are to be gathered, what questions are to be asked, and what will subsequently influence the outcome of data analysis. To put it simply, "the analysis affects the data and the data affect the analysis in significant ways" (Myers 2004, p.6). As Orlikowski and Baroudi (1991) put it, "Research methods and assumptions [and thus data analysis] are not learned and appropriated in a vacuum" (p.24).

In effect, after the interview itself, I quickly transcribed interviews, made summaries of transcripts, and highlighted key quotes, supplemented by points taken from media, internal documentation, and my field journal, which detailed my interpretation of events and described issues not captured in the transcripts.

At the crux of the interpretive case study process are successive readings of the data and codes. This arduous, meditative re-visiting of familiar data, issues, themes and concepts form the fabric of data analysis (Scott 2000). Miles and Huberman (1994, Chapter 10) propose thirteen commonsense tactics for drawing meaning from a particular configuration of data. Among their tactics, one, which I found to be particularly applicable, includes *noting patterns*

and themes and seeing plausibility. Such a tactic requires close examination of data and permitting intuition and impressions to freely draw out themes. These impressions can then be *clustered* (i.e. “trying to understand a phenomenon better by grouping and then conceptualising objects that have similar patterns or characteristics” p.249) and ‘*counting*’ of frequencies and consistencies as signifying importance. Another helpful tactic is to study the *metaphors* that respondents use in making sense of their experience. Miles and Huberman stress that “the richness and complexity of metaphors are useful” (Ibid, p.250). Yet another helpful tactic was to study *contrasts and comparisons*. Through all these differing tactics, Miles and Huberman then suggest *subsuming particulars into the general*. This is a conceptual and theoretical activity and involves thinking iteratively between “first-level data and more general categories that evolve and develop through successive iterations” (Ibid, p.256).

As major themes, issues, and contradictions were identified, they were pursued in discussions with my supervisor and peers and compared to the literature. In addition, the writing up of an interim analysis was also helpful, as the process of writing itself asserts “a certain ruthless clarity, exposing bone where the researcher thought there would be flesh, or inspiring ‘chronigami moments’ (Kavanagh and Araujo 1995), where she suddenly sees connections and processes emerge from formerly separate events” (Scott 2000, p. 44). Such interim analysis was helpful in that it helped me achieve a certain ‘critical distance’ from the data and fine-tuned my interview schedules. It also allowed a certain testing and triangulating of my interpretation of data. Additionally, the writing up of interim analyses helped reduce the amount of data already collected while I was still gathering more (Huberman and Miles 1994). I was, however, conscious that these interim analyses only served a temporary status and were open to revision.

In terms of low-level analytical techniques, Stake (1995) suggests four forms: categorical aggregation, direct interrelation, pattern establishment, and naturalistic generation. Yin (1994) suggests that case study analysis can take place in the form of time series or pattern matching. Cornford and Smithson (2004) found that information systems mostly employ discourse analysis and narrative analysis. Discourse analysis (Gill 2000) can be differentiated from conversation analysis by the attention of the former on the content of the discourse, “rather than linguistic organisation” (Flick 2002, p. 200). Narrative analysis is useful when a researcher is enquiring into a sequence of events and is inclined to stimulate a narrative interview in order to reconstruct biographical processes (Flick 1995). However, the narrative interviews are not mandatory for a narrative analysis, as Bruner (1987) argues that life itself is

a narrative, and the researcher's first step is usually to take the text and remove all the non-narrative material before analysing what remains.

At a higher level of abstraction, Myers (2004) identifies several interpretive modes of analysis including approaches such as hermeneutics, semiotics, narrative, metaphor and, arguably, grounded theory. The common thread among these qualitative modes of analysis is their principal concern with textual analysis of verbal or written material. In this thesis, I subscribe to hermeneutics as the general mode of analysis.

As described earlier, hermeneutics is an underlying philosophy that provides the philosophical grounding for interpretivism, and one of the fundamental principles of interpretive research (Klein and Myers 1999). It can also be treated as a specific mode of analysis (Myers 2004), where it is predominantly concerned with the *meaning* of text or text-analogue (e.g. transcriptions of interviews). The core theme of a hermeneutic circle is "learning the whole through learning the part" (Rathswohl 1991, p.237). This entails a process of interpreting/reinterpreting iteratively between the parts and to reiterate this process when anomalies surface. Repeating this process allows researchers to formulate new interpretations and refine some presuppositions. Ricoeur (1974 in Myers 2004) explains that:

"the anticipation of meaning in which the whole is envisaged becomes explicit understanding in that the parts, that are determined by the whole, themselves also determine this whole...[Thus,] interpretation...is the work of thought which consists in deciphering the hidden meaning in the apparent meaning, in unfolding the levels of meaning implied in the literal meaning" (Myers 2004, p.7)

Similarly, in an organisation, different stakeholders can have contradicting, incomplete and confused views on many issues; therefore, the task of hermeneutic analysis is to make sense of the whole and of the relationship between the people, the organisation, and information technology (Myers 2004). Examples of IS research which explicitly use hermeneutics include Boland (1991), Lee (1994), and Myers (1994).

The task for the basis of my thesis can be seen as a hermeneutic one. Only if I can obtain and interpret the meaning that organisational members ascribe to e-business can I construct a rich and accurately complex picture of how e-business interacts with organisational change. My hermeneutic process began with an early understanding of e-business within Ford Motor Company, and then, through interviews with different stakeholders, observation, and analysis of documents, I was able to refine my understanding of the greater e-business and organisational change context through the parts. When I encountered surprising (e.g.

anomalies), conflicting or incomplete interpretations of a certain issue, I went back to the original interviewees, or approached others in a similar stakeholder group, for clarification or expansion. This process continued and stopped (i.e. in a rather heuristic manner) when I was fairly confident in my understanding of the e-business and organisational change environment at Ford.

4.5.3 The Practice of Moving from Data to Analysis to Conclusions

It is felt helpful at this point to describe what actually happened in moving from the collected data through to the analysis and the final conclusions. After transcribing the interviews, wherever feasible, I passed the transcript to the interviewee to check its accuracy. Where there were obvious contradictions, either within an interview or between interviewees, I approached the interviewees with specific queries. As noted above, I had designed the interview schedule in the 'principle of suspicion', such that blatant inconsistencies would be apparent.

The other steps described above were followed and the first 'cut' at the data involved coding according to the chronology of the events using the software. However, at the next level, searching for themes proved to be more difficult. This was tackled using an iterative 'top-down' approach using the concepts from the literature review and a 'bottom-up' approach, based on the data itself. In 'top-down' terms, many of the concepts that I expected to find in the data, I found without difficulty. However, there were others, such as user participation and knowledge management, which I had thought would be important but were not mentioned by any of the interviewees. These concepts I discarded.

Turning to the data, there were issues that clearly troubled the interviewees that I had not expected. These included the problems experienced with joint ventures, which had not occurred to me; the arrangements for chargeback, which I had assumed were fairly esoteric; and the changes to the change agent, which again I had not expected. Furthermore, after taking a step backwards and considering the data holistically, I realised that there was the unexpected phenomenon of new 'e-business gaps'. These were divides between the e-business group, ConsumerConnect-Europe and the traditional IT function, who regarded ConsumerConnect-Europe as business people, and between ConsumerConnect-Europe and the traditional business people, who regarded ConsumerConnect-Europe as technical people. This phenomenon had never been mentioned before in the literature. This was an example of inspiration and I checked this idea against the data and there was ample evidence that the

concept was real. The selection of themes was not a linear process; rather it comprised iterative stepping-back and brainstorming.

In selecting the themes, I was evidently influenced, perhaps biased, by the adoption of structuration theory. This theory concentrates on agency and structure, at the expense of emotion and the cognitive aspects of individual decision making. Thus, another researcher, using a different theoretical approach, may well have selected different themes.

Although I had collected various bits of useful documentation during my fieldwork, this proved mostly useful for background information, helping me to understand the functioning of ConsumerConnect-Europe and its dealings with the rest of Ford Motor Company. In preparing the findings, as a narrative (see below), direct quotes from the documentation seemed to be of very limited relevance and tended to break the flow of the narrative and so I did not use much of this documentation directly, although it was clearly in the background of both my research and the actors' playing out of the drama. Had I used actor network theory, the documentation might have played a bigger role, as a non-human actor, but structuration theory tends to relegate documents and structural artefacts to a minor role. Similarly, much of the information that I gained from observation and shadowing was of background value only.

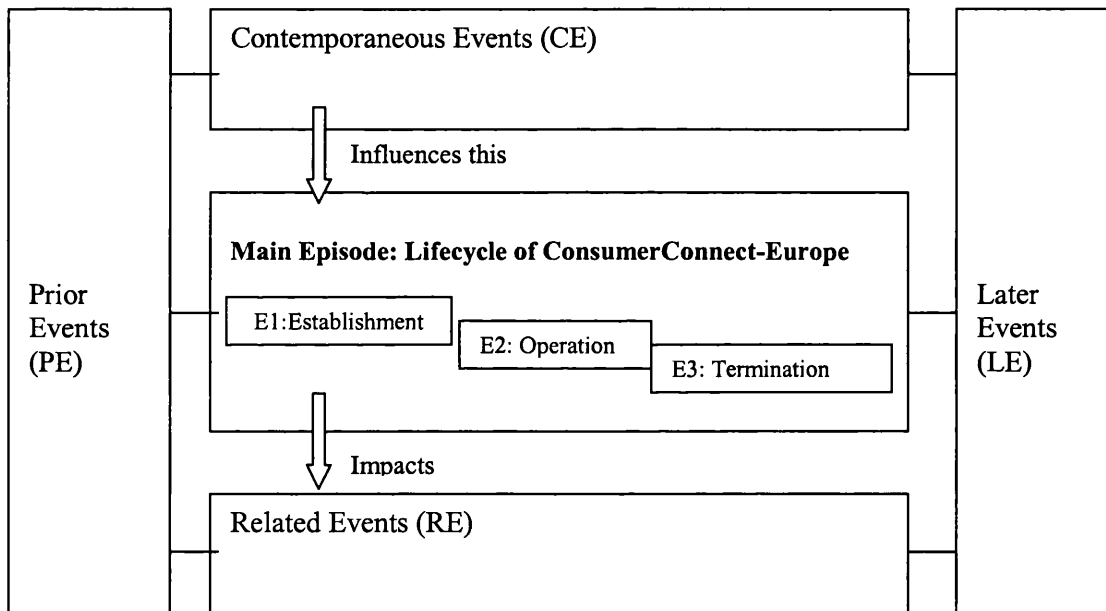
In this way, I produced the analysis of the data that is found in Chapter 7 of this thesis. This analysis, based mostly of the structural dimensions from structuration theory, is a useful but fairly low-level analysis, which forms the foundations for the following chapter. For the latter chapter, the Discussion, I needed to move to a higher level of abstraction and chose to, firstly, address the research sub-questions and then the main research question. The latter contained important insights in terms of the nature of e-business, the nature of agency in organisational change, the nature of organisational structures in large established organisations, and the duality of organisational change, which merited individual attention. These mostly stemmed from the high-level application of the theory and the reconsideration of the ConsumerConnect-Europe story in broader terms.

The discussion then 'drove' the conclusions and the practical recommendations as, by this stage, I was very clear as to the contributions and messages from the research.

4.6 Presentation

In presenting a longitudinal case study, it is often effective to impose a simple structure on the complexity of life. One such structure, proposed by Barzelay (2002) is to study the *main episode* (i.e. the central research subject, location, and time scope). This main episode comprises a number of events and encompasses a particular starting and ending point. To better situate this main episode, it is then useful to relate it to events that are relevant to the main episode, but that do not form part of the main episode. Such relevant events include *prior events*, *later events*, *contemporaneous events* (i.e. events that somehow affect/influence the main episode), and *related events* (i.e. events that are somehow affected/a result of the main episode). Diagrammatically, this narrative structure is presented in *Figure 4.6-1*.

Figure 4.6-1 Narrative Structure of a Single Experience (Barzelay 2002)



Such a narrative structure is applied in my findings chapters. The main episode is separated into three events:

- Main Episode: Life Cycle of ConsumerConnect-Europe
 - Event 1: Establishment
 - Event 2: Operation
 - Event 3: Termination

This separation into three events has been done partly intuitively and partly based on Giddens's (1984) characterization of an episode:

"All social life is episodic... To characterize an aspect of social life as an episode is to regard it as a number of acts or events having a specifiable beginning and end, thus

involving a particular sequence...To treat the formation of a state as an episode means analytically cutting into 'history', that is, identifying certain elements as marking the opening of a sequence of change and tracing through that sequence as a process of institutional transmutation" (Giddens 1984, p.244).

Giddens also agrees that in understanding an episode, one should consider the contingent events (i.e. contemporaneous events and related events) within the context as well as the origins of an episode (i.e. prior events).

Boland and Lyytinen (2004) support this segmentation of events within an episodic structure. They contend that narratives have a beginning, middle and end. Such a story commences "when confusion arises about the world we engage"(Ibid, p.61). The story then describes the "struggle to make the world more intelligible, or more desirable" (Ibid, p.61), and finally, it "ends with our victory (or loss)" (Ibid, p.61). Essentially, in the beginning, there is an order to a situation which gets disturbed and finally gets restored or reconceived at the end.

Although I found Barzelay's narrative structure effective in presenting my case study in a coherent and clear fashion, I was also conscious of trying to not lose the richness of the 'story' through the imposition of such a structure. I endeavoured to maintain a balance between reduction (i.e. a narrative structure) and complexity (Van der Blonk 2003) by also explicitly incorporating "the contradictory material, chaotic situations, impressions, and extreme opinions or emotions" (Ibid, p.48) from the case study.

For my Findings Chapters, I strive to apply *descriptive realism* as my writing style — the "writer attempts to stay out of the way and to allow the world being described to speak for itself" (Denzin 1994, p.507) – as opposed to *interpretive realism* whereby "authors insert their personal interpretations into the description of the life situations of the individuals studied" (Denzin 1994, p.507). Evidently, however, it is impossible to be completely objective in descriptive realism as all writing is interpretive. Nonetheless, the objective and impulse is to tell a "multivoiced story"-- a story from the voices of the organisational stakeholders. This 'multilogue' position (Van der Blonk 2003) offers the reader a feeling closer to the empirical material. Ultimately, the account becomes "the result of a complex construction of influences and interpretations" (Ibid, p. 51).

4.7 Summary

This chapter introduces my application of the interpretive research paradigm to my theoretical framework. It also reviews the research strategy (one in-depth interpretive case study) followed, along with the description of the organisation under study. In addition, it details the careful execution of the research techniques applied.

This chapter also reviews the steps employed for qualitative data analysis and, finally, it examines the presentation of my findings under a narrative structure and in the voice of descriptive realism, the outcome of which is presented in the next two chapters.

CHAPTER 5: FINDINGS PART I

Prior Events and Establishment of ConsumerConnect-Europe

5.1 Introduction

This chapter is the first of a two-chapter narration of the entire life cycle of ConsumerConnect-Europe (CCE). It begins by providing a brief overview of the main episode (i.e. the life cycle of CCE) and by outlining the historical background of Ford Motor Company (FMC) in relation to the automotive industry and the creation of Ford of Europe. It then recounts the *prior events* that lead into the main episode of this case study. This is followed by a narration of the first event, the *establishment of ConsumerConnect-Europe*, within the main episode, and it refers to some *contemporaneous events* that are relevant to the main episode.

The next chapter, *Chapter 6: Findings Part II*, concludes the narration with the second (*operation*) and third (*termination*) events of this main episode, while highlighting some of the *contemporaneous* and *related events* associated with these phases. Finally, it briefly refers to certain *later events* beyond the main episode.

5.2 Overview of the Lifecycle of ConsumerConnect-Europe (CCE)

Driven by the then CEO, Jac Nasser, CCE began with a sense that there was an urgency to integrate e-business within FMC and that a radical change of FMC's existing business strategy, processes and culture was required for FMC to retain its future competitive position and market share. CCE started with grand agendas within agendas, but it had a difficult time creating a local practice of e-business, as there was a lack of experience, understanding and detailed strategy for e-business. CCE's agendas implied creating synergies, which other parts of the organisation were not prepared for but were forced to comply with. The specific way in which CCE went about creating synergies created conflict. In effect, the problem came to be the intervention itself and hence, when Nasser's position weakened, CCE was eventually eliminated.

5.3 Company and Industry Background

Based in Dearborn, Michigan, the Ford Motor Company⁷ (FMC) was the world's second

⁷ It was incorporated in June 1903 and its founder, Henry Ford, is still highly honoured

largest automaker⁸, after General Motors, its longstanding archrival.

In the 20th century, FMC formed one of Detroit's Big Three, together with GM and Chrysler, and was the symbol of American industrial dominance. Ford introduced the concept of mass production (i.e. Fordism), which is elaborated in "*Appendix III: Fordism, Sloanism, and Toyotism*". Since the 1950s, the Big Three continued to dominate the US automobile market and enjoyed unrivalled success in the US throughout the 1960s and the early 1970s. Detroit was the stronghold of the global automobile industry and the world's largest producer of automobiles (Maynard 2003).

However, Detroit's glory did not endure. In celebrating their success, they neglected and underestimated their foreign competitors, who entered the US market with a variety of products ranging from small cars to pick-up trucks and from family sedans⁹ to luxury cars¹⁰, which were better in quality and lower in price than Detroit's offerings. By the 1980s, the Big Three were encountering serious problems in terms of declining sales, shrinking market share and, in comparison to foreign competitors, fewer new product lines and less efficient plants and production techniques. The Big Three lost the US small-car and mid-size sedan market to Toyota's 'Camry' and Honda's 'Accord' by the end of the 1980s. In the 1990s, Korean manufacturers (e.g. Hyundai) won over the entry-level vehicle market.

The luxury vehicle segment, which had been dominated by FMC's Lincoln Continental and GM's Cadillac in the 1950's, slowly slipped away to European and Japanese competitors, including luxury models from BMW, Mercedes Benz, Toyota (Lexus), Audi, Honda (Acura) and Nissan (Infiniti) models. (See *Appendix IV: Representative Major Automobile Manufacturers*).

To partly counter this declining market share at home, FMC looked to expand globally – both geographically and with new brands in Europe. FMC launched an "acquisition scramble" (Plant 2001), which other automobile manufacturers followed¹¹, with FMC's purchase of:

⁸ In January 2004, Toyota Motor Corporation replaced FMC as the world's second largest automobile manufacturer. In 2003, Toyota sold 6.78 million vehicles worldwide, while FMC's worldwide sales amounted to 6.72 million vehicles. Toyota's market share in the US increased from 10.4% in 2002 to 11.25% in 2003, while FMC's declined from 21.5% to 20.8% during the same period (Mukund and Neela 2004).

⁹ A closed-roof passenger car with four doors and a boot, or a similar two-door car with at least 33 cubic feet of rear interior space (Sumit and Hansa 2004)

¹⁰ Stylish and modern cars priced above \$50,000 (Ibid).

¹¹ For example, BMW acquisition's of Rover Group (1994); Daimler-Benz's 'mergers of equals' with Chrysler (1998); Renault's acquisition of Nissan (1999); VW's take over of Skoda (1990), Seat (1986),

- 1987 - Aston Martin (created 1913) became 75% owned by Ford, and wholly owned in 1993
- 1989 - Jaguar (created 1922) was acquired for \$2.4bn
- 1996 - FMC increased share holdings in Mazda (founded 1931) from 25% to 33.5%.
- Spring 1999, Volvo (founded 1927) was acquired for \$6.45bn
- Spring 2000, Land Rover was acquired from BMW for \$2.9bn (Land Rover was part of the Rover company, which had existed since 1906)

These luxury brands (i.e. Aston Martin, Jaguar, Volvo, and Land Rover) were grouped into the *Premier Automotive Group (PAG)* in 1999. These new brands boosted the existing Ford brand (the so-called 'Blue Oval' range) to seven brands (Blue Oval had already bought the luxury Lincoln brand in 1922 and created the Mercury sedan brand in 1935). FMC also bought the Hertz car rental company in 1987. Such acquisitions enabled FMC to expand its product portfolio and customer base.

In general, the automotive industry is highly competitive. Without exception, FMC, like the other Big Three, faces numerous risks (Vedpuriswar 2003):

- Competition in the industry leading to price wars
- The stagnant economic conditions in North America leading to a decline in sales and leases
- FMC's relationships with the United Auto Workers union leading to strikes in plants across the world
- Litigation against the company
- Tarnished reputation and costs from poor quality, defects and recalls of cars.
- Changes in government policies forcing FMC to undertake expensive projects in order to comply with new regulations
- Financial risks such as fluctuating interest rates, foreign exchange rates, and commodity prices

As such, the automotive industry, although rather oligopolistic, was and remains a very competitive industry, ruled by product quality, advertising, promotion, price, number of vehicles sold, and points of market share.

5.4 Ford of Europe (FoE)

FMC first set up its European industrial operations in England in 1911 and spread to other European countries, such as Germany, in the 1910s and 1920s. Industrial facilities were requisitioned to serve opposing camps' war efforts during WWII. After the war, in 1945, Henry Ford II (the grandson of FMC's founder) became President of FMC and started to

Bentley (1998), Lamborghini and Bugatti (1998); GM's acquisition of Saab (2000), increased share holding in Isuzu to 49% (2000), and strategic alliance with Fiat with GM holding 20% of equity (2000); etc..

build FoE to what it is today.

After the war, FoE was divided between England and Germany – effectively two separate and independent operations. To realise synergies and benefits from economies of scale, FMC moved to consolidate its operations in Europe. FoE was implemented as a management structure with the objective “to totally coordinate all of Ford’s activities in Europe, meaning all of the national companies that managed, owned and took legal and fiscal responsibility for Ford’s industrial and commercial assets in each of their respective countries” (Bordenave 2003, p.22).

Nonetheless, these national companies were not subsidiaries of FoE; they remained 100% holdings of the parent company. In other words, the American parent company maintained direct control over all European national companies.

Great Britain was given the FoE headquarters, which was located in Warley, Brentwood (Essex). This was a sensible decision as Great Britain was Ford’s European birthplace, its first market and production centre. However, regional biases remained in the organisational structure, where operational managers with European coordination responsibilities continued to also report to their respective national companies and work out of their own countries in a matrix structure.

To grasp a flavour of the complexity of this extensive organisational structure, we should begin from the top. FoE was headed by a chairman, who reported to the American parent company’s executive vice-president in charge of international automotive operations. Four support departments (i.e. legal and administration, industrial relations, finance and public affairs), each led by an FoE vice-president, reported directly to him. Further down the hierarchy, at the operation division level, there was a president, who was in fact No. 2 in the European hierarchy. Reporting to this president were four vice-presidents in charge of manufacturing, sales, product development, and commercial vehicles. In turn, each operational division had its own support staff units. For example, the manufacturing division had a purchasing unit, run by an FoE vice-president; a manufacturing planning unit; a product quality unit; and a plant engineering unit (the latter three were each headed by a director). Next, at the line level below these divisions were the operational groups and their support staff. For example, the manufacturing division held three such operational groups: body and assembly operations, power-train operations and general services. In turn, each of these groups had two support teams: industrial relations and finance. For further details of how the

other operational divisions were organised, please refer to Bordevave (2003). This structure was laid on top of the inherent national structures (and brand structures after the later European acquisitions).

The FoE chairman and president positions (or their equivalents, as the titles changed several times over the years) were highly political, both in corporate governance terms and also with regards to the career paths of senior executives, which stretched up to the chairman and CEO of FMC itself. Each of these top European role-holders was regarded as a 'king in waiting'. Alex Trotman and Jac Nasser, who will be discussed in further detail in the prior events below, both pursued a similar path before reaching the highest positions of FMC. The turnover rates of FoE chairmen and presidents were very rapid, with changes roughly every one or two years, suggesting that the positions served merely as steppingstones and that FoE had limited strategic autonomy within FMC; in other words, Europe's main orientations were analysed and directed from the US.

When FoE began in 1967, it had 90,300 employees. This figure fluctuated dramatically as a result of acquisitions and manufacturing modernisation. In 1999, FoE had more than 135,000 employees. All in all, Europe's share of Ford's global staffing averaged around 32% from 1976-2002 (Ibid).

With a unified European base, FMC was able to modernise and restructure its production. Such efforts entailed changes in the distribution of manufacturing allocations at a multinational level based on the static¹² and dynamic¹³ localisation advantages. By the mid-1980s, there were approximately 22 industrial sites (with some sites hosting more than one unit), in which FoE ran its R&D centres, final product plants, components factories, spare parts distribution centres and national company headquarters. Since then, Ford gradually began to withdraw from final vehicle assembly operations in Great Britain. This was a result of lower performance in British sites, compared to their German and Spanish counterparts, and due to their more turbulent labour relations, which led to several official strikes. Such delocalisation accelerated over the 1990s.

Overall, FMC was successful in integrating the firm's activities across Europe. The coordination structure enabled Anglo-German co-habitation around a reunified product range

¹² i.e. comparative manufacturing costs; productivity; labour costs; supply and logistics costs; and tax regime

¹³ i.e. create emulation between its factories or to compete with one another; to increase bargaining position when negotiating with State funding

and shared industrial and commercial resources, while preserving some of the original national identities in certain areas. On the whole, the shift from a multi-domestic European organisation to a multi-regional organisation existing at a continental level was successful and profitable for FMC.

Europe remains the most significant market for FMC outside North America. Europe's share of FMC's worldwide sales fluctuated across a relatively wide range from the lowest of 20.1% in 1974 (when it was affected by the first oil shock) to a high of 34% in 1982 (when North America was going through one of its worst times). Overall, however, Bordenave (2003) argues that excluding the cyclical fluctuations, FoE exhibited a steady upward trend in sales growth in Europe, while North America displayed a u-shaped trend. With such trends, it would appear that FoE enabled the global firm's average to grow over this period in time, suggesting that the different regions of FMC can serve to counteract or compensate for each other (i.e. diversification).

Within Europe, Ford of Britain represented the leading market, accounting for more than 30% of the European car sales in 1985, while Germany accounted for 20%, followed by Italy (6%), Spain, France, Netherlands, Sweden, Belgium, and other European markets.

5.5 *Prior Events*

5.5.1 Ford in the 1990s

The weakening of the US economy from the Gulf war in 1990-1991 also compounded the Big Three's financial troubles. Overall FMC was encountering an auto industry that had grown much more competitive (e.g. improved quality; reduced product cycle times; lower costs of development and production) since the 1970s, with their markets (US and worldwide) being encroached upon by the expansion of non-US manufacturers. As a result, the battle for advantage in the industry was rapidly becoming more global in character.

With the increasingly globalised character of the automotive industry, FMC began to question in the late 1980s how to garner further advantages through integration at a higher lever, i.e. worldwide. With this in mind, Ford decided to pursue its own profit strategy, which can be described as volume and standardisation (Bordenave 2003). This strategy focused on sharing platforms amongst as many models as possible and maximising the standardisation of subsystems like components. Such a strategy entailed transforming its current multi-regional organisation to a trans-regional one, with the ultimate objective of integrating its management

at a global level.

5.5.2 Ford 2000 and Effects on FoE

FMC's worldwide presence and its relatively centralised management system made globalisation at the industrial and organisational level feasible. FMC pursued this end with great determination, culminating in Alex Trotman's (the new Chairman, President and CEO) 1994 announcement of the "Ford 2000" reorganisation plan that would come into effect on 1 January 1995. Ford 2000 aimed to consolidate product lines to create global cars and included merging North American and European automotive operations into a single organisation.

The plan created, at the top of the organisation, a unified global structure with responsibility for the automotive business: Ford Automotive Operations (FAO). This was headed by a President with the title of FMC executive vice-president. In 1995, FoE still had a chairman and president, but its three main functional positions (i.e. product development, sales and marketing, and manufacturing) were eliminated. In 1996, the FoE chairman and president positions also disappeared. From that point, the President of FAO, based in the US, would directly supervise FoE's activities. This President of FAO was Jacques Nasser, personally coached by, and the future successor of, Trotman.

The basis for this reorganisation rested partly on the view that technology would usher in a new form of globalisation (Economist 1996). Ford was using a dazzling array of computer networks and video links to facilitate engineers from around the world working together on the same cars. Such technologies, argued Trotman, would not only increase productivity by introducing a 24-hour day for urgent projects, but they would also raise creativity through knowledge sharing across the continents.

Trotman's idea to break down excessive regionalism and reorganising the company on the basis of product rather than countries seemed beneficial, as it would reduce duplication of business functions and increase economies of scale. In practice, full-scale globalisation was very difficult to achieve and could easily fall short. Employees could resent being forced into complex global structures under which they report to several bosses and global products were often built to suit the lowest common denominator.

Furthermore, with globalisation, Europe became less relevant in "the strategic echelon and its *raison d'être* has been undermined" (Bordenave 2003, p.41) as the plan reaffirmed the firm's

unity and transferred its strategic decision-making powers to Dearborn, US. In other words, the decision-making centres were very far from the European operational units, while there was an informational and decisional overload at the American strategic apex. Such a combination was prone to generate dysfunctions, which is why FMC did not persist with this plan and recognised the necessity to restore FoE as an intermediary echelon of coordination.

As an exercise in change management, Trotman was 'considerably successful' as he went out of his way to involve as many managers as possible in his Ford 2000 project and thereby avoided the internal power struggles that doomed other companies' attempts at globalisation. However, the results of the reorganisation were less encouraging. Ford's post-tax profits fell by 22% to \$4.1bn in 1995; its growth in market share stumbled and it had to resort to big discounts to boost sales. Such results were difficult to interpret: they could mean that Ford had repeated GM's mistake, by allowing its obsession with internal reorganisation to distract it from its real business of making and selling cars, or that Ford's development costs were too high and that Ford 2000 was a necessary step to recovery. Even more so, the reorganisation had neither boosted the quality (or stylishness) of Ford's cars nor reduced the company's development costs.

Even more troubling were the effects of this programme on FoE. Not only was FoE experiencing, as Bordenave (2003) argued, an "identity crisis" through its changing position in the organisation, FoE was also experiencing a weakening of its commercial position and low profitability. In the 1990s, Ford's European market share was diminishing: 14.3% in 1985; 12.2% in 1995; 10.3% in 1998, and 10% in 2000 (Ibid). With this fall, FMC moved from first to third place amongst Europe's six leading carmakers¹⁴. Furthermore, its average ratio of profits in the 1990s was negative (-1.2%)¹⁵, while North American profitability was reaching 5 to 6% in 1996-1999. FoE's earnings in 1999 were \$28m on revenue of \$30bn, while 1998 earnings in Europe were \$193m on revenue of \$24bn. Thus, the 1999 earnings showed a decrease of 86% (\$165m) from the year before (www.autointell.net). It appeared that European profits fell in the 1990s in a critical and consistent manner.

¹⁴ In 2002, the six leading European Carmakers were VAG group of brands (Volkswagen, Audi, Seat, Skoda, Bentley, Lamborghini and Bugatti) at 17.3%; PSA (Peugeot and Citroen); FMC (Ford, Jaguar, Volvo, Land Rover, Aston Martin) at 11.3%; Renault (single brand) also at 11.3%; GM (whose European brands were Opel, Vauxhall and Saab) at 9.6%; and Fiat group (Fiat, Alfa-Romeo, Lancia, Ferrari, Iveco) at 9.0% (Bordenave 2003). It is noteworthy that in Europe, Ford had higher sales than its big American global rival GM.

¹⁵ It was positive for the firm as a whole (0.9%) and even more positive for the rest of the firm without Europe (1.4%).

In retrospect,

“analysts say most of the blame for Ford’s [FoE] problems falls on the shoulders of one man: Alex Trotman. The former Chairman’s Ford 2000 plan, which sought platform synergies with North America, left Ford of Europe devoid of competitive products.” (Zoia 2000, p.35).

5.5.3 Sports Utility Vehicles (SUVs) and Economic Climate

At the same time, the aforementioned sharp American recovery in profitability was largely due to Motown’s discovery in the 1990s of the latest American consumer craze: the Sport Utility Vehicle¹⁶ (Sumit and Hansa 2004). With this, the Big Three dominated the SUV market in the 1990s with more than 90% of the market; every second car sold in the US being an SUV. FMC introduced such well-liked small SUV models as the ‘Explorer’ and ‘Escape’, big SUVs like ‘Expedition’ and ‘Navigator’ and pickup trucks like the ‘F-series’. FMC dominated this profitable market. Fuelled by their sales, FMC’s profits swelled more than 60% to \$7.2bn from 1996 to 1999 (Kerwin and Welch 2001). Its profits from North American truck sales made it easy for investors to overlook Ford’s sagging car business, troubles in Ford’s Asian and South American operations, and losses in Europe.

However, by the late 1990s and significantly in the early 21st century, the foreign competitors reacted by attacking the market with SUVs, minivans, and cross-over vehicles (a combination of a passenger car and a SUV), from Toyota’s ‘RAV-4’ and Lexus’ ‘LX470’ to Honda’s ‘Acura MDX’ and the ‘Pilot’ sport utility. Mercedes and BMW also penetrated the luxury SUV segment with the ‘M-Class’ and the ‘X5’, while Porsche introduced the ‘Cayenne’, and Hyundai presented the ‘Santa Fe’. Thus once again, the Big Three were losing their advantage in another car segment (Maynard 2003).

5.5.4 Distribution of Leadership between Jacques Nasser and Bill Ford

Towards the end of 1998, Alex Trotman, chairman and CEO of Ford, announced his retirement. His successors, appointed on January 1 1999, were Jacques A. Nasser as chief executive officer and William C. Ford Junior, great-grandson of Henry Ford, as chairman. Jacques Nasser (hereby referred as “Jac” or “Nasser”), 51 years old, was the son of a Lebanese working man who emigrated to Australia, while William Ford (hereafter referred to as “Bill”, rather than Ford so as not to be confused with the Ford Motor Company), ten years younger, was an Ivy League educated heir to one of America’s most powerful business

¹⁶ Large jeep-like vehicles weighing over 1950 kilograms. (Sumit and Hansa 2004).

families.

Such power-sharing between the chair and chief executive has usually proved temporary in the car industry (Economist 1998). The last time a Ford (Henry Ford II) was in the chair, from 1945-80, he sacked a procession of capable subordinates, including the legendary Lee Iacocca, who was simply told “I don’t like you” by way of explanation for his firing. Bill was seen as unlike his bullying uncle and as being reserved and self-effacing. Upon his appointment, he pronounced, “I will lead the board; Jac will lead the company” (p.23). Even so, Bill and Nasser’s predecessor, Trotman, a non-family member, had led under a combined chairman and CEO role and had alone called the shots and persuaded the family to accept his decisions. Not least, Trotman groomed Nasser as his successor, but Nasser had to share power with Bill Ford sitting in the office next door and representing his family.

Bill and Nasser were very different men, half a generation apart. Bill was portrayed as the “impassioned do-gooder, the green-tea-drinking fly-fisherman, who had a hard time saying no to any worthy cause” (Gibney and Greenwald 2001, p.25), while Nasser was the “corporate hard-ass who just as easily might have run the old, secretive Ford Motor and revelled in it” (Ibid, p.23). Bill spent slightly over a decade in the company carefully earning and consolidating his power. His thesis as an undergraduate and masters student concerned “how to balance the legitimate interests of trade unions and workers with shareholder interests” (Morris 2000, p.123). Upon finishing his studies, Bill joined Ford and rotated through 17 jobs as a marketing analyst, ad specialist, international finance specialist, product development planning manager, truck marketing manager for Europe, head of Switzerland, and head of climate control. He had the solid backing of the Ford family, which controlled 40% of the voting stock; that alone protected him from the short-term vagaries of Wall Street. He also had strong support from the board. Upon his appointment, Bill stressed that his goals were not only to improve the company’s quality and profitability, but to be a leader in corporate citizenship.

Nasser joined Ford in 1968 as a financial analyst in Australia after completing his studies. Nasser was from a working-class immigrant background and he had never had anything ‘handed to him on a silver plate’. Over the next 30 years, as a Ford-lifer, Nasser, like Bill, held many jobs, but Nasser’s roles were in higher positions. He was an executive in Asia and Latin America, and he ran Ford’s operations in Australia and Europe. In 1994, he became group vice-president of product development and two years later, he became president of FAO under the Ford 2000 plan. Nasser was known for his energy, brainstorming, and speedy

decisions, otherwise referred to by colleagues as “paperless decisions” (Ibid). He was also renowned for his tough decisions. In the 1980s, at the helm of Ford’s troubled European operations, Nasser cut thousands of jobs in the face of a devastating recession, earning the nickname of ‘Jac the Knife’. Under Nasser, suppliers had to swallow annual price cuts of 5 percent or lose business with Ford. To revitalise Ford’s floundering design department, Nasser recruited a young outsider, J. Mays, who designed the successful new Beetle for Volkswagen. Nasser also started to revolutionise distribution, buying independent dealers in cities such as San Diego and then merging them into company-run superstores.

From the minute they took office, rumours of discord between Jac and Bill swept the hallways of the headquarters in Dearborn, Michigan: “there has been talk of shouting matches between the rich brat and the corporate master” (Gibney and Greenwald 2001, p.27). Nasser and Bill denied such rumours.

5.5.5 E-commerce at Ford and European Recovery Measures

At same time in the late 1990s, as already discussed in the Literature Review, e-business represented tremendous opportunities in areas of B2C and B2B commerce. The press and media were inundated with e-business excitement and dot-com buzz. For example, press articles presented principles of “information Darwinism” (Marks 2000), which prescribed that global firms needed to invest in IT, particularly web-based technologies, as a strategic resource for the future, in order to survive or otherwise they would die out. John Chambers, chief executive of Cisco (a high tech company which also partnered with Ford -- see below) agreed with this and asserted, “There will be nothing in the 10-year window except e-companies. That does not mean that brick-and-mortar will go away, but click-and-mortar will become the *only* means of survival” (Byrne 2000, p.44).

In addition, potential buyers were beginning to increasingly rely on the Internet for their car purchases. In the US, the emergence of numerous virtual dealers (e.g. Autobytel, Autohit, Auto Vantage and Carpoint) and physical car superstores competed with traditional dealers. Similarly, in Europe, manufacturers confronted Autobytel and other European web dealers (e.g. OneSwoop.com, virgincars.com). To make matters worse, the looming abolition of the EU’s Block Exemption in September 2002, which had for 14 years allowed them to sell and market new cars through captive dealers so as to control prices in different territories (Vandermerwe and Taishoff 2000), threatened traditional auto manufacturers and dealers.

In 1997, FMC headquarters created an entity, called New Business Development, in charge of extending their previous sales relationship with customers, which only accounted for a quarter of the vehicle's whole value, to one that endured throughout the car's life cycle. Some preliminary e-business activities within Ford were being tested as a cost centre in individual departments, but such efforts were fragmented. As time progressed, the Internet became increasingly the strategic tool to realise this vision and to also improve manufacturing efficiencies. So in early 1999, soon after his appointment as CEO, Nasser commissioned a task force within the New Business Development group to study how the Internet could improve Ford.

In June 1999, this team made a presentation to Nasser and his top managers. The team showed Nasser a breathtaking vision of an auto company of the future: factories that built cars to order, dealerships that reported problems instantly so that plants could make adjustments, and suppliers that controlled inventories at Ford factories, similar to vendors that stocked the store shelves of Wal-Mart. "We were mesmerised," said Alice Miles, a veteran Ford purchasing manager. "Nasser gave it an instant thumb's-up." Nasser said, "This is nothing short of reinventing the auto industry" (Kerwin et al. 2000, p.75).

Because Nasser, like Trotman, believed technology possessed the potential to reorganise companies and improve their efficiency, and because e-business efforts were very fragmented and the globalisation movement was not reaping the anticipated benefits, he challenged Ford's existing organisational structure and the Ford 2000 movement, four years after its introduction. After the two-three years of dismantling the organisation, trying to reap benefits from scale and coordination, and getting a more global culture in the company, Nasser decided to evolve the organisation further and in some ways bring the pendulum back from globalisation. Nasser said, "What Alex did was right, [but] we may have overcompensated, going too far on the side of globalisation, but the change was needed to break the culture of regional dominance" (Owen 2000, p.76).

This reversal however did not imply a simple return to pre-Trotman days. Although geographically defined positions reappeared in the organisational structure, big functional positions like manufacturing and quality, product development and global purchasing, remained very high up and filled by executive vice-presidents. One thing that emerged from the 1990s European roller coaster was the awareness of the importance of having a European coordination echelon, rather than attempting to minimise it. FMC however continued to search for a compromise between multi-regional and trans-regional logics.

More specifically, given FoE's dismal results in the 1990s, FoE was subjected to another major restructuring programme (Burt 2001). Most notably and symbolic among the cost cutting and restructuring programme¹⁷ was the closure of the historic Dagenham assembly line, announced in May 2000 (Hyland 2000). Cars had been rolling off the Dagenham production line since Henry Ford established the factory in 1931. The recovery plan slashed more than 2,000 jobs and a substantial amount of production capacity (Kerwin et al. 2002).

