

Strategic Issue Diagnosis as a Cultural Process of Paradox and Unobtrusive Power

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PREFACE

As I consider myself to be a practical person, I have problems with the formal-analytical approach of much of the present management research. I also have problems with their conservation of the strong market-libertarian tendencies of Anglo-American capitalism. Thus I chose to study a phenomenon where more complex practical knowledge might be cultivated, through an approach that did not have to yield to formal theories and technical procedures. This study ends up on the value of including cultural diversity and paradox in strategy processes, drawing on the experiences of people in a former public administration body who have faced radical change into a competitive corporation.

I would like to express my gratitude to Telenor for allowing entry and opening up the organisation at a unique and somewhat vulnerable period. Above all I feel grateful to the informants of my study; their sharing of experiences has made possible much more than what follows in this report. I also have to emphasise that what I have studied is Telenor at the middle of the 1990s. The portrayal of a large organisation going through continual change may be of general interest, but it is not necessarily representative of today's corporation.

I am grateful for the support of my advisory committee, first and foremost Tom Colbjørnsen and Rune Lines who have given their comments on drafts. Immersed in the values of other perspectives I have at times been critical of their perspective, but of course I recognise the importance of their views and the quality of their guidance. I can only hope that my effort and the considerable time that I have used don't detract from their recognition as doctoral candidate tutors. I also appreciate support from several others in the disciplinary milieus where I have worked. Thanks to the participants at the FIBE conference 1999, and at a seminar at NTNU in May 2000. Finally, I have to thank seven anonymous reviewers of the *Journal of Management Studies*, for constructively commenting upon drafts on an article about challenges in the study of ambiguity and paradox. All mistakes and weaknesses are my own responsibility. Apologies for language failures.

Thanks for financial support from scholarships at the Norwegian School of Economics and Business Administration (NHH) and Bodø Graduate School of Business (HHB) and from my present assistant professor position at Finnmark University College (HiF). Add-on expenses of my nine-months field stay at Telenor in Oslo were covered by the Program on the Economics of Telecommunications at the Foundation for Research in Economics and Business Administration (SNF) financed by Telenor AS. I ought to make known that I have held a small amount of shares in Telenor AS. I do not think that the study has been unduly influenced. Some would say that this could balance a bias from my "location in the periphery" which may sometimes involve concerns opposite to financial profitability.

Alta 12th of November 2003

Gunnar Birkelund

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Chapter 1.

INTRODUCTION

1.1 Experienced Problems in Telenor's Strategic Change Process

One of the very first days of my field experience at Telenor R&D (or The Norwegian Telecom Research Institute, which was their name at that time), I heard one of my lunch mates tell us all:

“The decision is already made. There will be established a new R&D unit in which we are going to be integrated with [the division of] Information technology and parts of Net. The subject will be under deliberation, and a report will be drawn up on it, but ... I would prefer some information about what happened when the decision in reality was made. The number of persons from Net is of secondary importance. What is going to happen with our research?”

This rumour, which I soon learned was a major theme of the research institute, went well with several themes of this dissertation. The intermingled themes of agenda setting, real and important decision making taking place on covert grounds, and opportunist use and withholding of information, leaving only rationalisation and secondary issues to more thorough public discussion, were all central concerns of my approach to studying strategic decision and change processes. The relationship between researchers and managers was of principal interest, too, since knowledge and competence resources are of considerable and increasing importance for future competitive ability. My approach, however, was adjusted and deepened during several other encounters with the participants of this particular change process. Some further preliminary observations will serve to introduce some central themes of my dissertation.

When I entered the company, Telenor had been in a process of radical change for several years. Because of liberalisation and internationalisation of the telecommunications markets, partly due to new technology merging traditional telecommunications with information technology and making the maintenance of the traditional national monopolies impossible, the company was forced to go through profound and comprehensive change. The last decade the organisation had turned from a public administration body to a commercial business organisation. To an outsider, the shift from inward, security and technology oriented to more outward, risk and market oriented, was perhaps the most visible. However, several other themes and concerns were involved in equally and more contentious transitions. In spite of the official praising of the ideology of market liberalism, the consequences of deregulation and increasing competition were not at all viewed through entirely favourable lenses.

Take the issue about the new R&D unit. At the top the question about what was going to happen with Telenor's research was not on the agenda, at least it was not couched in the language of reducing research. Instead an unproblematic administrative issue was the need for more market-oriented product development, geared toward the company's own profitability rather than the welfare of industry or society. A lot of the researchers

nevertheless feared reduction, not least because of earlier changes from which they had suffered such consequences.

Underlying this fear was a conflict of interest with top management. This conflict referred to dimensions of change and time horizon, as well as those of technology vs. market and company vs. society. Looking further into the future than other groups, and being more amenable to change, was essential to the identity of the researchers. A research manager, for instance, introduced the R&D unit to new employees:

“We are dynamic and taking a long view. In Telenor R&D, and telecom research in general, we are dealing with radical innovations, innovations that take some time to implement and achieve results from. The huge telecommunication systems are conservative.”

Recent introduction of a system of market mechanisms to govern the corporation's research activities, was perceived as yet another means for reduction of future oriented and change producing research. Researchers felt they had become victims of short-sighted principals of market oriented units, enforcing the market premises of today instead of the needs of future customers, users and society.

“We are being forced into a system of taking orders from short sighted customers from market oriented divisions. The market does not know what the future will be like ...”

“On this program you are just told that this is what you are going to do, because our principals have said so. It is no use saying that we can't do any research on so-and-so approaches to the problem. It is very frustrating, because the orders change all the time. In this way we can't do any good research”.

“If we are going to adapt to the desires of our market oriented units all the time, it will be difficult to do any research ... If our tasks change more often than not, our competencies would erode ... We would lose any long term direction for our competence building, and lose our position as an esteemed research institute.”

Top management was at least perceived as capable of taking a longer view, and many researchers would rather leave to them which research programs and projects to take on. A related issue was the independence of the researchers in establishing the contents proper of final reports. While the market managers were generally perceived as lacking the competence necessary for defining research projects, less challenge was levelled against the competence of top managers to establish even the outcome of reports. One reason was the perception of top managers as the only persons in positions to survey the different specialists' fragmented threads of knowledge, but inclination to avoid conflict, as well as a more general authoritarian mentality, may have contributed. A researcher evinced his apprehension:

“Some people think top managers know a lot, others want to instruct them. The best would be to get a dialogue with the top managers. One must try to get out of them what they want, so that one can get to know the bounds of the deliberation. Often it is difficult to know what they want, often they don't like parts of the report, and they get angry ...”

The more scientific oriented staff, evoking the value of scholarly freedom, and research managers more accustomed to conflict, took a different view. They often made harsh comments on these, frequently covert and tacitly understood, practices:

“Between the lines ... This executive is known for demanding reports until he gets one that matches his conclusions”

This pressure and the propensity to accept the premises of managers, were not limited to the R&D department. As one would expect, they were more pronounced elsewhere. This can be seen from, first, an excerpt from a young manager’s answer to my question about differences between the market division and the research unit (he had worked for and was knowledgeable about both), second, a labour union manager’s general description of the new management culture of a more competitive and business oriented organisation, and third, a labour union representative’s outline of the consequences of this climate from the unions’ monthly publication:

“In the R&D unit, there is a value of no differences between people. There is less fear for the authorities, and less ‘yes-sayers’ ...”

“Earlier we had great participation. There was much openness about what was done, and we got several proposals for considerations and comments before decisions were made. We now have a tremendous job getting information about what is going on. As soon as decisions are made, considerations of prestige play their part, and changes become almost impossible. Telenor is turned into a more closed system ... to increase our competitive ability, I’ve been told. I’m not so sure of that ...”

“If we don’t get information or participation in projects of importance for the staff, mumbling would easily arise in the corridors, creating frustration that spoils productivity and security.”

The relationship between more authoritarian mentality, lack of real participation and discussion of important decisions, and the tactical use and withholding of information, is clearly indicated in the latter descriptions. This lack of information was not restricted to the labour union. In spite of the spending of a lot of resources on centralised mass communications, most of the company seemed to express want of better information. Managers on the top of the hierarchy also suffered from impoverished information flows. Below, the labour union manager continues about the new management culture, and the young manager reveals some new insights from the upper echelons:

“Everybody wants to be ‘best in class’. Bad news doesn’t flow upward in this company, so when a decision is made, it’s made on shaky foundations. They don’t know what ought to be changed.”

“Managers are measured against standards for working upward in the hierarchy. One is not rewarded for informing those below oneself. By the way, leaders don’t know too much either, just a few on the top know, and a few of their report writers. I came to realise this recently, when I got this assignment to work for a top manager.”

One might ask how strategic decision processes looked like in such an organisational culture. A preliminary observation on strategy processes came from a research manager, warning me of difficulties in getting access to sensitive strategic matters and carrying out my study (in answering my question about use of the company’s research in strategy processes). His inside observation of suppression of discussion also before decisions were made, strongly contrasts the following official view, from Telenor’s monthly management publication’s presentation of the corporate strategy process:

“It will be impossible for you to get access to documents from the strategy process in different organisational units. They keep them close to themselves ... don’t want to give away information to other units ... and dissemination of information is constrained within the units, too ... One doesn’t want any discussion before a decision is made, because discussion could ruin the process.”

“We are not saying that you are not allowed to take your own points of view. You can and shall make your standpoint clear, as long as a subject is discussed and deliberated upon, and a decision is not made. But when the decision is made, you shall implement it together with other leaders in Telenor. At that time you have to stand behind the views of our leadership, even if that may be difficult sometimes.”

These scattered observations from the onset of my study may equal the information an average organisation member ever gets from the strategy processes. They also serve to introduce central themes of my study, as they all were perceived through and selected by the lenses of my approach to the strategic change process. My main focus is strategic issue diagnosis, the process of finding and formulating the content of the most important issues confronting the organisation before decisions are made. This strategic agenda setting process will be studied through a cultural perspective, as I believe the issues considered having the greatest consequences for long term profitability, competitive ability and effectiveness will be regarded the most important, and these considerations as well as the very definition of effectiveness will be dependent on the beliefs, values and interests of the organisational culture. The pragmatic value of such an approach arises from increasing ones ability to manage the cultural context of potential strategic issues to promote favoured issues or issue formulations to the agenda of strategic decision processes, thus attaining a better position or exercising a stronger influence on the strategic direction of the organisation.

The introductory observations above contain several problematic and conflicting cultural themes. Accordingly, I would expect the strategic issue process and the conception of strategic issues to embody several of the inherent tensions of the organisational culture. More specifically, I would expect the strategic issues of Telenor to arise from and be defined in terms of the simultaneous handling of oppositions like change and stability, market and technology, company profitability and societal welfare, risk and security, and short and long time horizon. My initial observations also sensitised me to the cultural context of power and information practices, and subsequent analyses have confirmed the importance of these mechanisms. Thus, I have chosen to focus on the role of the power and information part of organisational culture in defining strategic issues. I would expect the paradoxical handling of ideals of participation and information facing the reality of power barriers and lack of information to be central. I would also anticipate the potential existence of more invisible power mechanisms, especially to conceal this gap between ideals and reality. Even when information is disseminated, I will explore the possibility that information makes people prone to view situations and decisions through lenses that are less than ideally suited to their own interests.

After this rudimentary presentation of general themes, I shall raise the question of which theories exist on these matters. What knowledge do we have on theoretical mechanisms underlying the actors’ problematic experiences about information and participation in the early phases of strategic decision making processes? What can existing theories contribute to our improvement of these matters? Is it perhaps necessary to go beyond the existing theoretical perspectives?

1.2 Theoretical background

Strategic issue diagnosis and organisational culture

There are some studies of the process of formulating issues before they are recognised the status of strategic decision events, namely studies of strategic issue diagnosis (Dutton, Fahey, & Narayanan, 1983) or strategic problem formulation (Lyles & Mitroff, 1980). Strategic issue diagnosis refers to those activities and processes by which the ambiguous data and vaguely felt stimuli continuously confronting strategic actors are translated into focused issues (i.e. attention organising acts) and the issues explored (i.e. acts of interpretation) (Dutton et al., 1983). And strategic issues is defined as internal and external developments, trends and events which in the judgement of some strategic actors are likely to significantly influence the organisation's current or future strategy, because of considerable potential to influence organisational effectiveness (Dutton & Duncan, 1987a; Dutton et al., 1983; Dutton, 1986; Ansoff, 1980).

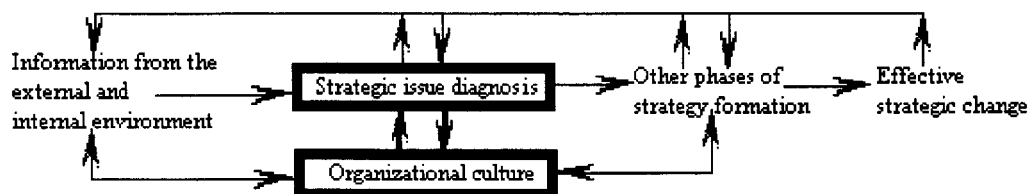
For several reasons, strategic issue diagnosis is recognised as an important part of strategy formation (Dutton et al., 1983; Mintzberg, Raisinghani, & Théorêt, 1976; Nutt, 1993). "It is difficult to imagine strategic decision making without some sort of diagnosis". Strategic issues do not come preformulated, therefore some understanding or imposition of meaning upon them is necessary before designing, choosing and implementing solutions. And as the strategic issues are complex, unstructured and ambiguous, as well as novel and dynamic, there is considerable latitude in interpreting them. Decision researchers generally agree on the power of the diagnosis phase in establishing, in large part, though often implicitly, the direction of the following strategic decision activities. "By framing an issue in a particular way and thus defining the domain for subsequent strategic decision making activity", the participants of this early, formative phase establish premises or constraints that provide guidance for the search for solutions and other phases of strategic decision making. By having this capacity to bound strategic actors, strategic issue diagnosis also represents an important potential for their emancipation. The very focus on strategic issue diagnosis could help to free actors from cognitive, informational and ideological limits and constraints that restrict the range of potential alternative courses of action and criteria for their evaluation. Further, more far-reaching emancipation could be achieved by exploring potential repressive mechanisms of the process of strategic issue diagnosis itself.

Of the theoretical and empirical studies done the last two decades, quite a few have affirmed the importance of contextual organisational factors akin to cultural elements (Lyles & Mitroff, 1980; Dutton & Duncan, 1987a; Dutton & Duncan, 1987b; Milliken, 1990; Thomas & McDaniel, 1990; Dutton & Dukerich, 1991; Dutton & Ashford, 1993; Dutton & Ashford, 1993) and national culture (Schneider, 1989; Schneider & De Meyer, 1991). Thus, the context of cultural factors is deemed important. But as far as I know none have focused on organisational culture as such in explaining strategic issue diagnosis. Some cultural attributes are recognised as important explanatory variables of consequential features of strategic issue diagnosis, but there are no studies going into some depth and utilising the fuller potential of the organisational culture concept to generate a richer and deeper understanding of strategic issues diagnosis, despite the multifaceted nature of the process. In short, by focusing on organisational culture, and applying the richness of this concept, this study could contribute to better knowledge of strategic issue diagnosis.

Studies of strategic issue diagnosis are concerned with processes consequential for organisational effectiveness. This concern with organisational effectiveness is a main theme in the organisational culture literature (Peters & Waterman, 1982; Deal & Kennedy, 1982; Tichy, 1983; Denison, 1984; Wilkins & Ouchi, 1983; Barney, 1986; Arogyaswamy & Byles, 1987; Saffold III, 1988; Denison & Mishra, 1995). The relation between organisational culture and effectiveness has proven more complex than the initial assumption that ‘strong’ culture favours profitability and effectiveness, and more difficult to verify empirically. This complexity arises both because the definition of effectiveness itself, the degree to which the organisation realises the interests of its internal and external stakeholders, is an implicit part of that very organisational culture, and because various qualities of organisational culture influence miscellaneous and complex organisational processes involved in creating effectiveness in different ways depending on context. As strategic issue diagnosis is an important effectiveness defining as well as effectiveness creating process, by thoroughly exploring the relation between organisational culture and strategic issue diagnosis, the understanding of the relation between organisational culture and effectiveness might also be improved.

The following figure summarises the theoretical background of this study. My overall focus is to explore the relation between strategic issue diagnosis and organisational culture, both consequential in explaining organisational effectiveness, or in this context the effectiveness of strategic change processes.

Figure 1. Strategic issue diagnosis, organisational culture, and effective strategic change.



Insufficiencies of existing studies

Some studies of strategic issue diagnosis have considered factors similar to organisational culture. However, my review and critique of the existing studies maintains that any satisfactory utilisation of the culture concept have been precluded by the dominance of what may be called the managerial functionalistic paradigm. Even the supplementary use of new paradigms and associated concepts of organisational culture have been avoided because of the tendency toward continuing established practices and denying necessary change, although the initial studies clearly identified dominant characteristics of strategic issue diagnosis which made other paradigms very appropriate.

The very definition of strategic issue diagnosis makes it clear that this is a process dealing with *fundamental change*. Strategic issue diagnosis is potentially leading to radical change in an organisation’s present or future strategy. Within the functionalistic paradigm, however, a relatively stable social reality is assumed, and the function of cultural elements in maintaining this reality is emphasised, while cultural phenomena and processes potentially contributing to more radical change is ignored, as well as the underlying cultural-political basis of a stable

social reality (Burrell & Morgan, 1979; Morgan, Frost, & Pondy, 1983; Smircich, 1983b; Benson, 1977).

The *political nature* of strategic issue diagnosis was also identified in early studies (Dutton et al., 1983; Lyles & Mitroff, 1980; Lyles, 1981). The dominating paradigm have nevertheless led to a tendency of applying a pragmatic top-management perspective, presumed rational, neutral and apolitical, but nevertheless favouring the interests of top management at the expense of other legitimate interests (Burrell & Morgan, 1979; Putnam, 1983; Smircich, 1983b; Shrivastava, 1986; Hardy, 1995; Alvesson & Willmott, 1995). If they sometimes include political processes and other interest groups, the strategic issue diagnosis studies easily focus on surface politics and ignore the underlying power structures and ideological mechanisms which favour issue conceptions related to dominating interests, most often sustaining the status quo in the interest of established ruling groups (Morgan et al., 1983; Conrad, 1983; Deetz, 1985; Stablein & Nord, 1985; Hardy, 1995).

Strategic issues and the processes where they are explored are *complex* and *ambiguous* (Dutton et al., 1983; Lyles, 1981; Mintzberg et al., 1976). The traditional way of thinking, using simplifying assumptions and values of linearity, consistency and narrowness is recognised as inappropriate for explaining such complex phenomena as paradox, and even leads to not acknowledging their presence (Cameron & Quinn, 1988). An emphasis on consistency and unitary integration of cultural elements leads to the denial of complexity and ambiguity (Meyerson & Martin, 1987; Martin & Meyerson, 1988; Meyerson, 1991; Martin, 1992). The appropriate identification and use of cultural concepts for understanding complexity and ambiguity has been reduced by the functionalistic paradigm's tendency to focus on the more simple, clear and easily observable and measurable elements and regularities of social reality (Morgan & Smircich, 1980; Morgan, 1983a; Smircich, 1983b; Schein, 1990).

Because of the complexity and ambiguity of strategic issues, understanding the process of their identification and comprehension requires an emphasis on the role of the actors' interpretation and judgement, rather than the myth of conclusions based on facts alone (Dutton et al., 1983; Lyles, 1981; Lyles & Mitroff, 1980). Data must be infused with meaning in a process of *social construction of reality*. This process can not be appropriately understood by treating people as reactive respondents to external stimuli through the use of established cognitive structures and processes (Putnam, 1983; Child, 1997; Dutton, 1993). Neither is the functionalist view of communication as the transmission of pre-existing information, values and meanings, typically from active managers to reactive receivers, and its definition of cultural symbols as just carriers and transmitters of such meaning, appropriate for understanding the creation and transformation of social reality (Morgan et al., 1983; Smircich, 1983b; Putnam, Phillips, & Chapman, 1996). Understanding how human actors come to create and alter puzzling strategic issue realities, is hardly facilitated by using the simplifying paradigm of organisational culture as isolated, stabile and clear-cut elements determining equally isolated, stabile and clear-cut elements of strategic issue diagnosis. Also vulnerable to being disregarded by the tendency to focus on relations between predetermined, universal variables, are the unique qualities of culture and human sensemaking processes (Schein, 1992; Meyerson & Martin, 1987; Smircich, 1983b; Louis, 1983; Selznick, 1957; Pettigrew, 1979), resources probably more influential for adaptation and competitive advantage (Barney, 1986; Barney, Wright, & Ketchen Jr., 2001; Meyer, 1982).

The practical application of the resulting theories will tend to be impaired by the less than perfect grasp of essential aspects of the strategic environment, and also easily involve a confinement within the limits of the currently established reality. Thus the present studies do not fully realise the inherent potential for emancipating actors from cognitive, informational and ideological mechanism repressing the possibility for more effective issue conceptions.