At the same time, in conjunction with the European recovery measures (restructuring programme), in the US, Nasser felt that "the company got too big, too inflexible and not nimble enough. He wanted to have operational areas that can really get their acts up" (FMC senior executive). Nasser felt that with the advances, variety and usability of technology, Ford should be able to "gradually put together the DNA and the personality and the culture of a consumer company" (Greenhalgh 2000, 46). So Nasser rearranged the company into eight Consumer Business Groups that "built on the strengths of Ford 2000 by adding a *brand* and *regional* influence that would allow us [Ford] to better connect with customers" (Owen 2000, p.75). He separated the North American and European operations. The Consumer Business Groups included:

- i. Ford of North America,
- ii. Ford of Europe,
- iii. Ford of South America
- iv. Ford of Asia Pacific
- v. Premier Automotive Group (including Jaguar, Aston Martin, Volvo, and Land Rover)
- vi. Mazda (Ford owns 33%)
- vii. Consumer Services Group (including Kwik Fit, Hertz Car Rental, Ford Credit, and Quality Care).

Of special interest was the creation of (viii) ConsumerConnect in September 1999, which was responsible for driving the e-business efforts across company lines and which forms the main subject of my case study.

In Nasser's own words, e-business represented a:

"break-through in technology that comes along only once in a century. It will enable us to transform how we do business. In the past, we've been able to transform particular processes — such as an engineering process or a manufacturing process - but the speed and open architecture of this new technology allows us to integrate the

¹⁷ Two small European assembly plants were also closed: Azambuja in Portugal and Plonsk in Poland. In addition, employment reduction was taken at Genk (an important German managed plant in Belgium).

diverse processes that make up a complex business in a way that was very difficult before. What used to happen was we would come up with new processes for manufacturing, engineering, logistics, sales, and marketing, but they weren't well-connected in a robust fashion. Today, we need to be able to go from a creative idea to an assessment of demand, to design, engineering, manufacturing, and logistics, all the way through to the relationship with our customers. That's the vision we have for this new technology" (Greenhalgh 2000, p.50).

At the heart of his vision was to become "the world's leading consumer company for automotive products and services" (Ibid, p.51). This meant transforming the company from a *manufacturing-led* company to a *consumer-led* company:

"The bold prediction we are making is that the automotive industry is going through a transformation from a nuts and bolts business to a customer business; from a transaction business to a relationship business" (Burt 1999, p.21).

He envisioned that the e-business initiatives, if successful, could make the automotive business more responsive and efficient. The transformations through e-business could be "as big as the transformation as Henry Ford's shift from craft manufacturing to mass production almost a hundred years ago" (Greenhalgh 2000, p.47).

Many traditional manufacturers were also moving in the same direction, including Ford's archrival GM. The two were aggressively competing on the speed, magnitude and reach of their online initiatives. For FMC, web-based technologies presented opportunities for reshaping organisational structures and culture, enhancing the efficiency of supply chains, developing customer-centric strategies, and expanding relationships with dealers.

Analysts believed that Ford (and its rivals) wanted to "sell themselves to Wall Street as reinvented car companies, not as Midwest automotive manufacturing companies, but as brand-new e-based companies that provide automotive products and services" (Brunelli and Milligan 2000, p.139).

5.5.6 Economic Climate of Ford: Expanding Ford's Brand Stable and Increasing Customer Touch-Points

Economically, Ford seemed that it could do no wrong. In 1999, its earnings of \$7,237m were larger than any other car company in history. Its aggregate revenues soared over \$162bn, an increase of 13% from the year before, from its brands and service divisions. These businesses gave Ford a presence in more than 200 countries and territories with a workforce approaching 400,000 and 140 manufacturing plants. It is noteworthy that these profit figures came mainly from two Consumer Business Groups: Ford of North America and Consumer Services Group

(especially Ford Credit and Hertz). As mentioned earlier, Ford of Europe was undergoing huge financial difficulties and major recovery measures.

In line with Nasser's self-defined mission to make FMC the world's leading consumer company for automotive products and services, he advocated,

“If you're going to have a long-term relationship, it has to go beyond just that one product. It's got to be services, and it makes sense to be able to go across the brands as well” (Melymuka 1999, p.20).

Thus, FMC acquired Volvo in 1999 and Land Rover in 2000, hoping to improve its European market share. In addition, in Nasser's view, integral to extending the relationship with customers and thereby increasing profits was to increase the number of “consumer touch-points”, which included repair, credit, and other services such as recycling. This was exemplified in his purchase of Kwik-Fit, the leading service and repair chain in the UK and a downstream purchase of a car recycling plant in the US, both in 1999 (Vandermerwe and Taishoff 2000).

However, Nasser believed the most powerful and pervasive means of creating consumer touch-points was through e-business, which for him promised:

“...nothing short of a total reinvention of this company...it will transform how we think, how we operate, how we design and manufacture. Above all, it will change how our dealers communicate and connect with our customers” (Ibid, p.10)

5.5.7 Creation of ConsumerConnect-US (CC-US)

In September 1999, under Nasser's vision of “utilising Internet to become the world's leading consumer company for automotive products and services” (FMC Annual Report, p. 4), Nasser challenged the existing fragmented e-business efforts scattered throughout the organisation and the resulting difficulties of raising funds for e-business initiatives through traditional channels. So he created ConsumerConnect-US (CC-US), which was charged with the mission to drive e-business efforts across all company lines. He allocated \$1bn to this endeavour (Rajshekar and Phani 2003). This followed GM's announcement in August 1999 of the new e-GM e-business group.

CC-US, relatively to the rest of the organisation, stood as an independent Consumer Business Group (at the same level as Ford of Europe, Ford of North America, Premier Automotive Group, etc.). It was positioned this way as Nasser wanted the new unit to be an

entrepreneurial organisation liberated from the traditional bureaucracy. In his Year 2000 address to employees, Nasser enthusiastically pronounced that he wanted to “transform [Ford] into an e-business.” In fact, he was such a proponent of e-business that he proudly adopted the title “Jac of E-trade”, a nickname bestowed on him by the Economist (November 1999).

5.5.7.1 *External Recruitment*

Nasser even recruited the leadership team externally, contrary to the normal FMC practice of internal senior appointments. To head ConsumerConnect, he enlisted Brian Kelley, former General Electric Company appliance sales general manager, who was known for championing customer communications and launching a website in September 1999. Kelley, President of ConsumerConnect, then recruited dozens of people from companies such as Whirlpool, Booz, Allen & Hamilton, and Proctor and Gamble, expanding the executive core to forty people. The director of corporate initiatives said, “We see ourselves as a kind of Alpha squad; here to lead change and help make the cultural difference required to bring Ford into the 21st century” (Kerwin et al. 2000, p.76).

Furthermore, Nasser had replaced more than a dozen top executives since he became CEO. In an interview with Ford’s ex-Chief Information Officer, he acknowledged, “The days when Ford ‘lifers’ were the norm are over...People join the auto industry because they want a relatively stable place to work... but it is fraught with uncertainties [now]. You have to be nimble” (Melymuka 1999, p.20)

5.5.7.2 *Joint Ventures and Partnerships*

5.5.7.2.1 *Business-to-Consumer*

CC-US’s mission was to serve as a *catalyst in transforming Ford* into a consumer company and to accelerate e-business developments across all brands while harvesting economies of scale from cross-brand projects. It believed that in the Internet Age “The consumer will win. The consumers are the centre. If you don’t believe this, think that it is all done for the company, you’re going to fail... The competitive advantage goes to those who learn and act quickly” (CC-US executive). CC-US wanted to move away from the past’s episodic customer transactions, towards ongoing relationships. To lead this change, CCE formed many partnerships and joint ventures with new technology partners as it felt that Ford’s traditional suppliers and contractors lacked experience. “We need to do this with people who have their own skin in the game, who want to win with you. We’re convinced that we need

the best technology partners in order to succeed and we'll continue to do that" (CC-US executive).

For example, CC-US entered a joint venture with Trilogy, a privately owned software company that specialised in developing configuration software. The new joint venture, named Drive, held the responsibility for all of FMC's customer and dealer facing e-commerce software. The aim was to enable Ford dealers to make features, such as car configuration, available to shoppers while providing Ford with data from dealership sites that it could use to reduce point-of-sale inventory and respond to trends. According to a Trilogy executive, it was not simply Trilogy's technical expertise that led to the partnership:

"Ford looked at Trilogy and said, 'You not only have this broad footprint of technology... but you guys have figured out how to hire great internet-savvy employees and have created a culture based on *innovation*. They looked at the whole equation and felt we were the right partner to create the joint venture, which is core to Ford's e-business strategy.'" (McCartney 2000, p.10)

In marketing, other technology partners helped Ford get closer to its customers. High profile dot-com companies, such as Yahoo! and Priceline.com, together with TeleTech (a call-centre company), were approached to design systems for delivering warranty, loan, repair and other customised services based on detailed knowledge of customers. Ford owners could volunteer personal data to be contacted for service reminders, recall information, and vacation planning (Halliday 2001). CC-US also formed agreements with community sites such as Bolt.com (teenagers) and iVillage.com (a leading women's site). Through these marketing alliances, Ford believed that it could reach customers through these new means and receive unfiltered information regarding consumer buying patterns.

Recognising the value of comparison-shopping to consumers, Ford took equity stakes in some industry sales and information sites (CarPoint and Carclub.com). CC-US wanted to ensure that within these sites, customers would have a fast and efficient experience with Ford. It believed that branding was essential to success and that Ford needed to position itself online in the same way as Yahoo! and Amazon. "We get consumers to think that we really are a state-of-the-art high technology e-business... We can show that we can work with the best, the fastest out there" (CC-US senior executive).

5.5.7.2.2 Business-to-Business

In supplier relations, CC-US partnered with Oracle Corp and Cisco Systems Inc. to create *Auto-Xchange*, an online B2B site where Ford could link with its 30,000 suppliers for quicker

communication, better prices and faster delivery. Ford owned the majority stake, with Oracle providing the software and databases and Cisco the networking. CarPoint would help to develop a build-to-order service. At the time, analysts predicted that Auto-Xchange would save Ford \$8bn through reduced procurement prices and nearly \$1bn more from reduced overheads each year. It was hoped that the site would become the preferred one for the whole auto industry.

At that time, it took Ford approximately 42 months to get a vehicle to market. With the Internet, it hoped to reduce this development cycle to 12-18 months (CC-US senior executive).

As noted in the Literature Review, in 1999-2000, B2B marketplaces seemed promising (Ramsdell 2000) and GM, in partnership with Commerce One, announced its competing venture (TradeXchange) just hours after Ford's Auto-Xchange announcement. Again this venture promised huge cost savings.

Although the bottom-line benefits of building exchanges could be lucrative, Ford and GM found that the development costs were high, especially considering the problems of integrating the various enterprise resource planning (ERP) systems involved (Silwa 2000). Furthermore, some major suppliers balked at having to conduct business with two separate sites. Hence, in February 2000, the two giants and a third major player, DaimlerChrysler announced that they would pool their efforts behind a single site, named Covisint, which was an amalgam of *communication*, *vision*, and *integration* (Isidore 2000). The plan was for the exchange to be financed through suppliers' monthly subscriptions plus transaction fees. Together, the three auto giants would control 46% of the industry. However, the Federal Trade Commission queried whether the combined purchasing power of the manufacturers would be anticompetitive for suppliers (Welch 2000). So Ford and GM each continued building their own exchanges while waiting for authorization for Covisint.

5.5.7.2.3 Other E-Business Activities

Ford also created a joint venture with Qualcomm, called Wingcast, for advanced in-vehicle communications and information technologies and services, known as *telematics*, into a new generation of web-enabled automobiles. Telematics included wireless phones, navigation systems, satellite radio, Internet connectivity, entertainment, traffic information, automatic collision notification, emergency assistance, and roadside assistance. Ford believed that telematics would bring about a transformation as this integrated safety, security,

communications and entertainment for drivers. It was predicted, in 2000, that the telematics market would grow to \$42bn by 2010 (Gain 2000).

Ford also partnered with *Teletech* to create a centralised, web-based, call centre called *Percepta* to monitor customer relationships and provide 24-hour advice for motoring problems. With this centre, Ford hoped to build customer confidence and retention, as well as insights for the design of new products.

5.5.7.2.4 Home Computers for Employees

In addition, Nasser wanted to integrate Internet into Ford's day-to-day internal business practices. Already, approximately 110,000 employees were linked to Ford's Intranet and all employees received a weekly state-of-Ford message from Nasser. As part of the effort to wire up Ford's geographically dispersed 350,000 workforce, Ford partnered with UUNet, Hewlett-Packard and PeoplePC to offer all employees a computer, printer, and Internet usage at home for a nominal fee of five US dollars a month (Kerwin et al. 2000). In an interview with Nasser, he explained this initiative:

“We wanted to lift the level of literacy in this new technology because this will facilitate the transformational change we're striving for as well as simply improving communication within the company. If we've got 400,000 people and we can improve our capabilities by even a fraction as a result of this programme, then Ford is going to gain a wonderful advantage in terms of human capital—intellectual capital—that other companies won't be able to match easily.” (Greenhalgh 2000, p.50)

With these employee initiatives and newly formed joint ventures, Ford hoped to attract and retain intellectual capital. As Nasser put it:

“Start-ups and dot-coms can't offer many of the things Ford can offer (e.g. global experience, the ability to move within a company without continuously job hopping, and the incredible breadth of experience you can acquire at Ford.) But Ford also offers some of the same experiences people are seeking when they look at smaller companies. We've created many joint ventures that are small enterprises within the company. They're equivalents of start-up companies” (Ibid, p.51)

In effect, Nasser wanted to change Ford into a technically advanced consumer company that would attract both traditional engineers and the new breed of technically knowledgeable enthusiasts.

CC-US viewed its role as the “catalyst in transforming Ford” (CC-US executive). It positioned e-business as the fundamental means of executing Ford's major vision for the 21st century: to move away from being a production and transaction oriented organisation, to one

which focused instead on customers and relationships in the personal mobility 'market space'. It formed ventures to drive towards FMC's e-business goals, and worked as a conglomerate over all these ventures, trying to ensure synergy and integration among the different ventures and investments. Nasser strongly supported this new Consumer Business Group: he gave it the material and people resources for its foundation; went outside to recruit people to lead it; forged close relationships with technology partners, and became internationally renowned as an advocate of e-business. "From the top down, we've really embraced e-commerce," said a Nasser-hired manager of e-commerce. "FMC is putting an 'E' in front of almost everything" (Moran 1999, p.6).

5.6 Event 1- Establishment of ConsumerConnect-Europe (CCE)

With the launch of CC-US, discussions to create a similar structure in Europe began in early 2000. Growing "out of the dot-com explosion" (Acceleration Team leader in CCE), bathing in "Nasserism" (Ford of Britain middle manager) and with Kelley's backing, taking advantage of customer relationship management before privacy laws would give all the contacts to dealers, and thriving under the pressure to "globally e-enable the business from analogue to digital" (Jaguar middle manager), ConsumerConnect-Europe (CCE) was formed in June 2000, nine months after the establishment of CC-US. Similar to its American counterpart, CCE was headed by a new senior executive with a background in consultancy. He was hired by one of Nasser's advisors into Ford of Europe Marketing but, after a few months, he was moved to head CCE with the title of Vice-President of CCE. He was "very unlike the traditional engineering guys at Ford who [we]re very product focused rather than customer centric" (FoE Public Relations middle manager). He bought into Nasser's vision of transforming the company into the world's largest automotive services company, rather than a product, car, company. He wanted to lead CCE's activities towards the goal of build-to-order and would evangelise about this.

Unlike its American counterpart, CCE did not start from the drawing board. The B2B strategy had been established globally and there were some underlying B2C and CRM initiatives from the US. Yet, in an effort to promote e-business to European stakeholders, the head of CCE engaged the help of an outside consultancy (Cap Gemini Ernst and Young) to run a 3-day offsite meeting. In this meeting, under the sponsorship of CC-US and the Chairman of FoE, the head of CCE informed senior representatives from all parts of FoE (FoE Marketing, Ford of Britain, Jaguar, Land Rover, Volvo, Dealer, Purchase, Ford Credit, etc.) of several key messages:

“We will have to change our operating style and culture to achieve the goals of ConsumerConnect. We will have to be quicker in execution and we will have to look at the bottom line on everything we do. There are three principal objectives for ConsumerConnect-Europe that we agreed with Brian Kelley:

- i. Drive revenue growth and increased profitability and achieve growth in contribution to the Ford Motor Company bottom line.
- ii. Leverage the value of the business through increasing Ford Motor Company market capitalisation.
- iii. Drive business partnerships that will revolutionise our culture and performance.”

At this meeting, the existing US initiatives were described and attempts were made to find the gaps in the European market, to define an agreed cross-brand strategy and to build an implementation plan. Through that launch meeting, the head of CCE wanted to develop a strategy that would be 80% implementable and bought into by all the key stakeholders. From there, a European organisational structure was to be defined and cross-brand projects would quickly ensue. CCE was set up to be an autonomous central cross-brand e-business consultant and supplier. It was to stop the various European brands from using different vendors, resulting in fragmentation, incompatibility and loss of core intellectual property. It wanted to promote alignment on IT development, strategy, approach and role of e-business initiatives across the brands.

5.6.1 Stakeholders’ Perceptions of ConsumerConnect-Europe

FoE and Ford of Britain (FoB) partially agreed with the concept, given the strong advocacy of Ford’s senior management. However, CCE’s use of an outside consultancy proved to be a double-edged sword; it helped CCE’s launch, but it also affected its reputation, as encapsulated in the criticism of a middle manager from FoE Marketing:

“I can’t remember how many times I have to file against opinions of consultants. No consultant will come in and tell you that you are doing all the right things....They [consultants] care about building shareholder value for their shareholders and spending time trying to build future business... Consultants had a moderate negative impact, as they didn’t allow ConsumerConnect to build its own respect. They condition the expectations of ConsumerConnect. ConsumerConnect had hired consultants to do the presentation; thereby, losing their own credibility to Ford.”

Furthermore, the Sales and Marketing communities of FMC were sceptical about the impact of the Web. They were more accustomed to the traditional dealer model and mass marketing. Despite CCE’s assurance that the Web would mainly serve as an information tool that would result in measurable sales leads, the Sales and Marketing communities feared that the Web would replace the traditional models, which were their lifeblood. Nasser “was seen as not

pro-dealer (wanted to directly sell to consumers), but the dealers are very powerful” (FoE Public Relations manager). Moreover, FoE Marketing had to provide the initial funding for CCE from its budget, already constrained by the European recovery measures. Furthermore, FoE Marketing had to support CCE’s operating overheads, which consequently made FoE Marketing the ultimate arbiter of many CCE projects. In addition, as discussed in the next section, CCE attracted and recruited some of the best personnel from the Sales and Marketing communities.

Among the various brands, Ford of Britain (FoB) was the largest and, being a Ford Blue Oval brand, the most tied to FMC. FoB was “totally committed to ConsumerConnect-Europe, regardless” (CCE middle manager) and, according to a FoB middle manager, the relationship with CCE “started off extremely well, extremely positive, and full of hope.”

Of the premium brands¹⁸ (Jaguar, Land Rover, Volvo), Jaguar was one of the smallest, with just over 100,000 sales globally. It bought into the e-business vision most enthusiastically. It had the longest history with FMC (since 1989) and had many senior and middle management positions occupied by long-term Ford employees. The senior manager of Jaguar’s CRM initiatives had close ties with CCE’s executives and wanted to be aligned to the company’s new vision.

Land Rover (LR) had just been acquired by FMC in early 2000. It was still adapting to the new corporate arrangements and was struggling to bring the company back into profit. It was a small brand and Ford’s global infrastructure would be oriented towards the mass market. As a premium brand it felt it had a different relationship with customers and feared that participating in a cross-brand strategy would be similar to “cracking a nut with a sledge hammer” (LR middle manager). In addition, since LR was in financial difficulties, it wanted to delay participation, unlike Jaguar.

Among the premium brands, Volvo was the most successful financially and the volume leader, with annual production exceeding 400,000 units worldwide. It was the most confident and autonomous among the new premium brands acquired by Nasser (in 1999) and was profitable, unlike Jaguar and LR. When it was bought, Volvo officials openly professed that they were unhappy to end up with an American company after their flirtation with Renault in the mid-1990s (Wernle 2003). Volvo already had “a prime source of cutting-edge systems, an

¹⁸ Aston Martin was not included in the e-business initiatives. They were a very low volume (approximately 1500 vehicles per year) producer.

advanced CRM platform, and a sophisticated loyalty programme” (Volvo senior manager). It also had close relationships with local IT suppliers. It was doubtful that CCE, in its efforts to supply a cross-brand strategy, would be able to add any immediate value or save any costs for Volvo specifically. According to a Senior Executive in CCE, Volvo saw CCE as a “threat to its autonomy”.

5.6.2 ConsumerConnect-Europe’s Employees

CCE was able to attract a very strong team of people with good track records in the automotive business. They were people with an entrepreneurial spirit, who didn’t “mind taking a bit of a risk, want to be at the edge, and attracted by novelty and innovation” (CCE senior executive). It was populated with many middle and senior managers, built on the assumption that it would expand quickly. When it was established, it mirrored the top-heavy organisation in the US headquarters rather than the Ford of Europe model and its budget was similarly top-heavy. There were more ‘managers’ than ‘workers’. As a small organisation, the group was highly paid and seen “as a bit elitist” (CCE senior manager).

According to an executive in FoE Marketing’s Internet and New Media Group, CCE was built on “some hopeful knowledge that this was going to be something that could go quickly in the dot-com, and drive and increase share price and FMC as a whole.” This executive regarded the vision as being handled a bit light-heartedly and not well executed as “most dot-com companies did not build an organisation with VP and managers; they started with someone running it and a few developers working day and night, and sleeping at their desks.” Three out of the six people under this marketing executive went over to CCE.

As with any large organisation, some divisions have higher status than others, and CCE was highly regarded by ambitious internal staff as it offered a “chance to progress through this massive grey structure of Ford” (CC-US senior manager) as it was carved out separately from the traditional organisation:

“It was the area of new growth within the company; the cutting edge of where we are at, and it had an organisation. It was seen as something new knocking in a company that’s 100 years old and there hasn’t been that many new areas of employment within Ford for many years...For the individuals concerned, it was seen as a strategically good move” (FoB middle manager).

To be hired into CCE was seen as a very promising career move. From its establishment, with five to six core people, CCE quickly expanded (excluding people from the joint

ventures) to roughly 90-100 people within the first year. This was smaller than the US operation, which peaked at 320 people.

After a few months, the real estate department of FoE placed CCE in a separate modern luxurious building, away from the outdated headquarters of FoE. It was positioned outside the headquarters in order to appear less tied to the Ford brand and more as a cross-brand provider.

5.6.3 Internal Structure

CCE was structured (see *Figure 5.7-1* at the end of this chapter) like its US counterpart with acceleration teams and joint ventures leading big e-business initiatives within initiatives (i.e. B2B, B2C, CRM, and telematics): “CCE certainly had a basket load of things that it thought it needed to be doing for the brands when it started its existence” (Jaguar middle manager). It was to be an entrepreneurial unit that would take risks by developing capabilities and, over time, evolve them as core assets and sell its services to the brands and other firms. It would be a profit centre and parts of CCE could even be spun off. Of particular interest to this thesis is their B2C web services initiative, which began through a joint venture with Trilogy in the US, named Drive.

5.6.4 Joint Venture for B2C: Drive

The Drive joint venture business model for B2C web services transferred from the US to Europe two months (August 2000) after CCE’s initial offsite meeting. Like its American counterpart, it was one of a series of quasi-autonomous companies that could in principle be spun off later. It was to get “an early lead on intellectual property and by the time the intellectual property was getting old (i.e. 3-4 years), sell it to other parties,” said a middle manager in Jaguar.

Drive was meant to house all the B2C web services of FoE. Its structure was a mixture of Ford and Trilogy. Trilogy would provide the expertise, tools, licenses and programmes to solve Ford’s problems and improve their market share. Some of Trilogy’s work would be paid for directly and some not. A Trilogy person would be responsible for a certain area and a Ford person for another.

Work began quickly. CCE would allocate £20,000 to £50,000 for a project to start. Because it was a new joint venture agreement and the relationship with Ford had been smooth, there

were few specifications as to what was supposed to be done and when, as both sides were part of the joint venture; they were “gentlemen...and going to understand each other.” (Trilogy team leader). Work was handed over verbally, vaguely defined and disorganised. The Trilogy team was placed in an expensive central London office, while the rest of FoE and CCE worked from Essex. In essence, Trilogy was given ‘carte blanche’ in Ford (Trilogy senior manager), which was amplified by the direct links between Nasser and the CEO of Trilogy.

5.6.5 Contemporaneous Events -- Establishment of Ford IT’s Acceleration Solution Centre (ASC) and Acceleration Maintenance Centre (AMC)

In the meantime, as web services became more important in the company and as a national sales portal, named Firefly, grew to be very high profile, “IT thought that e-business should be part of its turf as it had to do with servers and things” (FoE Public Relations middle manager).

Previously, IT had been slow and reluctant to embrace Internet technology. IT at Ford faced the same problems as many traditional IT departments in their efforts to adapt to e-business: “They aren’t fast enough and they’re run by technicians, not business people” (Moad 2001). For years, software development and maintenance groups were structured and deployed around internally developed legacy systems. Larger systems, such as Ford’s huge common manufacturing management system, utilised most of the people and resources. This arrangement suited some low-level business managers but made for an IT organisation that was very unreceptive to e-business as resources were allocated on the basis of the size of the legacy applications. Consequently, new groups at Ford, including those promoting e-business, had trouble gaining attention from Ford IT. 80% of Ford’s software budget was spent on simply maintaining and enhancing legacy applications rather than creating new ones.

With the growing importance of e-business, the increasing number of joint venture partners and IT outsourcing activities, together with Nasser’s announcement that “technology and networks [would] in particular determine the shape of everything else” (Moad 2001), Ford IT launched a top-to-bottom overhaul of Ford’s application maintenance and development organisations. George Surdu (IT Service Director) and other IT executives redesigned the IT organisation to enable Ford to produce new applications for e-business while cutting costs and improving quality.

This restructuring involved pulling Ford's software development and maintenance units out of the key business functions to which they'd been dedicated and steering them into a new centralised organisation where they could, for the first time, be run as truly independent businesses, each with its own profit-and-loss responsibility. These new centres were named the *Acceleration Solutions Centre (ASC)*, in charge of Internet software development, and the *Acceleration Maintenance Centre (AMC)*, in charge of website maintenance. AMC was larger and remained in the FoE's IT headquarters, while ASC was moved to a new building next to CCE. The physical design of this new building was "first class" (ASC senior executive) with an open architecture allowing flexibility for team configuration.

These new centres would communicate with the business units on requirements and other issues through a go-between divisions called Process and Technology Groups (PTG), such as Drive. These centres, with their programmers, analysts, database administrators, deployment specialists and contract workers, would be shared by all of Ford's business units, which would contract with them for specific projects. Through these new establishments and IT's strong ties to FoE Purchasing department, which approved all expenditure for CCE and would advocate using internal Ford IT rather than outsourcing, Ford IT could "pre-empt ConsumerConnect from getting [further] into its turf and taking power away from it" (FoE Public Relations middle manager), especially since e-business was the new direction of FMC.

5.7 Summary

This first part of the narrative detailed the background of FMC and the automotive industry. More specifically, it described the history of FoE and the turbulent environment surrounding the establishment of CCE. It showed the establishment of CC-US and how it led to the opening of my main episode: *the life cycle of CCE*.

With its foundations inherited from its American counterpart, CCE began with a sense of urgency to integrate e-business across FoE to help lift FoE out of its dismal financial state and align it with Nasser's visions. CCE started with grand agendas within agendas and expanded in size rapidly. In the meantime, Ford IT joined the e-business movement and created ASC and AMC. *Table 5.7-1* summarises the various perspectives arising from this establishment phase.

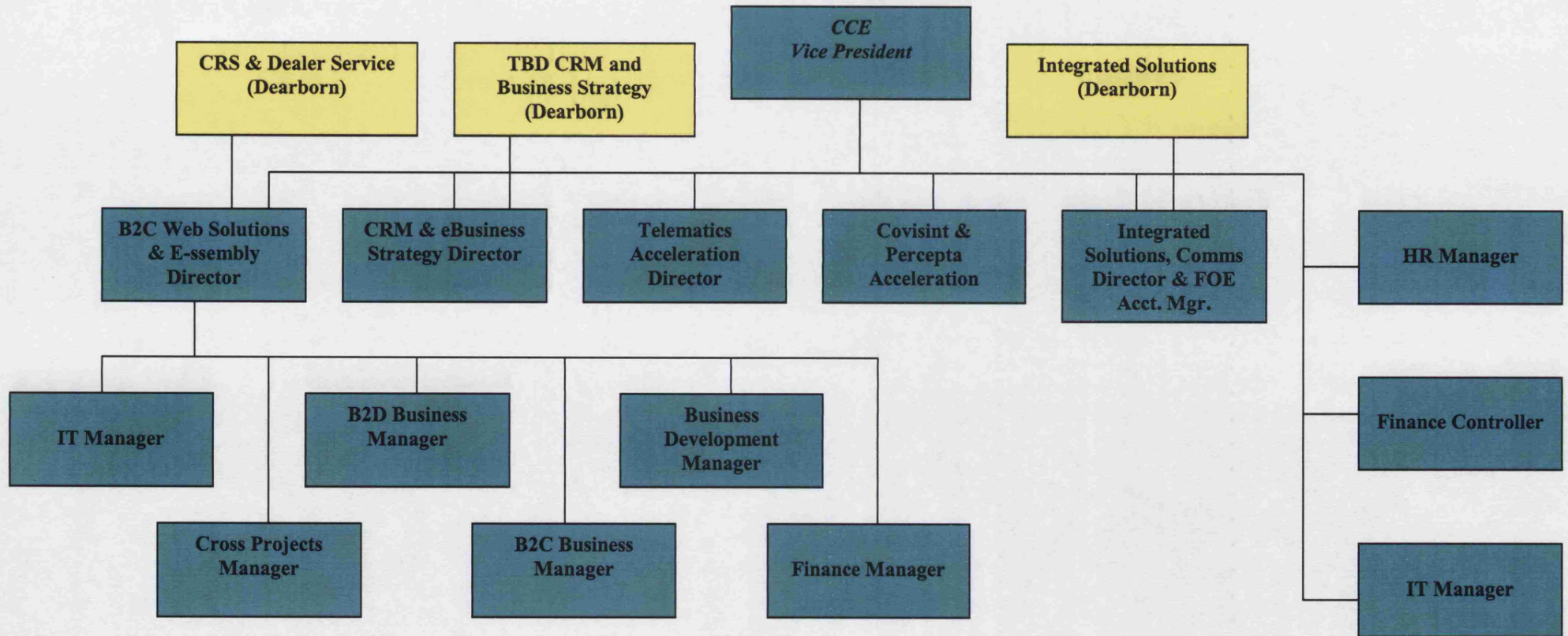
With the relevant Prior Events, Contemporaneous Events, and the Establishment of CCE delineated, the next chapter describes the next two phases of CCE, Operation and

Termination, while flashing sideways to highlight some of the pertinent Contemporaneous and Related Events. It concludes with references to the Later Events that followed the closure of CCE.

Table 5.7-1 Summary of Perspectives of Stakeholders in Establishment Phase

CCE	<ul style="list-style-type: none"> • Viewed itself as a prestigious department and attracted a strong team of employees • Viewed itself as expanding quickly, so created top-heavy organisation • Wanted to be located into a separate new building • Started with big agendas within agendas • Wanted to be entrepreneurial and to accelerate e-business • Positioned to be an internal profit centre, with goal of eventual spin off • Viewed partnering with new technology providers as best way to capture missing skills; trusted technology partners and gave them 'carte blanche' to do their work
FoE Marketing	<ul style="list-style-type: none"> • Partially agreed with CCE and Nasser's vision • Believed CCE lost credibility through use of outside consultants • Sceptical about Web; accustomed to traditional dealer and mass marketing model • Feared Web would replace the traditional models; viewed CCE as not pro-dealer • Provided initial funds and overheads for CCE, making them arbiters of CCE projects • Lost personnel to CCE • Believed CCE was elitist and thought CCE was handled light heartedly
FoB	<ul style="list-style-type: none"> • Agreed with CCE and Nasser's new vision; was dependent on FMC • Committed to CCE -- "started off extremely well and positive", within context of European recovery
Jaguar	<ul style="list-style-type: none"> • Loss-making brand since acquisition in 1989; lacked confidence • Many managerial positions filled by FMC people • Wanted to be aligned with FMC's new vision
Land Rover	<ul style="list-style-type: none"> • Newly acquired by FMC in early 2000; lacked confidence; loss-making brand • Worried that CCE's infrastructures were geared up for Ford brand and mass market • Had a different relationship with customers • Feared cross-brand strategy equated to "cracking a nut with a sledge hammer" for LR
Volvo	<ul style="list-style-type: none"> • Acquired in 1999; most confident, autonomous, and profitable luxury brand • Unhappy to be acquired by an American company • Had close ties with local IT suppliers; had CRM platform and loyalty programme • Doubted that CCE could provide immediate value or save costs • Saw CCE as a threat to its autonomy
Ford IT	<ul style="list-style-type: none"> • Believed that e-business should be part of its turf • Created ASC and AMC • Advocated employment of internal IT resources through Ford Purchase
Joint Venture with Trilogy	<ul style="list-style-type: none"> • Created based on gentlemen's agreement and work handed over verbally • Located in an expensive central London office • Young enthusiasts with freedom and scope to work as they deemed appropriate

Figure 5.7-1 CCE Senior Management Structure



CHAPTER 6: FINDINGS PART II

Operation and Termination of ConsumerConnect-Europe

6.1 Event 2- Operation of ConsumerConnect-Europe (CCE)

Established in June 2000, CCE was given a broad and ambitious mandate to establish e-business across the FMC brands quickly. Although CCE was Nasser’s “baby” and “flavour of the month” (FoE Public Relations middle manager), Ford had little knowledge or experience of e-business. The finer detail of e-business implementation would take a backseat while CCE positioned itself as the agent driving cross-brand e-business solutions across the Group.

A representation of the issues surrounding CCE was investigated in greater detail for this case study through its B2C arm, named Drive (later renamed E-ssembly), which was the most active of CCE’s four divisions. A list of sample projects from the various divisions is shown in Table 6.1-1.

Table 6.1-1 Examples of CCE’s Projects

CCE Division	Committed Projects
Drive (later renamed E-ssembly) B2C web solutions	Firefly (a national sales portal) New Internet Vehicle Configurator Lead Management System Email Management E-Fleet Concept Dealer Websites eUsed Business Case MyGarage.com E-Brochure E-Profile TalkBack.com 6-Sigma Project Jaguar Configurator Jaguar Lead Management Land Rover Global Website Land Rover Configurator
Covisint B2B supply chain	Online Auctions Catalogues Asset Management Virtual Product Workspace Portal Replacement Ford Supplier Network Supply Chain Management
Percepta integrated customer call centre	UK CRC Customer Satisfaction Convergence of Business Practices Ford Cornerstone (email system) Jaguar Cornerstone (email system)
Telematics in-vehicle web solutions	Focus Launch Mondeo Launch Customer Value Proposition Development

6.1.1 “Drive”

Drive started in August 2000 as a joint venture between CCE and Trilogy. From the beginning, the venture lacked adequate project management controls or infrastructure. Terms and conditions of work in the provider/consumer relationship were not defined and agreements were not recorded. In effect, there was “no regular control, no risk analysis, nor measure of business value provided at each stage” (Trilogy Senior Developer). CCE had enlisted Trilogy because it viewed Trilogy as “whiz kids” and gave them tremendous scope and freedom to do their work.

The relationship between CCE and Trilogy quickly deteriorated. Trilogy was a young and small company that lacked rigorous project management skills and was not accustomed to working with large traditional organisations. The hourly rate for a Trilogy developer was five to ten times higher than one of Ford’s, not to mention the additional expense of housing Trilogy employees in central London. Trilogy would deliver work that was below CCE’s expectations, leading to financial disputes.

Trilogy viewed its culture as having to “have impact, provide success” and underwent “frequent evaluations based purely on results” (Trilogy Team Leader). A Senior IT Manager at Ford offered a different opinion:

“They are the epitome of a company who over-promises and under-delivers; unprofessional; poor value for money; they have good people, but are frustrating. They are charging a lot and I disdain them. They’re an outsider, whose interest is not in Ford, and not to do business with Ford. They forget the organisation model, blow budget, and scope-creep issues. We only need Trilogy’s niche expertise.”

In addition, Trilogy was meeting financial pressures through a series of company-wide layoffs and this high staff turnover disrupted the CCE project. Some former Trilogy employees were rehired by Ford, enabling Ford to retain know-how at a less-expensive rate. This created tension within the CCE development team, as ex-Trilogy employees that were regarded as less competent could become project leaders on the Ford side. In some instances, Trilogy filed lawsuits against Ford for breaching non-solicitation agreements.

6.1.2 “Drive to Assembly to E-sembly”

The promise of the joint venture quickly evaporated and CCE severed its ties with Trilogy and forged ahead on its own. Adopting the name “Assembly”, the new organisation comprised employees remaining from Drive (Ford, Trilogy, and ex-Trilogy). Shortly after,

the name changed again to “B2C Web Solutions & E-ssembly” (for short, E-ssembly). Trilogy’s participation dwindled to that of a pure body-shopping contractor under the direct control of ASC and its communication lines with E-ssembly were cut. At daily lunches, Trilogy personnel would sit by themselves at a table far away from the rest.

The business model changed from a joint venture, with the ultimate goal of becoming an independent public company, to just an internal profit centre.

Although the situation improved slightly post-Trilogy, many of the initial structural problems remained. CCE still lacked a clear mandate within the organisation. The CCE function had grown too quickly and lacked sufficient organisation and infrastructure. In addition, CCE’s sources of funding placed it at a disadvantage.

FMC Corporate had given CCE a broad mandate to make sweeping changes within the organisation, but little guidance on the specifics of its role. Was CCE to act as a consultant, outsourcing product development to outside suppliers? Was CCE to become a full-service IT provider? FMC Corporate did not offer financial incentives or impose a central mandate for the brands to utilise CCE’s services. With this lack of clear direction, CCE aimed to provide everything related to e-business. One CCE manager said:

“It just doesn’t make any sense. It’s very fluffy... I don’t think we, ConsumerConnect, know what it wants to do.... It’s been dreadful, awful, terrible...The whole thing amazes me from my perspective. The culture is very expensive. There are a lot of people. I don’t understand what we’re trying to achieve. I don’t feel we add any value, giving anything back to the business. E-ssembly is suppose to be a centre of excellence, be seen as the best automotive provider of e-business solutions and I think we’re probably the worst provider of e-business solutions because we’re expensive and very slow compared to outside suppliers.”

Creating a service-oriented e-business within a traditional manufacturing company presented organisational challenges. CCE tried to encourage a “no fear culture where people can express themselves and get the same atmosphere of flexibility that you would get outside Ford.” Many FMC employees were not accustomed to this flatter hierarchy (of mostly managers). Although a flat organisation encouraged an entrepreneurial culture, it did not present the optimal interface to its more hierarchical customers. This often led to difficulties in communication between CCE and the brands.

Legacy ties and relationships strained CCE’s relationship with the brands. CCE managers

would skip levels of management and would complain to CC-US and senior board managers that the brands were not being cooperative. CC-US would sometimes communicate directly with the European brands, without notifying CCE, and this would lead to further estrangement of the European brands as they felt that CC-US did not appreciate European differences.