The new cultural paradigms necessary

To remedy these shortcomings of existing studies, I have brought to the field three new cultural paradigms: the interpretative, the realistic, and the critical. Together, they match the needs for explaining strategic issue diagnosis characterised by social construction of reality, complexity and ambiguity, political nature, and potential for fundamental change. The well-known interpretative paradigm focuses on the process of social construction of reality. The emphasis is on descriptively understanding how the participants themselves make sense of the ongoing communication and negotiation processes where experienced events and situations are interpreted and given meaning so that decision can be made and actions taken, and the patterns of inter-subjective meaning sustained in and emerging from these processes (Smircich, 1983b; Smircich, 1983a; Putnam, 1983; Stablein & Nord, 1985). Because of the emphasis on the actors' own subjective experience, a more holistic and integrative perspective recognising the wider context of experience, as well as unique features of the process, is facilitated (Smircich, 1983a; Putnam, 1983; Louis, 1983). Ambiguity is also acknowledged and allowed to be focused, because of culture's less concrete status (Meyerson & Martin, 1987; Martin & Meyerson, 1988; Smircich, 1983b). The cultural symbols used in communications are recognised as the essential media involved in sustaining, altering and creating new meanings of events, making the paradigm more apt for studying change (Morgan et al., 1983). The dynamics and complexity of the process are also acknowledged by adopting a pluralistic view of organisational culture, as composed of diverse groups having different meanings, interests and goals, thus reducing the bias towards management (Putnam, 1983), and by noticing paradoxical thinking (Meyerson, 1991; Westenholz, 1993; Hatch & Ehrlich, 1993). The influence of political and leadership relations is also recognised, though in this regard too much weight should not be attached to differences from pluralist functionalistic approaches (Smircich & Morgan, 1982; Bradshaw-Camball & Murray, 1991; Gioia, Thomas, Clark, & Chittipeddi, 1994).

The realistic paradigm is less familiar to cultural studies. However, to be able to use the knowledge of existing studies without falling victim to the functionalist simplifications, I want to put their contributions to use within the realist approach in social science philosophy and methodology (Bhaskar, 1978; Collier, 1994; Keat & Urry, 1982; Outhwaite, 1983; Tsoukas, 1989; Layder, 1990; Godfred & Hill, 1995). Deep and invisible cultural structures generating the observable, surface phenomenon of strategic issue diagnosis in complex, interactive, conflicting, contextual, but mainly deterministic ways, is the assumption and focal focus of this paradigm. Causal explanation of strategic issue diagnosis is thus allowed without being simplified as recurrent regularities between its more clear-cut elements. Regarding depth, invisibility and possible uniqueness of cultural structures, this perspective is similar to some cultural studies identified as functionalistic, that is studies focusing on deep, unconscious and taken-for-granted assumptions impeding change (Schein, 1992; Schneider & Shrivastava, 1988).

The critical cultural paradigm focuses on the oppressing power of organisational culture. Recognising that it sometimes is destructive or destructively used to create and maintain

domination, one aims at achieving a better representation of the interests of diverse interest groups rather than privileging historical or established managerial meanings (Putnam, Bantz, Deetz, Mumby, & Van Maanen, 1993). The focal theme is the ideological power of culture in distorting communication, meaning and consciousness, thus destroying possibilities for enlightened and rational strategic issue diagnosis, and often sustaining the status quo against the pressure of system inherent contradictions favouring radical forms of social transformation (Morgan et al., 1983; Benson, 1977; Benson, 1983; Deetz & Kersten, 1983; Bradshaw-Camball & Murray, 1991). While the politics of the interpretative paradigm is relatively open and manifest, the focus is now on underlying, often unexamined and taken-for-granted power structures and processes, taking note of their basis in interests and power relations in the larger economic, political, social and material context (Conrad, 1983; Bradshaw-Camball & Murray, 1991). The purpose is emancipation from these oppressing and alienating mechanisms, allowing individuals to enact their social realities in new ways more conducive to human interests and development. Knowledge generated from this perspective should therefore provide a basis for generating alternative and better strategic issue diagnosis contributing to more effective corporate strategies (Deetz & Kersten, 1983; Deetz, 1985; Stablein & Nord, 1985; Forester, 1982; Forester, 1983).

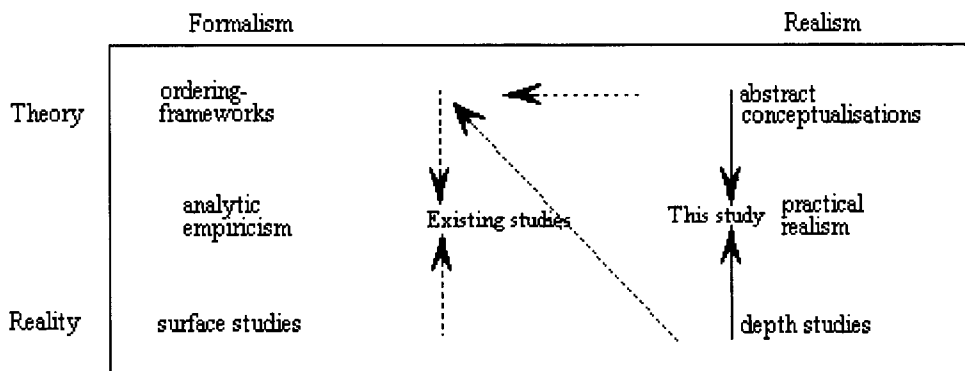
Positioning the study as practical realism

The application of several paradigms in illuminating the problem domain of one study requires working out a way of handling at least seemingly conflicting basic assumptions of different paradigms (Morgan, 1983b; Schultz & Hatch, 1996). The principal conflict between the paradigms of this study refers to different assumptions about action and structure, about voluntaristic views of purposive and intentional human action and deterministic explanation of social reality, the integration of which is a long standing concern in organisational, strategy and leadership studies (Astley & Van de Ven, 1983; Hrebiniak & Joyce, 1985; Ranson, Hinings, & Greenwood, 1980; Pettigrew, 1985; Whittington, 1989; Willmott, 1987). Based on Giddens' 'theory of structuration' (Giddens, 1979) a synthesis of these apparently conflicting assumptions are drawn up. The resulting paradigm could be labelled 'critical, hermeneutic realism' (Outhwaite, 1987), but for the purpose of this introduction it might be more appropriate to discuss it in terms of a 'practical realism' (figure 2).

The new paradigms are brought to the field because of their presumed better ability to examine the reality of strategic issue diagnosis. First, like initial studies of strategic issue diagnosis, they pay attention to and investigate in depth the empirical phenomenon of interest. Its complexity and ambiguity, emergent and fluid character, and human qualities of social construction of reality, are not ignored. Second, instead of limiting the basis of knowledge to what our senses more immediately can tell us, the underlying and unobservable realities causally generating the empirical are allowed to be approached, as well as the often unperceived structures and constraints of the larger context (Bhaskar, 1978; Sayer, 1992; Layder, 1990; Layder, 1993).

The existing studies may demonstrate the tendency of arriving at formal theories by a process of analytic empiricism. The categories created from early depth studies of the empirical domain, and to some degree informed by existing theories, are largely used as 'ordering frameworks' (Sayer, 1992). These ordering devices are permitting the collection of simple and surface observations, the assignment of these observations to a formal system of categories largely without taking their meaning as problematic, and finally the explanation and prediction of events in terms of the resulting formal regularities between isolated and

Figure 2. Positioning the study as practical realism.



clear-cut empirical elements. In contrast to this view of theory, Sayer show the realist view of 'abstract conceptualisation' to be superior. Here the ordering function is secondary, and theorising means prescribing a reflective way of conceptualising events in terms of the real underlying causes generating them. In short, "theory does not order given data or observations, but negotiates their interpretation, even as observations" (ibid.).

The causal adequacy of realism should also make it more practical. Because of higher correspondence with the world of strategic issue diagnosis, it should generate expectations about this reality and the results of our actions in it, which actually are realised. Thus it should improve our instrumentality in bringing about effective strategic change, but this involves more than the realistic appreciation of actual outcomes as in instrumentalism (Layder, 1990; Sayer, 1992). Caring about the realism of assumptions and concepts used as inputs in generating theory, an advantage of more true mapping of causal mechanisms should be realised, enlarged by an illumination of judgements of when these assumptions hold in concrete contexts, so that the theoretical mechanisms' presence, activation and potency could be expected to be manifested in observable and experienced events. The interpretative and critical perspectives should also improve practicality in terms of meaningfulness and understandability to the participants themselves. They embrace but go beyond participants' own experience of strategic issue diagnosis so that alternatives, decisions and collective actions can be brought about (Stablein & Nord, 1985; Shrivastava, 1987), and may be instrumental in realising organisational goals without dispensing with a concern about human autonomy, human development and human needs (Stablein & Nord, 1985; Deetz, 1985).

While positioning this study within its general theoretical context gives an introduction and rationale in terms familiar to various readers, an introductory chapter should also clarify more precisely the focus of the study.

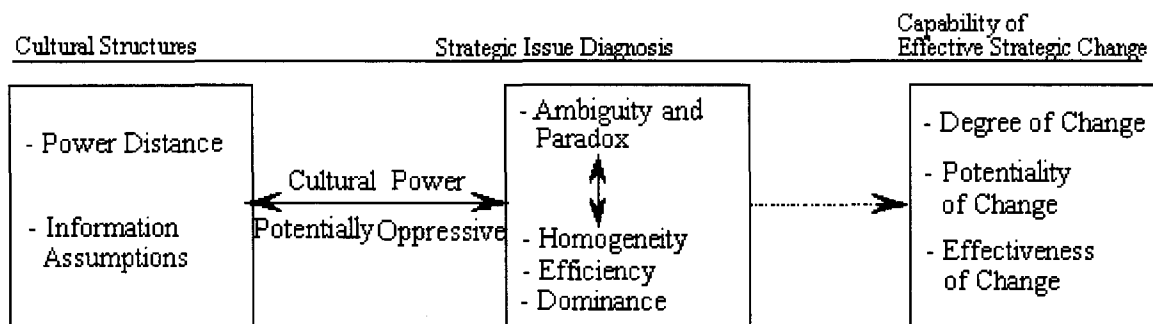
1.3 Purpose and thesis

The general purpose of this study is to contribute to more effective strategic change by exploring the relationship between strategic issue diagnosis and organisational culture. My main research question is how the concept of organisational culture can be put to use to generate a deeper and richer understanding, explanation, and criticism of strategic issue diagnosis. The cultural structures of power distance and information assumptions, their

influence on cultural processes in strategic issue diagnosis, and the likely ensuing effects on the capability of effective strategic change, emerged as the central focus (figure 3). Power distance, i.e., the degree of acceptance of differences in power between members of a culture, and information assumptions, i.e., the degree of favouring the dissemination of information at the expense of balancing this transmission with genuine dialogue, are still embedded within a cultural paradigm of support from and contradictions with other cultural structures, based on wider economic, political, technological and social contextual conditions, which must be accounted for in understanding, explaining and criticising their role in strategic issue diagnosis. My general thesis can roughly be summarised as follows:

- *Power distance and information assumptions are essential for understanding strategic issue diagnosis*
- *Assumptions and values of low power distance and dialogue in combination with information dissemination generate less homogeneity, efficiency, dominance, and more ambiguity and paradoxical thinking, through decreasing the oppressive and alienating aspects of cultural processes*
- *Assumptions of high power distance and information dissemination decrease strategic issue diagnosis' inherent capability to generate effective strategic change, more on a long than a short view due to the oppressive powers and the reinforcement of a stabilising culture. This capability could potentially be increased by changing these cultural structures and emancipating cultural members.*

Figure 3. Introductory model.