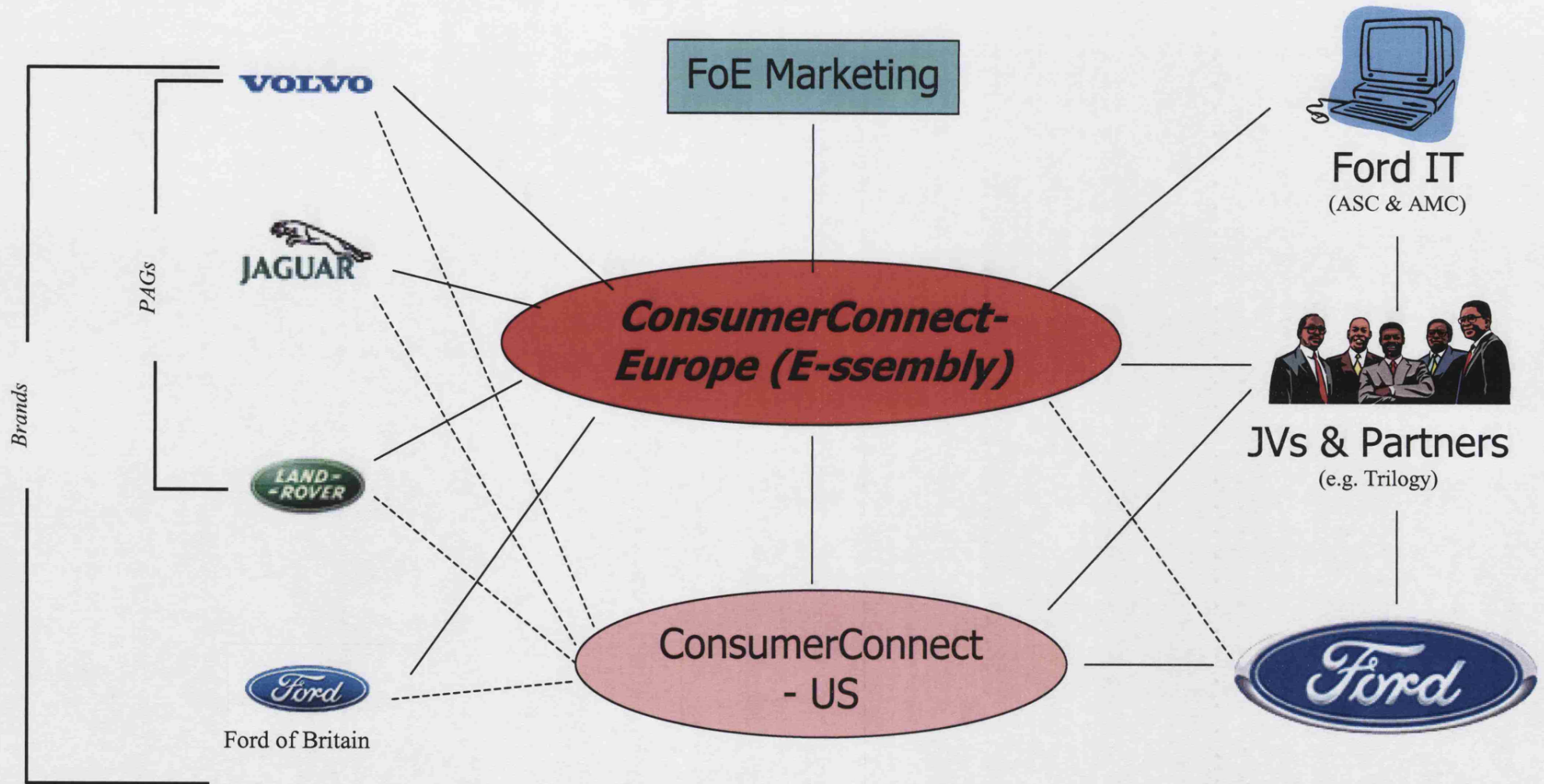
The internal organisation of CCE was in a constant flux. This lowered the morale of E-ssembly's staff and strained CCE's relationships with the brands. In the experience of one E-ssembly middle manager, his role and supervisor changed three times within a span of six months. He found his roles and reporting structure to be very confusing:

“I never understood the role, there were no solid objectives for the role, nothing there that was adding value to the brands. I'm used to a very active value-adding role in my previous positions. Previous positions have been very interactive with customers or dealers, and this has been very much a 'relationship' role. I've struggled with that and the fact that it has switched 3 times.”

The CCE funding structure changed several times. From the beginning, CCE charged at full cost plus mark-up but clients were finding CCE too expensive. Then, CCE tried to get extra funding from CC-US since FoE was in a difficult financial situation. It was the first time that money was transferred across the Atlantic between the different branches of the same group. To receive these additional funds, CCE had to switch its business model to a US-based risk and reward model, where profits were shared with CC-US and European brands had to pay CCE variable costs plus an annual fee over five years. CCE promoted this new payment structure as a cost-sharing and investment scheme. However, the brands did not have the funding to pay the annual fee so CCE eventually switched back to charging at full cost plus a smaller mark-up, which CCE promoted as “total-cost-pass-through”.

E-ssembly's vision of “scaling up to cover everything from day one, to become experts instead of being an expert at a section of the business” (E-ssembly team leader), its changes in business model (funding structure), its name changes, its lack of expertise in e-business, and its aggressive selling techniques, quickly lost credibility with the brands and among its own employees. Under these difficult circumstances, CCE struggled to sell its concepts to the brands. A schematic representation of the various stakeholders involved with CCE (E-ssembly) during this operation phase is in *Figure 6.1-1*.

Figure 6.1-1 Stakeholders in the Operation Phase



6.1.3 Contemporaneous Event -- ASC and Cost Control

Although E-sembly employed some technical people, it did not have sufficient know-how or capacity to develop the software platforms in line with their rate of growth. Hence, it needed to rely on other IT providers. Although FMC did not dictate that brands use CCE, it did mandate CCE to use Ford's ASC for all its software development and design. This made it very difficult for CCE to control its costs and meet its internal budget. This mandate was made possible through Ford Purchasing, which was responsible for approving the expenses of all the departments within Ford Blue Oval. According to a team leader in E-sembly:

“Ford Purchase and Ford IT are very powerful. You can't manage to spend a penny without the approval of Purchase. You can have an outside supplier who provides the same thing for \$1 and ASC for \$1000, but you'd still have to use ASC. Purchase gives you the authority to invoice FMC. They control all expenditure.”

ASC had the capabilities to develop very good solutions that could be integrated with the legacy systems. On the other hand, E-sembly felt that ASC was very expensive compared to outside vendors, and was very big and heavy. E-sembly sometimes just wanted fast and inexpensive IT solutions, but ASC was founded on Ford IT's mainframe mentality; “where things are developed slowly, well thought through, and where risks are minimised” (E-sembly middle manager).

E-sembly encountered most scope and time creep with ASC. For example, in one project, Owner Services, ASC initially quoted E-sembly £400,000; then spent 12 weeks and £100,000 analysing the project, and re-quoted it at £1.2m. In addition, some of ASC solutions, developed in the US, were “absolutely ace, but were too expensive and complex for Europe” (CCE senior executive).

Conversely, ASC felt that achieving alignment with business people was “an absolute nightmare” (ASC senior manager). It felt under-appreciated and misunderstood:

“E-sembly just wanted products cheaper and delivered more quickly without due consideration of a future when the product may have to interface with other systems...they held an aggressive management style...just shouted and moaned about things, and less than truthful on what they say they would deliver...they're used to cutting deals; the price is 'x', but if I beat them very hard, I can get it for 'y'. They're in the business of buying used cars” (ASC senior manager).

Furthermore, ASC felt insulted when a lower level business manager was sent to “dictate to the experienced [IT] manager what to do; giving us a hard time about the project costing and

timing...it's like having a small dog biting the tail of a big dog" (ASC senior manager). ASC felt that the business groups acted as if they had a "tyrannical control" (Ibid) and held a "blame culture". Traditionally, Ford IT did not negotiate and ASC felt frustrated with the time and effort wasted.

However, 60%-70% of ASC employers were contract workers from established IT companies (e.g. IBM and Compuware). Their presence attracted mixed opinions from business customers: IBM's ability attracted positive comments but, even if ASC were not profitable, IBM would be. In essence, ASC could easily employ outside IT contractors, while E-assembly couldn't unless it offered a very good reason to Ford Purchase, by which time ASC could probably contract the missing skills.

Nevertheless, ASC felt inhibited by other internal IT departments such as Technology Solutions Owners (TSO), who hosted its websites and, in ASC's opinion, were "complacent...holding the whip-hand does drive a certain attitude that is not as customer focused as it can be" (ASC middle manager). In addition, ASC constantly felt constrained by the Acceleration Maintenance Centre and the Process Technology Groups, who wanted to expand and compete for ASC's role.

6.1.4 Perceptions of Customers

6.1.4.1 Ford of Britain

Ford of Britain (FoB) was CCE's largest customer. According to those interviewed, this was more due to policy than merit. Unlike the other European brands, FoB was fully integrated with FMC purchasing functions. All expenses required approval from Ford Purchasing and, as a result, FoB was under pressure to use CCE. FoB felt that CCE was 'the flavour of the month'.

Some felt that CCE took FoB business for granted:

"they didn't view themselves as involved in a client/supplier relationship...It almost was as if they didn't have to win the business...The practical outcome of that was that there wasn't a tangible sense of a need to deliver. No urgency" (FoB middle manager).

CCE's desire to quickly demonstrate a profit resulted in conflicts with FoB. CCE charged for every aspect of a project at rates that FoB deemed exorbitant. This led to numerous disputes over delivery:

“They were actually not as cheap as some proven partners that I knew, from previous experience, would do a better job. So if you have somebody imposed on you, more expensive, and don’t deliver as much, it’s not going to end well.” (FoB middle manager).

FoB hired CCE to develop its Lead Management System (LMS), a platform that directed customer sales leads to dealers. FoB was dissatisfied with CCE’s level of commitment to the project, as it would not take ownership of the entire system. Although the core product worked, CCE did not devote adequate resources to stress test the upstream infrastructure and left the project before it was complete. According to a FoB project leader, “[CCE] took the majority of the project team with them and there was no back-up. They left us stranded.” The LMS project was decommissioned within 12 months after launch. “As a project, it was an expensive interim 12 months and we decided to bring it to an end because of our wholesale dissatisfaction with the product” (FoB LMS project leader).

Furthermore, FoB felt that CCE used it as a “sales pitch” to the other brands. CCE would portray their projects with FoB, such as LMS, as being successful because if something were successfully rolling out in FoB, than it must be good enough for the other luxury brands: “They understood our importance in getting other business. FoB is a big player... they hawk us around and that’s how we were treated” (FoB middle manager).

A common theme raised by FoB was that CCE should have outsourced the technology part and served just as consultants. FoB said that CCE did not have the required expertise to execute the technical aspects:

“My beef with them is that they didn’t get experts to do the job. We’re good at making cars and we don’t build computer systems. We should pay experts to do experts’ jobs” (FoB middle manager).

It also did not help that FoB shared a fairly widely held view that the director of CCE, a non-Ford person, was assigned to a task that he was unqualified for, while FoB’s managing director, who was “a very very significant person with a very very solid track record” (FoB middle manager), was ranked lower in the organisation.

There were communication gaps between FoB and CCE as FoB was uninformed and unclear about CCE’s purpose and operation.

In summary, FoB felt it was a “forced grudging alliance” with CCE, where CCE allegedly “over-promised, under-delivered, was too expensive, took business for granted, and did not

realise that it was in a client/vendor relationship” (FoB middle manager).

6.1.4.2 FoE Marketing

FoE Marketing was more accustomed to the traditional way of approaching customers (via mass media) and the traditional relationship with dealers: “Traditional Marketing likes to confirm the status quo and keep everything working as it has been -- continue advertising in newspapers and TV, etc.” (FoE Marketing senior executive). Furthermore, FoE Marketing had a small (6 people) Internet and New Media Group before the creation of CCE and so FoE Marketing would say, “Well, I’ve got somebody who looks after that already in e-business” (CCE senior executive).

With the launch and operation of CCE, FoE Marketing had mixed emotions. On one hand, CCE provided FoE Marketing’s Internet and New Media Group more internal resources to work with and a bigger scale and convincing power for e-business initiatives within FoE. In addition, the operation of CCE helped increase the budget of the Internet and New Media Group, by a factor of eight, for it to contract work from CCE. Furthermore, according to a senior executive in FoE Marketing, “ConsumerConnect was Ford, big benefits ... salaried heads have a much bigger ownership, commitment, accountability, delivery, than working with contractors.”

On the other hand, FoE Marketing was unclear to what extent CCE was working directly for the Ford brand versus the other luxury brands. FoE Marketing was paying 70% of CCE’s overheads, while the brands mainly paid for specific projects. FoE Marketing felt that it was “losing control and autonomy over CCE as CCE would spend 50-90% of its time on other brands” (FoE Marketing senior manager) rather than concentrating on the Ford brand. Since the individual brands did not have to pay 100% of the project cost, FoE perceived this “as taking funding away from Ford Blue Oval to spend on PAG brands and the PAG brands aren’t paying their way” (Jaguar senior manager). FoE Marketing also lost some of its best people to CCE and perceived these skilled human resources as being redirected to benefit the other brands, rather than FoE, while FoE was still funding these people. With such dissonance, the Internet and New Media Group used CCE less and less.

6.1.4.3 Premier Automotive Group

CCE dealt with three Premier Automotive Group brands. I discuss their perceptions in order from Jaguar, with the most favourable opinion of CCE, through Land Rover, to Volvo, which

had the least favourable opinion.

6.1.4.3.1 Jaguar

Of the luxury brands, Jaguar had the longest history with FMC and its management team comprised many Ford executives. Jaguar's relationship with CCE started well as "one or two people on both sides knew each other and trusted each other quite well" (Jaguar senior manager). It had the best relationship with CCE among all the brands.

Jaguar bought into CCE's cross-brand vision of developing a platform once and deploying it repeatedly across the brands. With lower volumes and lack-lustre financial performance, Jaguar was eager to benefit from the shared costs of cross-brand solutions and wanted to cooperate and align itself with FMC's overall strategy. For Jaguar, it was a "strategic alliance" with CCE:

"We mutually understood why it was better to have this alliance than a vendor alliance... It fundamentally did work, did deliver, and delivered things that we couldn't have afforded outside or couldn't have done outside without giving out on intellectual property" (Jaguar senior manager).

According to a Jaguar senior manager, Jaguar benefited from the dissonance between FoE and CCE discussed above.

6.1.4.3.2 Land Rover

Land Rover (LR), the most recently acquired brand, was struggling with poor sales and preoccupied with financial difficulties, despite its appreciation for potential cost savings from cost sharing of cross-brand solutions.

LR's senior management was interested in what CCE could offer them in terms of strategic support. Middle and junior managers however felt that since LR did not have the critical mass or financial resources to offer CCE, Land Rover would merely be able to offer suggestions, but not be able to make strategic decisions on the direction of e-business. For example,

"When Ford develops and deploys a new piece of software, they invest tens of millions of dollars. My budget is 2-3 million. While we would like to just take the software with the tools that ConsumerConnect produces, we find that when we actually deploy it, it is not right for the brand - not a whole lot of personalisation. We are a premium product and actually it's almost so complex that even Ford doesn't understand it. There are elements of what we want to use that Ford doesn't, and they are not created fully and are certainly not tested fully before we get them. There are

pros and cons with taking Ford's systems. Strategically, we should be taking them, but we are much smaller and we are investing more money than we need to. We can go out and maybe not get a bespoke tool for us, but we get something that achieves more of our requirements. We come to be an *after-thought*. The tools aren't especially developed for Land Rover. ConsumerConnect develop them and we're expected to take them and it can cause us problems" (LR middle manager).

Overall, LR felt that it had to follow what the other brands decided, but to follow a brand like Ford, which sold in the UK alone as many vehicles as LR did worldwide, would mean losing its luxury image. In other words, they continued to perceive the usage of CCE's technology as "cracking a nut with a sledge hammer". They felt that the idea of having a separate cross-brand e-business unit like CCE was good in theory, but in practice, they felt it was 80% Ford based and 20% brand based: "It's a case of who shouts the loudest and Ford is always the loudest. We're left following in the wake" (LR middle manager).

LR management felt that CCE was not business oriented enough. According to one source, CCE was not concerned about meeting agreed deadlines. LR staff were confused about CCE's internal structure, which seemed disjointed, and they didn't know whom to call in CCE as people changed roles frequently. They interpreted this lack of clarity as CCE "having something to hide" (LR Middle Manager). Compounding such concerns, some of the CCE people's knowledge of IT seemed to be little more than LR's.

Nonetheless, LR sometimes employed CCE, who seemed to offer a wider range of e-business initiatives than an individual outside supplier and LR wanted to apply and align itself with the strategic tool sets and solutions. This is however within the context that LR felt that CCE would impose its strategic solution, which "never came across as adding value in many cases" (LR middle manager). Although LR staff had established relationships with a few individuals within CCE, they felt that CCE was "on a mission to take on the world, certainly from a FMC perspective." Hence, according to a middle manager in LR:

"You needed to be politically aware when dealing with ConsumerConnect. You needed to be careful with some of the individuals you dealt with. They may go over your head afterwards. There were ulterior motives to what ConsumerConnect was about."

In summary, LR felt that it was a "forced alliance" with CCE.

6.1.4.3.3 Volvo

CCE had the most difficulty convincing Volvo of its value as Volvo was already advanced in its development of Internet solutions, and using CCE products seemed like a step backwards.

Volvo had its own Interactive Marketing Team since 1996 and, in 2001, Volvo established its own *E-business Strategy Team* responsible for Volvo's entire e-business strategy from product development to end consumer.

A Senior Executive in Volvo's Interactive Marketing Team said:

"I can understand why somebody thought it was a good idea, but it wasn't based on reality and it still isn't. I think they have a view of what their role is, but I don't think it's possible for them to actually execute it. They think they can save money for Ford by doing the cooperation and liaison and making everybody forced into using the same tools, but then neglecting to see the effects of too over synergising things, the delays it causes us. Basically, at the end of the day, they haven't saved us one dollar and I doubt they will in any near future."

Volvo had already established a network of relatively low-cost e-business suppliers. Its refusal to switch to CCE led to tensions, as CCE was "very good at complaining to its distribution network which is rather high up in Ford" and "kept using that against [Volvo] to make [Volvo] look bad, even in front of Ford, for not being team players." (Volvo senior executive).

Volvo viewed CCE as condescending and arrogant, and as unappreciative of its established level of e-business. Volvo felt that CCE would have been more useful had it supported and propagated best practices within FMC between the different brands, rather than recreating everything. A Volvo Senior Executive in the Interactive Market Group said:

"I had the head of ConsumerConnect Europe here a couple of weeks ago to talk to my E-Board. He sits in the meeting and he brings up BMW as this great example of a car company that's been working with Contact Management or philosophy of Contact Management for a long time. We were the first car company to start that. We've been using the same Contact Management platform in 40 countries, dealing with over 20 languages, and about 4 different alphabets. We're probably outstanding in the world when it comes to that area, not only for the auto industry. Yet this guy sits in my meeting and brings up BMW as the benchmark! Then you realise they have no idea what they're talking about. They never even bothered to see what we've done. We're the benchmark for the rest of the auto industry. Whenever I go outside the stare of Ford and so on, people know that, but within Ford, no! I think they really should get a deeper knowledge of where we are"

The organisational structure of CCE did not match Volvo's, leading to communication difficulties. CCE's structure, based on FMC's hierarchical military culture clashed with the Swedish, comparatively flat model, where employees at all levels were instilled with a sense of empowerment to make and implement decisions. Hence, according to the senior executive at Volvo's Interactive Marketing Group: "we have a tendency of ignoring decisions that have

been taken and think that we have the right to reopen any issue at any time,” which could often be interpreted as wasting effort when dealing with the American culture which stuck more to decisions made. Volvo felt that the American culture, of which CCE was a part, was very hierarchical and political, and Volvo “can get quite offended by the way they do things because to [Volvo] that’s like a stab in the back” (Volvo senior executive). Ultimately, the most prominent cultural issue for Volvo’s Interactive Marketing Group is “that we are a bit naïve and very honest and we believe things. We don’t play the [political] game as much.”

To make matters worse, the communication lines between CCE and Volvo were jumbled, as experienced by the senior executive in Volvo’s Interactive Marketing Group:

“They do have a lot of things to learn in terms of how they communicated. They either drown us in invitations to conference calls about vendor selection and they can even send that communication to me and on my level, I don’t take part in vendor selection, not even the guys on my team dig into things like that. So they don’t really have any idea who they’re sending the stuff to. So the important stuff sometimes doesn’t get to us at all...”

To further complicate these flagging communication lines, as mentioned earlier, sometimes CC-US would communicate with Volvo directly without notifying CCE:

“They definitely don’t have an organised way of sorting out coordination between North America and the rest of the world. We have found on several occasions that ConsumerConnect-US doesn’t know what Europe is doing, and vice versa. It makes it even harder for us as a brand to try and work globally. We are offered different solutions on the different continents. That does not go down well with us.”

In effect, according to a middle manager in CCE, “The majority of CC-US have never visited Europe and appreciated the difference”.

In summary, Volvo felt that it was forced into a misguided alliance with CCE. To Volvo, alignment across the brands was not logical or practicable. Volvo already had more advanced programmes in place and, in the quickly evolving e-business world, CCE’s aligned cross-brand platform concept would cost valuable time and money.

6.1.5 Perceptions of ConsumerConnect-Europe

CCE felt “caught in the middle of everything” (CCE senior executive), managing assaults from all directions: CC-US pressured CCE to do things faster; its customers demanded more attention to implementation; CCE was expected to make a profit but the brands regarded it as expensive and uncompetitive.

CCE management felt that it had to spend a disproportionate amount of resources convincing the brands to use its products and services. Budgets in FMC were decentralised, and without a central mandate, the initiative was with CCE to obtain resources from numerous budgets controlled by grudging and unreceptive brands. CCE viewed itself as having a “can-do culture” but was unnecessarily bound by tradition and bureaucracy.

This difficulty in getting alignment was also fuelled by the problems of being a change agent, as expressed by a senior executive in CCE:

“When you are trying to have a nimble different organisation, there are still big drags of big company process on it and if you try to do things fast, you’re delinquent because you didn’t follow the process and you end up antagonising people.”

Being a change agent was “a difficult role and not the most popular”, said an E-sembly Team Leader. “I make people feel a bit uneasy, I’m known sometimes as the ‘cowboy’.” This problem must be seen within the context of the politics surrounding the traditional departments and CCE.

In terms of its interaction with the brands, CCE was unable to convince the brands to align with its objectives, as explained by an Acceleration Team Leader:

“I wish that customers would believe that ‘we add value’. Sometimes I feel like I am ‘selling ice to Eskimos’. They are not incentivised to look at a bigger picture. They are under incredible pressure for revenue growth. We look at things for the longer term. ConsumerConnect seems like this hot house of ideas, but we have limited opportunity to deliver. We rely on other people (i.e. brands) to deliver and if they are not motivated to do so, then we are sterile. We are reliant on our skills to position with the brands.”

One middle manager felt that E-sembly would only be able to encourage the brands to adopt e-business if E-sembly were better than the brands. However, he believed that the brands already had “very knowledgeable, very educated, and very skilled people working on e-business. In many ways, far better people than those within ConsumerConnect.” *Table 6.1-2 & 6.1-3* summarise the various perspectives of stakeholders during this operation phase and *Figure 6.1-2* outlines the key events within the Establishment and Operation of CCE.

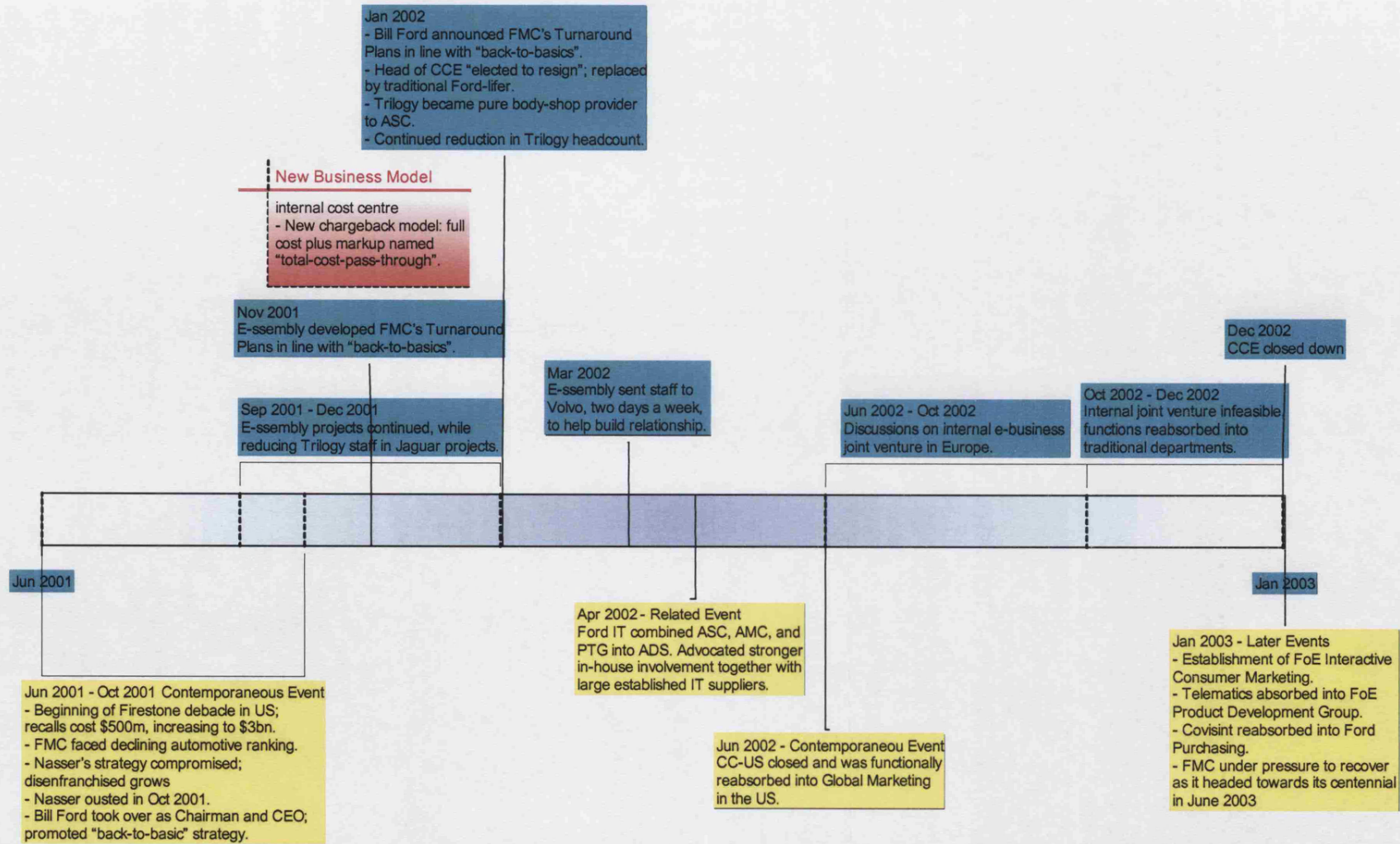
Table 6.1-2 Summary of Perspectives of (non-PAG) Stakeholders in Operation Phase

<p>CCE/E-assembly</p>	<p><i>About themselves</i></p> <ul style="list-style-type: none"> • Realise partnering with new technology providers was problematic, so severed ties • Lacked clear central direction and aimed to provide everything in e-business • Confused and considered job as “fluffy” • CCE’s internal organisation (business and chargeback models) in constant flux, further confusing and lowering staff morale and performance • Felt it lacked expertise in e-business <p><i>Towards ASC</i></p> <ul style="list-style-type: none"> • Felt ASC could develop excellent solutions but was very expensive, big and heavy • Felt mandate to use ASC impeded its cost control <p><i>Towards Brands</i></p> <ul style="list-style-type: none"> • Viewed customers as uncooperative so skipped levels of management to complain to CC-US and senior board • Felt caught in the middle of everything, dealing with resistance from every direction • Wished that a central mandate to use CCE would be enforced • Perceived itself as having a “can-do culture”, while brands did not believe nor want to learn about CCE • Felt difficulty of being a change agent, not a popular role • Felt brands held attitude of “not invented here” towards CCE’s innovation – like “selling ice to Eskimos”
<p>CC-US</p>	<ul style="list-style-type: none"> • Wanted to accelerate the situation in Europe, so it contacted the European brands directly
<p>ASC</p>	<ul style="list-style-type: none"> • Felt CCE did not understand its aims • Felt “absolute nightmare” in aligning with business people • Felt CCE filled with aggressive deal-cutting business people • Frustrated with time spent on price negotiation with CCE • Felt customers uncompromising and held tyrannical control over it
<p>FoB</p>	<ul style="list-style-type: none"> • Felt pressured into using CCE, due to policy than merit; felt CCE was the “flavour of the month” • Felt CCE took FoB’s business for granted; not proper client/supplier relationship • Regarded CCE’s charges as exorbitant • Dissatisfied with CCE’s commitment to project; felt CCE did not take ownership of project nor devote adequate resources • Felt CCE used FoB as a sales pitch to the other brands • Believed CCE should have outsourced the technology and serve just as consultants; felt CCE lacked technical expertise • Viewed the director of CCE, an outsider, as unqualified • Communication gaps with CCE, as FoB uninformed and unclear of CCE’s operation • Viewed relationship as forced grudging alliance
<p>FoE Marketing</p>	<ul style="list-style-type: none"> • Sceptical about impact of web; accustomed to traditional methods of mass media and dealership model • Mixed emotions towards CCE: <ul style="list-style-type: none"> • Helped increase budget for Marketing’s Internet and New Media Group • Unclear of CCE’s distribution of work for Ford brand versus other brands • Lost skilled people to CCE to benefit other brands • Dissonance led to diminishing use of CCE

Table 6.1-3 Summary of Perspectives of PAGs in Operation Phase

Jaguar	<ul style="list-style-type: none"> • Senior management had good relationships with CCE • Bought into CCE's vision; wanted to gain from shared costs of cross-brand solutions • Felt it benefited from CCE's dissonance with FoE • Felt it was a strategic alliance
Land Rover	<ul style="list-style-type: none"> • Preoccupied with its own financial problems and new merger, despite some appreciation of potential cost savings from cross-brand solutions • Felt it could not offer strategic decisions on direction of e-business • Felt that CCE would lose LR's luxury image with cross-brand solutions • Felt CCE was too IT focused • Confused by CCE's internal structure and interpreted the lack of clarity as CCE "having something to hide" • Felt CCE was "on a mission to take on the world", so needed to be politically aware • Felt it was a forced alliance
Volvo	<ul style="list-style-type: none"> • Felt it already had achieved what CCE set out to do • Saw itself as being advanced in e-business and using CCE's products as a regression • Felt CCE should transfer best practices and knowledge (i.e. Volvo's) among brands • Felt CCE portrayed Volvo as being uncooperative and wasting FMC's money to FoE • Felt that CCE had "too small ears and too big a mouth"; condescending and arrogant • Felt CCE did not acknowledge its high level of e-business • Felt CCE needed "to become more humble and start listening more" • Confused by changing communication lines with CCE • Felt CCE too hierarchical and political • Felt CC-US did not appreciate European differences • Felt it was forced alliance

Figure 6.2-1 Timeline of Key Events in Termination of CCE/E-sembly



6.1.6 Related Events

According to Brian Kelley, president of ConsumerConnect-Global, in an interview in January 2001, the company's combination of websites and other online ventures sent an estimated half-million leads to its dealers in the previous year. Of those leads, 60% were in the US. In 2000, Ford sold more than 50,000 vehicles (1% and 0.67% of vehicles sold in US and worldwide respectively) to consumers who shopped online first and provided their personal information (Halliday 2001). Kelley said, "The important thing about it [Ford's online presence, e.g. www.ford.com] is it's improving sales process because it saves customers time and gives them more information." In December 2000, Ford tested FordDirect.com, an online sales venture jointly owned by Ford and the dealers, to create a closer link between Ford and potential buyers (Halliday 2001).

Nonetheless, in the US, the entrenched state franchise laws had made it difficult for anyone other than a local dealership to sell cars in their jurisdiction (Waltner 2000; Wilson 2000; Preston 2000; Wilson 1999). Even Nasser could not buy a car without going through a traditional dealer. According to a CC-US executive, "Dealers will never be completely out of the picture...The answer is some people will always want to use the Internet channel; some people may never want to use the Internet channel, and it'll never be 100% one way or the other way." Furthermore, this CC-US executive believed that dealers had to become web-enabled and satisfy both the traditional and e-channel consumers. With the Internet, dealers were meant to improve their after-sales services, which could amount to three times the value of the initial purchase (Taylor 2000).

Although dealers would not be put out of business, they were still wary of e-business. Many dealers did not want automakers and dot-coms interfering in their relationship with customers, "The Net is making everyone fight for what they perceive as a customer and that's a problem" (Wilson 2000, p.11). In addition, some companies, like DaimlerChrysler, rolled out dealer-rating systems, which only funnelled sales leads from the company's website to those dealers who met tough new standards for service, facilities and Internet knowledge (Kerwin et al. 2000). GM sent leads from its GM BuyPower Website to only 75% of its dealers, including those that answered Net queries from customers within 24 hours. Hence, a failure to comply could be devastating for dealers as the new partnerships with Internet service providers gave manufacturers a way to bypass individual dealers.

6.2 *Event 3- Termination of ConsumerConnect-Europe (CCE)*

6.2.1 **Contemporaneous Event**

In mid-2001, millions of allegedly faulty tyres produced by Firestone Inc.¹⁹ led to a wave of accidents in FMC's most profitable and high volume products: Explorer SUVs and F-150 pickups. This resulted initially in 6.5m tyres being recalled, at a cost of \$500m, later increased by a further 13m recalls at a staggering cost of \$3bn to FMC (Economist 2001; Kerwin and Welch 2001). Consequently, the popularity of these mainstay models waned (Kerwin and Muller 2001; Feast 2002).

Besides FMC's high visibility fights with Firestone over these tyre recalls and SUV rollovers, "if you only read the headlines [of 2001], it [didn't] look like FMC can do much right these days" (Mayne et al. 2001, p.32). It seemed that FMC "has forgotten how to build quality cars and trucks" (Ibid, p.32). For example, its Escape small SUV had been recalled five times in that year. The crucial launch of the Ford Explorer, which had been excruciatingly slow and was meant to eliminate glitches, was marred by two embarrassing recalls. The last recall, involving 50,000 Explorers seemed "particularly bone-headed: tyres on some trucks were cut by a sharp end on a narrow stretch of the assembly line because nobody told the factory the new Explorer's stance was a little wider than the old one" (Ibid, p.34).

Furthermore, Ford trailed at seventh place, after GM and Daimler-Chrysler, as well as Toyota, Honda, Nissan, and Volkswagen, in the prestigious J.D. Power & Associates 2001 survey of vehicle quality, a fall of five places from the previous year (Ibid).

With this declining ranking, product recalls, and the staggering cost of the Firestone debacle, Nasser's entire strategy of redefining Ford as a company that championed consumers, through the strategic use of e-business, was compromised. It seemed that FMC's pursuit of consumer-orientation had led to increased consumer dissatisfaction. Furthermore, it allowed various disenfranchised groups (dealers, workers, unions) to express their discontent openly.

Under Nasser, a new employee-evaluation system had been introduced. The new policy particularly upset middle managers as it required supervisors to rank employees from best to worst along a curve: 10% As, 80% Bs, and 10% Cs. Getting a C meant no bonus and getting

¹⁹ Firestone Inc based in Nashville, Tennessee, US was the largest subsidiary of Bridgestone Corporation of Japan-- the world's largest tyre and rubber manufacturer. Bridgestone/Firestone Inc. manufactured Bridgestone, Firestone, Dayton, and other private brand tyres.

two C's in a row were grounds for demotion or dismissal. Rather than measuring an employee's performance against a set of objectives, the new evaluation measured an employee's performance against other employees with similar jobs, which was a radical change for a traditionally paternalistic company (Kerwin and Welch 2001). The policy was intended to weed out under-performers and build a sense of teamwork. Instead, employees said it had the opposite effect and provoked opposition to Nasser's initiatives to change the company's basic values. Some staff even took out class-action suits against FMC, charging it with discrimination against middle-aged white males (Ibid). Nasser, however, "emphatically reject[ed] the notion that he [was] trying to force change too quickly on the carmaker. If there were any regrets, he said, it [was] that we [were] not moving fast enough" (Ibid, p. 87).

However, as discussed in the Literature Review, the dot-com bubble burst in Spring 2000 and by March 2001, the NASDAQ was back to its pre-bubble days. Hence, Nasser's hopes of initial public offerings and e-business driving up Ford's share prices were shattered. Industry investors were drastically scaling back, and intense pessimism loomed over dot-coms, Ford's opportunities for spinning off their e-business operations collapsed.

The shockwave to markets of the World Trade Centre attack on September 11th, 2001 sent FMC's share price and sales predictions into further decline. FMC's financial results in the third quarter of 2001 were much worse than the previous year: worldwide vehicle unit sales (1.5m units) were down 10% (FT 2001); worldwide automotive operations lost \$877m, compared to a profit of \$497m a year before; and worldwide automotive revenues were \$28.55bn, compared with \$32.58bn the year before. FMC lost 1.5 points of market share in 2001 alone, slipping to 22.8% of US vehicle sales (Kerwin and Muller 2001). By October 2002, Standard & Poor's lowered the company's long-term debt rating from BBB+ to BBB with a negative outlook.

6.2.2 Nasser Ousted

In October 2001, FMC's board ousted Nasser. Taking his place, Bill Ford combined the roles of chairman and chief executive:

"For a brief shining moment on the morning of October 30th, FMC's Dearborn headquarters felt like Camelot. Cheering workers surged to their feet as William C. Ford Junior introduced himself as the company's new Chief Executive Officer at a hastily arranged press conference. Amid the gloom about worsening profits and quality, the ousting of CEO Jacques A. Nasser at the hands of founder Henry Ford's well-liked great-grandson was a tonic to battered morale. And the shift in mood was almost palpable. "It was like the old Ford again," says one company insider. "People

were smiling again instead of staring at the ground.” (Kerwin and Muller 2001, p.51).

Thus Bill arrived in the corner office with an unprecedented reservoir of goodwill. Employees, giving him the standing ovation, were thrilled to have a Ford running FMC for the first time since Bill’s uncle, Henry Ford II, retired in 1980. Bill was not the typical American CEO. Although, he had worked for FMC for 16 years, held 15 different jobs, and had never run an operation larger than a tiny Swiss unit, his surname assured him of a certain cachet and an inherent sense of company loyalty. His family controlled 40% of FMC.

Upon his appointment, Bill made a public broadcast, in which he apologised to employees for the pain the future restructuring will cause and he presented a frank account of the company’s mistakes, many of which he had presided over as chairman. Targeting Nasser’s e-business and services orientation as a poorly formulated strategy, he said: “We also pursued strategies that were either poorly conceived or poorly timed. We strayed from what got us to the top of the mountain, and it cost us greatly” (Shirouzu et al. 2002, p.4). In another interview, Bill acknowledged that FMC made serious manufacturing, marketing and strategic mistakes: “We lost some of our focus on our core business during the dot-com craze. That won’t happen again” (McClenahan 2003, p.32). He announced that FMC would pursue a “*back-to-basics*” strategy, focusing on manufacturing, finance and product strategy (Shirouzu et al. 2002). This new strategy and restructuring would entail closing five North American plants and eliminating around 17,000 jobs world-wide, in addition to the 18,000 cut since January 2001 (Ibid). In addition, this new strategy would include divesting non-core operations that Nasser had acquired or started (See Table 6.2-1: *Bill Ford’s Plan of Action*). The culture of excess would be changed: “wasted money, wasted time and wasted material are seen as obstacles to building cars, trucks and sustainable profitability. There will be no wasted motion at Ford—beginning with design, engineering and the supply chain” (Mayne 2002, p.35).

During Nasser’s three-year tenure, he worked his way through \$15bn of cash, leaving less than \$41m by the time Bill took over (Kerwin et al. 2002). Nasser had acquired two luxury brands (Volvo and Land Rover) but he also spent billions buying tangential operations such as recycling plants, Hertz Equipment Rental Corp, the Kwik-Fit repair chain and e-business ventures that failed (e.g. Drive- with Trilogy; Percepta- with Teletech). According to industry analysts, under Nasser, Ford had “fallen into a sorry state of disrepair: its profits, market share, quality and morale were spiralling downward as he tried to turn it into something, anything, other than a traditional car company” (Ibid, p70). Bill acknowledged that the board could have acted more quickly in mid 2001, but said that they were lulled by the record

\$7.2bn profits of 1999. Bill added, “It wasn’t a gradual decline. It was a massive implosion” (Ibid, p.72). The company lost \$5.5bn in 2001. To industry analysts, this back-to-basics strategy seemed unavoidable. Ford needed to leverage the strengths that had made them the world’s leading truck manufacturer and learn from their past:

“With the unchallenged success of the financial side of Ford’s business during the 1990s, it seemed easy then to ‘forget’ what business the company was in...In the end, only product matters. Concentrate on products and the rest will follow. Ford needs to go back to what made the company a contender for the world’s largest and most profitable car company” (Ettlie 2002, p.20).

Within FMC, according to Nick Scheele, newly appointed Chief Operating Officer, this back to basics strategy was also well received:

“There’s little backlash as the pendulum swings back to the industry’s fundamentals. It has had bumps...because it was a fairly abrupt stop-turn, but we were reverting to something, which is really what most people joined the company for. I mean, most people joined the company to be part of designing, building, wholesaling, marketing and financing cars and trucks. And I think there was a lot of confusion residing by saying, ‘Well, what you should be doing is doing something terribly different.’ Being an entrepreneur and doing things that people really didn’t join the company to do. And so I think that there was a sense of relief that OK, this is what we wanted to do all along. And we’re back to it” (Mayne 2002, p.36).