1.4 Plan of the dissertation

The theory review of the following chapter starts with the critique of existing studies. It may sound a bit polemical and perhaps provocative, but establishes fundamental thought differences between different paradigms, and demonstrates in broad terms lack of realism in the managerial functionalist strategic issue diagnosis studies. The following paragraph goes more in depth on the focused phenomena of paradox, ambiguity and unobtrusive power. It starts with the development of an interesting framework of responses to ambiguity and paradox in strategic change processes, suggesting the possible effectiveness of all the response kinds offered, and a more nuanced and detailed review is made on the investigation of these phenomena in previous studies. Then the interpretive, realist, and critical paradigms are introduced, with a view to improving such investigations and thus contributing to more

effective strategic change. Finally, an integrative definition of organisational culture is developed in a way which is useful for the purpose of this study.

The methods chapter starts from the implications of a realist as opposed to a neo-positivist or -empiricist methodology, before the methods developed and used are described in order to demonstrate how a critical and practical realism can be done, and in order to support evaluative judgement and discussion. After the first section on the relation between philosophical assumptions and practical research, the research strategy is concretised in terms of design issues, the grounded theory approach, and the triangulation of sources and methods of developing empirical material. The third section discusses some of the common problems of qualitative fieldwork, assisting judgements about how observations and interpretations may have been influenced. Finally, the methods used to capture the intangible phenomena of particular interest are discussed: ambiguity, paradox and unobtrusive power.

The first empirical chapter is about the cultural context of the study. The organisational culture of Telenor Ltd. and its R&D institute is approached, within the context of a radically changing telecommunications environment. The focus is put on the cultural changes put forth in meeting liberalisation and competition, and the resulting contradictions and conflicts. The chapter contains a lot of empirical material. It is organised around the central cultural themes and their contradictions, such as society- vs. business orientation, market- vs. technology orientation, etc. Toward its end, the power distance and communication assumptions are illuminated in relation to this particular cultural change context.

The next chapter is focused on the observed strategic issues diagnoses. A descriptive interpretation in terms of perceived strategic issue paradoxes is first presented, in order to illuminate the cultural themes and dynamics. Attention is focused on providing evidence of the quality and extent of ambiguity and paradoxical thinking, in relation to power distance, communication assumptions, and the experienced ability to change. Next, the quality and extent of paradoxical thinking is explained as a result of the activation of underlying cultural structures and processes. Four strategic issue diagnosis cultures are found, each involving a different cultural pattern with power distance and communication assumptions. Finally, one of the strategic issue diagnosis cultures - the corporate change oriented dynamic - is subject to a critical interpretation. Myths about ideal information and strong leadership are found to be central in the denial and transformation of fundamental contradictions into more or less superficial change management paradoxes.

The last chapter is concerned with a critical review of the study itself, and the possible implications following from its contribution. First, the question is if the requirements of research from the different methodological moments drawn upon have been met. The way the study has been done is discussed as regards interpretive, theoretical, critical, and external validity. Possible implications for practice are then suggested, centred on the prospect of an organisational culture which cultivates more strategic problem formulators with a respectable ability to relate to ambiguity and paradox. Finally, some implications for strategy research are outlined with an emphasis on improving the investigation of ambiguity and paradox.

Chapter 2.

THEORY REVIEW: LIMITATIONS AND NEW POSSIBILITIES IN THE STUDY OF STRATEGIC ISSUE DIAGNOSIS

2.1 Limitations of the functionalist paradigm

The functionalist paradigm is oriented toward organisational survival and effectiveness while maintaining a relatively stable social world (Gioia & Pitre, 1990; Morgan, Frost, & Pondy, 1983; Morgan & Smircich, 1980). It usually carries a managerial orientation, taking the perspective, values and priorities of managers, thus implicitly or explicitly solving their problems and serving their interests (Alvesson, 1991; Alvesson & Willmott, 1995; Putnam, 1983). Perhaps most important is the objectivist view of the social world as a concrete thing "out there", external to and independent of people, awaiting impartial and accurate observation (Gioia & Pitre, 1990; Morgan & Smircich, 1980). The objectivist ideal seems to be to represent this reality as general and contingent regularities between a few well-defined, stable, and clearly observable elements, referred to as variables (Morgan & Smircich, 1980). Human beings are often seen as responding to stimuli from this context in predictable ways, although their perception and interpretation may influence this process to some degree, and their relationship with the environment may be an interactive and complex one (Morgan & Smircich, 1980). While these assumptions may facilitate functionalist research, I shall argue that they make the strategic issue diagnosis studies lack realism, as they can not fully approach dominating characteristics of strategic issue diagnosis.

2.1.1 Lack of realism in studies of strategic issue diagnosis

Neglecting the social construction of knowledge

The importance of the participants' interpretations and judgements must be acknowledged to be one of the dominating characteristics of strategic issue diagnosis. In the first exploratory empirical studies it was discovered that most strategic problems are sensed through informal means and "it is up to the managers who become aware of these events to assign meanings to them" (Lyles & Mitroff, 1980; Lyles, 1981; Lyles, 1987). Adaptations to environmental events was depicted as "more consistent with social realities constructed through processes of ideological interpretation than with objective realities" (Meyer, 1982). The early and influential theoretical article (Dutton, Fahey, & Narayanan, 1983) emphasised that "the task confronting decision makers in SID is to make sense out of the complex situation presented" so they "need to seek out and interpret relevant data". The initial studies of SID emphasised that to understand the process of identification and formulation of strategic issues required an emphasis on the role of the participants' interpretation and judgement. And the following

studies repeatedly profess to study decision-makers interpretations and the social processes in which these are made.

This seems to stand in sharp contrast to the usual criticism of functionalist studies. Researchers working from within a functionalist paradigm are often criticised for neglecting the social interpretation and construction of reality. They treat social reality as something that exists external to and independent of human beings, that takes form and exists prior to any human activity, and that determines, or at least shapes, individual action (Burrell & Morgan, 1979; Putnam, 1983). Consequently, humans are treated as reactive and as responding to external stimuli in a mechanical way (Putnam, 1983; Burrell & Morgan, 1979). What tends to be overlooked is the dynamic, social process where reality is actively created and transformed by conscious human beings (Putnam, 1983; Gray, Bougon, & Donnellon, 1985; Knights & Willmott, 1987).

A closer look at the strategic issue diagnosis studies reveals that this pattern is evident also here. Although overtly the assumption is that humans are conscious and active in interpreting strategic issues (Dutton et al., 1983; Dutton & Duncan, 1987a; Milliken, 1990; Nutt, 1979; Dutton, 1993b), this claim must be modified (Dutton, 1993a). The most prevalent form of interpretation is a form of 'action determinism' (Whittington, 1989) where the interpretation of strategic issues is determined by the established cognitive structures and processes of managers and the external factors shaping them (Child, 1997; Dutton, 1993a). This emphasis can be seen in the heavy use of cognitive theory to explain the selective use and interpretation of incoming information (e.g. Dutton & Jackson, 1987). Any human capacity for conscious and rational thought only takes place within the joint determination of interpretation by "objectively" given contingencies and perceptual and cognitive filters.

Strategic issue diagnosis studies also often subscribe to the importance of the emergent quality of the interpretation processes (Mintzberg, Raisinghani, & Théorêt, 1976; Dutton et al., 1983; Lyles, 1981). However, they easily slide into a main emphasis on isolating variables and their covariation, which leads to underrepresenting the role of the process underlying these bivariate claims (Dutton, 1993b). There are a few important exceptions to this pattern, however, some studies do investigate the process as it evolves over time (e.g. Dutton, 1986; Dutton, 1988a; El Sawy & Pauchant, 1988; Dutton & Dukerich, 1991; Isabella, 1990; Gioia & Thomas, 1996) (the study by Isabella is also an exception as she assumes that organisational members actively create the reality they inhabit).

The unique quality of social construction processes is also vulnerable to being neglected by the functionalist focus on regularities among universal variables. Several studies of strategic issue diagnosis have pointed to the importance of distinctive features of the organisational context and culture (Meyer, 1982; Dutton & Duncan, 1987a; Dutton, Walton, & Abrahamson, 1989). The advice from functionalism, however, tends to reduce the uniqueness and distinctiveness by focusing on universal variables and broad categories of organisational context (Dutton et al., 1989). Again, the image and identity studies are important exceptions (Dutton & Dukerich, 1991; Gioia & Thomas, 1996). However, other assumptions of the functionalist paradigm diminish also their capability of studying the interpretive quality of unique processes.

The functionalist view of communication often makes researchers disregard the ambiguity of social construction processes. Basically because the notion of an 'idea', like everything else, in functionalism becomes metaphorically structured to be like a concrete 'thing', their location

becomes important and they become communicated by transporting them (Deetz, 1986). In this transportation or transmission view of the communication process, cultural symbols are conceived as tools for transmitting information and meaning, typically carrying information from an active manager to a passive and reactive receiver (Putnam, Phillips, & Chapman, 1996; Smircich, 1983b; Morgan et al., 1983). Effective communication is held to occur when ideas are transferred from a sender to a receiver with minimal errors (Putnam, 1983; Putnam et al., 1996). So when the information received is different from what the sender intended, this is conceptualised from the sender's point of view as 'poor communication' (Putnam et al., 1996; Eisenberg & Phillips, 1991; Westerlund & Sjöstrand, 1979). A truly interpretive study would recognise this 'fairy tale of the dominance of the sender' (Westerlund & Sjöstrand, 1979) and acknowledge the multiplicity of conscious actors as well as the ambiguity and meaning creation capability of cultural symbols (Morgan et al., 1983).

The transmission view of communication is evident in the few strategic issue diagnosis studies paying enough attention to intersubjective interpretation and negotiation processes to explain what is meant by communication. Symbols like language and labels "reflect the understanding of a strategic issue from the perspective of the participants in the SID", "serve to communicate understandings to the rest of the organisation" and "mobilise action in a particular direction" (Dutton et al., 1983). Though labels may have multiple interpretations, they are nevertheless managerial creations that convey and strengthen certain values and meanings (Dutton, 1993b). Participants in SID selectively transmit or communicate information to the rest of the organisation, using language labels to set into place predictable cognitive and motivational processes so that meanings are manipulated and organisational responses controlled (Dutton & Jackson, 1987).

In summary, the relative neglect of active and conscious actors, unique and emergent interpretation processes, and the ambiguity of communication, make functionalist studies less apt to study the social construction of reality.

Simplifying complexity and ambiguity

The complexity and ambiguity of strategic issues and the process in which they are identified and formulated is also recognised as an essential characteristic. While a subset of strategic problems are well structured, most strategic problems are unstructured (Lyles & Mitroff, 1980), and there is no single 'best' way for formulating the nature of the problem (Lyles, 1987). Because they are ill-defined they can seldom be anticipated and surveyed by formal systems, decision makers must usually sense these problems through informal networks before they appear in formal indicators (Lyles & Mitroff, 1980; Lyles, 1987). The uncertainty and ambiguity inherent in the complex and conflicting data sought to understand the identified strategic issues make the task of making sense of them very difficult (Dutton et al., 1983). The interpretation tasks confronting decision makers are thus extremely complex and likely to generate considerable uncertainty and equivocality (Milliken, 1990; Thomas, McDaniel, & Dooris, 1989).