Furthermore, FMC was also becoming very conscious of the Blue Oval’s status as it headed towards its 100th anniversary in 2003. Senior executives agreed to strengthen Ford’s profile worldwide by going back-to-basics with the core Ford business (Feast 2002).

This back-to-basics strategy was virtually identical to the strategies pursued by FMC’s rivals, including GM, Daimler Chrysler, Toyota and Honda. GM was cutting jobs at roughly the same pace as Ford, with a combination of buyouts and attrition and, after a decade of cutting costs, was accelerating its drive to eliminate waste (Shirouzu et al. 2002).

With Nasser’s removal, several of his top lieutenants and external recruits were also dismissed or demoted. Brian Kelley, head of CC-US, was dropped down to marketing for the Lincoln brand. The head of CCE was also asked to step down to a less significant role. Bill was more traditional than Nasser with regards to his hiring philosophy. Nasser believed “in recruiting aggressively from the outside and then letting his stars do as they please” (Kerwin et al. 2002, p.72), while Bill promoted internal employees. For example, he promoted Nick Scheele, an affable fence-mender, who headed Ford of Europe, to COO. He also pulled David Thursfield, the driving force behind the nascent European turnaround, back to Dearborn to help accelerate cost cutting. He even lured back former CFO, Alan Gilmour, 68,

who had retired seven years earlier (Ibid).

Table 6.2-1 Bill Ford's Plan of Action²⁰ (Adapted from Ford Motor Company, Jan 11, 2002)

Action	Descriptions
New Products	<ul style="list-style-type: none"> • Production-led revitalisation programme, which will lead to the introduction of 20 new or freshened products in the US annually between now and mid-decade.
Plant Capacity	<ul style="list-style-type: none"> • Reduction of North American plant manufacturing operating capacity by about one million units by mid-decade to realign the capacity with market conditions.
Hourly Workforce	<ul style="list-style-type: none"> • About 12,000 hourly employees in North America are affected by the actions completed in December or taken throughout 2002 and beyond. • An additional 3,000 hourly employees were affected in 2001. • Plans are being made to reassign as many plant employees as possible.
Salaried Workforce	<ul style="list-style-type: none"> • Last year's voluntary separation programme for salaried employees and other related actions resulted in a 3,500-person workforce reduction in North American. • The programme will be extended to achieve an additional 1,500-person salaried workforce reduction to reach the goal of 5,000. • If necessary to meet this goal, an involuntary separation programme will be used.
Global Workforce	<ul style="list-style-type: none"> • About 35,000 employees will be or have already been affected by combined actions around the world since January 2001. Those consist of 21,500 in North America – 15,000 hourly, 5,000 salaried and 1,500 agency employees – and 13,500 in the rest of the world.
Material Costs	<ul style="list-style-type: none"> • A material cost-reduction programme has been initiated with North American suppliers which shares design savings, with Ford receiving 65% of implemented cost reductions and the suppliers receiving 35% in the first year. • Designs that will help improve Ford's products and overall quality will be developed. • This programme, along with other material cost reduction efforts, is expected to improved ongoing annual profits before taxes by \$3bn by mid-decade.
Discontinued Low-Margin Models	<ul style="list-style-type: none"> • The Mercury Cougar, Mercury Villager, Lincoln Continental and Ford Escort will be discontinued this year.
Beyond North America	<ul style="list-style-type: none"> • Revitalisation plans beyond North American automotive operations include the continued implementation of the European Transformation Strategy, the Premier Automotive Group Strategy, the turnaround in South America and a revised direction for Ford Financial.
Divestitures	<ul style="list-style-type: none"> • Ford is pursuing the sale of non-core assets and businesses. • Ford's plans include \$1bn of cash realisation from these actions in 2002.
Dividend	<ul style="list-style-type: none"> • The annual common stock and Class B stock dividend will be reduced from 60 cents a share to 40 cents.

²⁰ The listed actions and those already taken are expected to improve pre-tax operating results to \$7bn annually, an improvement of \$9bn by the middle of the decade. As part of the restructuring, the company will take an after-tax charge to fourth quarter earnings of \$4.bn. The charge will cover several items, including asset impairments and personnel costs.

6.2.3 Related Events -- ASC, AMC, and PTG Consolidated

FMC's back-to-basics turnaround plan touched virtually every corner of the global automaker's operations, including IT. Ford IT was driving a series of IT initiatives that would reduce Ford's reliance on outsourcing and the number of technology business partners. Ford IT wanted to shift towards building in-house competency as opposed to sourcing work to multiple providers. Rather than 140 different agencies for basic programming, they partnered with eight large IT companies as preferred providers to promote deeper and bigger relations.

Alongside this general back-to-basics movement and building in-house expertise, Ford IT consolidated ASC, AMC and most of PTGs²¹ into an Acceleration Development Solution Group (ADS). This merger would allow the wider adoption of system development methodologies; the establishment of an architectural management group; the introduction of a technical career path within FMC; the stronger recruitment of in-house IT staff; and the employment of preferred (large established) IT suppliers like IBM.

6.2.4 Towards Termination of ConsumerConnect-Europe

With Nasser's removal, US management wanted to reduce the head of CCE's role (January 2002). He "elected to resign" instead as his future in FMC seemed bleak. From his perspective, his demotion was mainly caused by the politics and his lack of power and network within FMC:

"My one big regret is that I'm going because I didn't fit. I found it a struggle to not have been able to communicate properly with certain key individuals that have the power of life or death over my personal career... There is a real cult of god-like VPs, who have the power to change the whole direction of your day, your week, your project, sometimes not on a great deal of understanding. Because they've been around, they acquire a god-like omnipotence ... The exercise of power here is so naked. Power is everything. Decisions by a manager can totally, completely influence your future. I think there is a fear culture at Ford because if you upset a powerful guy, the retribution comes ... If you were in my position, a new boy, no track record in Ford, good track record outside, 45 years old. I have to prove myself all over again to people who are not interested in seeing the positive sides."

He was replaced by a traditional Ford manager, who had been with FMC for 33 years and who was part of the original founding team of CCE, and who had served as a CCE

²¹ The small part of PTG that remained was the slim consultancy organisation concentrating more on the strategic aspect of IT, but work involving business analysis and project management was merged into ADS.

acceleration team leader. With a strong track record²² within FMC, he was a classic 'Ford-lifer' with a strong personal network within FoE and FoB.

With Nasser's removal, CCE felt that it was susceptible to attack. Such sentiments were expressed by an Acceleration Team Leader:

"Jac Nasser was an avid supporter and has now left. He was seen as the founding father of ConsumerConnect, who then brought in Brian Kelley to lead ConsumerConnect. With his demise, 'when the cat is away, the mice will play.'

This emotion was also conveyed by the resigning head of CCE:

"A new venture like ConsumerConnect gets targeted because it sits in the middle of everybody. When Jac left, you became a very obvious target for everyone. If you are the change agent of the company, you need the backing of senior management, otherwise you won't succeed...This is the trouble with a big company. Not belong to a function, lack support from senior management, and lack of network within Ford"

He used an analogy in a board meeting to describe the situation: CCE, the change agent, was seen as a 'virus' to FMC, and was "under attack by the 'white blood cells' of FMC", which wanted to destroy the 'virus'. Another analogy he used was that CCE was FMC's "dirty laundry left to dry."

Not only did CCE no longer have top management support, Bill was promoting a back-to-basics strategy that intensified the concerns of CCE's employees:

"With the new chairman, who doesn't see this [i.e. ConsumerConnect and e-business] as a priority, then this is an issue. It is recognised that the new chairman has a number of charges (don't forget that we've taken a 2bn profit and made it a 5bn loss last year). It's quite clear where the priorities lie...ConsumerConnect has always been positioned as out on the edge. By definition, ConsumerConnect is a different paradigm... The change in senior managers at Ford makes it more likely that ConsumerConnect is not part of a winning team" (CCE Acceleration Team Leader).

CCE was now "an experimental satellite activity" (E-assembly middle manager) in relation to the back-to-basics strategy, as confirmed by a middle manager in Public Relations:

"ConsumerConnect would not be in any position to negotiate. It was created by the company and if the company changes strategy, than ConsumerConnect will have to change too. ConsumerConnect, the created one, is not an independent entity. It was

²² The first half of his career was in classical operational roles in FoB: sales and marketing, rental and fleet sales, leasing, selling cars to dealers, advertising, and sales promotion. Then in the latter half of his career, he moved to FoE, which almost by definition consisted more strategic and central staff coordination roles. He was in charge of European Dealer Strategy, which involved dealers' agreements, accounting systems, signage, cooperation image, operation, and coordination. He also worked as Marketing Strategy Manager for FoE.

created separately for good reason and the company changed, so it was deemed necessary to go back. ConsumerConnect cannot and will not resist because things have changed and other media will report ConsumerConnect as one of Nasser's initiatives."

As the circumstances changed and as CCE developed and learned from its early operation days, its work attitudes changed. For example, traditionally, resistance from the other stakeholders was "greeted with arrogance...skipping levels of management to try to force the situation". Later, the behaviour became:

"much more conciliatory; getting a resolution, and answering each one of their queries from each one of the stakeholders...realisation that ConsumerConnect cannot be arrogant with the brands, need to be much more subservient" (CCE Acceleration Team Leader).

Another senior executive in CCE confirmed the need for changing attitude:

"Undoubtedly, there were some employees who were not as politically astute and good communicators as they could be and they did things arrogantly, telling people that they needed to move their business to ConsumerConnect, whereas frankly, you need to earn the right for them to consider giving you the business. As soon as you order people that they need to move their business, it does a lot of harm...Now, its much more about *seduction than instruction*."

E-ssembly developed "e-time", a project management process. Prior to that, E-ssembly had "no fundamental discipline, no fundamental gateways, and no agreements as to what happened at each gateway" (CCE senior executive). With e-time, E-ssembly was able to offer structure, process, valuation metrics and tagging systems. E-ssembly also sent a dedicated member of staff to travel to Volvo headquarters in Sweden two days a week in order to better understand Volvo's perspective and to build better relations. However, even this E-ssembly middle manager questioned the overall value of E-ssembly and expressed his concerns that it was overly structured:

"E-ssembly's vision is to be an excellent IT implementation team and that's it. You probably need six project managers that manage IT implementation projects. You don't need all this side crap. There's loads of people here doing all sorts of other things and I don't know what value that adds...We can't afford all these people. We're spending a fortune on people that don't add to the equation."

Another E-ssembly middle manager confirmed his doubts about the value of E-ssembly:

"The way it operates now is that E-ssembly space is really just a project management area; there's no need for it to be set up as it is, with the exception of the fact that it is multi-brand...I guess you can disband E-ssembly tomorrow and not much harm will come to the organisation. What happens within the brand, you will have people who will manage the projects. You just need more involvement from the brand. The only thing missing is you need a multi-brand perspective to use applications across all the

brands, arguably that's not happening the way it should now anyways!"

Even though E-assembly improved its processes and procedures, some employees still questioned its value after Nasser's ousting.

6.2.5 Contemporaneous Event – Closure of CC-US

Within nine months (June 2002) after Nasser's dismissal, the new head of CC-US, who had replaced Brian Kelley in October 2001, also "elected to resign", in the same fashion as Nasser and the previous head of CCE. With this resignation, the US management had to decide the future of CC-US. As a result, among the back-to-basics divestitures and cost cutting programmes, Nasser's baby, CC-US, with its 300 employees, closed and was reabsorbed into Global Marketing in the US.

6.2.6 Termination of ConsumerConnect-Europe

With the closure of CC-US, CCE was even more exposed, as it was very small compared to the other seven Consumer Business Groups. Nonetheless, CCE continued for a short time as a separate unit.

Financially, it was difficult for CCE to continue as approval for headcounts and budgets would disappear. Politically, FMC was a US-centric organisation and "whatever it is, it always emanates from the centre and all ripples afterwards"(CCE senior executive). CCE was much smaller than its US counterpart and it had more specialised problems. US management believed in it and gave CCE extra time to reorganise. The US management told CCE to try forming an internal joint venture with the brands as a way to survive. The US management believed that this approach was feasible, though it was not an option for CC-US, which had always been more Ford Blue Oval focused.

CCE attempted to create an internal joint venture with the brands but, as the internal joint venture would sit within FoE, the luxury brands (PAGs) felt that the Ford brand would get priority. Moreover, to the PAGs, this option seemed more like the earlier US business model, which envisaged growing into a profitable entity for later spinning off. According to a middle manager in Jaguar, "I think it failed because it was a walk away from the original good idea...so if they [CCE] were ditching the better idea, than who will buy a less good idea."

In addition, at the time, the PAGs who would perhaps have participated, such as Jaguar and Land Rover, were even more preoccupied with their bottom line:

“They were having a torrid time in terms of profits with product launches. They decided that they have enough to do at the moment and doing the internal joint venture would take too much management involvement. Frankly, their managements were already stretched at that moment” (CCE senior executive).

Consequently, by October 2002, four months after CC-US closed, it became apparent that the European internal joint venture would not work. CCE, like its American counterpart, had to work on transferring its remaining elements back into different parts of FoE: FoE Marketing (for E-assembly mainly), FoE Product Development (for Telematics) and FoE Purchasing (for Covisint). Under pressure from the US, CCE had to close down by the end of 2002. Some of the lower level CCE staff would continue with their e-business roles within the traditional departments, but many, especially the senior and middle managers, moved to other (non e-business) roles in FMC. Nonetheless, even had CCE been able to form an internal joint venture with the brands, it would have been unsustainable as a separate Consumer Business Group; “they would have been much too small” (CCE senior executive).

6.2.7 Views of Stakeholders Regarding Termination

6.2.7.1 Jaguar

Jaguar thought that CCE was successful in its delivery, but its termination was mainly due to events outside CCE’s control:

“They were successful in what they were empowered to do and did do, and were all delivered very successfully. The factors that caused the demise were essentially organisational and political. The ultimate thing that caused their demise was the removal of Jac Nasser. Among a number of other factors, profitability, the tyre incident; the chips were down and the company was in a tough financial situation and they’ve got too many satellite activities going on around the business, and we need to refocus on the core business. It was thought that Jac couldn’t move his focus away from one thing to do another so he had to go. He wasn’t the man for the time” (Jaguar senior manager).

Jaguar felt that CCE’s life cycle had been artificially cut short.

Of all the brands, Jaguar was most disappointed with CCE’s termination; not only had Jaguar lost the possible cost savings from cross-brand solutions, it would have to find its own vendors:

“Now ConsumerConnect is folded back to Ford, the only choice we PAG have is we either make sure our needs are exactly the same as Blue Oval’s needs, so that we can share their projects and get screwed on costs or we could do it ourselves and find our own vendors. Then we’ll get straight back into the position that led to ConsumerConnect’s creation. We’ve got all sorts of different specifications and

different vendors flying around the IT industry, all saying very different things that mean exactly the same things. Then web vendors and all sorts of vendors will make *hay of us*. We'll have intellectual property that will be owned to a slight extent by the brand and to a greater extent by the vendors (or future partners)...we'll race to deliver business in a very dispersed way and we won't understand what it is we bought. It will slow our ability to be a consumer rather than a product driven company, a high speed rather than low speed business-facing product driven company. So I really do think the recent changes will be a business inhibitor. The problem is that a lot of the benefits were perceived as cost benefits and a lot of people who really understood and owned that business model, have moved away from the organisation" (Jaguar senior manager).

Ultimately, Jaguar was caught in a situation where they had started projects with CCE and, with its absorption back into the FMC, the business relation had to be re-evaluated and the gaps filled. As a luxury brand, Jaguar had always been consumer-oriented. Jaguar thought that CCE closed because of the removal of Nasser and the resentment between Ford Blue Oval and CCE.

6.2.7.2 *Land Rover*

Similar to Jaguar, Land Rover (LR) felt that CCE's absorption back into FoE would inhibit its business. It felt that it would lose the support that it had come to rely on from CCE and it would have to pay much more for the service without shared costs. It was frustrated with Ford's strategic changes, as expressed by a middle manager in LR:

"What tends to happen with Ford is that you get halfway down the project and Ford changes its mind. So the strategic solution is no longer the strategic solution and we lose that functionality. There's a six months delay between the Ford and brands' communication."

However, unlike Jaguar, LR acknowledged that although there were cost benefits from working with E-assembly, it felt overall that the whole CCE department was overpriced. It was less perturbed than Jaguar at CCE's closure as it had fewer dealings with CCE: "Now, we'll just have to look elsewhere or pay more money."

As mentioned in the operation phase, LR felt that CCE was too focused on IT solutions and not business process focused enough. LR felt that there was room for a central cross-brand team that would share processes and practices within the brands and thereby improve sales performance, loyalty rates and retention rates. However, it felt that CCE, similar to FoB, wasn't achieving this business process role that would have been more valuable for LR.

Ultimately, LR felt that the demise of CCE was due to both an event within Ford (i.e. Ford's overall strategy of back-to-basics) and internal factors within CCE. LR had disapproved of

the way CCE had been set up as a separate unit, initially trying to make a profit from the brands, followed by its changing business models. LR also thought that its lack of clear strategy and its IT culture caused its demise.

6.2.7.3 *Volvo*

Volvo was already sceptical about CCE's offerings and did not use it. Even though CCE had sent a manager to Volvo two days a week, relations had not improved. A senior executive in Volvo's Interactive Marketing commented:

"The only reason why they send someone over is that I've been asking for that for six months before it actually happened. So they're finally listening to us."

Similarly, when asked about CCE's future, before the public broadcast of its termination, he replied:

"I don't think they'll stand a hell a lot of a chance if they don't change what they're supposed to add to the total of FMC. I think if they keep on doing what they're doing now, they will be seen through sooner or later."

Thus, CCE's demise reaffirmed Volvo's earlier suspicions. Volvo was pleased that it no longer had to entertain the forced alliance and, since it did not use CCE, it was not affected by the termination. With its own internal Interactive Marketing Team and local suppliers, Volvo carried on with its business as usual.

6.2.7.4 *Ford of Britain*

As CCE's largest customer, Ford of Britain (FoB) was relatively uninformed about the state of CCE. When a middle manager from FoB was told that CCE had closed (January 2003), his reaction was:

"Fine [in a nonchalant manner]. The quality of people who were working there had declined. People left because they realised that it wasn't as great a department as it was portrayed to be. There are certain elements of a multinational company where better staff migrate to. When CCE was created, it was seen as an opportunity, good career move, good reputation. At the end of its life, it was not seen as a good career move and it had a poor reputation. Once it had a poor reputation, people start moving out of it and they struggled to fill places and they have lower quality personnel, and you find yourself in a downward spiral."

When this same middle manager was asked why he thought CCE had been dismantled, he replied:

"Two-fold: first, the corporate strategic direction was to get back-to-basics; need

more design engineers; make cars. Second, it is a truism, you don't dismantle something that is working. The inference being it's easy to dismantle something that isn't."

Hence, FoB felt that the demise of CCE was inevitable, given the corporate strategy, the decline in staff quality, and most of all, the actual operation of CCE. Furthermore, FoB believed that CCE staff had not built relations with the brands while they had top management support and without it, they found themselves in a vulnerable position:

"Their whole delivery, way of doing business, their attitude, had a great adverse effect. I don't think they've made many friends during their existence. They didn't make any friends at any levels. So long as they were Jac's flavour of the month, they were protected. As soon as he went, their champion was gone and they were easy pickings. I think primarily their biggest champion lost his job and they were exposed at that point and it didn't take long for them to become part of the rationalisation."
(FoB middle manager)

When asked about CCE's successes, his reply was, "Being really cynical, staying alive for as long as they did. I'm not aware of any conspicuous positive tangible benefits that they brought." FoB thought that CCE had reached the end of its natural life cycle, as FoB thought CCE was a bad idea and badly delivered. For FMC, closing an entire department that stretched across the world in less than 12 months was very rapid. FoB believed that FMC would gain from CCE's closure as FMC could now pay experts to do the job and allow Ford to concentrate on its core business:

"Go back to what we know well. We do very well: design, build, and market cars. We're a manufacturing organisation. We're pretty good at designing and financing cars over the past 100 years. We're not great at e-commerce delivery. There are companies that are good at it and we should spend time with them. I don't see IBM making any cars."

Ultimately, like Volvo, FoB thought that CCE had created its own downfall: "I don't think they were victims of a declining e-commerce market. I think they were authors of their own demise." (FoB middle manager). However, FoB gained from the re-integration, similar to FoE Marketing (see below):

"Ultimately we have to gain. We will achieve projects quicker, more cost effectively, in clearer fashion. We'll have a clarity that we haven't had. Clarity of purpose, of understanding, of demarcation, of who does what" (FoB middle manager).

In addition, over time and within Ford's troubled economic and changing internal climate, FoB also became more astute and cautious in investing in e-business:

"If you look back, e-business was the right thing regardless of whether it added any customer value. It was the Internet boom blindness. Now we are starting to say,

‘Hold on a minute, where is the customer benefit on this? Where is the payback? Are we actually benefiting from this at all?’...We’ve never sold many cars online...The Internet serves as an entry point to the purchase funnel rather than a close out of any deal. I think it fulfils a valuable role; it goes as far as it could go by any stretch of the imagination. As an information gathering tool, the Internet’s got its merits” (FoB middle manager).

6.2.7.5 *Ford of Europe-Marketing*

A significant portion of CCE, especially E-assembly, would be absorbed into FoE Marketing’s existing Internet and New Media Group. With this consolidation, Ford Blue Oval would gain from the removal of a layer of intermediation and cost. Previously, Marketing had interpreted the requirements of the national sales groups to E-assembly, now the sales groups could work directly with Marketing for e-services.

In addition, FoE Marketing regained direct control over certain e-business activities (which they had long financed) and could redirect them for the brand’s benefit:

“I have much more direct control now. Having a ConsumerConnect management layer, sitting between me and my people and the delivery of some of the projects we wanted to see, was a bit of a distortion.” (FoE Marketing senior executive).

Furthermore, this folding back allowed FoE Marketing’s Internet and New Media Group to expand from six to twenty-five people and a larger budget. However, the Internet and New Media Group did sympathise with CCE. The group’s head commented:

“I don’t think CCE was there long enough to establish a strong reputation. If you begin building it in 2000 and dissolving it in 2002, there’s no organisation who can establish its own brand in such a fast way, especially when we are doing fairly difficult projects which costs time to deliver and we’re doing it in an environment where budgets are restricted, so you can’t do everything you should be doing; your options then for building your brand are restricted.”

He also criticised Ford’s impatience:

“It’s one of those trends you see in FMC: there is no patience to run through difficult and long term initiatives, long term actions. We know how to do that for product development, but when it comes to other parts of the business, there is not much patience. You see this in our normal advertising. We set ourselves objectives and as soon as we see the matrices do not deliver what we expect in the first two days, we start changing the bloody thing. Marketing campaigns should have a longer term life; therefore, strategic initiatives like ConsumerConnect, building a resource, building a competence, I still have difficulty to believe that we took the decision to build ConsumerConnect and dissolve it 2 years later. Creating ConsumerConnect was taken by the same impulsive fashion as it was to dissolve it.”

Marketing’s Internet and New Media Group recognised that CCE had to spend time and

money to educate its staff in the new e-business arena. In addition, with the new head of CCE, a long-term Ford employee, he felt that CCE was just becoming more credible in its ability to deliver, when CCE was shut down.

Ultimately, FoE Marketing's Internet and New Media Group thought that the main factors leading to CCE's termination comprised the Firestone debacle and the collapse of the dot-com environment, which drove people to "rash conclusions that e-business would not end up to anything" (FoE Marketing senior executive).

6.2.8 ConsumerConnect-Europe's Perspective

CCE recognised that it:

"started very big and when you have a young child that is very big, it tends not to know how to handle its size so it tends to break things. ConsumerConnect started very big and quickly and it ended up upsetting people"(CCE Acceleration Team Leader).

It also recognised that it failed to get Volvo properly integrated into its programmes, despite basing an E-assembly manager in Gothenburg for 4-5 months. It also acknowledged its failures with certain projects whose costs escalated significantly (e.g. the Lead Management System and a CRM system, "e-Dialogue") and were eventually decommissioned. A CCE senior executive also admitted that CCE was "not quick enough to appreciate the dramatic changes that are involved in a fast changing environment...it's not deliberate self-denial or anything like that" (CCE senior executive).

However, CCE felt that it was on track to solve its problems but ultimately events outside Ford, events within Ford, and Ford's overall strategy brought its demise. Events outside Ford included the dot-com rush, which:

"distorted FMC's normal quite acute judgement and as soon as we realised what we had done, we overreacted and immediately cut back; we'd invested too quickly and disinvested too quickly and too savagely" (CCE senior executive).

From this senior executive's perspective, events within Ford were mainly financial rather than the change in top management, the latter being believed by middle managers within CCE. Financially, FMC as whole was running into increasing difficulties over the last year of CCE:

"There simply isn't the money around for e-business. We have a limited amount of money for 'fixed marketing' and we are spending most of that on media, media advertising and, by definition, there is less for CRM and e-business" (Ibid).

Finally, the combination of events outside and within Ford led to the change from the consumer-oriented strategy to the back-to-basics strategy, which ultimately did not include CCE and its e-business activities.

On December 31st 2002 CCE closed down. Despite its failure to continue as a separate unit, CCE felt that it had bequeathed certain achievements to FMC, as listed by its last head:

“In the telematics field, we have at long last replaced myths by maths. We’ve now got a proper rational business model of valuation, which is not a field of dreams, much more conservative, realistic, not so exciting, not so big...E-time is another victory. Getting a loyalty programme, which is a big plus. The biggest overall achievement is that we’ve turned a set of disparate philosophies into proper business. Previously, it was a whole lot of well-intentioned amateurs running off and spending a whole lot of money.”

The ‘disparate dreams and philosophies that were turned into proper business’ included building a direct ordering site for fleet customers, rather than building an additional information/catalogue site. Hence, CCE has provided “a whole load more intelligence, logic and giving the customers what they want rather than what a whole load of geeks think they ought to have” (Last Head of CCE).

Ultimately, CCE believed it had left FMC a developing underlying legacy, as expressed by the last head of CCE:

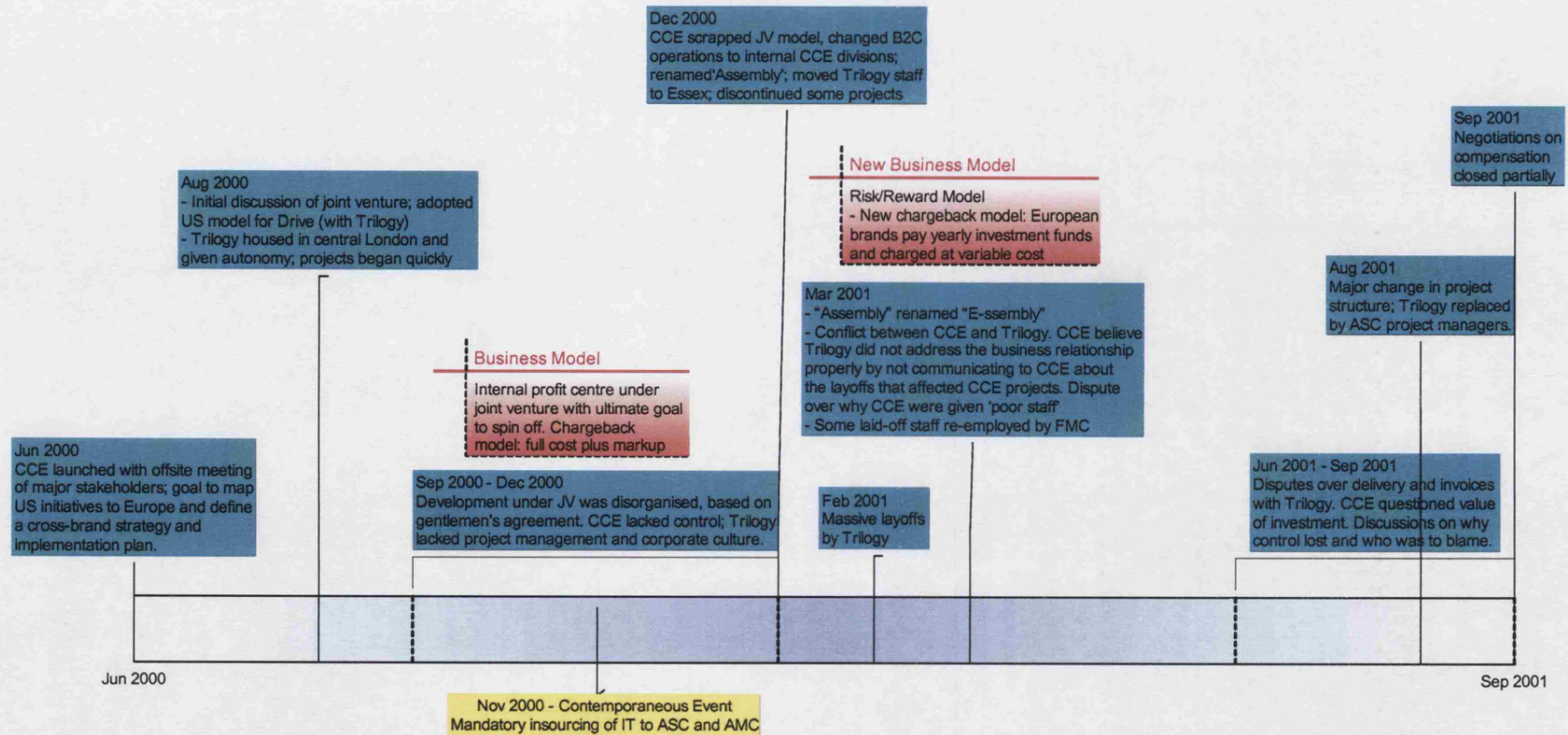
“I think everybody now recognises that e-business is Ford’s business. It is core business. This legacy is not complete, still work in progress, but undoubtedly on the way.”

Table 6.2-2 and *Figure 6.2-1* summarise the perspectives of the stakeholders in the termination phase and the key events, respectively.

Table 6.2-1 Summary of Perspectives of Stakeholders in Termination Phase

CCE	<ul style="list-style-type: none"> • Felt vulnerable to attack upon Nasser’s removal and ‘back to basics’ strategy • Felt it was perceived as the “virus” and “dirty laundry left to dry” • Became more conciliatory in relationships with clients • Felt it was fixing its problems, but still questioned its structure and value • Felt even more defenceless after closure of CC-US • Felt outside events brought its demise • Legacy: turned disparate dreams into proper business; gave FMC more intelligence and logic in e-business
FoE Marketing	<ul style="list-style-type: none"> • Benefited from reintegration • Pleased to gain direct control of e-business efforts and concentrate on Ford brand • Pleased about increase in Marketing’s head count • Felt CCE was not given enough time to establish itself • Felt CCE was on track to fixing internal issues and becoming more credible • Felt FMC was impatient and impulsive with e-business • Felt demise due to dot-com bust and tyre debacle
FoB	<ul style="list-style-type: none"> • Unconcerned about CCE’s closure • Felt demise inevitable due to corporate strategy, decline in staff quality, and CCE’s operation • Felt CCE failed to build relations with brands • Felt that CCE was lucky to survive for as long as it did • Felt FMC should pay experts for e-business while focusing on its core business • Felt CCE staff were ‘villains’ not ‘victims’ • Felt reintegration benefits FoB
Jaguar	<ul style="list-style-type: none"> • Perceived demise as due to exogenous events outside CCE’s control • Felt CCE’s life cycle was artificially cut short • Disappointed and felt abandoned • Did not believe an internal JV was a better proposition than the current set-up
Land Rover	<ul style="list-style-type: none"> • Felt demise was a business inhibitor and a loss of useful support • Frustrated with Ford’s changes in strategic solutions • Felt slightly abandoned • Perceived demise was due to Ford’s overall strategy and CCE’s internal factors • Felt that CCE was crippled by its changing business models and lack of clear strategy, and its work culture
Volvo	<ul style="list-style-type: none"> • Was already sceptical about CCE • Reaffirmed its initial suspicion that CCE would not survive • Pleased to retain its e-business autonomy

Figure 6.1-2 Timeline of Key Events in Establishment & Operation of CCE/E-ssembly(Drive)



6.3 *Later Events*

As of January 1st 2003, part of CCE was merged with the Internet and New Media Group to form “Interactive Consumer Marketing” within FoE Marketing. Telematics was absorbed into Ford of Europe’s Product Development Group and Covisint was absorbed into Purchasing.

E-business would continue to evolve within FMC, but it would go through a period of being on the back burner (i.e. not forgotten, but not a top priority), as compared to the prominence it was given by Nasser and the backward steps it had to take under the back-to-basics strategy.

As FMC headed towards its 2003 centennial, pressures to restore its status became imperative, especially with the new Chairman and CEO being the great-grandson of the founder. However, Bill Ford had inherited the company in a difficult condition and FMC was concerned to implement major turnaround plans in the US and Europe in order to restore profitability.

6.4 *Summary*

This chapter narrated in some detail the story of CCE’s operation and termination phases, including the views of the other stakeholders. I have tried to present it in terms of the events themselves and the voices of each stakeholder, through representative quotes and summaries of their perceptions, without drawing hasty conclusions along the way. No attempt has been made to analyse this data in this chapter as an initial analysis follows in the next chapter and a more rounded discussion in the following one.

Most of the detailed story concerns E-ssembly, the most active of the four main sub-divisions within CCE. I did not investigate the other sub-divisions but, based on newspaper stories, company gossip, and CCE senior management advice, it seems that their ‘stories’ were much like that of E-ssembly, perhaps worse.

CHAPTER 7: STRUCTURATIONAL ANALYSIS

In narrating the ConsumerConnect-Europe (CCE) story above, the overarching cultural and political tensions are clearly visible, playing an important role throughout the rise and fall of the business group. To understand how e-business interacted with the structures of this large established company, I mainly apply Giddens's structuration concepts, as outlined in Chapter 3. The crux of this analysis is from the perspective of CCE but includes its relationships with the other key stakeholders and certain events (prior, contemporaneous, related, and later) beyond the main episode. However, the analysis is selective and focuses on the central issues highlighted by the findings. The main analysis is structured chronologically, through the establishment, operation and termination phases. Within each phase, the events are analysed using Giddens's notions of the dimensions of structure (signification, domination and legitimation) and contradiction and conflict. As noted in Chapter 3, the separation of the dimensions is for analytical convenience, although they are in practice intimately interlinked. The chapter concludes with a brief evaluation of the CCE experience, in terms of strengths and weaknesses.

7.1 Event 1- Establishment of ConsumerConnect-Europe (CCE)

7.1.1 View of CCE

In terms of the *domination* dimension of structure, at its establishment, CCE ostensibly started with considerable power. With the avid support of Ford's Chief Executive (Nasser) and the head of ConsumerConnect-US, CCE commanded access to substantial political and financial resources within Ford of Europe, despite the latter's financial problems. CCE hired an expensive consultancy firm to help with its establishment and secured the attendance of all the top stakeholders in Ford of Europe for the three-day offsite launch meeting. In addition, it had the resources to recruit costly senior managers from outside Ford and the prestige to attract the best internal recruits. This team of 'stars' reinforced its power and importance within FMC. Furthermore, CCE was located in a newly converted, stylish office rather than the outdated headquarters of FoE.

In the *legitimation* dimension, CCE mostly adopted the norms of its US counterpart. These incorporated Nasser's belief (like Trotman's, his predecessor) that technology would offer tremendous new opportunities for modernising FMC. E-business, especially at the time of the dot-com boom, seemed to promise the transformation of FMC into a consumer-oriented company, if it could be adopted rapidly. This norm of rapid e-business adoption was

intensified by Ford's longstanding norm of close competition with General Motors (GM), which was also investing heavily in e-business through its own separate e-business group (e-GM) launched a month ahead of Ford. Similarly, the announcements of Ford's AutoXchange and GM's TradeXchange were made within hours of each other.

Other norms to cross the Atlantic, to be absorbed by CCE, included the need to be entrepreneurial, innovative and fast moving, contrasting with the traditional slow bureaucracy of FMC. Innovation should extend beyond product development and into processes and interaction with external and internal customers. Traditionally, each luxury brand had considerable autonomy in selecting software providers, but CC-US intended to become a cross-brand solutions provider and this norm was inherited by CCE and underlined by its move to a separate (luxurious) location away from FoE. However, with significant funding from FoE Marketing, CCE's independence was something of a contradiction.

Like its American counterpart, CCE was essentially set up as a change agent. This carried the norm of being different from the rest of Ford, which by its nature encouraged potential conflict. This norm is illustrated in the appointment of a non-Ford executive to lead CCE, the use of the outside consultancy in its establishment, and the efforts to recruit the best people from inside and outside FoE. This difference, or 'special-ness', gave legitimation to CCE's access to resources, even when finance was tight, as well as legitimising its partnerships with small start-up companies. The latter arrangements conflicted with Ford's traditional norm of working closely only with large established institutions.

With such structures of legitimation and domination, CCE's staff held certain worldviews (structures of *signification*). They believed that they held the solution to FMC's problems and therefore could dictate to others what should be done. They saw the rest of Ford as opportunities for change through e-business, reinforcing their conviction through a wide array of e-business proposals to the brands. However, this enthusiasm and confidence was not reciprocated by all the stakeholders (see below). CCE regarded those who resisted as being old fashioned, narrow minded, and politically charged and redoubled its efforts to implement e-business solutions by more aggressive selling and by skipping levels of management to drive its initiatives forward. This led to further alienation and resentment from certain brands and outright conflict towards the end of CCE's existence.

Furthermore, in conformance with its norms, CCE staff saw themselves as quick effective operators, impatient to get projects rolling. This is exemplified in the titles of its project

teams: 'Acceleration Teams' headed by 'Acceleration Team Leaders'. They saw themselves as the catalysts in charge of changing FMC. A similar symbol is the naming of the B2C joint venture with Trilogy, 'Drive', which could be seen as quickly 'driving' FMC into the Internet Age. CCE also believed in joint ventures as a way of importing the technological skills it admired by working closely with technology providers with which Nasser had close personal ties. CCE aligned itself closely with Nasser's vision and felt invulnerable while he remained in control.

7.1.2 Views of Other Stakeholders

7.1.2.1 Ford of Europe Marketing

As noted above, some stakeholders were more receptive to ConsumerConnect's vision than others. As its major paymaster, FoE Marketing initially expected to have considerable control over CCE but this eventually conflicted with the actual operation of CCE (see below). The Head of Marketing was the champion for many of CCE's projects and expected to make the final 'go-no go' decisions, which contradicted CCE's norm of being an autonomous cross-brand provider, which, in turn, contradicted the new European recovery measures based on strong regionalism as opposed to the trans-regional nature of the previous Ford 2000.

However, some senior marketing executives were sceptical about the effectiveness of e-business and clung to their traditional faith in the mass media and dealer models of marketing. One senior manager thought that ConsumerConnect was "built on some *hopeful* knowledge that this was going to be something that could go quickly in the dot-com, and drive and increase share price and FMC as a whole". This adherence to tradition may also explain why Marketing moved an outsider, recently recruited by a Nasser supporter, out of Marketing, into the risky post of Head of CCE. Although this broke the traditional norm of favouring Ford lifers, it served to move the outsider out of Marketing.

While some marketing staff were jealous of CCE and were reluctant to lose any more of their budget in that direction, others, (such as the Internet and New Media Group) were more attuned with Nasser's new norms and the language (signification) of e-business. CCE's use of outside consultants, in its setting up, breached Marketing's norms as this seemed to signify doubts about the internal competence and credibility. CCE's aggressive recruiting was seen by some as an attempt to poach the best staff from Marketing.

Thus, while in terms of *domination*, some parts of Marketing were pleased about the birth of CCE, there were worries concerning *legitimation* and *signification*.

7.1.2.2 Brands

Since CCE was to be an autonomous cross-brand provider, all the brands were their clients. In principle, the brands had 'buyer power' (a form of *domination*) over CCE and could opt for outside e-business suppliers. However, in practice some brands had more autonomy than others.

7.1.2.2.1 Ford of Britain

This group was highly dependent on Ford of Europe/FMC and had little autonomy. Its procurements and budgets had to be approved by Ford Purchase, which pushed for the usage of internal facilities rather than spending money outside. Although FoB, the largest volume seller, was ConsumerConnect's biggest prospective client, as discussed below, in the operation phase it had little choice but to use CCE and had no opportunity to use its buying 'muscle'. This led to power contradictions within the *domination* dimension.

In the early stages of CCE, the financially weakened FoB felt it had to align to Nasser's visions. One employee said that the relationship with CCE had "started off extremely well, extremely positive, and full of hope". An important aspect of the *signification* dimension concerns the image of Nasser at the time. He was known and feared as "Jac the knife" in the 1980s when he cut thousands of European jobs in the face of a devastating recession. He instigated the major European recovery measures and authorised the closure of the huge Dagenham assembly line. Nasser was renowned for tough, fast and paperless decisions. Consequently, to avoid further job cuts, FoB needed to appear cooperative and align with Nasser's new vision.