The SID studies are quick to admonish strategic managers to recognise complexity and ambiguity to avoid "solving the wrong problem". Decision makers' lack of tolerance and tendency to avoidance so that strategic issues are formulated rapidly without much careful study are recognised and criticised, and normative advice about how to address conflicting interpretations and interests are developed (Lyles & Mitroff, 1980; Nutt, 1993c; Nutt &

Backoff, 1993; Thomas et al., 1989). The cognitive theory often used to explain interpretation highlights strategic managers' attempts to reduce complexity rather than to absorb and internalise it (Child, 1997; Dutton, 1993a). Categorisation theory shows that ambiguous information is interpreted to conform to prototypical attributes, when information is missing by filling in the gaps and assuming consistency with the category, and when available information is ambiguous by distorting information (Dutton & Jackson, 1987). Social motivation theory may also be used to indicate that "decision makers deliberately seek ambiguous information to avoid learning about claims that would disturb a preferred interpretation" (Nutt, 1993c). To counteract such tendencies strategic decision makers are advised to use analytical aids and tools to surface and explore the arbitrariness and consequences of assumptions; to clarify, exchange, and resolve different interpretations; and to utilise or continue to utilise more complex inquiry methods (Dutton et al., 1983; Lyles & Mitroff, 1980; Lyles, 1987; Lyles & Thomas, 1988; Thomas et al., 1989).

The strategic issue diagnosis researchers themselves, however, do not follow their own advice. The assumptions of the functionalist paradigm, and the ambiguities and paradoxes that arise when they are confronted with other paradigms, are not explored. While themes of complexity, paradox and ambiguity is inferred from both early and later findings suggesting themes for theory building (Nutt, 1993c), they seem to reduce the complexity of the phenomenon to easier manageable proportions and focus on aspects of the problem that are familiar (Volkema, 1988). Several strategy researchers think the whole strategy field has been unduly influenced by fields such as physics and economics to radically simplify its empirical domain by using restrictive and naive assumptions which leads to prematurely rationalising certain research methods and procedures (Lampel & Shapira, 1995; Hambrick, 1990; Daft & Buenger, 1990). The institutionalisation of positivistic methodologies, and "the peculiar incentives and restraints that a premature normal science straightjacket has imposed" (Bettis, 1991) is therefore "resulting in a loss of relevance due to the inability of such approaches to capture change, complexity and uniqueness" (Lampel & Shapira, 1995).

Functionalist, positivist or neo-positivist, methodology often de facto assumes that "the social world expresses itself in terms of general and contingent relationships among its more stable and clear-cut elements, referred to as "variables"" (Morgan & Smircich, 1980). And the desired outcomes of research are therefore statements of contingent relationships that can be used to predict the behaviour of variables, suggesting causal relationships between independent and dependent variables (Smircich, 1983b; Putnam, 1983). SID researchers sometimes critique the "currently dominant paradigm for strategy research, in which the objective of empirical research is identifying predictors of bottom line performance (Daft & Buenger, 1990; Hambrick, 1990)" (Jackson, 1992). The reason is that the mediating processes (e.g., SID) through which independent variables shape dependent variables are not yet sufficiently understood to formulate accurate predictions (Jackson, 1992). Most empirical studies continue to isolate variables that are relatively easily observable and investigate their covariation with statistical techniques. A rough categorisation of the published empirical studies I am aware of, after the 'formative' studies at the start of the 1980'ies, indicates that about two thirds emphasise the use of questionnaires and statistical methods, while about one sixth use more complex methods like case studies, one third of these in combination with the favoured questionnaires and statistics (table 1).

To simplify models, more complex factors like social and political forces are often neglected or "treated indirectly through their ties to" specific or "core" factors (Dutton, 1993a; Dutton & Ashford, 1993). We may also suspect that studies using more complex inquiry methods have

Table 1. Overview of methods utilised in empirical studies of SID.

Method	N	Studies
Questionnaire & statistics	12	Lyles and Mitroff (1985), Lyles (1987), Jackson & Dutton (1988), Sallivan & Nonaka (1988), Milliken (1990), Thomas & McDaniel (1990), Schneider & DeMeyer (1991), Thomas, Clark & Gioia (1993), Lauzen (1995), Denison et al. (1996), Lang et al. (1997), Sharma (2000)
Interviews/simulation, questionnaire/quantification & statistics	16	Dutton & Webster (1988), Dutton, Stumpf & Wagner (1990), Nutt (1993b, 1998), Thomas, Shankster & Mathieu (1994), Haukedal & Grønhaug (1994), Ginsberg & Venkatraman (1992, 1995), Highhouse, Paese and Leatherberry (1996), Dutton et al. (1997, 2002), Kuvaas (1998, 2002), Mittal and Ross (1998), Andersson and Bateman (2000), Highhouse, Mohammed and Hoffman (2002)
Interviews/repertory grid & categorisation	3	Dutton, Walton & Abrahamson (1989), Nutt (1993a), Dutton et al. (1997)
Case/simulation, questionnaire & statistics	3	El Sawy & Pauchant (1988), Gioia & Thomas (1996), Dutton et al. (2001)
Case studies	5	Dutton (1986), Dutton (1988b), Isabella (1990), Dutton & Dukerich (1991), Barr (1998)

simplified reality by focusing on its more surface and easily observable facets. El Sawy and Pauchant (1988) emphasise evidence of 'template twitching' which "is an observable phenomenon which is easier to capture than the latent template itself". The important but unobtrusive features of organisational culture, ideology, and strategy which "can sink so deeply into the social fabric that they are invisible to the tools of survey research" (Meyer, 1982), are perhaps not easily found by emphasising just the top management team's perceptions and utilising empiricist grounded theory and categorisation analysis as did Gioia and Thomas (1996). The surprisingly lack of inconsistency, disagreement and ambiguity of issue interpretations found by Dutton and Dukerich (1991) is perhaps not that surprising knowing that they used positivist methodology and procedures (references to Eisenhardt, 1989; Yin, 1989; Miles & Huberman, 1984). Dutton's case studies focus on formalised issue management systems where archival data make the issue history easier observable, and refer to grounded theory (Glaser & Strauss, 1967) and positivist evaluation criteria (Yin, 1989), but may seem to avoid this critique by using key informant data as well as more complex interpretation processes (Dutton, 1986; Dutton, 1988b).

Another assumption that serve to simplify the problem for functionalist researchers is the limitation of the "number of purposes served by [their] problem statements"; they have a tendency to reduce the complexity and ambiguity present in a situation by "limiting the number of stakeholders or the extent of their involvement" (Volkema, 1988). The managerialist bias of functionalist studies contributes to the reduction of complexity and ambiguity.

Managerialist bias and oversight of political processes

Functionalists are often accused of a managerial orientation (Burrell & Morgan, 1979; Putnam, 1983). While this may not be an inherent feature of the functionalist paradigm -

contrary to the technical interest in manipulation and control of the natural and social environment - the interests of certain groups are often represented over others in their theories and models (Putnam, 1983; Stablein & Nord, 1985). In particular, the interests of managers and capital have been a major driving force in organisation and management studies (Stablein & Nord, 1985; Alvesson, 1991). Those who are also working as consultants are particularly prone to address the needs of their present and future clients, and the risk of lost or reduced integrity is obvious (Putnam, 1983; Alvesson, 1991). The managerial orientation secures that "the questions formulated and answered, the perspective taken, the sectional interests supported etc. are grounded in a world view, a set of beliefs and values, which indicate that the top managers of corporations and other organisations are a highly important group, whose actions are normally supposed to support the social good (whatever that might be)" (Alvesson, 1991). In this way the legitimacy of established managerial priorities is taken for granted, and research becomes dedicated to identifying more effective and efficient means for their realisation (Alvesson & Willmott, 1995). Managerial interests are often generalised to be organisational interests by assuming a unitary view of organisations and culture; by talking with just managers at the same time as organisations are treated as cooperative and harmonious systems in pursuit of common interests and goals (Putnam, 1983; Gregory, 1983; Stablein & Nord, 1985; Shrivastava, 1986). Conflicts and contradictions within organisations are ignored (Shrivastava, 1986). Other social groups within and outside organisations are of secondary significance and might be seen basically as the objects of managerial actions (Alvesson, 1991; Shrivastava, 1986).

This ideology can explain how the organisational culture concept that "was initially used to help appreciate the symbolic features of organisational life" was soon "transformed to a concept that promised to provide control over these features" (Meyerson, 1991a). The basic purpose of the dominant cultural schools soon became to produce statements of contingent relationships between variables that could be used as predictable means for organisational control and management (Smircich, 1983b). The practical value of managerialist biased research does seldom follow directly from the statements of predictable covariation between causal and dependent variables, however. "Efforts to find universal or even broader cause-effect relationships and other types of correlations, providing a basis for narrow social engineering management efforts, have met with limited success (Brunsson, 1982; Starbuck, 1982). Instead of producing pay-off in a technical sense, mainstream management science's ideas, theory and terminology mainly exert an indirect influence, through ideologies and language which enable problems to be understood in specific ways and which affect the people in the organisation (Astley, 1984)" (Alvesson, 1991).

While the organizational culture field may have turned more complex in terms of perspectives and approaches (Brummans & Putnam, 2003), the strategy field seems to remain one of the most one-sidedly pro managerial. "Thinking about strategic management has been dominated by a concern to rationalise and/or refine managers' habitual ideas about what strategy is and how it should be done" (Alvesson & Willmott, 1995; Shrivastava, 1986). What about the studies of strategic issue diagnosis? Let us first ascertain that they do not exalt strategic managers as the "omnipotent masters of the universe" (Jackson, 1992) and ignore the pluralism of other actors and politics of the process altogether. The early, exploratory study by Lyles and Mitroff (1980) established that political themes recurred throughout strategic problem formulation. Individuals used political power to influence the problem formulation process; they feared retaliation by the political powerful, for instance, if they identified a problem that resulted from a past error by a top manager; and avoidance and denial of problems were related to political influence to stabilise the organisation in the long run (Lyles

& Mitroff, 1980). The early, influential theoretical article supports the notion that pluralism and politics are among the dominant characteristics of the process (Dutton et al., 1983). Strategic issue diagnosis activates many participants at several levels of the organisation, as the consequentiality of strategic decisions for resource allocation and interdependency between organisational units awakens their political interests (ibid.). It is recognised that "the individual or group who has credibility, diplomatic skills, and commitment to a particular view can successfully impact the process of information gathering during problem formulation" (Lyles & Mitroff, 1985). And such influence attempts are manifest in the distortion and/or selective control of data in order to create a particular focus and direction in the diagnosis (Dutton et al., 1983).