Visions were not new to Ford. A few years earlier, Nasser's predecessor had started to reorganise Ford to become a more global company but this was never completed and the changes in norms (*legitimation*) had not been effected. Now, Nasser wanted to reinvent Ford as a new e-based company that provided automotive products and services and was even wiring up the workforce at home. It appeared to some that corporate direction was changing every few years. It was easier for Ford lifers to ride with, rather than against, the waves. Furthermore, under Nasser, the 'immortality' of Ford lifers was ended and FoB needed to be even more prudent and nimble with the changing organisational directives. It was safer, as an

organisational norm, to follow than to challenge Nasser's vision.

Nevertheless, within FoB, the norm of promoting only internal staff to senior positions (Ford lifers) was strong: they would have a better understanding, appreciation, and network within Ford. Hence, the recruitment of an outsider to head CCE was difficult to approve and his perceived lack of legitimacy easily rubbed off onto CCE itself. Furthermore, CCE's easy access to resources was not appreciated by FoB, which was dealing with the financial and human costs of the closure of Dagenham.

7.1.2.2.2 The Premier Automotive Brands

Among the luxury brands, Jaguar had the longest history within FMC and many of its senior managers originated in Ford. Consequently, the relationship was close. Jaguar management had developed the norm of aligning with FMC directives and working cooperatively with FMC. Furthermore, Jaguar was not performing well financially. At the CCE launch meeting, Jaguar bought in enthusiastically. It lacked confidence in its own competence in e-business and was attracted to the cost saving potential of a cross-brand solution. Also, the (few) e-business people in Jaguar already had close ties with CCE staff. Thus, the structures between Jaguar and FMC were stronger in each dimension.

Land Rover was a new acquisition by FMC (in early 2000) and was struggling internally with the new corporate arrangements and with sorting out its finances. Its management was preoccupied with these fundamental problems and did not have the capacity to seriously consider e-business. Furthermore, Land Rover was a much smaller brand and feared that a cross-brand solution would be aimed at the mass-market, rather than its small, luxury brand. It had less confidence in Ford, the brand and the company, than Jaguar. It saw itself as more exclusive, prestigious, and "stately", and consequently it feared that a Ford solution would be like "cracking a nut with a sledge hammer" (a contradiction in signification). However, as a new, poverty stricken acquisition, it had little choice but to rely on FMC and cooperate with its directives and thus little trouble was expected concerning the domination dimension. LR was willing to try working with CCE and hoped that some of the solutions could be tailored to its needs, achieving the needed cost savings – the norm of financial survival became paramount.

Of the premier brands, Volvo was the most autonomous, confident, and successful. Like the other luxury brands, Volvo had its own purchasing department and Ford Purchase did not have the authority to prevent it from employing outside suppliers. Many of its managers were

displeased to have been acquired by an American company and were accustomed to doing things their way. Furthermore, it already had an advanced CRM platform and loyalty programme and had established good relations with its local software providers, who were cheaper than CCE. Volvo regarded CCE as being inexperienced with e-business and yet a threat to its autonomy as Nasser's 'favourite son'. Thus, in each of the structural dimensions, there were contradictions between Volvo and the rest of FMC.

7.1.2.3 Ford IT

Ford IT felt initially threatened by CCE as it regarded much of e-business as legitimately part of its territory (a powerful norm). As CCE began to recruit its own technology staff and contracted outside technology providers, Ford IT resolved to pre-empt any further threats by exerting its influence (domination dimension) to create ASC (Applications Services Centre) and AMC (Applications Maintenance Centre), which were meant to be the technology arms for ConsumerConnect and became powerful emblems within the dimension of signification. Ford IT argued that this approach would be in accordance with the new organisational norms of speed and innovation and cited its history of dealing with technology. The creation of ASC and AMC ensured that large parts of the e-business budget (and resources) would go to Ford IT and the intellectual property rights would remain within the company. The relocation of ASC into CCE's expensive office underlined the influence (and power) of Ford IT.

7.1.3 Summary of Analysis of Event 1- Reviewing the Cast

The restructuring of FMC occasioned by the establishment of CCE led to various tensions and contradictions and these are clarified by using the dimensions of structuration theory. In terms of the *domination* dimension, CCE seemed to have sufficient authoritative and allocative resources to prosper and the weaker stakeholders were not in a position to argue. However, there were contradictions here: the funding from Ford of Europe (FoE) Marketing and the (apparent) buying power of the brands to shop elsewhere. While CCE gained *legitimacy* from Nasser's vision, the appointment of an outsider to lead CCE and the use of the expensive outside consultancy contradicted the traditional norms of FMC stakeholders. Further doubts concerning legitimacy were raised by threats to the traditional territory of Ford IT, the mass media and dealership model of Marketing and the longstanding autonomy of Volvo. In terms of *signification*, e-business itself and the perceived competence of CCE received rather a mixed reception in the rest of FMC. *Table 7.7-1* summarises this structural analysis of the establishment phase.

Table 7.1-1 Summary of Analysis of Establishment Phase in Structural Terms

	Domination	Legitimation	Signification
CCE	<ul style="list-style-type: none"> Started with considerable power, access to resources and autonomy 	<ul style="list-style-type: none"> CC-US norms (entrepreneurial, innovative, fast moving, central cross-brand provider) Role of change agent and IT driver to modernise FMC; competition with archrival GM 	<ul style="list-style-type: none"> Believed it had the solution to old fashioned FMC's problems – with e-business
FoE Marketing	<ul style="list-style-type: none"> As major paymaster, expected considerable control over CCE 	<ul style="list-style-type: none"> Regionalism as opposed to trans-regional CC group; Hire Ford-lifers 	<ul style="list-style-type: none"> Mixed acceptance of CCE language; some jealousy of CCE; wary of CCE poaching staff
FoB	<ul style="list-style-type: none"> Highly dependent on FoE/FMC 	<ul style="list-style-type: none"> Changing visions not new; easier to ride with, than against, the waves 	<ul style="list-style-type: none"> Felt it had to align to Nasser's visions; feared "Jac the Knife"
Jaguar	<ul style="list-style-type: none"> Lacked financial resources 	<ul style="list-style-type: none"> Aligned with FMC 	<ul style="list-style-type: none"> Lacked confidence in e-business Attracted to cost saving
Land Rover	<ul style="list-style-type: none"> Lacked resources, which were tied up sorting out new corporate arrangements 	<ul style="list-style-type: none"> Luxury brand with exclusive relations with customers; financial survival 	<ul style="list-style-type: none"> Disliked mass-market approach; feared "cracking a nut with a sledge hammer"
Volvo	<ul style="list-style-type: none"> Successful brand and the most autonomous 	<ul style="list-style-type: none"> Unhappy with American ownership; accustomed to autonomy 	<ul style="list-style-type: none"> Saw CCE as inexperienced and a threat to its autonomy
Ford IT	<ul style="list-style-type: none"> Power to create ASC and AMC; pre-empt further advances from CCE 	<ul style="list-style-type: none"> Held monopoly of IT related activities in FMC 	<ul style="list-style-type: none"> Viewed ASC/AMC creation as in line with new FMC norms of speed and technology

7.2 Event 2 - Operation of ConsumerConnect-Europe

CCE positioned itself as the central cross-brand e-business excellence centre and aggressively sold its services to the brands, skipping levels of management whenever necessary to force through its solutions. It ran into setbacks with the failure of the joint venture with Trilogy, problems with the mandatory insourcing of IT and difficulties with some of its customers, especially those who had been initially sceptical. Towards the end of this phase, CCE became increasingly restrained by the reality of its contradictions and constraints as it interacted with the other stakeholders. Many of the problems CCE encountered were (and remain) common and chronic in large organisations. Some were more structural and political (e.g. the centralisation decentralisation balance), while others emphasised relationship difficulties (e.g. the management of joint ventures) and these were compounded by organisational problems

resulting largely from the technology itself (e.g. the pervasive nature of e-business). A further area of difficulty for CCE was that CCE itself was undergoing a 'double loop' organisational change, as the change agent was changed. In this section, I analyse the operation phase of CCE through a structurational treatment of these organisational issues (described in the Literature Review), most of which relate squarely to the overall problem of organisational change. A summary of the structurational analysis of the operation phase is located in *Table 7.2*, at the end of this section.

7.2.1 Centralisation vs. Decentralisation

The organisation, management and allocation of responsibilities among thousands of managers and employees, often split between numerous locations, brands and functions across the world is a chronic challenge for large organisations. One particular theme is the continuously shifting balance between the conflicting pressures to centralise or decentralise functions and decision-making responsibilities. These pressures were very prevalent in my case study.

7.2.1.1 Domination Dimension

Nasser centralised e-business into ConsumerConnect and set it up as a separate Consumer Business Group, but this contradicted somewhat the regional structure of the other Consumer Business Groups, which had considerable autonomy in all other functions, except e-business. This contradiction led to various conflicts. Volvo attempted to hold on to most of its e-business function, even introducing a new e-business strategy group, while Jaguar and Land Rover retained some e-business activities internally and divided the rest between CCE and external vendors. Ford Marketing also retained its small e-business department, giving it some limited independence from the central CCE. Ford of Britain was the only brand that had to employ CCE for its e-business activities.

ConsumerConnect itself was not centralised, being split regionally between North America and Europe, with CCE being a small copy of its American counterpart. ConsumerConnect was set up as a central division but communication and cooperation across the Atlantic was not always smooth. On occasion, neither side knew what the other was doing and the US would sometimes communicate directly with the European brands without consulting CCE. Thus, there were various contradictions within the centralisation-decentralisation balance in terms of domination.

7.2.1.2 Legitimation Dimension

FMC's new key norm was that all e-business projects should go through ConsumerConnect centrally. Internal groups had to consult ConsumerConnect before embarking on an e-business project and this squarely contradicted the traditional norms of regional and brand autonomy.

7.2.1.3 Signification Dimension

The name ConsumerConnect symbolised centralisation. Its location in a separate building symbolised its autonomy and separateness from Ford of Europe, which was further underlined by the appointment of an outsider to head CCE. However, this autonomy was not totally convincing to the premier brands. CCE had sprung out of FoE Marketing and the premier brands believed that Ford Blue Oval, with its financial muscle based on high volume sales, would have an excessive influence on CCE projects. This suspicion of bias lingered and was one reason why, in the termination phase, the internal joint venture option was scuttled. The notion of a central e-business function signified delay for Volvo and subservience to FMC for Land Rover.

7.2.2 Matrix Structure

Matrix structures were introduced in many large organisations some forty years ago to try to solve the rigidities of traditional hierarchies. In order to improve flexibility and facilitate cross-functional team-working, matrix organisations imposed an additional structure, based on projects, markets or products, which is laid on top of the existing functional hierarchy (Bartlett 1995). As discussed in the Literature Review, in practice, it led to increased co-ordination costs resulting from the inevitable confusion of staff reporting to two managers, each with differing objectives. In my case study, a form of matrix organisation can be seen with CCE reporting to CC-US, FoE Marketing, and the FoE Board. Similarly, staff within E-assembly had to report to both their project manager and CCE management.

7.2.2.1 Domination Dimension

Typical of a matrix structure, there was confusion among staff regarding who to listen to, who to work for, and whose objectives to align with. At first they were given much support and encouragement from CC-US, but less from FoE Marketing. In addition, staff needed to allocate resources and time to produce reports for their different bosses, which was frustrating and time consuming.

7.2.2.2 *Legitimation Dimension*

With bosses from various departments, different norms are attached to different aspects of the job. For example, CC-US carried the norms of joint ventures and spin-offs, while FoE Marketing's norm was more traditional and internally oriented, which contradicted that of CC-US.

7.2.2.3 *Signification Dimension*

With these differing norms and power contradictions, CCE often approached its customers with inconsistent messages. At first it interacted under a joint venture for profit model and accosted them aggressively but alternated this sometimes with a more conciliatory relationship building approach. Moreover, this was aggravated by snarl-ups in the lines of communication with clients (e.g. when CC-US communicated directly with the European brands). These confusions, especially in an inherently uncertain area like e-business tended to confuse CCE's customers, as well as creating confusion and role conflict among CCE staff.

7.2.3 **Chargeback Model**

As noted in the Literature Review, it is difficult to select an appropriate chargeback model for a large organisation. How should one department charge another for its services or products? Should it be at standard or actual variable cost, at standard or actual full cost, at full cost plus mark-up, at market prices, or dual-pricing?

7.2.3.1 *Domination Dimension*

Chargeback particularly affects the distribution of resources within an organisation and hence the domination dimension. When CCE started, using joint venture models, it had the power to charge at full cost plus mark-up. It had the (internal) market power to set pricing schemes to increase its financial resources, at the expense of its customers. Later, when the internal customers were unable and unwilling to pay such high prices, CCE reduced its mark-up. However due to Ford of Europe's poor financial situation and CCE's shortage of funds, CCE had to change to a standard variable cost, which it advertised as cost sharing/reduced charge cost. However, customers had to pay a fixed yearly instalment of investment funds into CCE. This model did not last long either as the brands lacked the necessary funding and CCE switched back to charging at full cost plus a small mark-up, which it advertised as "total-cost-pass-through". To the brands, these pricing changes remained unclear and expensive.

At the same time, the Acceleration Solutions Centre, the internal department supplying IT

solutions to CCE, charged at full cost plus mark-up, which allowed cushioning for contingency factors. However, because of Ford Purchase's power, CCE was not allowed to use outside suppliers, and so ASC had the power of a monopolistic supplier and was able to continue charging CCE at cost plus mark-up.

7.2.3.2 Legitimation Dimension

Since CCE started its operation under the norm of a joint venture to be spun off, it legitimated its charging method to cost plus. Later, when this method proved unpopular and the joint venture model was abandoned, it had to revert back to internal FMC norms of charging at cost. In essence, CCE changed the model from a profit centre to a cost centre. ASC didn't need to dramatically change its chargeback model as its norms remained the same. It was an internal provider and a cost centre. It only reduced the extent of cushioning (i.e. contingency costs) it added to its charges when the economic situation was more taut.

7.2.3.3 Signification Dimension

In terms of signification, CCE started under a different worldview, which was adjusted four times within thirty months to better suit the organisational environment. Such changes signified chaos to the internal customers. They further reproduced and reconfirmed the internal customers' perception that CCE staff were not experts and inexperienced in implementing IT solutions. In addition, there was a contradiction in the notion of customer/supplier relationship in this context. Customers typically have a choice over their vendor selection but, for example, FoB was unable to take its business elsewhere when it was dissatisfied with CCE. Similarly, CCE was the customer of the ASC and was unable to use another supplier. This contradiction created a lot of frustration, resentment, and competency reservations about suppliers. FoB saw the relationship with CCE as a "forced grudging alliance", while CCE viewed the relationship with ASC as a "forced alliance". On the other hand, ASC viewed CCE as having consumer power as CCE is its main customer and considered the relationship as a "strategic alliance". Likewise, CCE expressed similar views concerning its relationship with FoB, its biggest customer. Thus, there were considerable contradictions in the chargeback relationships in terms of domination, legitimation and signification.

7.2.4 Empowerment

Empowerment is an ideal human resource objective that often remains an ‘illusion’ for organisations (Argyris 1998). As discussed in the Literature Review, management rhetoric may be so effective that employees ‘perceive’ themselves to be empowered, but it may not match the external criteria, which was the case with CCE employees.

7.2.4.1 *Domination Dimension*

FMC was a large very hierarchical organisation with a structure suited to command and control, but not empowerment. Although CCE was a separate Consumer Business Group, it still existed within the hierarchical structure, reporting to CC-US and FoE Marketing. Furthermore, CCE itself was top heavy and hierarchical, rather than being a flat organisation in which people were free to challenge decisions. In essence, there was little room for empowerment for CCE employees within the power structure of the organisation.

7.2.4.2 *Legitimation Dimension*

The rigid hierarchical and matrix structures contradicted the norm of empowerment that CCE employees felt entitled to. CCE was meant to be dynamic and free of the bureaucracy of Ford but this contradicted the norms of Ford IT, Ford Purchase, Ford Marketing and the brands. CCE staff were not free to push their agenda for transforming FMC.

7.2.4.3 *Signification Dimension*

When CCE employees initially joined the group, they viewed themselves as being very powerful. They expected to progress through and change ‘this massive grey block’. They saw themselves as change agents, ‘good guys’, and catalysts for change. They believed they were empowered to make change happen and they aggressively sold their services. However, over time they realised that, despite being ‘empowered’ by Nasser, they were constrained by the other stakeholders, such that, at termination, they felt powerless. Towards the end, it became an embarrassment to even mention their CCE posts in their internal curriculum vitae: “If I were them, I wouldn’t put ConsumerConnect on my CV” (Ford of Britain-Middle Manager).

7.2.5 Relationship Building

For a new group in a large organisation, building and, in some cases, rebuilding relationships with the rest of the organisation is essential but difficult. It requires social skills and political astuteness.

7.2.5.1 *Domination Dimension*

Strongly supported by top FMC management, CCE initially had the power to command the attention of the brands and push for an effective relationship. However, the contradictions within the domination dimension discussed above meant a lack of a mutual accord such that the relationship building activity appeared contrived. On the other hand, some staff within CCE commanded respect either because of their high rank or from their existing personal networks within FMC.

7.2.5.2 *Legitimation Dimension*

FMC employees tended to be life-long, moving around the company every few years and building a wide personal network. This was a strong norm: “everyone always knows someone you know in FMC” (FoE Marketing senior manager). Such a network facilitated relationship building, but its absence made relationship building very difficult as people tended to be politically charged. Thus, existing relationships between CCE staff and people in Jaguar facilitated collaboration with Jaguar, whereas relationship building with the newly acquired Land Rover had to start from scratch. This was also the case with Volvo, characterised by its previous autonomy and apartness. Difficulties in forming relationships encouraged CCE, fuelled by the CCE norms of accelerating and injecting e-business into the company, to become more assertive and aggressive in its relationship building attempts. However, this behaviour contradicted the traditional FMC norms of careful network building. Furthermore, and crucially, the head of CCE, an outsider, had no existing network at all.

7.2.5.3 *Signification Dimension*

Potential customers of CCE became wary of its approaches, interpreting them as being politically charged. Weaker customers, like Land Rover, would overtly seem supportive to forming alliances with CCE but would covertly resist, regarding the alliance as “forced”. However, Volvo, the stronger brand, was able to express its reluctance to building relationships more overtly. FoE Marketing and Ford of Britain had less room for any resistance, believing that if they offended someone who was politically well connected, retributions would come later. In its efforts at building relationships, CCE approached the

brands with the attitude that the brands had no choice, as if this were a central directive of the company. When CCE met resistance, it labelled the brands as narrow-minded and unresponsive to innovation. To help ameliorate its relationships with the brands, CCE altered its roles to improve relationship building. For CCE's internal recruits, this shift contradicted their traditional FMC 'manufacturing' views and they regarded the explicit relationship building activities as 'fluffy', fruitless, and not adding any value. However, without such activities, there was probably no chance of working with the more detached brands.

7.2.6 Management of Acquisitions

The management of acquisitions adds an extra dimension to relationship building and, in a multinational multi-brand company like FMC, it is very complex. Not only are there differences in facilities (access to resources), norms, and interpretive schemes at the regional level, there are also differences at the product and brand level, thereby squaring the complications. As discussed in the Literature Review, complications typically arise from cultural confusion and problems of integration and fit (Houghton et al. 2003).

7.2.6.1 Domination Dimension

In FMC's case, acquired companies notionally have to abide by FMC directives. However, senior FMC executives have long realised that totally removing the autonomy of acquired brands would risk destroying the elements that made the brand successful to begin with, thereby defeating the very purpose of the acquisition. Hence, even Nasser was unable to mandate the premier brands to use CCE as they were informally entitled to extra autonomy compared to the Ford brand.

7.2.6.2 Legitimation Dimension

Each brand contained different structures of legitimation, which could be contradictory and lead to conflict when work is conducted together. The most dramatic difference concerning legitimation was between Ford and Volvo. Ford's hierarchical culture was based on the American military, in which reporting relationships were clearly defined and the questioning of authority was discouraged, while Volvo's culture was much more communal and socially equitable, with ambiguous reporting relationships and staff empowered to question and reopen any decisions for the benefit of the company. Such contradictions created conflict when CCE and Volvo tried working together; for example, Volvo would seem to agree on a decision with CCE in a meeting only to reopen the decision later, which irritated CCE. Furthermore, Volvo was not accustomed to the numerous reports demanded by the

complicated matrix structure of FMC and felt drowned by repetitive inconsequential paperwork. Both Jaguar and Land Rover faced similar contradictions, but to a lesser degree. They were both smaller and less hierarchical than FMC and had to accommodate the additional layers of hierarchy and reporting overheads.

7.2.6.3 Signification Dimension

FMC found it difficult to maintain a customised balance between autonomy and control for each brand, as Ford's culture is one of "control rather than mere involvement" (FoE Marketing senior executive) but they "don't want to kill the goose that lays the golden egg." Such a balance tended to shift depending on the complex interweaving of time and context, including the brand, the function, the management, the financial situation, the environmental situation, history, etc. Merging such different values and cultures under one roof was always going to be delicate and difficult, particularly when Ford saw Volvo as the antithesis of American culture, and vice versa for Volvo. This contradiction represented the highest level of acculturation (i.e. the dynamic interaction/contention between cultural differentiation and organisational integration) and hence it was not surprising that Volvo greeted CCE with such a high degree of scepticism and resistance. It symbolised the American domination as a threat to Volvo's autonomy and was underlined by CCE's initial aggression and arrogance.

7.2.7 Joint Ventures

As noted in the Literature Review, joint ventures are a form of temporary alliance that can suffer from social, psychological and emotional problems, similar to those of mergers and acquisitions with the added uncertainty of the temporary nature of the alliance. Thus, there may be ambiguity regarding the roles, capabilities and expected behaviour of the partners in the venture.

7.2.7.1 Domination Dimension

In CCE's joint venture with Trilogy, the structures of domination were unclear: at the top, Trilogy's position was strongly supported by Nasser, giving it considerable status and autonomy within FMC but the rest of FMC was more accustomed to a controlling relationship. CCE had no prior experience or prevailing norms to guide the relationship with these young technology partners and, without clearly agreed power structures, CCE began by offering Trilogy significant resources and autonomy to run projects independently in its central London office. CCE was itself preoccupied with setting up other joint ventures and developing a wide portfolio of products and services for its customers. When the Trilogy

project turned sour, CCE sought to regain control over the Trilogy people and reduce their autonomy by dismantling the joint venture model, reducing the resources available, closing the London office and bringing them back to the CCE office in Essex. Ultimately CCE ended the joint venture partnership, reducing it to a purely body-shopping contractor relationship, the least strategic and autonomous type of customer/supplier relationship. CCE forced Trilogy staff to communicate solely with ASC, forbidding them to maintain their communication lines with the brands. Nevertheless, CCE needed Trilogy's presence because its web configuration software was patented and kept as a black box from Ford. CCE tried to circumvent this resource power by rehiring recently laid off Trilogy staff who had worked in Ford. These people had been fired because they were less competent and suddenly they were back working beside Trilogy people on projects. Such contradictions led to conflicts and these people were not welcomed by Trilogy staff and were shut out from new developments.

7.2.7.2 Legitimation Dimension

CCE's discomfort at not being able to control Trilogy was aggravated when the latter failed to produce the work CCE had expected and also lacked integrity by falsely reporting hours worked. This lack of integrity conflicted with the expectations of CCE in the joint venture partnership and led to major financial disputes. CCE failed to catch this false reporting early on as it lacked norms in both how to work with young small companies and also project management control and risk analysis. In turn, CCE conflicted with Trilogy's norms of joint venture partnership by rehiring ex-Trilogy staff. This led to Trilogy pursuing lawsuits against Ford, which also conflicted with the norms of integrity in joint venture partnerships. Ford was more accustomed to working with well-established companies (like IBM) rather than with small start-ups populated by young technically savvy people who lacked corporate experience.

7.2.7.3 Signification Dimension

CCE began with the belief that joint venture partners represented the best approach to achieve its objective of changing the organisation rapidly into a web-enabled company. It thought that traditional suppliers lacked the necessary skills and that joint venture partnerships offered access to unique skills that would shore up weaknesses in its own capability base. As problems arose, its perceptions shifted from trust and reliance to scepticism, cynicism and detachment. By the end, CCE doubted the ability and accountability of its partners, regarding their young staff as lacking rigour and discipline. It also thought that the partners failed to appreciate the established processes and culture of Ford. Hence, it was not possible to work

effectively with them. CCE felt more attuned to traditional companies than these “fly by night engagements” (CCE- Middle Manager).

7.2.8 Consultancy

Consultants are internal or outside experts, who are typically hired into a company to review a situation, diagnose the problem, and prescribe a solution. They are sometimes the implementers of the prescribed solution and serve also as change agents. They are usually paid significantly more than internal operational employees and are typically hired on a project basis. Consultants typically confront challenges in managing relationships with their clients due to the elusive nature of expertise (Caulkin 1997; The Economist 1997; Shapiro et al. 1993); the lack of commitment among client groups towards consulting services (Ozley and Armenakis 2000); and the appropriate positioning difficulty, as discussed in the Literature Review. With CCE, a double consulting problem was apparent: Trilogy, as a joint venture partner, was to consult CCE while CCE was to consult FMC and the brands.

7.2.8.1 Domination Dimension

In terms of domination, Nasser provided the authoritative and allocative resources to create CCE and he was an avid supporter of joint ventures. With his patronage, CCE and Trilogy were given access to significant resources: CCE were able to recruit and expand a top-heavy organisation quickly and Trilogy staff were paid substantially. Both were treated very well by being placed in trendy new expensive offices. Such provision of resources contradicted FoE’s restructuring programme whereby the rest of FoE had to suffer severe cost cutting.

7.2.8.2 Legitimation Dimension

Nasser had agreed such expenses on the basis that they were integral to realising the new norm of change. These consultants were to be the internal experts who would provide Ford with invaluable advice and expertise. However, within Ford, outside consultants (e.g. Trilogy) were frowned upon and employees felt that resistance, either overtly or covertly, was legitimate on the grounds that the consultants did not understand Ford, were not interested in building Ford’s shareholder value, and pushed for too many idealistic changes.

7.2.8.3 Signification Dimension

Under such norms, FoE Marketing tended to be more in-bred and resistant to the consultants’ opinions and it applied this logic to CCE. FoE Marketing and the brands (except for Jaguar) viewed CCE as out to make a profit for themselves. After all, CCE was launched with the

help of an outside consultancy and the head of CCE came from a consulting background. In addition, as a newly established cross-brand provider, the brands were not convinced of CCE's expertise or its high charges. Furthermore, the premier brands, especially Land Rover, doubted CCE's ability to understand the luxury brands, its working culture and its requirements. Volvo in particular was very sceptical about its ability to add any value as Volvo considered itself more advanced in e-business than CCE. Similarly, CCE became increasingly sceptical about the consultancy it was receiving from its joint venture partners, thus it moved towards the company norm of anti(external)-consultancy.

7.2.9 IT and Business Gap

Closing the gap between IT and business has perhaps been the "holy grail" for IS academics and practitioners for decades (e.g. Peppard 2001, Reich and Benbasat 2000) as discussed in the Literature Review. The relationship between CCE and the Acceleration Solutions Centre (ASC) features many of the traditional characteristics of this gap but it should be noted that CCE fills the role of 'business' and ASC as 'IT' in this case.

7.2.9.1 Domination Dimension

With the creation of ASC, Ford IT was able to persuade Ford Purchase to mandate CCE to use ASC for all web-related software development. Such mandatory insourcing was a clear exercise of power, as CCE had to pay ASC for every project, even when cheaper and better outside suppliers were available. CCE could only use outsiders when it was able to prove that ASC lacked the necessary capabilities. Such proof, however, was difficult to achieve as ASC had a wide variety of skills and could always hire additional contract workers. Ford Purchase was able to impose this as they had the authority over CCE procurements.

7.2.9.2 Legitimation Dimension

This mandatory insourcing matched FMC's traditional norm of keeping resources within the company. Even if internal suppliers were more expensive than outside suppliers, it was thought best to use internal capability rather than letting it lay idle. Traditionally, Ford IT employed many long-term outside contractors from large companies such as IBM, Compuware, and Logica as Ford IT was unable to attract and retain skilled IT people internally. Consequently, Ford IT was never an inexpensive option. Furthermore, there was a general consensus that internal IT would better serve the company's interests in terms of security, control and protection of the company's intellectual property.

7.2.9.3 Signification Dimension

The mandate forcing CCE to use ASC was seen by Ford Purchase as a sensible internal redistribution of finance but CCE perceived ASC as uncompetitive and expensive. ASC's extensive use of outside contractors signified an expensive contradiction to CCE, which was rarely allowed to use such outsiders. CCE viewed ASC solutions as too big and heavy. CCE sometimes just wanted "quick and cheap" solutions, not 'gold-plated' ones, emanating from a mainframe mentality. In addition, CCE felt that ASC was too tied to US solutions advocated by global IT.

On the other hand, ASC saw itself as a competitive internal supplier, providing robust, well-engineered and compatible systems that served the company's best interests. They felt it was "an absolute nightmare" (Head of ASC) to get the business people (CCE) to understand this. They felt that CCE always wanted something cheap, such that CCE's aggressive style and deal-cutting was reminiscent of "used-car salesmen" and "cowboys". ASC also felt threatened by the potential competition from the technical staff within some CCE groups, like E-assembly. Finally, ASC worried that CCE would blame it when reporting project failures to senior management.

Because the expensive technical contract workers only communicated with ASC, and ASC only communicated with CCE, who then communicated with the brands, the gap between business and IT was further stretched. This long line of communication ensured hierarchy and control, but also widened the gap between business customers and IT staff. For example, FoB thought that CCE was very technical and not focussed enough on business, as well as being expensive and out to make a profit, when much of this was due to the additional weight of ASC.

7.2.10 Octopus-Nature of E-Business Technology

As argued in the Literature Review, e-business is a very pervasive technology that can affect every part of the organisation; hence, Clegg et al.'s (2004) metaphor of an "octopus", whose tentacles can touch every part of the organisation.

7.2.10.1 Domination Dimension

Because of the excitement surrounding e-business and its pervasive potential, Nasser allocated significant resources and autonomy to ConsumerConnect, which was set up in a top-heavy fashion under the premise that it would expand very quickly.

7.2.10.2 *Legitimation Dimension*

This allocation of resources was legitimised not only by Nasser's support but also by the rhetoric from the media at the time. Ford was applauded for its pioneering e-business activities, matched only by those of its archrival, GM. Such investment also matched the new company norm of consumer orientation. E-business was seen as an essential enabler for the transformation from a manufacturing corporation.

7.2.10.3 *Signification Dimension*

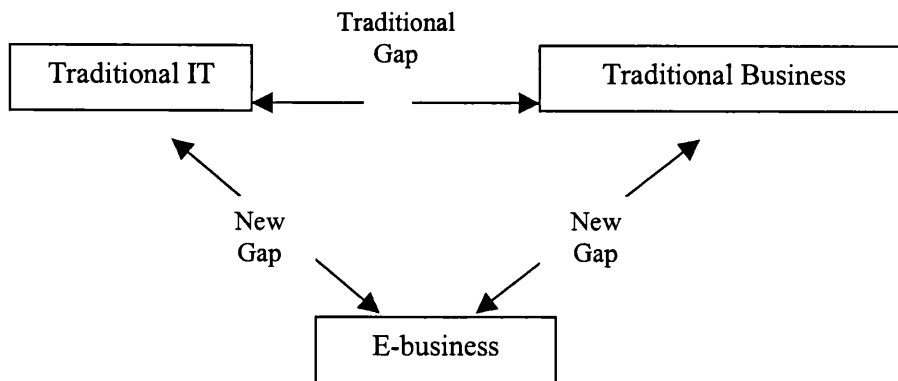
The arrival of e-business posed considerable signification problems; the existing power centres (Marketing Division, the brands, the IT Division) were trying to make sense of it. However, the concept was grasped by Nasser and formed a key platform of his new vision for a re-invented company, with a total shift from a manufacturing focus to a customer and service focus. It was at his personal instigation that the new e-business division was formed, firstly in the USA and latterly in Europe. However, this sudden visibility and status for e-business made it hard for CCE to prioritise and organise projects. While it lacked the experience, it wanted to do everything and maximise the potential of e-business in all areas with the help of its joint venture partners. It also did not want to lag behind GM in the e-business race.

Since CCE was launched in such a big way and lacked focus in any particular e-business direction, its customers felt bombarded with excessive options and confused over how to interpret e-business for their particular divisions. Furthermore, CCE was unclear where to focus its efforts and how to maximise the utility from its joint venture partners. At the same time, CCE felt as if it were 'selling ice to Eskimos' when the brands were unresponsive and fixated with revenue growth. Such problems with the e-business octopus were common in many organisations at the time.

7.2.11 **E-business Gap with Traditional IT and Traditional Business**

Following on from the discussion above of the IT-business gap, with CCE filling the role of the 'business', it becomes clear that not only should e-business be considered within the wider constructs of organisational change (as opposed to an IS implementation), but there are also two additional gaps: between e-business and traditional IT, and between e-business and traditional business. These gaps extend the traditional IT-business gap (see *Figure 7.2-1*). This argument also fits with the theme of the Literature Review.

Figure 7.2-1 E-business Gap with Traditional IT and Traditional Business



Interpreted in terms of Giddens's dimensions of structure, there are clear contradictions between CCE, Ford IT, and the rest of FMC in legitimation, signification and domination, as discussed above. CCE's belief in cross-brand e-business solutions, swift organisational transformation, and its terminology and practices, were not reflected elsewhere. This was exacerbated by the ambiguities concerning access to resources (domination).

Not only did CCE's structures contradict those of the traditional Ford IT (including the Acceleration Solutions Centre), they also contradicted the structures of traditional businesses such as Marketing, Volvo and Land Rover. Although not examined as part of the case study, the traditional gap remained between IT and business. Thus, e-business represents a new element that fits neither completely within traditional IT nor within traditional business functions.

These gaps, together with the octopus-nature of e-business provided FMC and CCE with significant problems. Each group had its own interpretive schemes and norms and it was often difficult, if not impossible, to mediate the differences. Furthermore, such differences were amplified by the apparent urgency of the implementation, such that little time was available to try to achieve a common understanding.

7.2.12 Organisational Changes to the Change Agent

As noted at various points in the above analysis, CCE (the change agent) was itself undergoing various organisational changes (e.g. changing business model), leading to a sort of double-loop organisational change situation. CCE was trying to change the existing structures of FMC while it was undergoing frequent changes itself.

In terms of legitimation, its internal changes tended to contradict its overriding norm as a knowledgeable change agent providing direction to the company. Its internal changes suggested that it lacked knowledge and direction, which threatened its key norm and self-perception. In terms of signification, as the change agents underwent changes, the clients viewed them as lacking consistency, expertise, and direction, resulting in a lack of trust in CCE. Of course, the changes confused CCE staff, such that they felt insecure and unsure of their contribution and roles. Ultimately, it was hard for CCE to change other people's structures when its own structures were being severely tested; thereby further complicating the already complex task of organisational change.

7.2.13 Summary of the Analysis of Event 2

Overall, the contradictions, conflicts and complications from the operation phase weakened the structures of domination, legitimation, and signification that had been installed in the establishment phase. This weakening would seem to have hastened the demise of CCE.

The original structures of domination, such as having significant access to resources, were diminished by FoE's financial troubles, resulting in CCE having to change its chargeback models. The original autonomy given to CCE was constrained by the existing hierarchical and matrix structures.

The initial norms (legitimation structures) of entrepreneurialism, cross-brand provision, change agency and speed were hampered by acquisition, joint venture, consultancy, relationship building and empowerment problems. In addition, the emphasis on e-business was hindered by gaps with traditional business and with IT, and the octopus nature of the technology.

Finally, the original structures of signification of CCE's agents, such as being the saviours of FMC and being able to direct other departments regarding solutions were similarly dampened by the above issues, together with the changes affecting CCE itself. *Table 7.2-1, 7.2-2 and 7.2-3* summarise this structural analysis of the operation phase.

Table 7.2-1 Summary of Analysis of Operation Phase in Structural Terms (part 1 of 3)

	Domination	Legitimation	Signification
Centralisation vs. Decentralisation	<ul style="list-style-type: none"> • CC created as a separate group, contradicting FMC regional structure • Volvo resisted by creating another internal e-business group • Jaguar & LR retained some e-business internally, split the rest between CCE and external vendors • FoE Marketing retained e-business department • FoB was the only brand forced to use CCE • CC a centralised function, but communication problems with CC-US 	<ul style="list-style-type: none"> • FMC's norm for using CC contradicted regional and brand autonomy 	<ul style="list-style-type: none"> • ConsumerConnect symbolised centralisation • Separate building symbolised CCE autonomy, underlined by outsider as head • CCE autonomy unconvincing to luxury brands • Centralisation signified delay for Volvo and subservience for LR
Matrix Structure	<ul style="list-style-type: none"> • Confused reporting structure • Resources used to produce excessive reports 	<ul style="list-style-type: none"> • Varying norms from different bosses 	<ul style="list-style-type: none"> • Inconsistent CCE messages to customers
Chargeback Model	<ul style="list-style-type: none"> • CCE changed chargeback models due to resource pressures 	<ul style="list-style-type: none"> • Chargeback models associated with different norms 	<ul style="list-style-type: none"> • CCE's world-view changed four times as business model shifted • Signified chaos and lack of expertise to customers • FoB did not feel engaged in a customer/supplier relationship with CCE (similar with CCE towards ASC)
Empowerment	<ul style="list-style-type: none"> • FMC large hierarchical organisation founded on command and control, not empowerment • CCE still encased in FMC's hierarchical/matrix structure • CCE internally top heavy and hierarchical, left little room for CCE staff empowerment 	<ul style="list-style-type: none"> • Hierarchical/matrix structure contradicted CCE's empowerment norm 	<ul style="list-style-type: none"> • CCE initially viewed itself as a powerful catalyst for change • Later, CCE realised its empowerment was constrained

Table 7.2-2 Summary of Analysis of Operation Phase in Structural Terms (part 2 of 3)

	Domination	Legitimation	Signification
Relationship Building	<ul style="list-style-type: none"> • CCE strongly supported initially and commanded attention • Some CCE staff did command respect due to high rank and existing network 	<ul style="list-style-type: none"> • FMC norms of life-long employment and personal networks • CCE lacked network in newly acquired Volvo/LR, fuelled aggressive selling, contradicted careful network building 	<ul style="list-style-type: none"> • CCE initially communicated as if it had a central mandate • Customers interpreted CCE as political • LR overtly supported; covertly resisted. • Volvo overtly resisted • FoE Marketing and FoB felt unable to resist actively and feared retributions • CCE felt some brands to be narrow-minded and unresponsive to innovation • As CCE increased relationship building, staff felt disempowered in 'fluffy' roles
Management of Acquisitions	<ul style="list-style-type: none"> • Risk of removing autonomy from acquisitions would be counterproductive; hence, no mandate to use CCE 	<ul style="list-style-type: none"> • Acquisitions had contradictory structures to FMC and CCE • Volvo's 'communal' culture contradicted FMC's 'militaristic' culture 	<ul style="list-style-type: none"> • FMC's difficulties in maintaining balance between autonomy and control for acquisitions • Acculturation between Volvo and Ford
Joint Ventures	<ul style="list-style-type: none"> • Unclear contradictory structures with Trilogy, degenerated to pure body-shopping 	<ul style="list-style-type: none"> • FMC lacked norms for working with small start-ups and JV partners • Rehiring laid-off Trilogy staff contradicted integrity of relationship 	<ul style="list-style-type: none"> • CCE initially impressed by JV partner's expertise; perceptions shifted from trust to cynicism until they finally felt more comfortable with traditional companies
Consultancy	<ul style="list-style-type: none"> • Resources initially available for CCE's expensive consultancy, contradicting FoE's restructuring 	<ul style="list-style-type: none"> • Norm of anti-consultancy through most of FMC 	<ul style="list-style-type: none"> • Some stakeholders saw CCE as greedy for profit and/or lacking expertise & understanding

Table 7.2-3 Summary of Analysis of Operation Phase in Structural Terms (part 3 of 3)

	Domination	Legitimation	Signification
IT and Business Gap	<ul style="list-style-type: none"> • CCE mandated to use ASC for software development • Contradicted lack of mandate to use CCE 	<ul style="list-style-type: none"> • Preference for using internal resources, even if more expensive • Belief that internal IT would better serve company's interests • Contradicted entrepreneurship and the need for quick and cheap solutions • ASC's use of contractors contradicted CCE's mandate to use internal IT 	<ul style="list-style-type: none"> • Ford purchase saw insourcing as neutral redistribution of budget • CCE viewed ASC as uncompetitive & expensive; too big, heavy, and based on mainframe mentality • CCE saw contradiction in mandatory insourcing as ASC hired outsiders • ASC viewed themselves as honest professionals, who were misunderstood & lacked selling ability • ASC felt threatened by CCE's employment of other IT resources • IT-business gap widened by constrained communication between Trilogy and the brands
Octopus Nature of E-business Technology	<ul style="list-style-type: none"> • Fuelled by e-business aura, Nasser allocated significant resources and autonomy to CCE • Contradicted European recovery measures 	<ul style="list-style-type: none"> • Allocation of resources legitimised by Nasser's support, media hype and need to match GM • Contradicted careful scrutiny of investments 	<ul style="list-style-type: none"> • Initial problems in interpreting e-business; Nasser grasped it to re-invent company • Sudden visibility and status made it hard for CCE to prioritise and organise projects • Customers felt confused and bombarded with CCE's initiatives • CCE felt brands were unresponsive
E-business Gap with Traditional IT and Business	<ul style="list-style-type: none"> • Contradictions concerning access to resources 	<ul style="list-style-type: none"> • CCE's norms contradicted traditional business and traditional IT 	<ul style="list-style-type: none"> • CCE's terminology and practices not reflected elsewhere in FMC • Contradictions exacerbated pervasiveness of e-business and CCE's sense of urgency
Organisational Changes to Change Agent	<ul style="list-style-type: none"> • CCE's need to undergo frequent changes itself reduced its power to change others 	<ul style="list-style-type: none"> • CCE's internal changes contradicted its role as an expert change agent 	<ul style="list-style-type: none"> • CCE insecure, unsure of its contribution • Customers viewed CCE as lacking consistency, expertise, and direction, resulting in a lack of trust

7.3 Event 3- Termination of CCE

Arguably, CCE's termination phase was triggered by Nasser's removal, which itself was caused by the dramatic financial consequences of the massive US tyre recall. This crisis led FMC's board to oust Nasser and combine the CEO and Chairman roles under Bill Ford. Bill profusely apologised to the staff for the painful restructuring and the mistakes made and many of Nasser's senior appointments were removed, including the heads of CC-US and CCE. As part of Bill's 'back to basics' programme, CC-US was closed down, followed six months later by CCE. CCE, riven with contradictions in terms of domination, legitimation and signification, was sufficiently weak that it took little effort (human agency) to close it down.

7.3.1 Legitimation Dimension

Bill Ford promoted and redirected FMC to a "back-to-basics" strategy. He publicly stated that the e-business strategy had been a mistake and that the company had lost some of its focus during the dot-com craze. FMC would return to the norm of being a manufacturing company and concentrate on its core activities. This shift matched similar moves by the other auto manufacturers, as GM, Daimler Chrysler, Toyota, and Honda all switched around the same time to similar strategies of cost cutting, eliminating waste, and concentrating on core operations. The move back to a familiar norm, especially when much of the industry was doing the same, helped to give the change legitimation.

7.3.2 Domination Dimension

Under the back-to-basics strategy and with its poor financial situation, FMC massively scaled back its e-business activities and other service ventures (such as Hertz Equipment Rental, Kwik Fit, and automotive recycling plants) in which Nasser had invested. CCE no longer had access to the resources, both material and human, that it had started with. Nor, with Nasser gone, did it have the direct support of its founder. Consequently, CCE's autonomy was virtually wiped out as it lost senior management support, its US counterpart closed, and its access to resources was dramatically reduced. Its whole future was clearly in doubt.

Even though CCE adopted a more conciliatory approach to its customers, it still lacked friends and supporters in Europe who would sign up to an internal joint venture model. Consequently, it had no choice but to close down.

7.3.3 Signification Dimension

With the dot-com bust, e-business as a whole no longer seemed so attractive and, within Ford, this was emphasised by the shift to a back-to-basics strategy. CCE became seen as “an experimental satellite activity” (E-sembly middle manager). As a change agent, CCE felt particularly vulnerable as it was “sitting in the middle of everyone else” (CCE Senior Manager) and it followed that:

- “With his [Nasser’s] departure, when the cat is away, the mice will play” (CCE Acceleration Team Leader)
- “ConsumerConnect is seen as a ‘virus’ and is now under attack by all the ‘white blood cells’ in the organisation” (CCE senior manager)
- “ConsumerConnect is Ford’s ‘dirty laundry’ left to dry.” (CCE senior manager).

As noted above, in this deteriorating situation, CCE employees shifted from seeing CCE as “being an opportunity to progress through FMC’s massive grey structure” to being ashamed of putting the job on their CV. The morale of some CCE middle managers plummeted and even they saw CCE as being big, expensive, unnecessary, and not adding much value. Other, more senior staff felt that CCE was actually on track to solving its weaknesses but external events had compromised the e-business strategy.

The clients’ perception of CCE’s demise ranged from disappointment to celebration. Jaguar tended to view it as unfortunate and outside CCE’s control and it still looked for cost savings from cross-brand solutions. Land Rover felt that the closure would inhibit its business, although it still doubted CCE’s value for money. Volvo had always been sceptical about CCE and was glad to avoid the forced alliance. Like Volvo, Ford of Britain believed that CCE was the author of its own demise. FoB’s initial relative support for CCE had clouded to cynicism regarding its ability to deliver. Although FoE Marketing believed that CCE had been closed prematurely and showed some sympathy, it was mostly pleased to cut out this layer of intermediation and regain direct control over e-business; thus keeping more finance within Marketing.

7.3.4 Concluding Remarks

Fundamentally the internal structures linking CCE to the rest of FMC had not become sufficiently institutionalised to ensure CCE’s survival in the face of the ‘back to basics’ strategy. Furthermore, as noted above, they contained various contradictions. In all three structural dimensions, domination, legitimation and signification, CCE had severe problems. Although this

is somewhat hypothetical, this situation probably precluded survival solutions such as the internal joint venture, a commercial spin-off or a management buyout. On the other hand, CCE's final 'partner' in e-business, ASC, had the strong backing of Ford IT and was able to consolidate with AMC to remain viable. *Table 7.3-1* summarises this structural analysis of the termination phase.

Table 7.3-1 Summary of Analysis of Termination Phase in Structural Terms

Domination	Legitimation	Signification
<ul style="list-style-type: none"> • E-business budget scaled back massively • CCE lost access to resources & lost support of CC-US • CCE's autonomy virtually wiped out by loss of senior management support 	<ul style="list-style-type: none"> • Bill Ford's change to a 'back-to-basics' strategy • E-business strategy publicly renounced as a mistake • 'Back-to-basics' replicated by other auto manufacturers 	<ul style="list-style-type: none"> • Dot-com bust made e-business unfashionable • CCE staff disillusioned and ashamed of connection with CCE • CCE's morale plummeted as staff lost confidence in their ability to add value • Some felt CCE was unlucky and compromised by external events • Jaguar viewed termination as unfortunate • LR felt closure was a business inhibitor, but still doubted CCE's value for money • Volvo was glad to avoid the forced alliance with CCE • FoB & Volvo felt CCE was the author of its own demise • FoE Marketing believed termination was premature but was pleased to regain direct control

7.4 Evaluation of ConsumerConnect-Europe

Following the above analysis of events and structures, although not the objective of the thesis, it is relevant to ask: What did this all amount to? Was CCE a complete failure?

Evaluation is an exceedingly difficult task and remains a perennial problem in IS research (Smithson and Hirschheim 1998). It is often hard to classify a development as either a failure or a success; much depends upon the evaluator's subjective perspective and the criteria employed. CCE's operation was probably terminated prematurely, suggesting a *failure*. However, the original business model envisaged an eventual spin-off, rather than a permanent home in FMC. CCE was set up as a series of acceleration teams (i.e. project teams) for the duration of particular projects. In effect, CCE's structure was never more than temporary.

Certainly, CCE was unable to achieve its initial three principal objectives:

- Drive revenue growth and increase profitability and achieve growth that contributed to the FMC bottom line

- Leverage the value of the business through increasing FMC market capitalisation
- Drive business partnerships that would revolutionise FMC culture and performance

With the failure of the dot-coms, the fall of Enron, and the tarnish of joint ventures, spin-offs, and IPOs, all three objectives began to appear elusive and infeasible, regardless of the performance of CCE.

At the next level down, one could perhaps evaluate CCE in terms of the outcomes of its projects. On the basis of hearsay, some of these projects were apparently successful (e.g. Ford Finland and parts of Jaguar web configuration) while others were less successful (e.g. Leads Management System, eDialogue), being discontinued after significant escalation. However, due to access and time constraints, I was unable to investigate any project in depth and, recognising the inherent problems of evaluation, I am reluctant to rely on hearsay.

It is similarly difficult to evaluate CCE on the basis of strategy. While, to begin with there was a formal strategy, due to the nature of the work and the context, CCE management and staff quickly reverted to a more emergent strategy in order to cope with everyday activities and problems. As far as I am aware, there was no reformulation of the initial formal strategy and CCE seemed to be largely left to their own devices. The political and organisational environment was changing swiftly and thus there was little opportunity or incentive for developing any further formal strategy.

In more concrete terms, CCE failed to become the recognised internal cross-brand team of e-business experts. This could be attributed to a lack of experience, a lack of time and the inability to gain the trust of all the stakeholders. CCE's final demise was 'messy' and the envisaged spin-off or internal joint venture proved to be unattainable. CCE entered a downward spiral that seemed impossible to escape.

Nevertheless, CCE believed that it had turned a set of disparate e-business hopes and philosophies into a proper business approach: "a whole load more intelligence, logic, and giving the customers what they want rather than a whole load of what geeks think they ought to have". As time progressed, CCE reflexively monitored its interaction with clients and was beginning to resolve its own weaknesses in promotion, implementation, and communication of e-business. It did nurture and extend the confidence of brands, such as Jaguar. In terms of processes, it created e-time, an effective e-business project management method, and it developed useful matrices for

the investment appraisal of e-business projects. Hence CCE did leave FMC with some useful e-business experience and expertise and some functioning elements that were absorbed into traditional departments.

These achievements should be set against a failure to achieve buy-in from Volvo, sizeable investments in projects that escalated and failed (e.g. LMS, eDialogue) and partnerships (such as the joint ventures) that yielded few tangible benefits. However, there is no publicly available cost-benefit analysis (nor is it easy to have one) of CCE. FMC's experience with CCE seemed to parallel that of GM's similar venture. The question perhaps becomes "Would FMC have been worse off, without the CCE experience?" This is impossible to answer.

7.5 Summary

This chapter offers a detailed analysis, using the constructs from structuration theory, to demonstrate the contradictions in terms of domination, signification and legitimation that surrounded CCE throughout its brief life. These contradictions were triggered into conflicts by outside events (the Firestone tyre problem and Nasser's removal) and finally engulfed CCE. The brief evaluation of CCE suggests that it was not a total failure, although it did not manage to achieve its original objectives.

In the next chapter, the Discussion, I return to the main research question and sub-questions, as well as commenting on the applicability of structuration theory and discussing the larger issues of e-business, organisational change and organisational structure.

CHAPTER 8: DISCUSSION

This chapter leads on from the detailed structural analysis of the previous chapter to examine the larger issues that emerge from this research study.

The mechanism I use for this is to address firstly the research sub-questions posed in the Methodology Chapter:

- What was it about the structures of FMC that made CCE's intervention vulnerable to collapse?
- What was it about CCE's own structures that made it vulnerable to collapse?
- What was it about the management initiative (i.e. the process) used to introduce e-business that made the intervention vulnerable to collapse?
- What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?

These sub-questions refer directly to the case study and in this chapter, serve as a summary device for the case. I then turn to main research question:

- How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?

This is at a higher level of abstraction and takes the insight from the case study to suggest wider considerations, concerning the nature of e-business, organisational change and organisational structure in general terms.

The chapter concludes with an evaluation of my experience of using structuration theory within this study.

8.1 Research Sub-Questions

It is appropriate here to remind the reader of Giddens's conception of 'structures', which underpin the discussion that follows. According to Giddens, structures are the rules and resources that organise the properties of social systems. They exist in a manifest form only when they are instantiated in action; otherwise they persist as memory traces in human minds. Agents draw upon these rules and resources as they act and interact in specific time-space settings and are themselves the outcome of those actions and interactions. He distinguishes such structures along

the three dimensions of signification, domination, and legitimation.

8.1.1 What was it about the structures of FMC that made CCE's intervention vulnerable to collapse?

FMC, with its sheer size, extensive history, patchwork of national cultures, multiple brands, and multiple products combined to produce a very complex organisation with many deeply embedded structures ("rule-resource sets, involved in the institutional articulation of social systems" Giddens 1984, p.185) and structural properties ("institutionalised features of social systems, stretching across time and space" Giddens 1984, p. 185). For example, FMC operated under an institutional norm of closely competing with General Motors, which contributed to Nasser's rush to invest heavily in e-business. However, this behaviour contradicted Ford's norm of bureaucracy, control, and meticulous financial scrutiny of investments, while Nasser was pushing for speedy adoption and the autonomy of e-business division. Yet, existing departments, which operated under a traditional norm of control, still had power to access and control the bulk of Ford's resources and network, which, in turn, contradicted CCE's goal to be autonomous and the central cross-brand provider.

As time progressed, and the e-business environment deteriorated and as the stakeholders reflexively monitored the weakening of the e-business structures, they were able to reinforce the prior norm of concentrating on manufacturing and openly resist the change initiatives from CCE. In other words, this manifestation of Giddens's concepts of structural contradictions, human knowledgeability and reflexive monitoring, diminished the legitimacy of e-business investment, reinforced traditional norms and reduced the opportunities for change. Such reflexive monitoring (i.e. of their own actions, those of others, and the intended and unintended consequences) provides the basis for social change as well as social stability. In CCE's case, the consequences of its change efforts lacked the impact it had anticipated, resulting in the persistence of FMC's previous social stability; being product and manufacturing orientated for almost a hundred years.

Furthermore, FoE Marketing's norm also contradicted CCE's. Marketing identified more with mass media and traditional dealerships. Most Ford employees were Ford-lifers who operated under the norms of the internal network and were not receptive to high-ranking outsiders. Moreover, each brand and each department had their own norms, which had achieved some form of balance over the years, but conflicted with those of CCE. While FMC traditionally looked kindly upon 'modern' products (triumphs of engineering), they were less accepting of modern

systems and processes. Thus, FMC itself contained numerous structural contradictions. Nonetheless, an underlying structural consensus across the traditional FMC was the “passion for cars. They worked at Ford because they wanted to design, build or deliver exciting products, and that was the subject they all could talk about at length no matter what department they worked in”(Magee 2004, p.28). This underlying structural accord was much weaker among CCE, which was composed of outsiders and ‘different’ (to the standard) employees and whose underlying structures revolved around building a consumer company through e-business.

8.1.2 What was it about CCE’s own structures that made it vulnerable to collapse?

Besides the above structural contradictions CCE encountered with the rest of FMC, CCE’s imposed norm of double-loop organisational change (i.e. being a change agent as well as being changed) also contributed to its vulnerability when it encountered conflicting and complex structures within its own department and with other departments. Its original structure of domination emanated mainly from a single source, the CEO, but it lacked the support of a wider audience. When its main supporter was removed, it was attacked from many sides and high-ranking outsiders, who did not belong to the ‘old boys club’, were discharged or demoted.

This vulnerability was accentuated by its infancy, its attitudes (like a “big child who didn’t know how to handle its size”) and its failure to establish itself with the rest of the organisation. Structures need to be nurtured and reinforced in order to traverse the test of time and space and become institutionalised. CCE did not have (or make) the opportunity to institutionalise its internal structures or those with FMC as a whole.

CCE did change its attitude of arrogance, aggression and impatience to become more humble, conciliatory and patient, as its power and status declined. It changed its business model and management team, rejecting the joint venture approach. Unable to become, or absorb, real e-business specialists, CCE employees tended to serve as generalists within project management roles. Such contradicting structures not only destabilised CCE and caused confusion amongst its own staff, they further weakened any esteem of the few sympathetic stakeholders. Furthermore, CCE’s total identification/signification with e-business meant that it was at the mercy of the rapidly changing e-business fortunes. CCE only had ‘one string to their bow’ and the fall of e-business crippled the group, as it had no other product to offer its clients. Its ‘single orthodoxy’ became unfashionable.

8.1.3 What was it about the management initiatives (i.e. processes) used to introduce e-business that made the intervention vulnerable to collapse?

The first problem was a combination of the speed and scope of the e-business initiative, which seemed like an overnight whirlwind to the stakeholders. They did not know how to interpret e-business and found themselves waking up to an altered landscape; in this case, a dramatically changed organisational strategy. Ford's traditional care in evaluating potential investments was replaced by Nasser's speedy decision, which seemed rash and not well thought through. Some stakeholders felt that e-business was another example of Nasser's lavish spending spree, together with his acquisitions of Volvo, Land Rover, Kwik-Fit, and the automotive recycling plants. Some thought he was neglecting both 'the fabric of the house' and existing long-term business opportunities. Nasser's expenditure seemed unjustified and wasteful, especially to Ford of Europe, which was undergoing substantial job cuts and cost reductions. It was difficult to square his munificence with the reality of plant closures, including the historic UK assembly line at Dagenham. To European old-timers, it seemed unfair to cut traditional divisions and gamble on new projects like CCE.

Furthermore, Nasser took a big risk by setting up ConsumerConnect as a separate Consumer Business Group, rather than positioning e-business within the protection of Marketing. He did this largely to expedite the execution of his e-business vision, but the lack of broad-based senior management support clearly weakened CCE. CCE had to market to internal clients, some of who were reluctant to participate, either due to envy or uncertainty regarding the impact of e-business. CCE's conspicuous involvement with outsiders made it even more estranged from the traditional departments. Long-term employees viewed these outsiders as flashy intruders with little understanding of the context or loyalty to Ford and were astounded by their new status. CCE's use of expensive outside consultants exacerbated this problem.

In terms of CCE's management, at the delivery level, it lacked control mechanisms to manage relationships with joint venture partners and with clients. Furthermore, CCE lacked a project management and development method tailored to e-business and matrices to evaluate e-business investments, which were not developed until its termination phase. Some CCE managers were even miscast into project management roles, for which they lacked the requisite skills.

8.1.4 What was it about the dynamic outer context that helped to turn these vulnerabilities into a downward spiral?

The general business environment, or outer context, was particularly unstable towards CCE at the time, both within and beyond the automotive industry. I have discussed the dot-com boom and bust in the Literature Review. Considering it now, in hindsight, it is difficult to recall both the excitement of the boom, with its visions of a 'New Economy' demanding a positive response from organisations like FMC, and the bust with its corresponding disillusion and disenchantment. The boom served to accelerate (and perhaps over-accelerate) the prospects of CCE while the bust acted as a heavy drag on CCE's trajectory and progress. Thus CCE traversed from an extremely favourable environment to an extremely unfavourable one. In the bust, individuals and organisations were de-investing in e-business in the same irrational fashion as they had earlier invested in it, at the time of the boom. As Giddens puts it, "it is hardly only in recent times that human beings in one context have been concerned to emulate or borrow from those in another in order to offset their power or influence" (1984, p. 253). Ford was no exception in its rapid e-business investment and withdrawal, as many others did the same, including General Motors.

Around the same time as the dot-com bust, Enron collapsed in a welter of prosecutions and accusations of corporate fraud, leading many companies to become less enraptured with increasing their share prices, which had been one of FMC's chief goals for e-business investment. Furthermore, the events of September 11th 2001 and further financial woes for FMC (e.g. Firestone debacle) seemed to strengthen the swing from very good to very bad times in the general business environment. It was no coincidence that the outer (general business environment) and inner (FMC) contexts shifted together against CCE and this clearly aggravated CCE's downward spiral.

8.2 *The Main Research Question*

How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?

My approach here is to take each element of the question in turn and examine the insight gained from the study. Thus I start with the nature of e-business and then discuss its introduction into organisations in terms of human agency. I then examine the nature of organisational structures before considering the interaction of agency and structure (duality) in the context of e-business.

8.2.1 The Nature of E-Business

This research reaffirms the tremendous pervasiveness of e-business as the tentacles of the e-business octopus (with its new business models, processes, culture and partners) reach every corner of the organisation and all along the supply chain to suppliers and final consumers. This is demonstrated in this study by the impact of the introduction of e-business into FMC: the structure of this huge global organisation was changed to accommodate e-business. This is further demonstrated by the range of stakeholders involved in my (relatively small) study: CCE, FoE Marketing, various brands, CC-US, Ford IT and the joint venture partners. However, it should also be noted that I was only able to examine in detail one division within CCE. Other divisions being developed in parallel at the time included: Covisint (with Ford Purchasing, other manufacturers and technology suppliers); Percepta (with various FMC sales groups and customer call centres); and Telematics (with FMC Product Development, Auto Design and New Business Development). Together with these other divisions, the pervasiveness of e-business was also confirmed by its corresponding new products and significant changes to the basic product (e.g. telematics), new processes (e.g. build-to-order), and changes in the procurement relationships with suppliers (e.g. B2B Covisint).

Although I discuss the outer context above, it is relevant to mention briefly the hype that surrounded e-business at the time of the dot-com boom, later reversed in the bust era. Both periods were important to e-business development, in that the boom fuelled, perhaps excessively, the urgency of developments, while the bust helped to kill CCE. In a sense, the creation of ConsumerConnect (US and Europe) was revolutionary, but the diffusion of e-business within Ford seemed evolutionary. Furthermore, both phases were accompanied with unacknowledged conditions—with the failure to recognise the e-business hype in the former and the failure to acknowledge the true value of e-business in the latter. However, these were both fairly transient and arguably have not left permanent stains on the phenomenon of e-business.

Thus, the content of the e-business implementation, in the case of FMC, had considerable depth and scope. It is believed that other organisations regarded e-business implementation in the same terms. Thus, in Markus's (2004) terms, e-business implementation is clearly a 'technochange' project with major elements of organisational change. As such, and as confirmed by this study, it requires explicit human intervention in terms of human agency (see below) and this can have a major impact on the organisational structures of domination, signification and legitimation. At

the same time, these structures (see below) can facilitate or inhibit the e-business implementation.

Building on Scheepers and Damsgaard's (1997) study of intranets, this research demonstrates that although technical issues play a role in e-business implementation, social issues are perhaps more significant. In particular, e-business change agents may confront structural contradictions (e.g. gaps) with both the traditional IT and the traditional business groups, yet at the same time, these gaps suggest a coming together of IT and business through e-business. That is, arguably, in many organisations, neither the IT nor the business camps are completely homogeneous; instead, they represent a continuum that comes together in e-business. Consequently, e-business does not belong to either side and demonstrates how IT and business can be intimately interlinked. Perhaps then these new gaps arising from e-business may not last as long as the traditional gaps between business and IT, but rather represent the start of a healing process.

This research also reveals that e-business adds another dimension and brings traditional organisational issues back to the forefront (e.g. problems with centralisation/decentralisation, matrix structure, chargeback, empowerment, relationship building, management of acquired firms and joint ventures, consultancy) and raises issues about an organisation's basic culture. Consequently, in CCE's case, such resurfacing of traditional issues in a turbulent environment underpinned the double-loop organisational change situation in which the e-business change agents were being changed themselves.

Moreover, this research underlines the dilemma encountered by e-business implementers. On one hand, implementing e-business extensively and intensively can lead to serious organisational conflict; however, on the other hand, a too small effort runs the risk of not gaining enough benefit, momentum or enrolment of stakeholders to reach a critical mass.

Tightly connected to this dilemma of scope and intensity, e-business implementers also need to decide how to set up e-business within the company, which in our area of research concerns a large established organisation. The debate primarily concerns whether to set e-business up as a separate department or to integrate it into existing departments, whether to use joint venture partners, to acquire another company, and/or to employ the services of outside consultants. This debate necessarily remains inconclusive and rather context specific. Nevertheless, it is insightful to consider the debate in the case of CCE by examining the benefits and drawbacks of FMC's adoption of a separate e-business department.

On the positive side, beyond the organisational propaganda, by being a separate unit, CCE was able to set itself up relatively quickly and flexibly from the rest of the organisation. It was not as bound to the traditional Ford norms and processes as the rest of FMC. This also gave it the ability to expand and recruit quickly for any skills it lacked as it had its own HR team, without going through the bureaucratic approval process of Ford. It was able to recruit young ambitious enthusiasts within Ford as well as high-ranking outsiders, which was an exceptional feat within a Ford lifer culture. By being separate from Ford and grouped together, these idiosyncratic individuals were also more protected from traditional Ford, compared to being alone. Furthermore, by being a separate unit, it could organise itself in the way it wanted in order to be effective.

More specifically, as it was not attached to a traditional department, it was able to concentrate on e-business, rather than being distracted by other organisational issues, such as the Firestone debacle. Consequently, it was able to facilitate and expedite the development and standardisation of e-business applications and processes. Moreover, this allowed a more centralised development of e-business applications and investigation of technology packages, as well as assessment of e-business opportunities. In this way, user departments considering e-business did not need to 'reinvent the wheel' each time, which enabled potential economies of scale in e-business development, investigation, implementation, and research and development. Additionally, by being an independent unit (i.e. not part of Ford IT or Ford Marketing), it was able to attain a certain credibility among the different brands, especially with Jaguar. Finally, in an ideal world, having a centralised e-business department facilitated knowledge acquisition and effective organisational learning, as the expertise was relatively centralised.

In contrast, CCE's existence as a separate unit had many drawbacks. It was new and segregated from the rest of the organisation, which accentuated its difference in an organisation that was governed by many traditional departments and that rarely created new ones. In this way, it was perceived as an 'outside' threat by several departments (e.g. Marketing, Ford IT, and Ford of Britain). This is exemplified in the 'double gap' between CCE, Ford IT and the rest of FMC. Had CCE staff been change agents within a traditional department, they would have seemed less threatening as there would have been an implicit trust that insiders would look after Ford-lifers and continue the Ford traditions. In contrast, outsiders carried more uncertainty and mystery, and seemed less sympathetic, more ruthless, and less understanding of traditional Ford people.

Furthermore, this perceived threat was complemented by some resentment and jealousy from traditional departments as CCE was created within a turbulent time of restructuring. While Ford of Europe was experiencing drastic cost cuts, including the imminent closure of Dagenham, CCE seemed to be the favourite son of the CEO, with the resources to employ high ranking staff in a fancy new office. However, at the same time, its high profile made its teething problems and mistakes highly visible. It was criticised, even slandered, more harshly as it lacked a track record and lacked a strong political base, besides that of Nasser. Such vilifications amplified the doubts about its competence. Furthermore, as a separate unit, it carried its own overhead costs and stood administratively alone, as opposed to sharing such costs and administrative burdens with other departments. Thus, it was unable to 'hide' its financial indiscretions within a large department's budget, which would have been beneficial while it was finding its feet.

As a separate unit, without a central mandate to use it, nor any subsidies for employing it, CCE needed to market itself intensively to the other stakeholders to 'sell' its services. Whether it did this too aggressively is debatable but, as a separate unit, it was distant from the other stakeholders and consequently lacked the opportunity to secure easy e-business projects from 'friends' (except for Jaguar), to develop working relationships and to demonstrate its ability and essentialness. Furthermore, as a separate new unit, it was easier for stakeholders not to take it seriously and to dismiss it, especially since it was led by outsiders, who lacked the internal network that assisted a Ford-lifer's career. Finally, as a separate new unit, it was subjected to the LIFO (i.e. last in first out) phenomenon: when there were serious problems elsewhere in FMC (the Firestone debacle), rather than savaging the tightly linked core departments, it was much easier to prune CCE.

As an aside, this is a vindication of Hickson's (1971) theory of strategic contingency, where departments (functions) have power if they have centrality, non-substitutability, or they reduce organisational uncertainty. CCE was clearly not central (essential) to traditional automotive manufacturing and this was re-emphasised by the 'back to basics' shift. CCE was substitutable, either by internal departments (e.g. functions within Marketing and Volvo) or by subcontracting to outside technology providers. Furthermore, when the dot-com bubble burst, its central product (the only string to its bow) was also tarnished. Finally, CCE was not in a position to reduce uncertainty for the organisation; rather, the opposite occurred, with confusion, conflict, contradiction and uncertainty dogging its progress. A summary of the benefits and drawbacks of setting e-business as a separate unit is summarised in *Table 8.2-1*.

Overall, this predicament of setting up a separate e-business unit closely matches the traditional centralisation/decentralisation debate. There are huge dangers of centralisation as seen with CCE, but there are equally huge dangers of decentralisation with every department ‘doing its own thing’, re-inventing the wheel, and potentially running the organisation into chaos. A possible resolution, as suggested from the centralisation/decentralisation literature is federalism, which is the offering of limited freedom (or autonomy) within central guidelines (Gerrity and Rockart 1986). For example, rather than enforcing a single common platform, CCE could have given Volvo a limited range to choose from and prohibit any platforms outside the range.

Table 8.2-1 Benefits and Drawbacks of Setting-Up a Separate E-Business Unit

Benefits	Drawbacks
<ul style="list-style-type: none"> • Speed and flexibility • Free from traditions and obsolete processes • Can expand and recruit quickly • May attract young ambitious enthusiasts and high-ranking outsiders • Idiosyncratic individuals can be protected • Free to organise itself • Able to focus on e-business • Expedites development and standardisation • Reduces ‘reinvention of the wheel’ across the organisation • Economies of scale in development, investigation, implementation and R&D • Facilitates knowledge acquisition and organisational learning 	<ul style="list-style-type: none"> • Accentuates its difference and perceived as an ‘outside’ threat, causing distrust and uncertainty • Stands administratively alone and carries own overhead costs • High profile makes teething problems and mistakes highly visible (can’t hid financial indiscretions) • Need to market its services • Need to build relationships • Distant from other stakeholders • Lack opportunity to secure easy projects • ‘Last in, first out’ • Difficulty to establish centrality, non-substitutability and ability to reduce organisational uncertainty

Overall, although some of the above discussion on the nature of e-business may not be wholly new, this research provides empirical evidence to all of the above e-business issues as oppose to mere vision or ‘talk’ about it. This study adds substance to the nature of e-business.

8.2.2 The Nature of Agency in Organisational Change

I have argued that a significant e-business implementation, such as CCE in FMC, should be seen as a ‘technochange’ or organisational change initiative. It is thus pertinent to examine what has been learnt about organisational change from this study.

Firstly, such a change is ‘feasible’, even in a large organisation like FMC, but it is a very complex undertaking, requiring considerable effort and cost. Significant organisational changes were achieved in FMC, to some extent, but there is no guarantee that such a venture will be successful.

Secondly, the conceptualisation of such a change in terms of human agency being applied to the structures of an organisation is a useful and insightful approach. The notion of human agency captures the explicit intervention, in terms of the actions performed, with the concomitant effort and cost, needed to effect such a change. Furthermore, the notion of organisational structures is a good way of representing the social and organisational context within the organisation, before, during and after the change. It serves to capture the culture, politics and relationships that are impacted by, and impact, the change.

The notion of agency incorporates:

- The identification of the relevant agents
- The actions performed
- The extent of the effort involved (intensity and scope)
- The method or processes used to effect the change

As is normally the case in an organisational change situation, the agents involved can be categorised roughly into two categories: change agents (Nasser, CCE) and change targets (the other stakeholders), who are affected to a greater or lesser extent. Typical actions associated with organisational change include planning, budgeting, negotiating, marketing, training, implementing, and evaluating the change.

Change agents initiate the challenging task of changing existing organisational structures but, to do this, they must employ those same structures to effect change. Those structures, reproduced by the change targets, may enable and constrain their change effort. The need to use existing structures to effect change should influence the manner in which the change agents execute their change efforts; i.e. acceptance is more likely if the manner of the change fits, rather than challenges, the established social structures. The hasty introduction, and equally hasty closure, of CCE was rather foreign to Ford's normal practices.

With such high levels of intensity and scope, this particular organisational change (introduction of e-business through CCE) was always going to be a high risk venture. Under the complex, swiftly changing, circumstances, it was probably impossible to predict the outcome with any accuracy. Nevertheless, there was little evidence of any serious and detailed feasibility study in the case of CCE. It seemed that the acceptance of the change by the stakeholders was not doubted and it was assumed that the critical threshold of stakeholders would be achieved and a long-term momentum

for change would result.

A further aspect of the process of change, in the case of CCE, was the perceived arrogance, aggression and impatience of the change agents, triggered by top executive support and fuelled by the apparent urgency of the dot-com revolution. Instead, a more sympathetic, conciliatory, and patient approach would have seemed more fitting to Ford's structures.

In our case, CCE, as change agents, was especially vulnerable as its organisational support was largely confined to Nasser and a handful of senior managers and its sole 'product' (e-business) went through an unfortunate period when it was highly out of fashion. Its status was also adversely affected by its double-loop of organisational change, whereby CCE had to undergo various organisational changes itself, while trying to change the rest of the organisation. This added to the confusion, uncertainty, resistance and resentment towards change both among the change targets and the change agents.

Unsurprisingly, many of the change targets, relatively comfortable with the traditional structures, tended to resist any efforts of the change agents that seemed to threaten their position. There was clear evidence of change targets actively cutting away at the autonomy (empowerment) and resource base of CCE, as well as examples of passive resistance by stakeholders.

As a result, this research illustrates how human agents (both change agents and change targets) reflexively monitor their environments and act purposively and knowledgeably to secure their best interests, although unintentional consequences of intentional actions (see below) occur relatively frequently. Thus neither party is completely at the mercy of the other, as Giddens would support, as agents, regardless of the situation, always maintain at least some minimal capability to "act otherwise" and thus are able to defect, resist or influence the activities of those who depend upon their cooperation.

8.2.3 The Nature of Organisational Structures in Large Established Organisations

This research demonstrates that especially in large established organisations that span the globe with multiple products, services and brands, the structures are often complex and even contradictory, but they remain deeply embedded as they have been reinforced over time. As exemplified in the Ford case study, differing brands embody contradicting structures (e.g. Volvo vs. Ford of Britain). Even within a particular brand or function, contradictory structures exist,

largely arising from the various layers of structures at the regional (national), functional, product and project levels. For example, CCE was part of a separate Consumer Business Group (ConsumerConnect) but it operated under a matrix structure in which it reported to Ford of Europe, ConsumerConnect-US, and FoE Marketing, while CCE employees reported to project managers, functional managers and regional managers. Furthermore, the complexity of these structures is magnified by the various structures of other key stakeholders up and down the supply chain (e.g. automotive dealers). The introduction of the pervasive e-business often adds another layer of contradiction on top of existing contradictory structures.

It is apparent from this study that these structures are not merely formal reporting structures or an administrative convenience based on an organisational chart. Rather, as Giddens argues, they comprise dimensions of domination, signification and legitimation. This notion comprehensively incorporates the cultural and political reality of organisations, as well as covering resource allocation, decision making, actors' varying conceptual frameworks (interpretive schemes) and their norms, roles and motivation. It offers a relevant and rich approach through which to understand both these complex structures and organisational change itself. A little reflection shows how important these notions of structure are in terms of guiding, facilitating and constraining people's working lives and yet, again, it is clear that the structures are themselves constructed and maintained by the people concerned.

While these structures are clearly important, they are also complex and contradictory. They may be deeply embedded; for example, FMC's norm of monitoring and matching competitors, which seemed to be mirrored by similar norms in the other large firms within this particularly oligopolistic industry. Another example is CCE's norm to be a central cross-brand provider, but there was no central mandate (domination) nor new incentive scheme (signification) to enforce/induce its use, especially among the brands.

Nevertheless, despite their complexity and strength, it is not impossible to change these structures, through human agency. At Nasser's instigation, FMC managed to launch CCE and it functioned as a separate unit. CCE itself managed to implement various changes with various levels of cooperation from the other stakeholders as CCE tried to adapt to the changes in organisation structures.

However, while significant changes to an organisation's structures can be implemented, and were in the case of FMC, the old embedded structures (and structural properties) may not necessarily die away quickly. Within Ford, the old structures, especially the norms of manufacturing industry and Ford-lifers, were not eradicated under the new regime. It is evidently very difficult to change people's basic norms and interpretive schemes overnight and this study shows how resilient these old structures can be. They lay dormant while Nasser and ConsumerConnect reigned but 'bounced' back with a vengeance when Bill Ford took power with his 'back to basics' approach. This also demonstrates the need to nurture and reinforce these structures, allowing them to traverse through the test of time and space before they become institutionalised and thus part of the organisation's structural properties. Clearly the tenets of structuration theory allow both stable structures and structural changes to be examined.

Although my main focus concerned events within CCE and between CCE and the rest of FMC, the notion of structures extends beyond the focal organisation and into the outer context. For example, the structures between CCE and Trilogy were briefly examined using the same dimensions (domination, signification and legitimation) as the internal structures and this showed insightful contradictions. One could argue that other relevant aspects of the outer context could have been similarly examined. For example, the activities of the media during both the dot-com boom and bust exhibited some characteristics of domination (power and authority), signification (terminology) and legitimation (norms). However, this was beyond the scope of this study. *Table 8.2-2* summarises the above natures of e-business, of agency in organisational change and organisational structures.

Table 8.2-2 Nature of E-business, Agency in Organisational Change and Organisational Structures

<p>Nature of E-business</p>	<ul style="list-style-type: none"> • Highly pervasive • Status strongly affected by dot-com boom and bust • Implementation entails ‘technochange’, with considerable depth and scope • Implementation requires explicit human intervention • Technical issues are important but social issues may be more significant • Change agents confront: <ul style="list-style-type: none"> • Structural contradictions with traditional business and traditional IT • The dilemma that large changes may lead to conflict but small efforts achieve little • The dilemma of a separate e-business unit versus integration with traditional department
<p>Nature of Agency in Organisational Change</p>	<ul style="list-style-type: none"> • Change is ‘feasible’, even in large organisations, but requires considerable effort and cost • Change agents <ul style="list-style-type: none"> • Need senior management support • Initiate the challenging task of changing existing organisational structure, stemming from old structures • Should approach change targets carefully • Should avoid unnecessary changes to their own structures • Change targets <ul style="list-style-type: none"> • May be comfortable with traditional structures • Tend to resist change efforts that threaten their position • Reproduce existing structures that enable and/or constrain change • Are more likely to accept change that fits established structures • Both change agents and targets reflexively monitor their environments and act purposively and knowledgeably to secure their best interests • Unintentional consequences of intentional actions may still arise
<p>Nature of Organisational Structures in Large Established Organisations</p>	<ul style="list-style-type: none"> • Structures often complex and contradictory, but may be deeply embedded: <ul style="list-style-type: none"> • Intensified by matrix reporting structure • Amplified by other stakeholders along the supply chain • Complicated by introduction of pervasive e-business • Structures (domination, legitimation, signification) guide, facilitate and constrain working lives, yet are maintained by the people concerned • While structural changes are feasible, obsolete embedded structures may endure and resurface • New structures need to be nurtured, reinforced, and traverse through the test of time and space before becoming institutionalised • Organisational structures extend beyond the focal organisation into the outer context.

8.2.4 The Nature of Duality of Organisational Change

Most importantly, this research underlines the nature of duality in organisational change. It demonstrates that organisational change normally entails changing established structures and structural properties through the efforts of human agency, yet structures enable and constrain such

change efforts. In other words, organisational change represents a complex, dynamic, and recursive interplay/interaction between structures and actions. It is a duality in which the change agents shaping the organisation also shape themselves as human beings in the process, but in so doing, they also create new structures or inadvertently reinforce existing structures, which together in turn facilitate or inhibit their further actions and constitute their identities. Consequently, a study of organisational change should entail both the examination of the nature of organisational structures and the nature of agency.

In the FMC case, Nasser used the existing structures (in terms of domination, signification and legitimation), which had been reinforced over the years by the everyday working practices of Ford, to change those structures significantly and implement ConsumerConnect. This was not a mere administrative reshuffle; he had to try to change internal groups' resource balances, decision-making authority, perceptions (interpretive schemes) and underlying norms. He managed to effect the change although it failed to become institutionalised. ConsumerConnect (including CCE) used the new structures to try to make further organisational changes throughout FMC through e-business.

More specifically, in terms of the signification dimension, this research reveals that without shared structures of signification regarding an organisational change programme among the various stakeholder groups, the acceptance and integration of the organisational change programme is considerably constrained. In addition, extending from Scheepers and Damsgaard's (1997) results, this study emphasises the importance for organisational stakeholders to perceive the organisational change as value-adding and non-contradicting in order to minimise resistance. Moreover, if change agents embrace more than a single orthodoxy (in this case, an all-consuming approach to e-business) in executing organisational change in an environment of different interpretive schemes, they can more easily communicate in the world-view of other stakeholders. A lack of flexibility and variety can restrict and even cripple the change agent.

In terms of the domination dimension, this research highlights that when support is given or achieved from top management and other stakeholder groups, change agents are enabled in their actions and can reproduce their domination structure; conversely, when support is unattained or unsustainable, their domination structure is weakened while the other stakeholder groups reproduce their own domination structures and retain their resources for other activities.