The pluralism and political nature of the process are acknowledged in most of the following studies, too. However, investigations take place within a traditional management orientation which serves to reduce the emphasis on political pluralism. First, while it is mostly acknowledged that strategic issue diagnosis involves several participants and groups at various levels of the organisation, management, and especially top management, are focused because they are assumed to serve the significant cognitive function in interpreting strategic issues (Dutton et al., 1983; Lyles, 1987; Jackson, 1992; Haukedal & Grønhaug, 1994). While the cognitive theory often used contain assumptions about limitations of the human information processing capacity, strategic managers are still regarded as experienced experts in comparison with people at lower ranks. "Resolving the nature of strategic problems becomes an important task of upper level management. Making sense of complex situations requires specific cognitive and experiential skills" (Lyles & Thomas, 1988). "Because modern organisational environments are complex and dynamic, a key role of top management has become providing meaningful interpretations for patterns of ambiguous information. Indeed, the imposition of meanings on issues characterised by ambiguity has become a hallmark of the modern top manager" (Thomas, Clark, & Gioia, 1993). Therefore strategic issue diagnosis studies are concerned about providing strategic managers or experts with frameworks or methods suitable to support their investigations of strategic issues (Nutt & Backoff, 1993; El Sawy & Pauchant, 1988).

Second, the implication of the recognised pluralism and political nature of the process is that it needs to be carefully managed. Strategic issue diagnoses involves managing a highly political negotiation process between various groups with different interests and viewpoints (Lyles, 1987). "Top management occasionally needs to step back, appraise and possibly redesign the diagnosis process, rather than attempt to merely refine decision alternatives" (Dutton et al., 1983; Hunsicker, 1980). In particular, strategic issue diagnosis studies often suggest that effective diagnosis depends on managing the context in which the process unfold, either through the selection of participants or by affecting other factors shaping the cognitive, social, and political process (Jackson, 1992; Dutton, 1993b; Dutton, 1993a). Third, the managerial orientation is evident in the manipulation of the meaning of strategic issues for other organisational participants who have not been active in the strategic issue diagnosis process. The managerial interpretations arrived at is ultimately communicated to the rest of the organisation, influencing action alternatives and subsequent outcomes (Isabella, 1990; Thomas et al., 1993). Managers are advised to actively and selectively transfer certain meanings to the rest of the organisation, using language labels to set into place predictable cognitive and motivational processes so that meaning is manipulated and organisational responses controlled (Dutton & Jackson, 1987).

There is variation in the degree of top-management orientation. One indication is the choice of informants and respondents in the empirical studies (table 2). Although it is difficult to get access to top managers for research purposes, about one half of the empirical studies have used top managers as the only or primary informants, while just one study includes organisational members from all hierarchical levels.

Table 2. Respondents and informants in empirical SID studies.

Org. member categories	N	Studies
Just Top Management	12	Lyles & Mitroff (1980), Lyles (1981, 1987), Lyles & Mitroff (1985), Sullivan & Nonaka (1988), Thomas & McDaniel (1990), Thomas, Clark & Gioia (1993), Thomas, Shankster and Mathieu (1994), Ginsberg & Venkatraman (1995), Denison et al. (1996), Kuvaas (1998, 2002)
Primarily Top Management	8	Milliken (1990), Ginsberg & Venkatraman (1992), Nutt (1993a, 1993b), Lang et al. (1997), Gioia & Thomas (1996), Nutt (1998), Barr (1998)
Top Management & Middle Management, Planners, Students	10	Meyer (1982), Dutton (1986, 1988b), Jackson & Dutton (1988), El Sawy & Pauchant (1988), Isabella (1990), Schneider & DeMeyer (1991), Haukedal & Grønhaug (1994), Highhouse, Paese and Leatherberry (1996), Sharma (2000)
Middle management, Champions, Staff & Planners, Students	10	Dutton & Webster (1988), Dutton et al. (1989, 1990, 1997, 2002), Lauzen (1995), Mittal and Ross (1998), Andersson and Bateman (2000), Dutton et al. (2001), Highhouse, Mohammed and Hoffman (2002)
Employees at all levels included	1	Dutton & Dukerich (1991)

The most top-manager oriented studies emphasise the importance of upper-level executives. "It is up to them to interpret and to assign meaning to the unanticipated environmental events that occur. It is also up to them to generate support of a problem area as an issue" (Lyles, 1987). SID is portrayed as primarily an individual cognitive process particularly important for top managers - the dominant coalition - though they are affected by their multilevel social and political context (Dutton, 1993a; Dutton & Duncan, 1987a). "Different arenas and levels of an organisation may be involved in the scanning activities associated with sensemaking, but it is top managers who have primary influence over which strategic issues are attended to and how they are labelled" (Thomas et al., 1993). A relative high degree of top-management focus is also evident in characterising bottom-up planning processes as those where "division-level management play the primary role" and as having presumed negative consequences of more narrow scope and diversity of strategic issues (Dutton & Duncan, 1987b).

Less emphasis on top management can be found in studies suggesting more positive views of participation and pluralism in participants' values and beliefs. A more participatory process and use of a larger pool of interpretive resources may lead to better noticing the occurrence of environmental change (Milliken, 1990), and more change because of a broader range of justifications for why and how an issue can be seen as positive, a gain and/or controllable (Dutton, 1993b). A focus on diverse strategic issue processing groups and the open expression of conflicting views often leads to emphasising the advice, however, that they should be composed of individuals with dissimilar task related skills and knowledge rather than different values and interests, and that it is up to top management to compose or pick the members of such groups (Jackson, 1992). While active thought and multiple interpretations are generally favoured, the basic conditions for such freedom and choice are often reduced in organisations (Dutton, 1993a).

Some SID studies highlight real bottom-up forces at work. Studies of agenda building through issue selling and coalition building focus on the activities of middle managers and even nonmanager employees in activating and focusing attention around strategic issues (Dutton, 1988b; Dutton & Ashford, 1993; Dutton & Penner, 1993). However, the concept of strategic agenda as the set of issues that consumes top decision makers' attention, and the idea of successfully selling issues to top management, again highlights the dependency on and the criticality of top management's collective beliefs (Dutton & Ashford, 1993; Dutton & Penner, 1993). The mentioned frequent references to the emergent quality of the process also "stands in contrast to most top-down views of how organisational issues are interpreted" (Dutton, 1993b). Emergent and political aspects increases complexity (Lyles, 1981; Lyles, 1987), however, and the reluctance to use methods suitable to capture complexity has reduced the ability to study pluralist and political aspects of the process. While the top management focus is partly empirically justified, the organisations studied may have been very authoritarian and top management in fact the only or primary participants in the strategic issue diagnoses, ideological and methodological biases have been significant contributors to the findings. Some studies, however, reduce the focus on top management by explicitly focus on middle managers or staff, but just one succeed in studying emergent and complex processes composed of participants from all levels in the organisation (i.e. Dutton & Dukerich, 1991).

Paying attention to the politics of strategic issue diagnosis, instead of, or rather as complement to, the heavy reliance on analytic concepts about deterministic cognitive structures and processes, is one means to contribute to increased freedom and awareness of choice (Child, 1997; Dutton, 1993a), for everyone from top executives to nonmanager employees alike. To some extent the strategic issue diagnosis studies do pay attention to the political underpinnings of the process, for instance, by focusing on the importance of issue sponsors to the agenda building process (Dutton, 1988b), or even by acknowledging that coalition building takes place outside conventional political channels (Dutton & Penner, 1993). Some studies make explicit their view on how participants gain power and influence to be used in strategic issue diagnosis. An individual's power is derived from both personal attributes, authority positions and structural location (Dutton, 1988b; Dutton & Ashford, 1993). "Individuals gain greater power when they are central, nonsubstitutable, and cope with uncertainty for the organisation" (Dutton, 1988b, referring to Hickson et al., 1971).

When the strategic issue diagnosis studies pay enough attention to politics to explicate their view of power, it becomes evident that they make use of the "strategic contingency" concept of power, which is consistent with and contributes to the dominant managerial bias. This perspective does not investigate the repressing aspects of power, and consequently does not contribute significantly to the liberation potential inherent in strategic issue diagnosis. Like most processual studies of the politics of strategic management, the strategic issue diagnosis studies is minimally concerned about "how managers come to assume and maintain a monopoly of what has become institutionalised as "strategic" decision-making responsibility" (Alvesson & Willmott, 1995). There is little consideration of how the "facts" of strategy are laden with managerial values and ideological assumptions, of how manager's practical reasoning - for instance about apparently apolitical factors in the outer context - is conditioned by and contributing to politic-economic structures of the wider society (e.g., advanced capitalism in most US studies), and no sustained critical assessment of corporate strategies against a broader set of criteria than capitalist and corporate management objectives (e.g., power, growth and profits) (Alvesson & Willmott, 1995; Shrivastava, 1986).

Similarly, studies using the organisational culture concept have often failed to expose the relations of power and the dynamic and precarious process underlying cultural phenomena (Gray et al., 1985; Knights & Willmott, 1987). Even under the guise of giving more autonomy to the individual than more traditional organisational control forms, corporate culture studies may promote the extension of management control through eliminating the conditions - pluralism and the associated conflict of values - for facilitating the social process of emotional and intellectual struggle for self-determination (Willmott, 1993). The outcome of such studies is a simultaneous recognition and trivialisation of the politics of culture and strategic decision-making, which actually may reduce their liberation potential. Their fruits are "vulnerable to selective appropriation by those concerned to promote or legitimise the development of "more subtle ways of encouraging compliance and reinforcing existing power structures"" (Knights & Willmott, 1987, quoting Turner, 1986; Alvesson & Willmott, 1995).

Disregard of potential for fundamental change

The very definition of a strategic issue makes it clear that strategic issue diagnosis is a process that deals with the possibility of fundamental change in organisations and their strategies. And the strategic issue diagnosis studies are of course concerned about change. Dutton and Duncan (1987) investigate how meanings formed in SID create a momentum for change, and note how judgements of understanding and capability facilitate more radical change. Dutton (1993) indicates that opportunity labels may lead to more change, a positively glossed future looking orientation may be made dominant and a less detailed mapping of the issue may be created to overcome understanding or emotional barriers to change. Nutt and Backoff (1993) direct attention toward how paradoxes and tensions in strategic issues may contribute to creativity and change. Strategic issue diagnosis researchers also easily criticise strategic managers for giving in to the pressure to take decisive action and "see only superficial concerns in the novel, tangled and complex consideration that make up issues, and respond to these concerns in predictable ways in which tradition is favoured over innovation" (ibid.).