In terms of the legitimation dimension, this research illustrates the resilience of organisational norms that have been reinforced by change targets and other stakeholders over many years. This resilience can be particularly fervent when an organisational homogeneity (e.g. FMC's manufacturing orientation) contradicts the suggested change; following poor experiences with earlier technology introduction; and reinforced by management traditions.

Thus, a significant constraint to change efforts is the contradictions within the new structures, in the dimensions of signification, domination, and legitimation. In effect, underlying this conception of duality of organisational change and reiterative reproduction/transformation, this research highlights the multifarious structural contradictions arising from organisational change within large established organisations. Structural contradictions destabilise and cause confusion among the change agents and also lower the esteem of other stakeholders towards them. In the case study from Baskerville and Land (2004), the interaction of old and new structures proved to be dysfunctional. Many contradictions grow to actual conflict when stakeholders feel that the differences affect them negatively and they are able and motivated to take actions of some sort to express their resistance. Consequently, change agents need to understand, acknowledge and appreciate their own structures in relation to their change targets and to anticipate possible resistance resulting from structural contradictions in order to achieve their change objectives. Nonetheless, the resilience of traditional structures can diminish opportunities for the institutionalisation of new contradictory structures. In my case study, this aspect of the duality is reconfirmed by the ease with which many 'old' structures were revived under Bill Ford's "back-to-basics" strategy. However, this revival had to take account of Nasser's structures.

Considering the scope and intensity of the organisational changes in this case, it was obviously very difficult to predict, or control, the interaction between agency and structure, both at the level of setting up ConsumerConnect as well as their attempts at implementing e-business based change. In this complex fluid situation, it was hardly surprising that unanticipated and unintended consequences resulted. The stated intention, in setting up ConsumerConnect was to drive revenue growth, increase profitability, increase market capitalisation and change FMC from a manufacturing company to a customer-focused organisation. Clearly these consequences were not achieved; instead the unintended consequences included greater overall consumer dissatisfaction and the early demise of both the CEO (Nasser) and ConsumerConnect itself. At the level of CCE's projects, some did achieve their intended consequences (e.g. the successful creation of the e-time project management method) but others failed (e.g. the Lead Management

System).

Within the realm of everyday human interaction, notions of duality and the dimensions of structure were clearly visible as human agents communicated using their interpretive schemes, including appropriate vocabulary and symbolism, both to reinforce and change existing structures. Those with sufficient 'facility' exercised their power, and sanctions based on old (and new) norms were used; again, either to reinforce or to change existing structures. Furthermore, these dimensions were closely interlinked: for example, the symbolism of CCE's prestigious location echoed the exercise of power through the facility of resources and corresponded to the new norms of the organisation. Had CCE been able to communicate better, with a more reliable resource base and fewer contradictions in terms of legitimation, perhaps the story would have ended differently. *Table 8.2-3* summarises the duality of organisational change from the above structural analysis.

Table 8.2-3 Nature of Duality of Organisational Change

- Organisational change is a complex, dynamic, recursive interaction between structures and actions
- It is a duality in which the change agents shaping the organisation also shape themselves
- But in so doing, they also create new structures or inadvertently reinforce existing structures
- These in turn facilitate or inhibit their further actions and constitute their identities
- Dimensions of structures are closely interlinked in the duality of organisational change
- Signification Dimension
 - Shared favourable structures facilitate acceptance of change
 - Stakeholders should perceive the change as value-adding and non-contradictory
 - Change agents need flexibility in an environment with differing interpretive schemes
- Domination Dimension
 - Widespread support allows change agents to reproduce their domination structure
 - Lack of support gives an advantage to contradictory domination structure
- Legitimation Dimension
 - Norms reinforced over time can be very resilient
 - Resilience encouraged by:
 - Organisational homogeneity that contradicts the change
 - Poor experiences with earlier technology introduction
 - Management traditions of the company
- Contradictions and Conflicts
 - Many structural contradictions arise from change in large established organisations
 - Contradictions destabilise and confuse change agents and lower their status
 - The interaction of old and new structures can prove dysfunctional
 - Contradictions may become conflicts if stakeholders have motive and opportunity
 - Change agents should relate their structures to those of change targets
 - Resilience of old structures may threaten institutionalisation of new ones
- In complex situations, unanticipated consequences of intentional actions can result

8.3 Critical Evaluation of Structuration Theory

8.3.1 Criticisms

A common criticism of structuration theory is that it is complex and requires a significant investment in time and effort in order to understand, and then apply, Giddens's notion of duality of agency and structure and the various structural dimensions. Without a proper appreciation of the theory, a researcher could mistakenly focus on either the exogenous influence of structure on social phenomena or the power of human agents to subjectively influence social phenomena. The underlying power and distinctiveness of structuration theory is in bringing together both sides of the duality. Similarly, gaining the understanding and ability to analyse Giddens's three dimensions of structure and human interaction, interlinked by the three modalities, is not trivial. This is exacerbated for many IS researchers through his use of the vocabulary of sociology to explain concepts that may be foreign to many IS researchers. Furthermore, the explanations provided typically use examples of societies or tribal communities rather than organisations and work groups. The onus is then on the IS researcher to interpret both the concepts and the explanations into the IS field. However, this problem applies to other meta-theories (e.g. general systems theory) and is certainly not exclusive to structuration theory. Hence, one of my main contributions is to relate it and interpret it to the IS field. This is achieved through studying previous IS applications of structuration theory, building from it and making the effort of conceptualising e-business implementation and organisational structure as a duality between Giddens' agency and structures.

Another common criticism is his focus on the ontological content of social theory and his lack of a "methodological scalpel" and thus a "failure to present a viable epistemology" (Hekman 1990 in Rose and Scheepers 2002), leaving the researcher with limited practical guidance as to how to carry out empirical research. Giddens's own 'guidelines' (1984, p.281-4; 1990, p.311), mentioned in Chapter 3 are still rather abstract. He admits that his principles "are essentially procedural and do not supply concepts useful for the actual prosecution of research" (Giddens 1990, p. 311). As Kwong also points out: "Structuration theory has not provided a precise indication of content nor methodological direction to answer questions like 'which actors' and 'which skills to investigate', and 'how', 'where', and 'when' to investigate these (1995, p.81-82).

Consequently, the researcher needs to make the effort to bridge the gap between Giddens's conceptions and the execution of the research. Poole and DeSanctis (2002) attempt to reduce this

gap through seven requirements for a full-blown programme of empirical study. Nonetheless, the operationalisation of structuration theory in empirical work is difficult. As discussed in the Methodology Chapter, I based the formulation of my semi-structured questionnaires and the execution of the empirical work on the guidelines of both Giddens (1984, 1990) and Poole and DeSanctis (2002) and an extensive review of the literature on organisational change before tailoring them to the circumstances of the case study and refining them as my knowledge of the context developed.

Particular issues that were relevant to my case study and are not covered adequately by Giddens, are conflicting emotions and personal relations. Each of these factors can have a considerable influence on the existing structures. The emotional dimension is partially covered by structures and contradictions within the dimension of legitimation; for example, people often become upset because something is 'not fair'. Arguably, fairness is closely related to norms but other emotions are less easy to locate. CCE exhibited a mixture of emotions, including excitement, pride and frustration as they traversed from establishment to termination, while other stakeholders exhibited fear, resistance and gloating at various points of the CCE story. Such contradicting emotions probably contributed to the actual conflict when ConsumerConnect was vulnerable to attack. Thirdly, personal relations (friendships and vendettas) play a significant role, whether positive or negative, in the integration of new structures or the continuation of existing structures. Personal relations can conflict with institutional norms, making the human agent less rational and financially astute. In other words, the proposed structures can be objectively beneficial for the organisation, but personal relations/rivalry can prevent them from being realised. Alternatively, the proposed structures may be feeble, but personal relations can make them happen. In effect, personal relations, similar to emotions and environmental events, can impact structures of domination, signification, and legitimation.

Nonetheless, although Giddens does not specifically direct the researcher to the 'which', 'where' and 'when' in empirical execution, upon recognition of the relevant issues, Giddens does provide the tools to evaluate how they affect the social system. Besides such a list of 'which, where, and when' to look could not be exhaustive and is highly dependent on the case. In other words, the strength of Giddens's model lies in its ability to help both the researcher and the practitioner gain a deeper understanding of how change happens.

One issue that is treated lightly within structuration theory is the notion of competence, or

specialised knowledge or expertise. Most of Giddens's examples concern competence as everyday knowledge and he appears to assume that most actors possess this competence at an adequate level. However, one view of the story of ConsumerConnect-Europe might subscribe many of its problems to a lack of competence at various managerial levels of the organisation. Nevertheless, this issue tends to remain a rather taboo subject in both social theory and in the carrying out of empirical research. It is certainly extremely difficult, and arguably inappropriate, for a researcher who may have little management experience to pass judgement on the competence of managers in a context with which they are much more familiar than the researcher. In this regard, structuration theory is as silent as other theories, not to mention handbooks on research methodology.

In terms of analysis, despite the efficacy of structuration theory in the mutual unfolding of the two-way link between agency and structure, the different dimensions are so interwoven in the theory, that it is sometimes difficult to attribute more intensely specific organisational issues to one dimension in the analysis. Giddens emphasises that the three dimensions are for analytical convenience, despite being intimately interlinked in reality. However, in terms of empirical analysis, it can be difficult to categorise certain issues as evidently more within one dimension than another. Scheepers and Damsgaard (1997) found similar problems in their application of structuration theory in the analysis of an intranet implementation. In this research, this classification difficulty surfaced especially between structures of signification and legitimation, as they exhibit significant overlap.

As noted above, while conceptually the notion of structures, with their three dimensions, seems extendible to the outer context, this was particularly difficult in a study like mine. My focus was very much within CCE and FMC but clearly the numerous actors had various structural links to the outer context and these may have been highly influential. Links to particular media (newspapers, television news), churches, trade unions, political parties, golf clubs and professional associations may have been crucial in terms of signification, domination and legitimation but it was obviously totally impractical to examine them. The operationalisation of the theory in the outer context would be extremely difficult, unless that was the focus of study; in which case, many of the relevant internal structures could have been missed. Thus, the macro-micro links are problematic at a fine level of granularity.

Finally, Lea (1995) criticised that structuration theory exerts a positivistic meta-theoretical

orientation. However, this criticism seems unjustified as structural analysis is recursive in nature and includes the analysis of unanticipated consequences of actions. In fact, Scheepers and Damsgaard (1997) support this interpretive view: “Structuration theory does lend itself to explaining the interaction of actors during intranet implementation, but we found it less powerful in its *predictive* capability.”

8.3.2 Strengths

Despite the criticisms, Giddens’s theory is a simple but powerful theory that enables the researcher to capture a comprehensive understanding and useful insights of the various dimensions involved in the interaction between human agency and structure. Furthermore, it provides a sophisticated treatment of structures as opposed to a mechanical organisational chart or the interminable centralisation/decentralisation debate. A structural analysis opens up the possibility of examining the heterogeneous systems of meaning, power relations, and norms of different social groups within the same company. In terms of research analysis, it can be applied for both a macro and a micro examination of the same process.

Furthermore, within the domain of multinational organisational change, in which there is increasing contact between different departments across space and it is increasingly difficult for any group to remain isolated and uninfluenced by other groups, structuration theory is a very appropriate and applicable meta-theory. It is a theory that equally reflects change as well as stability and is attuned to shifts in attitudes and actions, as well as their continuance. In analysing structural reproduction, it emphasises reflexivity and knowledgeableability on the part of human actors and thus changes in structures in the mind. It provides a deeper understanding of how organisational change occurs and how structures, even in the face of processes beyond managerial intent and control, may be organised and evaluated, and fed back into the change processes themselves.

Consequently, such an analysis of social practices within organisational structures, which is precise and takes history, content, process and context into account, and hence, overcomes decontextualisation of organisational change, can be of significant value to researchers and perhaps even for practising managers. It provides depth, an emergent perspective, and an appreciation of how organisational change evolves. The theory is dynamic; its constructs are enthralling, and its language is at once clarifying and bewildering. It is a meta-theory that has helped to meaningfully uncover the complex and neglected area of challenges in implementing e-

business into large established companies, the *raison d'être* of this thesis.

Despite this, one can still raise a pertinent question: what are the benefits of using structuration theory over simple analysis, otherwise known as common sense? This is particularly relevant to the case study described in this thesis, where some of the failings of ConsumerConnect-Europe would seem to be fairly obvious.

The first point in addressing this question is that structuration theory provides a language to describe organisational change. The language, although a little ungainly for novices, is precise and its terms and concepts are well defined. Secondly, the concept of duality, viewed as an essential, reciprocal relationship between agency and structure is a powerful notion. This implies that structure only manifests itself in human interaction and that human interaction always involves the use of structures. Adopting this idea prevents the analysis of structure without the consideration of agency and vice versa. Thirdly, the dimensions of structure, which are present to some extent in every interaction, offer a realistic yet simple tool for the analysis of complex structures. They provide a useful tool to explore the richness of the context of change.

Furthermore, structuration theory provides a new and insightful approach to understanding change, resistance to change (both immediate and latent) and stability. This, combined with the notions of unacknowledged conditions and unanticipated consequences, allows for a deep analysis of most organisational change situations.

Thus, the key notion of duality provides support for change strategies based on iteration and learning, as well as an appreciation of the context. Hence, it fits nicely within the best practices of organisational change, based on human relations and socio-technical thinking.

Finally, the sheer comprehensiveness of structuration theory acts as a useful checklist to ensure that most aspects of action and structure are considered and should prevent the danger of 'jumping' to a conclusion, where the analyst or researcher opts for the first likely solution that comes to mind. Thus, I feel that the use of structuration theory offers considerable benefits over simple analysis, or common sense.

8.4 Summary

In this discussion I addressed the research sub-questions concerning FMC's and CCE's structures, processes and outer context that underlay the 'story' of CCE. This showed how the contradictions in the structures became conflicts, fuelled by the problems of process and particular events in the outer context.

I then moved on to consider the more generic main research question:

How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?

The discussion showed the problems of implementing e-business as an organisational change, using the basic tenets of structuration theory. I showed the insights achieved concerning the natures of e-business, organisational change (as human agency) and organisational structures, as well as demonstrating the duality of agency and structure.

I then reviewed the strengths and weaknesses of structuration theory, based on my experience of using it for this study. Although there are difficulties in fully understanding and operationalising the theory, I found it to be a powerful tool for analysing organisational change.

CHAPTER 9: CONCLUSION

The purpose of this research is to help understand how the introduction of e-business interacts with the existing structures of large established companies. This thesis maintains that, in order to capture a more comprehensive and dynamic understanding of how organisations undergo such a change, we should adopt an emergent ongoing perspective, with human agency implementing change, facilitated and constrained by organisational structures. To achieve its end, this research adapted and interpreted Giddens's structuration theory to the field of information systems. This closing chapter offers an overview of the thesis in the first section, followed by a discussion of the contributions made, in terms of content, theory and methodology. This is followed by the practical implications of this research, the limitations of both the research design and the theoretical framework and, finally, some suggested areas for further research.

9.1 Overview of the Thesis

The introduction, Chapter 1, outlines the problem, both in practical and theoretical terms. It gives a brief overview of the theory used and the research methodology and design deployed.

The literature review in Chapter 2 demonstrates that e-business, without being a fully-fledged revolution, can still be tremendously pervasive throughout the whole organisation and is a much greater endeavour than the implementation of conventional IS. Consequently, large e-business initiatives should be considered as technology-driven organisational change. However, there are very few studies in the literature that address in depth the introduction of e-business into a large established organisation in terms of organisational change. This significant gap in the literature is the target area of this study. The second half of the chapter reviews the organisational behaviour literature concerning organisational change along content, context, and process themes, which taken alone are each rather limiting. Consequently, it concludes that an approach that combines these three themes would be insightful, which leads to my chosen theoretical approach.

Chapter 3 describes Giddens's structuration theory, which is the main theoretical approach I have chosen. The chapter presents the background and key concepts of the theory, focusing in particular on the aspects relevant to this study. These include the fundamental duality of human agency and social structure, including the dimensions of organisational structures: signification, domination, and legitimation. These dimensions are mediated by three modalities (interpretative

schemes, facilities and norms), drawn on by human agency in its constitution of interaction and thereby reproduce and change the organisational structures. It is important to note that through the application of structuration theory, the interpretation of organisational structures in this thesis is much richer than the mere delineation of organisational charts. Rather, organisational structures symbolise the rules and resources which are instantiated only in action, which are the medium and outcome of the reproduction of actions, and which can be discussed along the above dimensions. Finally, another important concept is Giddens's notion of structural contradiction and conflict. The former arises from divergences within and between social groupings and contains the potential for conflict, while the latter refers to the actual struggles between actors or groups.

Chapter 4 introduces the philosophical assumptions underpinning this research. These correspond to the epistemological and ontological assumptions of interpretive research. The application of this research paradigm is not only the result of my personal belief, but also a result of my theoretical approach and my examination of previous works employing structuration theory. The main strategy adopted for the development of the main research question was the conduct of a single embedded in-depth case study. This chapter then discusses the research techniques utilised and explores in more detail the development of the sub-research questions from the main research question and the meticulous design of the interview questions. It concludes with an examination of the data preparation and coding, the interpretation, and the presentation of the research findings.

Chapters 5 and 6 concern the findings of the case study. Chapter 5 introduces the organisational background of Ford Motor Company and the prior events that led to the establishment of ConsumerConnect-Europe (CCE). It narrates the establishment of CCE and the initial perceptions of the various stakeholders. Chapter 6 narrates the operation phase of CCE, with a particular concentration on their B2C division, E-sembly (originally named Drive). It describes the issues encountered, the contemporaneous events that took place, and the perceptions of the stakeholders. Chapter 6 concludes by recounting the contemporaneous events that shrouded the termination of CCE and its actual termination. It also follows the views of the stakeholders regarding the termination and briefly alludes to the later events beyond the main episode.

Chapter 7 analyses the case study through the detailed application of structuration theory to the three phases. Particular emphasis is given to analysing the dimensions of the structures and the

contradictions encountered in the three dimensions. In the establishment phase, primacy is given to describing the various stakeholders while in the operation phase I focus on the issues underlying some of the important contradictions. In the termination phase, I wrap up with Giddens's dimensions, which has been applied throughout the Analysis. The chapter ends with a brief evaluation of CCE's successes and failures.

Chapter 8, the Discussion, addresses the sub-research questions, originally posed in Chapter 4, before turning to discuss the main research question:

- How does the introduction of e-business interact with the existing structures of large established companies? Why does the introduction of e-business pose major challenges to organisations?

Using the concepts from structuration theory, this chapter offers interesting results in terms of the natures of e-business, organisational change, organisational structure and duality of organisational change. The chapter then provides a critical evaluation of structuration theory, based on my extensive experience of using it throughout the research.

The next section details the various contributions made by this research study.

9.2 Contributions

9.2.1 Construction of Contributions

Barrett and Walsham (2004) examine how contributions are constructed and established in interpretive case studies in terms of:

- structuring intertextual coherence
- problematising the context for contribution
- positioning contributions
- content of contributions

Structuring intertextual coherence refers to “the need for texts to establish contribution by re-presenting and organising existing knowledge so as to configure a context for contribution that reflects the consensus of previous work” (Ibid, p.296). I believe that this thesis achieves that through the themes adopted in the Literature Review. *Problematising the context for contribution* refers to identifying a gap, deficiency or conflict in the literature. In my case, this is the dearth of detailed studies of the implementation of e-business in large organisations, in terms of

organisational change.

Positioning contributions is rather different as it implies identifying the target audience for the research (*framing*), specifying the research scope, highlighting the interesting aspects and admitting the disputable aspects (*staging*), and finally issues concerning generalisation (*stacking*). As noted in Chapter 4, Research Methodology and Design, the audience comprises academics and practitioners interested in e-business and organisational change and researchers interested in the application and operationalisation of structuration theory. The scope is a single case study, which recounts the story of ConsumerConnect-Europe and highlights the relevant aspects in terms of the interaction of e-business and organisational structure. Disputable aspects are noted in the Analysis and Discussion chapters; for example, the difficulty in evaluating the venture as a whole. The issue of generalisability is covered in the methodology chapter. Although Ford Motor Company is a particular case, with specific actions, structures and processes, the insights gained can clearly be transferred to other large established organisations undergoing similar changes.

Barrett and Walsham's (2004) *content of contributions* refers to Walsham's (1995) types of generalisation from interpretive case studies:

- development of concepts
- generation of theory
- drawing of specific implications
- contribution of rich insights

My content of contributions is, I feel, in the areas of specific implications and rich insights. These are presented in Chapter 8, Discussion, and summarised below.

9.2.2 Content of Contributions and Theoretical Contributions

9.2.2.1 The Nature of E-business

The study illustrates the potential pervasiveness of e-business with relevant applications throughout an organisation and up and down the supply chain. The study shows how a large mature organisation like FMC reacted to both the dot-com boom and bust. The optimism (in some parts of FMC) surrounding the creation of ConsumerConnect during the boom was only matched by the speed with which the organisation reversed its support during the bust. Although the main empirical element of the study ceased shortly after the bust, personal observation and

reading suggest that e-business has since stabilised into a widely-used and effective technology, if not a business revolution. It seems reasonable to class e-business as a 'technochange' (technologically driven organisational change) project (Markus, 2004), whose implementation requires careful intervention. The introduction of e-business is likely to involve a considerable interaction with the organisational structures of domination, signification and legitimation. A particular structural phenomenon is the likely gaps between a specialist e-business department and both the business as a whole and the traditional IT department.

It is difficult to give a definitive answer to the debate concerning the merits of introducing e-business by setting up a separate department, such as ConsumerConnect. This seems to be highly dependent upon the context at the time. FMC's experience with ConsumerConnect was not a particularly happy one but most of the problems were due to the specific interaction of the ConsumerConnect initiative with FMC's organisational structures at the time, exacerbated by problems elsewhere in the organisation.

9.2.2.2 The Nature of Agency in Organisational Change

Despite the problems and the opposition, Nasser did manage to implement this significant organisational change in the massive complex structure of FMC. He succeeded in setting up ConsumerConnect as the FMC e-business arm, whose task was to transform the structure (including culture) and processes of the organisation. It was a high risk venture that seemed to take for granted the support of the other stakeholders, who would quickly form the critical threshold needed for long-term change. Due to the various structural contradictions, plus its short life span, these new structures never became institutionalised.

While the change agents in CCE exuded arrogance and aggression, the change targets mostly did not object overtly. However, CCE had very limited real support in the organisation and found itself at the centre of structural contradictions concerning resources (domination), norms (legitimation) and interpretive schemes (signification). It was only then that CCE became more conciliatory. Everyone involved demonstrated purposive and knowledgeable behaviour, with evidence of reflexive monitoring, but this was not enough to prevent the unanticipated consequences of their actions

Thus, it seems important who the change agents are: perceived insiders, outsiders or somewhere between the two. Similarly the intensity and scope of the change is important: ConsumerConnect

was a highly intensive, wide-ranging, venture. Although I did not examine the detailed methods used by CCE, the process of change is also important: in the case of FMC, the process was hasty, sharp-edged and confused. Each aspect of this example of agency caused problems with the organisational structures of FMC.

9.2.2.3 The Nature of Organisational Structures in Large Established Organisations

Firstly, it is clear that organisational structures are more than just reporting structures. They consist of dimensions of domination, signification and legitimation, as proposed by structuration theory. Secondly, in an organisation like FMC, organisational structures are highly complex, having to accommodate various functions, products and brands around the world. In such an organisation, it is hard to avoid contradictions within the structures and the arrival of e-business puts further pressure on existing contradictions, frequently leading to conflict.

In an organisation like FMC, which stretches back more than a hundred years, many of these structures, especially those concerning legitimation are extremely deeply embedded; for example, the manufacturing culture and the rivalry with GM. Although it was possible to change these structures, they did not die away quickly but lingered around in the background. Thus, when Bill Ford launched his 'back to basics' movement, the old norms were still available and seemed particularly attractive at the time. These structures probably stretched into the outer business context but it was not possible to examine these within the time available for this study.

9.2.2.4 The Nature of Duality of Organisational Change

This research illustrates the effectiveness of structuration theory in analysing a very complex organisation undergoing structural changes over time. Most importantly, this research accentuates the duality of organisational change through Giddens's three closely inter-dependent dimensions of structure.

Firstly, it demonstrates how structures of signification, via interpretive schemes, enable (and restrict) stakeholders to make sense of the working context they act in and to communicate their views to others. This communication reinforces (or alters) such structures of signification. For example, CCE aligned with Nasser's vision (in terms of legitimation and domination, as well as signification) and communicated the prospects of e-business and consumer-orientation to their clients. However, many stakeholders maintained their traditional worldviews (interpretive schemes): some (e.g. traditional FoE Marketing employees; Land Rover) resisted passively,

communicating their disaffection with CCE within their own ranks, while others (e.g. Volvo) openly criticised CCE. Such contradictions in signification, fuelled by similar contradictions and conflicts in domination and legitimation, resulted in CCE changing their own interpretive schemes and toning down the 'promises' of e-business. This research demonstrates how a lack of shared structures of signification, and/or inflexible structures, can delay and constrain change. It also shows the damage that can result from 'unfortunate' signification; for example, the identification of e-business with financial catastrophe during the dot-com bust.

Secondly, this study underlines how agents mobilise structures of domination (via facilities), which partially comprise the access to relations with other economic actors and access to material resources, to execute their particular purposes. In turn, such access to resources/facilities restrict and enhance agents' ability to effect change. In this study, a variety of modes and methods of domination is applied. For example, the effects of management support in favour of e-business led to the establishment of CCE and its significant access to both authoritative and allocative resources; conversely, the cutting off of management support severely hampered such access and eventually led to its termination. Its changing status in the structures of domination was also shown in the manner in which CCE attempted to 'sell' its e-business initiatives. While it perceived itself holding power, it sold aggressively and impatiently but, once it saw its power decline, it became more conciliatory in selling.

Thirdly, this research demonstrates how agents refer to the structures of legitimation (via norms) to make judgements of people's behaviour (including their own) and events as to whether they are right (legitimate) or wrong (illegitimate). The continual 'testing' of structures of legitimation could lead to their changing, in some circumstances (e.g. the decriminalisation of soft drugs in parts of Europe), or to their becoming more reinforced (rigid) in others (e.g. the increased opposition to homosexuality in parts of the Church of England). It should be remembered that structures of domination and signification are closely interlinked with legitimation and may give additional influence to those with control over resources, decisions and media. This study also shows how resilient deeply embedded norms can be -- for example, the 'manufacturing' norm of FMC. Thus it was difficult for many stakeholders to accept the replacement of this 100 year-old norm with Nasser's vision of customer focus. In this area, precedents can be important; for example, the failure of the Ford 2000 programme to be institutionalised before Nasser instigated further major changes. Also, in addition to the 'manufacturing' norm, other powerful traditional norms were threatened: internal promotion, lifetime employees and financial scrutiny.

This research emphasises that, underlying this conception of duality and reiterative reproduction and transformation, there are multifarious structural contradictions within a complex, multi-national, multi-brand, organisation that is attempting to undergo a significant reorganisation through the implementation of a pervasive technology. The change action tends to stir up old contradictions, such as control versus autonomy, leading to conflict where stakeholders feel sufficiently threatened and/or are confident of winning; for example, Volvo's resistance to threats to its autonomy. Similarly the resentment shown towards high-ranking outsiders is seen throughout the CCE story, from their difficulty in building internal 'networks' through to their dismissal or demotion in the termination phase.

In effect, examining this e-business change episode through Giddens's concepts offers rich insights into why e-business aroused such structural contradictions, why it was so difficult to integrate within Ford, and how the context in (spectacularly violent) motion exacerbated CCE's vulnerabilities and led to its downward spiral. Contradictory structures destabilise and cause confusion, whether they concern domination, signification or legitimation. This should be appreciated by change agents and their sponsors. Regardless of the knowledgeability (and seniority, experience and good intentions) of stakeholders, unanticipated consequences of intentional actions do occur. Furthermore, some deeply embedded structures, although perceived by some stakeholders to be dysfunctional, may take a considerable time to die away completely and their replacements need time and careful nurturing to become institutionalised.

Such a structurational analysis of organisational change, which is precise and takes history, process, and context into consideration, seems of significant value not only for academics but also for practitioners (see Sydow and Windeler 1998). The analysis is based on actual events and the views of the people involved and while the terminology is complex, the implications of the analysis seem remarkably practical. They offer insights and a deeper understanding of organisational change, its context and process. "Structuration theory reflects change as well as stability and is attuned to shifts in attitudes and actions as well as their continuance" (Walsham 2002).

9.2.3 Methodological Contributions

The contributions of this thesis to research methodology are partly tied to those drawn from the theory. The case study illustrates the operationalisation of structuration theory in terms of interpreting Giddens's concepts of agency, structure, contradiction and duality into the phenomena within the story of CCE. Similarly, the dimensions of legitimation, domination and signification had to be translated into concepts and categories that were relevant to the case study. Furthermore, the data collection, analysis and discussion needed to be performed based on this operationalisation. The analysis, in particular, employed Giddens's dimensions of structure for a detailed examination of the structural contradictions within the case study. It is felt that the research methodology and design incorporating this operationalisation are reusable in other contexts and represent a methodological contribution.

In terms of the design of interview schedules, this research illustrates that developing research sub-questions from the main research question can help bridge the gap between the main research question and the actual interview questions (Wengraf 2001). This bridging and simplification of interview questions into layman's terms is critical in capturing the essence of the story and the data required for structural analysis. Consequently, the interview questions are not phrased using the vocabulary of structuration. Hence, many of the interviewees' responses encapsulate several elements and dimensions of structuration and thus can require 'unpacking'. Nevertheless, the power and breadth of structuration theory and its underlying concepts encouraged a very comprehensive data collection. This is another aspect of the operationalisation of the theory.

Furthermore, this research supports the importance of careful construction of interview questions in order to maximise the opportunity to gather the most honest and thoughtful response. Techniques applied in building the interview schedule include offering interviewees a range of possible and legitimate answers to avoid contaminating the responses through leading or biased questions; applying vignettes in order to show the subtle differences between perceived power and actual power; asking indirect questions to cover controversial issues and direct questions for straightforward factual issues; and corroborating/contrasting earlier responses or first round interviews with schematic representations and follow-up questions or with a questionnaire and follow-up questions.

This research demonstrates that a carefully crafted interview schedule significantly helps in discovering the various interpretations of the change episode from the differing perspectives (i.e.

ConsumerConnect-Europe, Ford of Britain, Jaguar, Volvo, Land Rover, Ford of Europe Marketing; Ford IT; joint venture partner; traditional IT suppliers; Ford Purchasing, etc.). However, this research also emphasises that any carefully constructed instrument needs to be complemented with good personal sensitivity to the interviewee within the highly politicised and unstable environment.

Finally, this thesis contributes methodologically by effectively narrating a complex change episode in a coherent fashion. This is achieved through three mechanisms. First, as proposed by Barzelay (2002), this research imposes a simple structure on a complex story. It concentrates on a main episode, which comprises a number of events and encompasses a particular start and ending point. This main episode is separated into three events: beginning, middle, and end (Boland and Lyytinen 2004), otherwise named as establishment, operation, and termination in my case study. The main episode is then situated in relation to other relevant events (prior, contemporaneous, related and later events). Second, although imposing a narrative structure is effective in presenting my case study in a coherent and clear fashion, I was also conscious not to lose the richness of the story through the imposition of such a structure. I maintained a balance between reduction from the narrative structure and complexity by explicitly incorporating contradictory material, chaotic situations, impressions, and extreme opinions or emotions from the case study. Finally, I strove to apply *descriptive realism* in the presentation of my findings through the telling of a multi-voiced story and thereby, offer the reader a closer view of the empirical material.

Overall, I believe that my experience with the case study methodology, the techniques applied for constructing the interview schedules and collecting data, and the approach adopted to narrate the complex story, may be useful for other researchers studying organisational change in a highly political and unstable environment, regardless whether they apply structuration theory.

9.2.4 Practical Contributions

The practical contributions of this research stem both from the theory and the analysis and discussion of the case study. In studying organisational change, practitioners can use notions from structuration theory to better understand the complex dynamics of organisational change. Although a detailed analysis is beyond the scope of this thesis, some of the broad implications for change agents are worth mentioning at two levels: firstly, the overall implications of agency, structures and their duality, and, secondly, the more detailed implications of the three interlinked

dimensions of structures.

Overall, my research, based on structuration theory, reveals that even in a company as well established and complex as Ford, it is feasible to make major organisational changes, but their institutionalisation may require considerable resources and be delayed or overtaken by events and contradicting institutionalised structures, as was the case with CCE. It follows that change agents should aim at the enrolment of a critical mass of stakeholders, but allow sufficient time for the institutionalisation of the new structures to take place. However, agents need to define the scope of change through a coherent change strategy while being aware of unintended consequences. Similar to Markus's (2004) concept of 'technochange', change agents would be advised to implement such a change in an incremental fashion especially with high risk, high reward, significant technology-driven organisational change, such as e-business. This incremental approach would help institutionalise the technology, while enabling the functionality and scope to be enriched incrementally. Change agents should also be prepared to iterate and learn from mistakes. An incremental, iterative, learning approach was largely absent from CCE. Change agents should be systematic in the change process in order to routinise the implementation of change and avoid the double-loop organisational change experienced by ConsumerConnect.

Overall, with regards to the structures, practitioners should be aware of the complexity and importance of structures in a large established organisation when attempting organisational change. They should recognise that the existing structures, though they can be altered, can also enable and constrain the change efforts. Furthermore, they should acknowledge and be highly sensitive to the structural differences and contradictions that are likely to be present, especially across a large multi-national and multi-product company. They should also be aware that organisational structures comprise more than just trivial reporting structures but encompass dimensions of domination, signification and legitimation. A sensitivity to the richness of structures does not imply that change agents must change their own interpretive schemes, norms, and facilities to those of the change targets but that they should be aware that different norms and interpretive schemas exist and that these are normally founded on knowledgeable and purposive behaviour, backed up by reflexive effort. Such an awareness establishes the basis for mutual respect and the opportunity for more cooperative and negotiated organisational change.

In addition, this research captures the duality of organisational change by illustrating that the only way to make changes is to change from existing structures. However, even if the old structures

are converted to new structures, remnants of the old structures can still linger. Hence, even if structural changes are made, it does not mean that they get institutionalised overnight. Consequently, further changes need to take into account the new structures, which have not been institutionalised, and remnants of old structures, which still linger. This interaction between the old and the new is observed in ConsumerConnect's case. When CCE was trying to implement changes, remnants of the old structures restricted its interaction with the brands, but when it collapsed, the remains of CCE were easily reincorporated back into traditional departments (such as FoE Marketing and Ford IT) where the structures of norms, resources and interpretive schemes could absorb e-business, but on their own terms.

Leading on from the duality of organisational change, practitioners should also be aware of the dangers of relying solely on outsiders, such as consultants and joint venture partners, to design and implement organisational change. This warning stems from the difficulty for even organisational members, let alone for outsiders, to gain a comprehensive understanding of the complexity of the various structures within an organisation. Furthermore, outsiders clearly lack the reflexive monitoring within the organisation and have not participated in the reinforcement of the old structures. This is obviously not to say that fresh ideas and perspectives from outsiders do not have value. Outsiders may provide excellent advice in terms of the content of certain changes, but issues more closely related to agency and structure in the particular organisation probably warrant an insider's hand.

More specifically, practitioners can also benefit from the appreciation of each of the three interlinked dimensions of structure. The dimension of legitimation, concerning norms, is particularly important for organisational change. If the organisation (or the relevant parts) believe strongly in change, modernisation and learning, then change is likely to be easier. If the norms are less helpful, one could argue that efforts should be made to change those norms through education, rather than provoke resistance. However, in attempting to change norms, practitioners need to provide extremely good justification for the changes and such justification should appeal to other accepted norms, such as the survival of the organisation and the jobs of its staff. It is no accident that dramatic changes are often accepted without opposition in times of crisis. Clearly, practitioners should not be overly idealistic and insensitively change others' norms for the sake of change as this may lead to contradiction and conflict. In effect, change targets will participate more wholeheartedly if they believe that the new system fits the existing norms. In addition, should outsiders be included in executing the change, internal change agents should monitor and

manage their activities carefully.

In terms of the dimension of domination, this thesis shows the need for time and resources in order to effect change. Also, it shows that both allocative and authoritative resources are necessary in implementing organisational change; that is, change agents cannot achieve their goals with only one and not the other. Furthermore, the distribution and usage of such resources should be transparent and founded on accepted norms; otherwise, stakeholders can become jealous and conflicts can result. This transparency also leads to accountability for how the resources are applied. Especially in new ventures, some projects will fail and so an awareness and acceptance of risk should be part of the norms of both change agents and the other stakeholders. A 'blame culture' or 'scapegoating' is not helpful; the distribution of resources should be perceived as equitable (c.f. the closure of Dagenham at the time as the establishment and growth of CCE), although this may be difficult in practice.

Finally, with regards to the dimension of signification, it is clear that changing people's interpretive schemes requires time and resources. It also follows that change agents should not threaten existing signification structures just for the sake of change. Instead, wherever possible, they should communicate using the vocabulary of the change target, avoiding jargon and obscurantism. Ideally, change agents should be 'multilingual', being able to communicate effectively with a range of different stakeholders from accountants to assembly line operators. For example, when change agents introduce new concepts, they should apply metaphors and models that are likely to be familiar to the change targets. This requires the awareness and resources to carry out appropriate research in advance before approaching the change targets. First impressions count (c.f. Trilogy and their negative first impression among traditional employees at Ford). Practitioners should also communicate change related to the perspective of the targets and how it is likely to affect them individually, rather than communicating a generic organisation-wide formula. Interpretive schemes can be very local, especially in a large organisation. This implies that practitioners need to be highly sensitive and careful not to offend or communicate the wrong message by employing contradictory interpretive schemes. By being sensitive, flexible, and adaptable in their own interpretive schemes, it is likely that they may be able to incrementally and systematically change the interpretive schemes of the change targets.

To sum up, the recognition of the duality of structures and agencies in implementing technology driven organisational change is relevant not only for researchers, but also for practitioners.

Researchers should find that studying this duality along the various dimensions widens and deepens their understanding of organisational change dynamics. Practitioners who appreciate the concepts of the theory, as illustrated by my case study, may be able to re-frame their understanding of existing structures. These concepts could provide a new practical lens through which to view the feasibility of implementing and institutionalising a particular change programme.

Although many of the above recommendations may not be new, the way in which they are derived, founded on empirical work and a solid theory, offers a reliable and transferable basis suitable for practitioners engaged in organisational change in large established companies. As reflected on in the Discussion Chapter, structuration theory not only provides a language to practitioners, it also enables a different way of understanding change, resistance to change and stability; an abstraction of structure in three dimensions; and a conceptualisation of duality of organisational change within this e-business context. The sheer comprehensiveness of the theory serves as a buffer against (or a checklist) dashing into rash and biased conclusions. *Table 9.2-1* offers a summary of the above practical contributions.

Overall, these practical contributions offer a way of thinking about e-business that should aid practitioners in making the necessary changes in the organisation for e-business to be successful. This research demonstrates the need for an e-business strategy as opposed to doing everything at once (a 'big bang' approach); however, due to the problems arising from the interaction between agency and structure, the likelihood of unacknowledged conditions and unintended consequences, a strategy should be based on learning and iteration, rather than detailed determinism.

Table 9.2-1 Summary of Practical Contributions

Actions	<ul style="list-style-type: none"> ▪ Major organisational change is feasible, even in large organisations, but institutionalisation may be difficult and time consuming. Change agents should: <ul style="list-style-type: none"> • Enrol a critical mass of stakeholders and have time for institutionalisation • Define the scope of change through a coherent change strategy • Recognise the danger of unintended consequences • Implement high risk, high reward technochange incrementally • Are prepared to iterate and learn from mistakes • Act systematically to routinise implementation, avoiding double-loop change
Structures	<ul style="list-style-type: none"> ▪ Practitioners should recognise: <ul style="list-style-type: none"> • The complexity and importance of structures in enabling/constraining change • The signification, domination, and legitimation dimensions • That structures can be changed • Structural differences and contradictions exist • Differences founded on knowledgeable, purposive and reflexive behaviour
Duality of Organisational Change	<ul style="list-style-type: none"> ▪ Changes are made from existing structures ▪ Obsolete structures may linger and new ones are not institutionalised overnight ▪ Outsiders lack understanding of organisational structures
Dimensions	<ul style="list-style-type: none"> ▪ Legitimation <ul style="list-style-type: none"> • If favourable norms are absent, education is needed to nurture them • Changing norms requires justification and should appeal to accepted norms • Dramatic changes are more acceptable at times of crisis • Targets are more likely to accept change if it fits their existing norms • Outsiders require monitoring and management by internal change agents ▪ Domination <ul style="list-style-type: none"> • Time and resources needed to effect change • Allocative and authoritative resources necessary • Resource distribution and usage should be transparent and fit accepted norms • Accountability of change agents ▪ Signification <ul style="list-style-type: none"> • Changing interpretive schemes requires time and resources • Change agents should: <ul style="list-style-type: none"> • Not threaten existing signification structures just for the sake of change • Communicate using the 'local language' • Communicate in terms of the individual group, not the whole organisation • Employ flexible interpretive schemes

9.3 Implications of Research Agenda

9.3.1 Research Design Limitations

In the Methodology chapter, I discussed the implications of selecting an interpretive qualitative paradigm and case study methodology: one can gain depth and even theoretical generalisation but not claim statistical generalisations to populations of organisations. The main contribution of the thesis is in having adapted structuration theory to study technology-driven organisational change in large established companies. It shows how structuration theory can illuminate the structures

and the interaction with agency that influences the success of an organisational change effort.