This is somewhat ironic, since the functionalist tradition they are part of themselves may compel them to take decisive action and use established methods and techniques which simplify reality and obscure the capability to capture complex change processes (Lampel & Shapira, 1995). More basically, the assumption of a relative stable social reality may make for a conservative orientation in strategic issue diagnosis research (Burrell & Morgan, 1979; Putnam, 1983). The emphasis on what function culture and symbols play in system survival through the maintenance of social order leads to discovering strategic situations similar to those constructed before (Morgan et al., 1983). Neglecting the social construction of reality makes one tend to overlook the dynamic and precarious cultural process in which both culture and the strategic situation is constructed and deconstructed (Gray et al., 1985; Knights & Willmott, 1987). The management bias and the emphasis on serving the interests of dominant groups also contributes to a tendency to implicitly favour status quo over more radical changes which may threaten the established power relations (Alvesson & Willmott, 1995; Alvesson, 1991). Although Lyles and Mitroff (1980) early indicated that avoidance and denial of problems were related to political influence to stabilise the organisation, for one thing because less powerful people feared retaliation by the powerful, this theme is not satisfactorily addressed in the following studies.

2.1.2 Consequences for the Study of Ambiguity, and for the Capability of Effective Strategic Change

Two important and related conclusions may be established from the criticism of previous studies: 1) less than perfect ability to investigate the ambiguity and paradox involved in the social construction and change of reality, and 2) a managerialist bias which impede any inquiry of political processes which could create more radical change. As both involve consequences for the capability of effective strategic change, it may be instructive to explore how they may influence this capability. The awareness of more subtle functionalist traps may help to avoid earlier mistakes and contribute to more effective strategic issue diagnosis. Later the new paradigms' ways of investigating ambiguity/paradox and politics/radical change will be introduced, to illuminate how they might improve our understanding, explanation, and criticism.

First, possible responses to ambiguity and paradox have to be more closely identified, together with their effectiveness in strategic change processes. A framework of responses is developed, and it will be argued that several different responses may be needed in order to develop the capability of effective strategic change.

Responses to ambiguity and paradox in strategic change

Ambiguity and paradox are not only dominating characteristics of strategic issue diagnosis, they are long standing themes in the study of organisations and change in general (March & Olsen, 1976; Weick, 1979). In recent years renewed interest have materialised (Alvesson, 1993; Bouchiki, 1993; Denis, Langley, & Cazale, 1996; Nesheim, 1993; Martin, 1992; Robey & Boudreau, 1999; Janssens & Steyaert, 1999; Lewis, 2000; Wennes, 2002; Clegg, 2002b). Practising managers and authors of management books have recognised that the handling of paradox and ambiguity is vitally important for leadership and organisational functioning (Peters & Waterman, 1982; Van de Ven, 1983; McCaskey, 1988; Pascale, 1991; Colbjørnsen, 1992; Farson, 1996; Handy, 1994). The increasing complexity and change in several areas of organisational environments may have stimulated this development, e.g., leading to the recognition that "Janusian thinking" is associated with the creative insights necessary for dealing with change and increased pressure from conflicting demands (Quinn & Cameron, 1988).

Defining ambiguity and paradox

Ambiguity occurs when there is no clear interpretation of a phenomenon (Feldman, 1991). Three kinds of ambiguity may be distinguished. First, ambiguity may refer to 'objective' phenomena that are subject to more than one interpretation (Levine, 1985; Weick, 1979). This form of ambiguity exists as 'an attribute of a research object' without necessarily being recognised subjectively. The words of a message may contain several possible connotations because of their relation to several plausible interpretive contexts; for instance, the contexts of different organisational and professional ideologies, which may not be recognised by the individual participants in a particular communicative situation (Eisenberg, 1984). Such 'objective' paradoxes exist, in part, because processes that change some characteristics of a social system also tend to evoke other processes that affect the social system in multiple and opposite ways (Starbuck, 1988). Multiple forces may be at play during the strategic change process, pulling or pushing the organisation toward or away from its ideals (Nutt & Backoff,

1993). Typically these forces align with interest groups and political coalitions, such as the dominant coalition and more peripheral groups, and with different cultural constellations (Robey & Boudreau, 1999).

Second, ambiguity may refer to the conscious or unconscious awareness of multiple interpretations of a phenomenon, so that one clear interpretation does not exist (Eisenberg, 1984; Levine, 1985; Meyerson & Martin, 1987; Weick, 1979). For instance, the receiver of an ambiguous message recognises that two or more interpretive contexts could be used to infuse it with meaning, and he or she faces the question of which possible meaning is the most appropriate (e.g. that intended by the source). In many respects this tension between objective existence and subjective awareness is the central issue (Clegg, 2002a). Is the ambiguity inherent to the nature of that which is being represented, or do existing interpretive frameworks constitute otherwise objective (un)ambiguity? Facing a world of ambiguity, people may create multiple sensemaking frameworks that are themselves complex and simple, ambiguous and clear, contradictory and logical, and stable and changing (Starbuck, 1988). The lack of perceptual recognition of different objectively existing forces at play in the strategic environment can impede necessary organisational transformation (Davis, Maranville, & Obloj, 1997).

Third, ambiguity may indicate uncertainty or confusion caused by ignorance, lack of information or simply by being unclear about any meaning (Levine, 1985; Martin & Meyerson, 1988; Sjöstrand, 1997). The experiences of employees of the Women's Bank in New York may serve as an example. They were confused about the ideological implications of working in this feminist institution, because trainers relied on individualistic explanations such as, "she's just not serious about wanting to work" to describe the trainees' "poor" or "unprofessional" performance due to sick children (Alvesson, 1993). This confusion found on the level of personal experience may be explained by consideration of different interpretations of the situation and contradictions between different ('objectively existing') cultural configurations (ibid.).

While information might reduce uncertainty and confusion, it may also support more than one interpretation. Ambiguity, thus, is not something that necessarily can be clarified by gathering additional facts (Feldman, 1991; Meyerson & Martin, 1987). Turning to the definition of paradox, some might hold ambiguity and paradox to be different phenomena, which involve different responses. I have taken the point of view that they are closely related and, in fact, overlapping concepts. Paradox may be seen as a subset of ambiguity. When two or more of the multiple interpretations are in opposition to each other, they may be referred to as paradox. This view can be found in several uses of paradoxes as examples in developing definitions of ambiguity (e.g. Meyerson & Martin, 1987).

Paradox may be defined as the mental presence of two or more contradictory ideas, assumptions or interpretations that are accepted and held to be true at the same time (Cameron & Quinn, 1988). When considered separately, either interpretation appears sound, but when considered jointly they are, or appear to be, contradictory and even mutually exclusive (Cameron & Quinn, 1988; Scott Poole & Van de Ven, 1989). But one need not choose one at the expense of another; this is the essential characteristic that distinguishes paradox from similar concepts like dilemma, conflict, etc. (Cameron & Quinn, 1988). Both poles of the paradox are accepted, present, and operate simultaneously. Among the many categories of paradox, we are concerned with pragmatic paradoxes, arising in self-reflection or communication between people about important events and their implications for individual

and collective welfare; rather than outgrowths of pure deductive reasoning or grammatical form (Ford & Backoff, 1988; Putnam, 1986). A most common example of paradox from the organisation and strategy domain is the simultaneous embrace of existent strategy and new strategic initiatives. Both at the individual and collective levels (e.g. in communication between different groups co-existing within an organisation), commitment to a special sense of organisational identity and mission must co-exist with new perspectives which inhibit the definition of new problems simply as variants of old problems (Cameron & Quinn, 1988).

The capability of effective strategic change

Three dimensions of the capability of effective strategic change make clear a few essential distinctions. First, the degree of change has to do with the level at which change takes place. Low level change is smaller modifications or incremental adaptations within a fixed structural framework, while high level change refers to discontinuous change in the structural framework itself (Argyris & Schön, 1978; Bartunek, 1984; Fiol & Lyles, 1985; Watzlawick, Weakland, & Fisch, 1974). In the former, adjustments may take place so that basically the same things can be done increasingly better. The latter implies a redefinition of basic worldviews, assumptions, values, and premises through which people understand themselves and their situation. Increasingly higher level change involves discontinuities in deeper and deeper level structural frameworks (Bradshaw-Camball & Murray, 1991; Frost & Egri, 1991).

Second, it is essential to note the difference between change in strategic cognition and change in strategic behaviour (Fiol & Lyles, 1985). The desired high-level capability of effective strategic change may be developed through changes in frames of reference (Shrivastava & Mitroff, 1983) or interpretive schemes (Bartunek, 1984) within which problems are formulated, without any large magnitude of change in strategic behaviour. Comprehensive change in power relations, patterns of resource endowments, core values, systems and processes, may take place later - incrementally or during a short period (Quinn & Voyer, 2003; Tushman & Romanelli, 1985). Continuous strategic learning may take place locally and in lower level frameworks, gradually building a momentum for higher level change in the underlying generation mechanism for corporate strategic behaviour (Kuwada, 1998; Dyck, 1997; Staber & Sydow, 2002).

The third dimension is the effectiveness of strategic change, a concept there is no agreement about because different organisational participants and scholars use incompatible and competing criteria to define what is effective (Cameron, 1986). To incorporate such problems of criteria dissonance and political conflict, I shall use the strategic constituencies model of effectiveness, which refers to the degree to which the interests of the organisation's internal and external stakeholders are realised (Cameron, 1986; Freeman, 1983). A pragmatic definition would easily narrow the stakeholder concept to include groups which are directly instrumental to an organisation's survival and goal achievement as defined by its top managers. However, my social responsibility approach entails a broader definition to include both the interests of society at large and the legitimate ethical claims of all those affected by an organisation's strategy (Mahoney, 1994; Burton & Dunn, 1996; Mitchell, Agle, & Wood, 1997). Effectiveness is thereby defined as inherently ambiguous and paradoxical, as different interest groups have at least some different and oppositional interests (Cameron, 1986). Other indicators of effectiveness - like profitability, competitive advantage, fulfilment of formal goals - should not be discounted, as they may often be necessary for the realisation of different stakeholder interests.

Developing the framework of responses

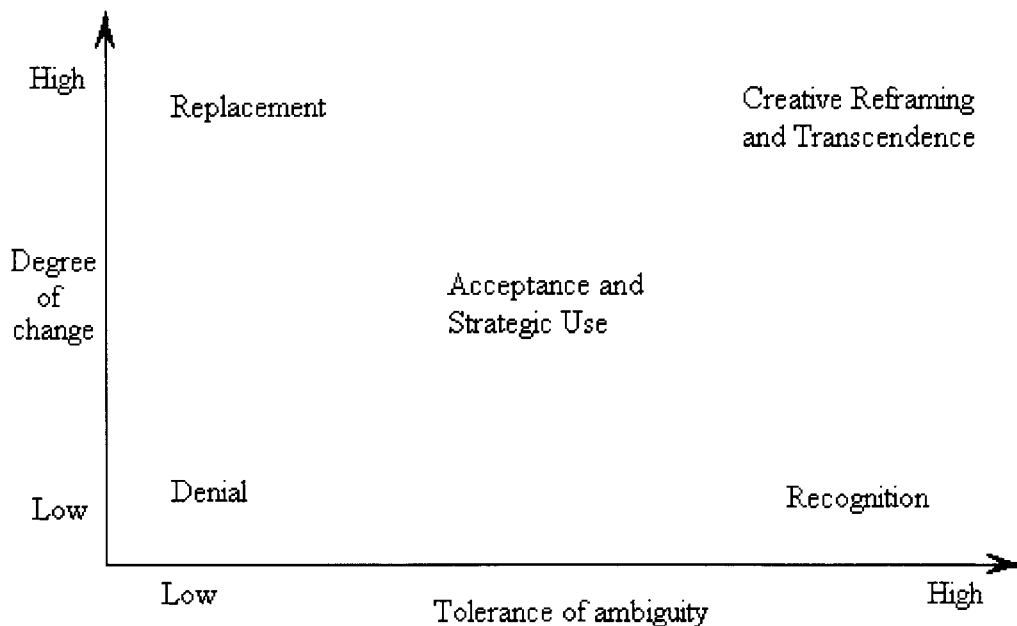
There is considerable evidence that people often react to ambiguity and paradox with displeasure and anxiety, and to avoid negative effects like action paralysis they often respond by denying their existence (Martin & Meyerson, 1988; Putnam, 1986). Such low tolerance of ambiguity is related to a simplistic view of the environment and lack of the insight necessary for adaptive functioning (Durrheim, 1988; Furnham & Ribchester, 1995). Accordingly, top managers have or should have the capacity to tolerate and even thrive on ambiguity (Bartunek, Gordon, & Weathersby, 1983; Isenberg, 1988; Jacques, 1978; Nutt, 1993b). A review of the literature reveals a range of responses to ambiguity and paradox, which may be utilised to build systematised frameworks.