The findings from the case study do not lead to the induction of a new theory or concepts but they do impart significant contributions in terms of specific implications and rich insights and form the basis for theoretical and practical contributions. Although, a case study of Ford is very specific and therefore limited in its capacity for generalisation, this is endemic for any case study, but it is likely that similar processes and issues occur in other large established organisations. Hence, certain specific implications and theoretical and practical insights are likely to hold in other organisational settings.

Interpretive research is always open to the criticism of the bias of the researcher. As emphasised in the Methodology Chapter, I countered this tendency through investigating via a range of stakeholders and a variety of data sources. Gaining access to such an interesting organisation and discovering such a rich story outweighs the risk of researcher bias.

Nonetheless, a limitation of this research is that the CCE story happened fairly fast in a turbulent environment, as opposed to a stable one. Consequently, drastic events took place in a short time frame and I only had a small window of opportunity to capture a real-time snapshot of these events and the changing environment as they unfolded. I had no opportunity to revisit nor repeat the study. However, these limitations are countered to some extent by people's recall of the recent and fundamental change episode and my proximity to them.

Another limitation that developed as the environment became more turbulent in Ford and certain topics became more sensitive was my access to people and information. Unlike the early days when I had relatively free access to any areas related to e-business, my research scope had to narrow down to E-assembly and its associated stakeholders. However, I was fortunate to remain in the organisation at all and the E-assembly division of CCE presented a very rich representation of the issues that CCE as a whole was experiencing. Furthermore, since I had already established a rapport with a number of people in CCE, I was able to maintain contact and discuss sensitive issues throughout my research. In addition, this narrowing of research scope enabled me to concentrate my efforts and gain further depth into the situation. Nonetheless, it would have been constructive to take other slants at the change episode (e.g. talk to dealers, first tier suppliers, etc.), but, given my limited resources, it was necessary to narrow my research scope and only interview the most relevant stakeholders.

In total, I was present in the organisation for more than one year but the research would certainly have been enhanced, had I had more time and, also, had CCE survived longer. In this case, I would have been able to investigate CCE's activities at the level of one or more individual projects and their outcomes. It would also have been useful to interview staff from Consumer-Connect (US) for a different view of CCE's performance. In addition, it would have been valuable to discuss my interpretation of the case study in detail with the various actors. Other issues, such as CCE's investment appraisal procedures, would have been interesting to study but these would constitute other theses entirely.

Another implicit limitation in a large hierarchical organisation is that I was mostly limited to interview people subordinate to my sponsor, who was however, very highly ranked and helped me access many other departments and staff. However, it was much more difficult for me to justify access to 'god-like figures' (in Ford) such as Jac Nasser or Bill Ford, especially during the turbulent periods. It would have been ideal to enter the case study three months before anything happened; nonetheless I entered shortly after CCE's establishment and was able to capture the interviewees' recent recollections of the circumstances. Also, I was present for most of the operation and termination phases.

9.3.2 Adequacy of Research Framework

As Walsham (2002) puts it, "any theory illuminates some elements of particular case situations and is relatively silent on others," and structuration theory is no exception. Although Giddens's theory is not a panacea, the search for an all-encompassing social theory seems futile. Hence, even though other theoretical frameworks could have been selected, this research chose structuration theory because it enables a comprehensive and insightful understanding of the different dimensions involved in the mutually reflexive interaction between human action and organisational structure.

Furthermore, this structural analysis facilitated the examination of the heterogeneous systems of meaning, power relations, and norms of different stakeholder groups within the same large organisation. In addition, this theory can be used to explain both change and stability and is attuned to shifts in attitudes and actions, as well as their continuance. It provides depth, an ongoing and emergent perspective, and an appreciation of how organisational change evolves. Such an analysis of social practices within organisational structures, which is precise and takes

history, process and context into account, overcomes decontextualisation of organisational change and can be of significant value to both organisational researchers and for practicing managers.

Structuration theory is a very complex theory and can be applied in many ways from various angles. As Giddens would agree, to import the theory as a whole into research would be ineffective, and this research uses his principles and concepts in a critical and sparing fashion as appropriate to the case study in order to uncover the challenges in implementing e-business in large established companies. It is the hope of this research that a humble contribution towards the clarification and development of the application of structuration theory for other IS researchers is made.

9.4 *Areas of Further Research*

Structuration theory was applied to understand and make sense of the challenges in implementing e-business in large established organisations. The theory is dynamic and its constructs are enthralling. The information systems field could benefit from applying the theory not only in analysis, but also in incorporating it into the technology-driven organisational change management research (technochange - Markus 2004). For example, some of the above practical implications could be integrated into an iterative incremental technochange approach.

Furthermore, the theory can benefit from additional operationalisation and application in the IS field to help elucidate and exploit its multifarious principles. This work is by no means the ultimate word on e-business and organisational change. Quite the reverse, by acknowledging the insights and contributions of previous research, I fully espouse the relevance of cumulative research. It is a supplicating aspiration that this thesis would assist other researchers in their task of developing intellectual tools for the study of IS and organisational change.

In terms of further empirical studies, Ford is fundamentally healthy, and clearly the story continues. It would be appealing to trace the next stages of the evolution of e-business. Similar studies in other organisations using structuration theory would also increase our knowledge of this contemporary process of change. However, it may be difficult to find another large organisation undergoing a similar e-business-related major organisational change. Alternatively, the same theory and methodology can be applied to study other technochanges or to study interorganisational relationships and structures, such as along a supply chain. Another option is to carry out a more detailed study of a narrower change process and capture a more meticulous

examination of organisational behaviour and psychology. Conversely, it is feasible to widen the research scope to several organisations, to industry-level, or to regional-level in a comparative study.

In conclusion, structuration theory can be used to understand the challenges involved in the implementation of information systems in large established organisations. I do not pledge that it is the only theory that could do that nor do I wish to reduce all organisational change phenomena to a duality, but this research has certainly demonstrated the insightfulness and comprehensiveness in analysing the mutually reflexive interaction between human actions and structures. In our more global world with increasing advances in information technology, organisational change is becoming wider in scope and more challenging. The IS field needs to increase its understanding of the problematic issues and approaches to resolving them. It is hoped that this thesis makes a modest contribution in that direction through making a real input towards understanding how e-business interacts with organisational structures.

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APPENDIX I: ISSUES OF CONFIDENTIALITY

This is to confirm that at no time while I was researching at Ford Motor Company for my doctoral thesis was I asked to sign a written confidentiality agreement.

I first met the Vice-President of Consumer-Connect (Europe) in the presence of my thesis supervisor, Dr. Steve Smithson, over lunch in the Senior Dining Room at the London School of Economics. On that occasion, the three of us agreed verbally that:

- I would keep the company and the interviewees anonymous in any widely distributed publications, such as journals, conference proceedings, newspapers or magazines.
- I would use the company name, but not the names of the interviewees, in my doctoral thesis.
- I would keep the names of the interviewees confidential from Ford Motor Company.
- Before publishing any material I would pass the relevant parts of the material to the Vice-President of Consumer-Connect (Europe) to check the factual accuracy.
- I would not inquire into any financial aspects of Consumer-Connect (Europe) and I would not reveal any commercially sensitive data, in terms of financial, commercial or strategic plans.
- Outside of these restrictions I would have freedom to publish analyses or commentaries according to the normal intellectual property arrangements.

In accordance with this agreement, I sent an early version of my research findings to the Vice-President of Consumer-Connect (Europe) at the end of my study during 2003. He acknowledged receipt by email and did not ask for any changes to the text.

Signed,



Catherine Chu



Steve Smithson
(Thesis supervisor)

APPENDIX II: INTERVIEW SCHEDULES

As discussed in the Methodology Chapter, the design of the interview schedule was based on research sub-questions derived from the expansion of the main research question, which was itself dictated by the overarching research purpose. The interview questions were developed partly from some of the theoretical conceptions in Giddens's framework, partly from themes arising from the Literature Review, partly from other well-established interview schedules, partly from intuition, and partly from the study of interview handbooks.

In general there are two types of interview schedules: one for CCE/E-assembly employees and another for other stakeholders (including brands and IT). Evidently, each interview schedule was tailored to the interviewee prior to the interview, but the following two interview schedules attached provide examples of the questions asked to these two general types of respondents. .

In terms of the sequence of interview questions, for both types of interview schedules (CCE employees and other stakeholders), I grouped them along an interview logic, rather than in accordance with the research sub-questions. This interview logic composed of four stages:

- (1) discuss interviewee's background at Ford;
- (2) discuss interviewee's experiences working in (or dealing with) CCE;
- (3) For earlier days of fieldwork (when I was coming to grips with the organisational dynamics)
 - a. draw a schematic representation of stakeholders involved in e-business and discuss relations and interactions among stakeholdersFor termination phase or second round interviews²³:
 - b. fill in a "questionnaire" and discuss perceptions
- (4) discuss future projections and further comments.

In line with the nature of semi-structured interviews, not all questions in the following interview schedules were posed to the interviewee if I felt that such questions were already answered in an earlier part of the interview or were less pertinent to the interviewee. In sum, the interview schedules included more questions than usually asked, but together, the questions served as prompts, teased out missing elements, and kept interviews on track.

²³ Second round interviews were even more tailored to interviewees and their responses from the first round. Often, clarification and development were sought.

Example 1: Interview Schedule for CCE Staff (e.g. E-ssembly)

I- Talking About You Personally:

1. How long have you been working with Ford? How long have you been working with E-ssembly? If discrepancy→
 - Which other departments in Ford have you worked for? Which areas of expertise do you bring to E-ssembly?
2. Do you have any experience or experiences in the area of e-business prior to E-ssembly?
If yes →
 - What e-business projects have you worked on? (e.g. number of projects, number of companies, number of sectors, scope and scale of projects etc.)
3. What are your particular areas of expertise at E-ssembly? (e.g. business management, project management, B2C)
4. Your current job title is “_____ *Manager*”. What are the various roles that you perform on a daily basis in your position?
 - Would you rank these roles differently in terms of importance?
 - How successful has (prompt: ---most important role) been?
 - i. If not so successful → why?
 - ii. If successful → how does his role pose challenges?
5. Who do you report back to? CCE?
6. What aspects of your job do you like?
 - If you could change certain aspects of it, what would they be?
 - So overall, would you like to stay in this job? (If extreme negative: How did you end up in this job?)
7. What makes a good/ bad working day?
 - What is the ratio of good/bad working days?

II- About Your Experiences in E-ssembly:

1. Why and when was your role created?
2. What are some of the main projects you have worked on in E-ssembly?
3. What worked during your period here?
 - Prompts for *What*:
 - a. allies/ new alliances/ supporters/ facilitators
 1. Jac Nasser, was he, an avid supporter of e-business as suggested in popular press? If so, how did his support help E-ssembly?
 2. Who or which departments were **keen** on implementing e-business? Why?
 - b. who were receptive to innovation and e-business?
 - c. what facilitated E-ssembly’s progression (e.g. good team, selection of employees, resources, top mgmt support)

- d. were members recruited from outside, internal Ford, or contract workers?
- e. which projects went successfully? Why?
- f. What *key events* went particularly well?

Prompts for *key events*:

meetings, turning points, JVs, new recruitment, getting financial resources, etc.

4. What didn't work?

- Prompts for *What*:

- a. What frustrated you in particular?
- b. Who in particular made things more difficult (i.e. stealing ideas, or stopping things from going forward or both) for E-ssembly? (Who were your enemies?)
 - 1. *How long* have these departments or these people been at Ford?
 - 2. Why were they threatened? (e.g. devolving of power)
 - 3. How do they view innovation?
 - 4. Who makes the *decisions* for projects to go through?
 - 5. How would you rate the level of support provided by the "*champions/ owners*" of projects from outside E-ssembly in seeing projects through?
- c. Are there some other main obstacles? (*Note INHIBITORS*)
- d. *What particular regrets do you have? What particular events went wrong?* (e.g. staff meetings, turning points, lack of support, movement of people, lack of funds)

5. In general, why did some projects succeed and why did some fail? What were the factors involved? Give examples?

6. Is E-ssembly Ford's preferred supplier for web solutions?

- If yes → How did you gain this status? How is it enforced?
 - a. If not → How easy/difficult is it to gain projects?
- What if the brands want to use someone else, what do they do?
- Have they complained to higher level of management? How did this affect E-ssembly?

IIIa- Schematic Representation (*applied in interviews during operation phase*)

Now we get to the drawing bit of this interview. For a typical project, what other departments in Ford would you have to interact with? Can you draw a **visual representation** of this?

Great, I know that you've kindly answered some big questions, can we now go through the same sort of area, as I would like to try to understand these in the context of your daily coordination work with other departments.

1. Who tended to initiate projects? (i.e. Client initiated, CC initiated, E-assembly initiated?) (Were you asked by the other departments? Did you try to project into the future needs of the company? Are other auto manufacturers doing it~ hence, Ford needs to remain competitive?) Why were they trying to introduce these projects?
⇒⇒If CC initiated: Why were/are you (they) trying to introduce these projects? What were the goals?
(e.g. variation in the environment, competitiveness, increase internal efficiency etc.) Was the system adopted as part of strategies to legitimate the adoption of innovations?
2. Who were the key decision makers?
3. Which departments do you have to work closely with? How smooth or difficult are the interactions with these departments? (esp. Ford IT, IBM?, ASC?)
4. What is E-assembly's relationship with Jaguar, Land Rover, ASC? CC? Dealers? Marketing and Sales?
5. Do you think ASC charges fair/unfair prices? If not→ Why not? How do you view their 80/20 rule? Is there anything else that bothers you regarding their charging methods?
6. In this project, what sort of resistance did you face? How was resistance dealt with? Was resistance overcome?
7. What other mechanisms were deployed to ensure the acceptance of the e-business system to achieve the outcome? (e.g. discourses, threats, training, money, new rules (explicit or implicit, etc.)
8. Are there differences in culture amongst the departments in this diagram?
 - Define (in your own words) Ford's organisational culture.
 - *Next, how is E-assembly's culture different similar?*
 - How is E-assembly's cultures similar/different to CCE?
 - Are there other departments that share a similar culture to E-assembly's?
 - Now within E-assembly, are there differences in culture?
9. Have the cultures of other departments changed as a result of interactions with E-assembly or as a result of the introduction of this new e-business system (e.g. through interaction, different dress code)?
 - If changes→What have been the causes of these recent changes in the group norms or meanings?

10. *If not already answered--* How would you describe other departments' attitude (positive/ negative) towards E-ssembly? Why? Is this the same for CCE?
11. Are there any power relations/differences among the departments in this diagram?
 - OK, so which groups want to exert power over others in this diagram?
12. Which group is subject to control then?
13. Please imagine this scenario: Say you have been negotiating with the Jaguar or LR over an e-business project, and you have generally settled all the details, but before the signing of the contract, Jaguar/ LR tells E-ssembly that they want more, but cheaper. What do you do?
 - Could they find another supplier easily?
 - How do you think E-ssembly compares to other outside suppliers?
14. Here's another scenario: Say you have already entered into an e-business agreement with Jaguar/ LR. Now when the project starts, how easy would it be for Jaguar/ LR to change/ add the deliverables?
 - How easy would it be for E-ssembly to change/ reduce deliverables? How would E-ssembly react? What will happen? How does this get resolved? Are there any future implications?
15. To summarise, you have talked in detail the different types of relationships in relation to E-ssembly. If you were to categorise these relationships, would you call it
 - forced alliance
 - strategic alliance
 - principle-agent relationship; brands with the money talk
 - default supplier
 - or something else
 - a. why?
 - b. Has E-ssembly done anything to improve these underlying relationships? If yes, what?
16. How has E-ssembly's standing (i.e. existence, power to influence and implement policies and changes) in Ford changed over the years (from its inception to now?) (Note inhibitors)
 - How is this standing similar/different to CCE's?
17. What improvements can you suggest for these other departments?

IIIb- Questionnaire (applied in interviews during termination phase)

In your judgment, to what extent did the following factors adversely affect CCE's status within Ford? For each factor, I will ask you why? (Please tick the appropriate box in each case).

Factors:	Not at all	so-so	totally	Why?
Ford Factors				
1. Events outside Ford				
2. Events within Ford				<ul style="list-style-type: none"> ▪ Change in top management?
3. Ford's overall strategy				
4. Ford's culture				
5. Consumer-Connect US				
ConsumerConnect-Europe Factors				
6. Existence as a separate unit				
7. CCE's strategy				<ul style="list-style-type: none"> ▪ What is it? ▪ Did the other department buy in? ▪ What difficulties did you encounter in theory and in practice to getting buy in?
8. CCE's partnerships				
9. Attitudes of other departments:				<ul style="list-style-type: none"> ▪ Why? Due to teething troubles of CCE or mismatch of expectations? How do they view innovation? Why were they threatened? Support given by champions/owners? ▪ If you were to categorise these relationships, would you call it: (i)forced alliance; (ii) strategic alliance; (iii) principle-agent relationship; brands with the money talk; (iv) default supplier; or (v) something else. Why?
IT				
Brands				
Marketing				
FCSD				
Others?				
10. Internal Structure				
11. Employees				
12. Resources and Budget				
13. Methods				
14. Communication skills				
15. Technology				
16. Organisational power				<ul style="list-style-type: none"> ▪ Initial power vs. final power

- Has there ever been a situation where CCE has made the brands do something that it doesn't want to do or prevent the brands from doing something it wants?
- Please imagine this scenario in the past: Say you have been negotiating with the brands over an e-business project, and you have generally settled all the details, but before the signing of the contract, you tell the brands that you cannot deliver all that they wanted. What would they do?
 - Could they find another supplier? How easy would it be for them?

17. CCE's culture				
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- What is CCE's culture?
- How is other Ford departments' cultures different/ similar?
- Have the culture of your departments changed as a result of interactions with CCE's or as a result of the introduction of this new e-commerce system (e.g. through interaction, different dress code)?
- If changes→What have been the causes of these recent changes in the group norms or meanings?

17. Others? (IMPROVEMENTS?)				
--------------------------------	--	--	--	--

Among these factors, what would you say to be the most or among the most significant factor(s) that adversely affected CCE?

1. To summarise, out of this CCE story, what would you say would be the key lessons for Ford?
2. Key lessons for CCE?
3. What have you personally gained from your experience working in CCE?

IV- Your Projections Concerning the Future

1. What is the future of e-business in Ford?
2. What does the future of E-ssembly look like? (e.g. bright, dim, bleak, dark)
 - a. If he is only positive....
 - i. Don't you have any concerns about the future? What are they?
 - b. If he is somewhat negative...
 - i. What specific concerns do you have about the future of E-ssembly?
3. What improvements would you suggest for E-ssembly in the future? For your role as supplier/consultant? Is there anything you want to change about the implementation process?
4. (in termination phase) Who benefits/loses out from CCE reintegration back? Why?
5. (in termination phase) What is E-ssembly's legacy to Ford?
6. Is there anything else you would like to add or emphasise upon?
7. Who else would you recommend that I should speak to from which department?

Example 2: Interview Schedule for Other Stakeholders (e.g. Volvo)

I- Talking About You Personally:

1. How long have you been working with Volvo? (If not long, where have you worked before?) How long have you been working with e-business?
2. What is the role of e-business for Volvo? Is there a specific goal or set of goals that e-business is designed to achieve?
 - a. If yes→ How much of that goal have you already achieved?
3. Do you have a specific e-business department in Volvo, or a person or group of people that deals with e-business generally?
 - a. Did you have a specific personnel who interacted with CCE?
4. What were some of the big e-business projects that Volvo has been involved in?
 - a. How much did CCE contribute to these projects? Were most of these projects conducted with CCE or with local suppliers?
 - b. If changes in level of contribution→why?
5. How is this decision being made (choosing between CCE or local suppliers)?
 - a. Does Ford Purchasing have a say in this?
6. Who or what tended to initiate e-business projects? (i.e. Client initiated, CCE initiated initiated?) *Why were you/ they trying to introduce these projects?* (Were you asked by the other departments? Did you try to project into the future needs of the company? Are other auto manufacturers doing it~ hence, Volvo needs to remain competitive?) (e.g. variation in the environment, competitiveness, increase internal efficiency etc.)
7. Who were the key decision makers in these projects?
8. Who do you report back to? Is the reporting “lateral” (i.e. committee) or hierarchical?

II- About Your Experiences with ConsumerConnect-Europe:

1. In your own words, what do you think is the role/purpose/mission of the CCE?
2. How successful/unsuccessful have they been in achieving this role/purpose?
3. Do you see E-assembly differently from CCE?
 - If yes→ how so?
4. Can you describe the relationship between Volvo and CCE over the years since its inception? Why did it get here? (for write-up: use marriage analysis- or relationship in general)
 - Why problems? Due to teething troubles of CCE or mismatch of expectations? How do they view innovation differently?
5. How does CCE compare (i.e. quality, delivery, creativity, communications) to other e-business suppliers, e-business consultancies, E-assembly, and Ford IT? In what way?
 - If very negative→ Doesn't CCE add value?

6. What do you think about this concept of carving out a separate e-business division, like CCE in Ford?

7. What worked in terms of your interactions with CCE?
 - a. Prompts for *What*:
 - Alignment in strategies?
 - People at CCE? Good team?
 - How would you rate your level of support to CCE in seeing projects through?
 - which projects went successfully with CCE?
 - What *key events* went particularly well with CCE? Prompts for *key events*: meetings, turning points, JVs, new recruitment, getting financial resources, etc.

8. Conversely, what didn't work?
 - a. Prompts for *What*:
 1. What frustrated you in particular? What did Volvo do about these problems? (i.e. just not work with CCE? Use local suppliers?)
 2. Are their differences in attitude towards e-business within Volvo? What?
 3. If not answered in 5: Comparing local suppliers and CCE, does Volvo prefer to use one over the other?
 - If yes → why?*
 - If no → doesn't CCE add more value in some ways?*
 4. Are there some other main obstacles? (Note *INHIBITORS*)
 5. *What particular regrets do you have? What particular events went wrong?* (e.g. staff meetings, turning points, lack of support, movement of people, lack of funds)

7. Has CCE done anything to improve this underlying relationship? Communication? Delivery issues? Attitude problems?
 - If yes → What have they done? (give examples)

IIIa- Schematic Representation (*applied in interviews during operation phase*)

Now we get to the drawing bit of this interview. For a typical e-business project, what other departments in Ford would you have to interact with? Can you draw a **visual representation** of this?

Great, I know that you've kindly answered some big questions, can we now go through the same sort of area, as I would like to try to understand these in the context of your daily coordination work with other departments.

1. Are there differences in culture amongst the departments in this diagram?
 - Define (in your own words) Volvo's organisational culture.
 - Next, how is Ford's culture different/similar to Volvo?
 - How is CCE's culture different/similar to Ford?
 - Are there other departments that share a similar culture to Volvo?
 - Now within Volvo, are there differences in culture?
2. Have the cultures of your department (or others) changed as a result of interactions with CCE (e.g. through interaction, different dress code)?
 - If changes→What have been the causes of these recent changes in the group norms or meanings?
3. *If not already answered--* How would you describe your department (and others?) attitude (positive/negative) towards CCE? Why? Is this the same for E-assembly?
4. Are there any power relations/ differences among the departments in this diagram?
 - OK, so which groups want to exert power over others in this diagram?
5. Which group is subject to control then?
6. Has there ever been a situation where CCE has made Volvo do something that it doesn't want to do or prevent Volvo from doing something it wants?
 - If no→ could it happen in the future?
7. Please imagine this scenario: Say you have been negotiating with CCE over an e-business project, and you have generally settled all the details, but before the signing of the contract, CCE tells Volvo that they cannot deliver all that you want. What do you do?
 - Could you to find another supplier? How easy would it be for you?
8. Here's another scenario: Say you have already entered into an e-business agreement with CCE. Now when the project starts, how easy would it be for CCE to change/ reduce the deliverables? How easy would it be for Volvo to change/add deliverables?
9. What do you think CCE is doing well in?
10. What improvements can you suggest CCE to do?
11. So overall, how would you categorise this past relationship? Would u call it a
 - Forced alliance—forced alliance: because it is forced on us basically.
 - Strategic alliance
 - Default (easiest available) option

- Principle-agent relationship / money talks
- Or something else?
 - a. Why?

12. How has Volvo's standing (i.e. existence, power to influence and implement policies and changes) in Ford changed over the years (from its inception to now)? (*Note INHIBITORS*)

IIIb- Questionnaire (*applied in interviews during termination phase*)

In your judgment, to what extent did the following factors adversely affect CCE's status within Ford? For each factor, I will ask you why?

Factors:	Not at all	so-so	Totally	Why?
Ford Factors				
1.Events outside Ford				
2.Events within Ford				Change in top management?
3.Fords's overall strategy				
4.Ford's culture				
5.Consumer-Connect US				
ConsumerConnect Europe Factors				
6.CCE's existence as a separate unit				
7.CCE's organisational power				Initial vs final power
<ul style="list-style-type: none"> ▪ Has there ever been a situation where CCE has made Jaguar do something that it doesn't want to do or prevent Jaguar from doing something it wants? What happened? Could you find another supplier? How difficult or easy would that be? ▪ Please imagine this scenario: Say you have been negotiating with CCE over an e-business project, and you have generally settled all the details, but before the signing of the contract, CCE tells Volvo that they cannot deliver all that you want. What do you do? <ul style="list-style-type: none"> ▪ Could you to find another supplier? How easy would it be for you? ▪ Here's another scenario: Say you have already entered into an e-business agreement with CCE. Now when the project starts, how easy would it be for CCE to change/ reduce the deliverables? How easy would it be for Volvo to change/add deliverables? 				
8.CCE's strategy				How was it different to Jaguar's?
9.CCE's partnerships				
10.CCE's internal structure				
11.CCE's employees				
12.CCE's methods				
13.CCE's communication skills				
14.CCE's technology				
16.CCE's culture				

<ul style="list-style-type: none"> ▪ What is CCE's culture? ▪ How is it similar / different from Volvo? From other Ford departments' culture? ▪ Have the culture of your departments changed as a result of interactions with CCE's or as a result of the introduction of this new e-commerce system (e.g. through interaction, different dress code)? <ul style="list-style-type: none"> ▪ If changes→What have been the causes of these recent changes in the group norms or meanings? 				
17. Others? IMPROVEMENTS?				<ul style="list-style-type: none"> ▪ If you were to categorise these relationships, would you call it: (i) forced alliance; (ii) strategic alliance; (iii) principle-agent relationship; brands with the money talk; (iv) default supplier; or (v) something else. Why?

Among these factors, what would you say to be the most or among the most significant factor(s) that adversely affected CCE? Why?

On the contrary, which of these factor or factors, or some other factor, helped sustain the existence of CCE for as long as it did?

IV- Your Projections Concerning the Future

1. What does the future of e-business at Volvo look like? (e.g. bright, dim, bleak, dark)
 - a. What particular challenges does this goal present?
2. What does the future of CCE look like? (e.g. bright, dim, bleak, dark)
3. *(in termination phase) How will Volvo benefit or lose out after this reintegration back of CCE? Why?*
4. *(in termination phase) What is CCE's legacy to Ford?*
5. *Is there anything else you would like to add or emphasise upon?*
6. Who else would you recommend that I should speak to?

APPENDIX III: FORDISM, SLOANISM, AND TOYOTAISM

The automobile industry has always occupied an essential position in debates about management, technology and work in advanced industrial societies. Since Henry Ford's days, just before the First World War, the industry has served as a model of economic expansion and technological progress based on mass production. This mass production system has come to be known as *Fordism*. It depends on three basic principles: the standardisation of the product, the use of special-purpose equipment, and the elimination of skilled labour in direct production. The latter, the reduction of skill requirements in vehicle assembly, was pursued through the subdivision of tasks and the elimination of fittings.

More than any of his contemporaries, Henry Ford seized the sizable latent demand for cheap, reliable basic transport in the American Midwest, with its prosperous, but isolated farms and small towns. His "Model T", ruggedly designed, easy to repair and priced much more economically than its competitors sold in unprecedented numbers, jumping from 6000 in 1908 to 189,000 in 1913 and 803,000 in 1917 to reach a total of 15m by 1926 (Tolliday and Zeitlin 2003).

With the astronomical growth of sales, each of Ford's principles of mass production reinforced the others in a constant struggle for faster throughput. This then gave rise to another famous Ford innovation: the introduction of the moving assembly line in 1913. However, Ford's rapid growth and dramatic innovations in production also created unprecedented problems of labour management. Skilled workers progressively moved into new *indirect* services (e.g. tool-making, tool-setting, and maintenance) and joining the growing number of supervisors, inspectors, progress chasers, clerks, and engineers needed to administer mass production. Ford's workforce soared from 1548 in 1909 to 13,667 in 1913, a mounting proportion of which were unskilled immigrants from southern and eastern Europe many of whom did not speak English. Turnover levels reached 370% in 1913, with absenteeism rates of 10% per day, creating tremendous difficulties in production planning. In this context, Ford introduced his famous *Five Dollar Day*, a profit-sharing plan designed to stabilize and integrate the workforce along with other measures such as a Sociological Department and an intensive driving supervision.

However, the immense success of Ford's competitive strategy rested on specific features of the American market in this period: its enormous size, vast distances, egalitarian income distribution and homogeneous tastes. International markets, such as the UK, were fundamentally different in each of these aspects, continuing much smaller and dominated by quasi-luxury demand into the 1920s. Hence, a strategy based on price competition and economies of scale proved far less effective than overseas. For example, British manufacturers such as Morris and Austin pursued a more pragmatic strategy: they competed on the basis of new models and designs as well as price and moved gradually towards higher volumes of production. Consequently, production methods remained less rigid and capital-intensive than at Ford and had greater customisation in bodywork, more adaptable equipment in machining and greater use of hand labour in assembly (Tolliday and Zeitlin 2003). In contrast to Ford, British manufacturers relied on piecework incentive schemes rather than tight supervision to motivate the labour force. Similar to the British market, the French and Italian markets were also smaller and had greater differentiation, which together posed obstacles in implementing the Fordist production and marketing strategies. In addition, for the European motor manufacturers, the great leap forward to mass production ran ahead of

management's ability to develop suitable systems of cost accounting, work scheduling, supervision and quality control. In effect, the shop-floor realities often lagged well behind the glossy visions of the engineers. Eventually, none of the European auto manufacturers, dared to emulate Ford's labour strategies in full, abstained from high day wages in favour of piece rates, speed up, and worker flexibility as means of boosting output and adjusting to fluctuations in demand.

In time, however, the American market itself was changing in ways that necessitated partial modification of Fordism (Brinkley 2003). In the 1920s, there was a growing saturation of the market for utility cars, a fall-off in the proportion of first-time buyers, an increase in used-car sales, and a slower overall growth of demand. As Alfred P. Sloan of General Motors recognised, cars could no longer be sold effectively based on price alone. GM invaded the American *mass-class* market from above by pricing its more comfortable and up-to-date Chevrolet slightly above Model T. To ensure that no one else could follow his lead, Sloan set out to produce "a car for every purse and purpose" in four autonomous divisions, each aimed at a distinct price band. GM also relied on advertising, instalment sales and annual model changes to stimulate consumer demand and surpass its rivals. To prevent model changes disrupting production, to curb fluctuations in sales, and to increase economies of scale, the executives developed new methods of forecasting demand, raised the proportion of components purchased from outside subcontractors, and began to interchange parts across divisions (Talliday and Zeitlin 2003). On the shopfloor itself, GM moved away from the Fordist model and introduced *semi-special* machine tools which could be adapted to new models by changes to cams and gears. This translated to increases in the ratio of toolmakers and toolsetters in the workforce. Furthermore, it sought flexibility through season layoffs for production workers and the use of piece rates and group bonuses rather than a day wage system.

GM's innovations in product and production strategy soon began to undermine Ford's hold on the American market. The Model T became increasingly outdated despite incremental changes that were introduced over the years and sales dropped off sharply in the 1920s despite repeated price cuts. By the late 1920s, Ford had to succumb to defeat and begin work on new model to regain the company's competitive position. However, the extreme specialisation of the production for the Model T made the changeover enormously difficult and expensive: all the existing machinery had to be scrapped and factories had to shut down for nearly a year, allowing the entrance of a new competitor, Chrysler.

Consequently, Ford's Fordism was modified to permit greater flexibility in response to shifts in the market and the innovations of GM. However, the triumph of what came to be called *Sloanism* proved ambiguous in practice. As GM refined and adjusted to the market conditions, the Sloanist strategy grew to increasingly rely on continuous restyling to defeat smaller companies who could not generate new styles and who lacked marketing power. The Big Three (i.e. Ford, GM, and Chrysler) used their powerful advertising and dealership networks to force up the costs for competitors by driving diseconomies of scale in body tooling on their rivals. They carried much higher fixed costs in design and tool and die equipment per vehicle in order to sustain the annual model changes that the smaller independent companies could not afford and to emulate. The latter's inability to participate in this model competition lead to their eventual demise.

The Europeans maintained their practice of developing each model separately, which allowed greater scope than in the US for continuous improvement and technical innovation, but made it difficult to match the economies of scale of their mass market best sellers. By the 1970s, the modified Fordist systems practice by American and to certain extent by European automobile manufacturers had become sluggish and internally contradictory. Factories were swelling with inventory and work-in-progress; maintenance and work scheduling were a constant problem, resulting in frequent interruptions of production; and high volume output was pursued at the expense of product quality (Talliday and Zeitlin 2003). The diversity of models and options required for marketing stood in tension with the uniformity and standardisation required for the efficient operation of a Fordist production system, and Western car manufacturers had become extremely vulnerable to any major disruption (e.g. fuel price, union disputes, and Japanese competition) in the post-war growth pattern. Thus in Europe as in the United States, by the late 1970s, Sloanist marketing strategies based on product differentiation coexisted uneasily with Fordist production strategies based on standardisation and economies of scale (Brinkley 2003).

The Japanese initially set out to adapt Fordist systems, but they eliminated certain key imperfections in the Fordist model, making it possible to combine product diversity with mass production on an unprecedented scale. This system, which can be termed *flexible specialisation* (or *Toyotism* or *lean production*), depends on the combination of increasingly flexible, general-purpose equipment and a skilled, adaptable labour force to manufacture an ever more diversified range of products for which economies of scale were becoming less important. It designed and built cars by combining speed, flexibility and consistent quality (Owen 2000). Some observers perceive the Japanese model as a challenge to the Fordist model, as it reverses its central principles and points towards the emergence of a qualitatively new system of production. Other Western automobile manufacturers, notably the Germans and the Swedes, moved towards this direction with their growing emphasis on multi-skilled work teams to exploit the full potential of flexible automation systems for the manufacture of a changing array of high quality products. Even Ford engaged in organisational imitation and management reform in their *After Japan* programme, which concentrated on automation, inventory reduction, and quality control with more limited shifts in personnel policies and relations with suppliers.

The changed market conditions and new technologies of the 1970s and 80s have brought with them shifts in competitive strategy and manufacturing practice, which posed a fundamental challenge to the Fordist model. Still, however, this Fordist model transcended into Ford's more recent practice. In the 1990s, Ford was the leader in quality and manufacturing efficiency among Detroit's Big Three (Shirouzu et. al. 2002). Ford's most efficient plants were those such as the Taurus factory in Atlanta that produced high volumes of one vehicle. At that time, Ford's main concern was in keeping pace with demand for high sellers such as the Explorer, the F-series pickup truck and the big Expedition and Navigator SUVs. Ford's high scores for efficiency resulted mainly from a strategy of running conventional mass-production plants on overtime.

However, that kind of efficiency did not last, as consumer tastes became more fickle and the window through which a new model could earn high revenue before competition catches up shortened. As Ford executives acknowledges, Ford North America was racing to catch up with Japanese auto makers, GM, and Ford's European operations (which became able to mix medium-size, compact, and subcompact models in any one plant), to redesign plants so that assembly tools and processes allow for production of two or three different sizes and shapes of cars in one plant, with changes from one model to another possible over a weekend if necessary. Flexible factories,

based on the model of Japanese auto makers, were the aspiration for many auto manufacturers for years. Japanese auto makers, led by Honda and Toyota, designed their factories and their vehicles so that expensive equipment that welds together steel car bodies could be reused, even on redesigned models. That flexibility also made it possible to avoid lengthy and costly shutdowns for retooling to build a new vehicle.

Current practice in automobile companies ranges from the reduction of rigidities in the manufacture of a broadly standardised product line to conscious efforts at building maximum flexibility into every aspect of an increasingly diversified production process. However, as in the case of the emergence and diffusion of Fordism, the future of the automobile industry and its workers will be determined not by some intrinsic imperatives of markets and technology only, but rather by the strategic choices of corporate managements, trade unions, and national governments.

APPENDIX IV: REPRESENTATIVE MAJOR AUTOMOBILE MANUFACTURERS

(Adapted from Maynard 2003; Sumit and Hansa 2004)

	Brief	Brands	Notes
General Motors	<ul style="list-style-type: none"> World's largest car company 388,000 employees 30,000+ suppliers Manufacturing operations in 50 countries and presence in 200+ countries Produces 8,000,000+ cars and trucks a year 	<ul style="list-style-type: none"> Cadillac Chevrolet Pontiac Buick Saturn Opel/Vauxhall Saab Holden Isuzu Fiat 	<ul style="list-style-type: none"> Recently acquired Saab Motors. In 2000, GM purchased a 20% stake in Fiat, world's 7th largest car maker. The two companies carry out joint marketing and engine production in Europe and Latin America. GM has technology collaborations with BMW and Toyota and vehicle manufacturing ventures with Toyota, Suzuki, Shanghai Automotive Industry Corp., AVTOVAZ and Renault.
Ford	<ul style="list-style-type: none"> World's second largest car company Founded in 1903 370,000 employees 112 wholly owned, equity owned and joint venture manufacturing plants in 30 countries 173,000 employees in the US alone 	<ul style="list-style-type: none"> Ford Lincoln Mercury Jaguar Mazda Volvo Aston Martin Land Rover THINK 	<ul style="list-style-type: none"> One of the first US companies to set up production abroad, moving to Dagenham in the UK in the 1920s. Had acquired Jaguar and Aston Martin in the UK and a large stake of Japan's Mazda, Volvo and Land Rover from BMW in recent years. Ford dismissed Jac Nasser and replaced him with William Clay Ford in late 2001.
Volkswagen	<ul style="list-style-type: none"> Germany's largest car maker Founded in 1955 ~3,000 employees in the US 	<ul style="list-style-type: none"> Volkswagen Skoda Seat Bentley & Rolls-Royce Audi Bugatti Lamborghini 	<ul style="list-style-type: none"> Recently spent heavily to acquire the Rolls-Royce car factory, only to be piped at the post by BMW, who now own the brand name since 2003, leaving VW with the Bentley label. Acquired Skoda in Czech Republic, SEAT in Spain and Italy's luxury Lamborghini and Bugatti badges.
DaimlerChrysler	<ul style="list-style-type: none"> World's third largest car company World's largest truck business 100,000+ employees across US 	<ul style="list-style-type: none"> Mercedes-Benz Chrysler Jeep Dodge Smart 	<ul style="list-style-type: none"> Created with the merger of Germany's Daimler Benz and the US-based Chrysler Corp. in 1998. Had recently implemented a restructuring programme to improve its struggling Chrysler division.
Toyota	<ul style="list-style-type: none"> Japan's largest car company World's most successful exporter of cars 35,000+ employees across US and Canada 8 North American manufacturing plants 	<ul style="list-style-type: none"> Toyota Lexus 	<ul style="list-style-type: none"> Has suffered like other Japanese car makers from the Japanese recession, but its more efficient production methods and economies of scale has allowed it to remain independent, unlike other Japanese car makers. Cost-cutting measures has seen it move some productions overseas. Successful in Europe and America, with reputation for reliability. Developing new technologies for more environmentally friendly vehicles (e.g. Prius) – the world's first mass-produced hybrid vehicle. Developing breakthroughs in fuel cell technology and electric vehicles. The e-com, CNG Camry and the RAV4-EV are examples of Toyota's ongoing research and development of alternative fuel vehicles.