The most well-known existing framework is perhaps the strategies of Scott Poole and Van de Ven (1989), who focused on making use of and resolving contradictions between different explanations of the same phenomenon in theory building. Recently, Lewis (2000) and Janssens and Steyaert (1999) have put forward frameworks of managerial responses. However, their emphasis on the recognition and balancing of paradox obfuscate the distinction between responses maintaining equilibrium and those contributing to change. Thus, the short treatment of Quinn and McGrath (1985), who were interested in how contradiction, tension, and paradox leads to organisational transformation, has perhaps been the most influential for my own approach. But they do not integrate the insight from explanations of power dynamics to illuminate how dominating meanings and meaning creation processes tend to maintain relative status quo. A critical influence thus come from Wood and Conrad (1983), who distinguished between three classes of responses according to the degree of change they would produce in negative double-bind interactional patterns faced by professional women. The degree of change must be an important dimension of any framework of responses in strategic change processes, together with the degree of tolerance of ambiguity and paradox. Building on the recognition that ambiguity and paradox may be related and overlapping phenomena, so that their responses may be similar and treated together, my own approach distinguishes between five different kinds of responses (figure 4). Those kinds of responses exhibiting higher degrees of both ambiguity tolerance and change may be thought of as responses at a higher level, as they involve qualitative changes in reflectivity and complexity and encompass or transform responses at the lower levels.

The first response, denial, indicates that one clear interpretation is accepted as true, while the existence of confusion or any other interpretation is denied (Quinn & McGrath, 1985; Putnam, 1986; Lewis, 2000). Denial is most often regarded as a problem, resulting from typical and often initial defensive reactions as individual cling to past understandings in order to avoid the anxiety involved in recognising the need for change (Lewis, 2000). It would be an oversimplification, however, to regard it only as a pathological individual response. At times denial would be beneficial for an organisation (Lyles & Thomas, 1988): if the firm already operate effectively in situations of long term stability, if it delays dealing with and avoids spending resources on something that becomes clearer or diminishes in importance over time, and if the firm is able to impose its interpretive frames on the environment (Porac & Rosa, 1996). The danger of denial includes lack of learning and procrastination about recognising the true nature of a really strategic problem. Further, it may involve sacrifice of opportunities to develop the capability of effective strategic change, which may be necessary even to survive in the future.

Recognition refers to the emergence of entirely new interpretations of some aspect of the

Figure 4. A framework of responses to ambiguity and paradox in strategic change processes.



strategic environment. "Shock - an experience that clearly violates a frame of reference - may force actors to admit the limits of extant understandings and practices" (Lewis, 2000). By reducing social strain humour and irony may also be devices that permit ambiguity to make its way into personal or social awareness (Hatch & Ehrlich, 1993). Often recognition would require the ability to resist the dispersal into defensive reactions and actions when leading on the limits of one's knowledge and resources, and stay in uncertainties, doubts, and distrust so that space is created for new perceptions, reflections, and thoughts (Simpson, French, & Harvey, 2002). The continual observation of the situation might perhaps be involved, through sensing and intuition mental functions without thinking and evaluation (Nutt, 1993b). Much tolerance of ambiguity may be required, and recognition may typically be regarded as a temporary state of confusion and uncertainty before new understandings are clarified or accepted.

Acceptance and strategic use is the acknowledgement of ambiguity and strategic behaviour within this acknowledgement (Eisenberg, 1984; Levine, 1985; Quinn & McGrath, 1985), which may facilitate some change and encourage innovation through shifting interpretations of central organisational symbols (Eisenberg, 1984; Meyerson, 1991a). The use of two or more incompatible theories to stimulate reflection and theory development may be a well-known example for academics (Scott Poole & Van de Ven, 1989), and most practitioners know the tension from both needs for top management authority and for decentralised autonomy and initiative (Clegg, Cunha, & Cunha, 2002). Within this level of response, two related pairs of opposite tendencies may pull the responses either backwards, in the direction of denial, or forward towards higher level responses: separation vs. integration and managerial control vs. political diversity.

Separation refers to the tendency to pull interpretations and contradictions apart, by removing or reducing the meaning and experience of tension from different realities and their relational context (Levine, 1985; Palmer & Dunford, 2002; Meyerson, 1991b; Quinn & McGrath, 1985;

Janssens & Steyaert, 1999). The result may be an alternation between different understandings, e.g. in a horizontal (sequencing) or vertical (layering) way (Janssens & Steyaert, 1999), which may increase effectiveness by building complexity into the organisation and create flexibility and freedom which is not present in totally linear systems (Janssens & Steyaert, 1999; Cameron, 1986). It may also lead to the fragmentation of knowledge and counterproductive bickering among proponents trapped between which of the suggested “truths” is “true” (Berg & Smith, 1990; Scott Poole & Van de Ven, 1988). The resolve of tension by shifting attention is usually regarded as less helpful than acknowledging the simultaneous presence of different understandings and working within this acknowledgement (Bartunek, Walsh, & Lacey, 2000). The implicit or explicit either - or adherence to one side of a paradox might involve the perpetuation of problematic conditions, lead to physical or psychological withdrawal, and dissolve social relationships (Wood & Conrad, 1983; Putnam, 1986).

More can often be gained by considering several interpretations together rather than separately. The mere recognition of their simultaneous presence and operation may provide advantages beyond flexibility and insight for how to live comfortably with organisational diversity (Meyerson, 1991a; Cameron, 1986). The realisation that paradox have to be sustained or endured may lead to preparation and some provisional strategy about how it should be managed (Clegg et al., 2002). Such acceptance may support a sense of freedom from tensions impeding extraordinary task performance (Lewis, 2000), and permit less than perfect social systems to continue functioning in the face of otherwise problematic conditions (Hatch & Ehrlich, 1993).

An even more dynamic way of dealing with ambiguity may develop from efforts to integrate different understandings. One method is to analyse the use of different or unclear meanings and specify how they may be said to relate to one another (Levine, 1985). A well-known analytical strategy is the explanation of contradictory forces at different levels or times of an organisation or society (Scott Poole & Van de Ven, 1988). A more practical way may involve facing up to and immersing oneself within the tensions and social relations of paradox, which can lead to the discovery of links between opposing forces, and thus learning about how to cope with or resolve them through practices or concepts which bring them together in some synthesis (Lewis, 2000; Clegg et al., 2002; Smith & Berg, 1987; Vince & Broussine, 1996). Such integration is more likely to be a momentarily and unfinished engagement rather than an eternal solution, and often anchored in and limited to the local context of actors (Schneider, 1990; Clegg et al., 2002). It is important to notice that integration may involve both the maintenance and the resolution of tension and paradox. Resolution may be possible in the reconciliation of different sides of convergent problems, while the amplification of contradictions in integration efforts with divergent problems may intensify pressures towards creative higher level responses (Cameron & Quinn, 1988).

Within this level of response remarkable advances may result from the resolution of paradox, but we must resist the temptation to equate effectiveness with responses that resolves and unites paradox (Cameron, 1986; Quinn & McGrath, 1985). The mere acknowledgement of the ambiguity and paradox of strategic change may capture the tangled web of political and market forces that confront an organisation and pull and push it from or toward its ideals and values (Nutt & Backoff, 1993). Strategic managers who deal with one of these forces and neglect the others are less apt to be successful; they may create a dangerous situation in which the barriers to action or opportunities posed by the unrecognised force are overlooked (Cameron, 1986; Nutt & Backoff, 1993; Sheremata, 2000). A variety of inherent paradoxes

have been identified as explanations for the emergence and effectiveness of innovations and new ventures in corporations (Cameron & Quinn, 1988). Empirical studies have found addressing multiple interests and simultaneously demonstrating contradictory attributes to be related to increased organisational effectiveness (Cameron, 1986; Greenley & Foxall, 1997). Increased customer service may reduce short term profits, but lead to long term financial benefits and increased social performance (Harrison & Freeman, 1999; Agle, Mitchell, & Sonnenfeld, 1999).

A closer look at the effective use of ambiguity and paradox may illuminate the related tension between managerial control and political diversity. To start with, ambiguity may be used in a relatively neutral manner in many ways, to facilitate the representation of rich social and personal realities in ways impossible by univocal communication, and to allow people to be more tactful and understand each other without jeopardising relationships (Eisenberg, 1984; Levine, 1985). It may also be a managerial and political necessity to engage in ambiguous communication in order to avoid conflict and confrontation; by using common symbols which may be interpreted differently by different stakeholders (Eisenberg, 1984; Levine, 1985). But the tension arise because strategic ambiguity can both enable collective action and participation, by inviting engagement in public discourse and mobilising supportive action, and unnecessarily disable and oppress actors by clouding interests and action possibilities (Forester, 1982; Eisenberg, 1984; Levine, 1985). Here the pluralist ambiguity-acknowledging perspective hopes to legitimise diversity in interests and interpretations, while the management orientation mostly seeks to bound ambiguity and control how such diversity influences organisational processes (Meyerson, 1991a; Putnam et al., 1996; Stoney & Winstanley, 2001).

The managerial perspective often emphasises that any conflict should be settled through managerial choice or political confrontation, resulting in a balance between the poles of a paradox, or the subordination of one or more of the competing positions (Quinn & McGrath, 1985; Janssens & Steyaert, 1999; Lewis, 2000; Clegg et al., 2002). A political perspective may also identify strategy as the partial resolve of conflicts between interest groups (Narayanan & Fahey, 1982), but it does not necessarily include any assumption that dominant groups like senior management who can win any confrontation, have legitimate monopoly over strategic decision making processes (Alvesson & Willmott, 1995). We must of course recognise practical limitations on the degree of diversity and participation feasible, in particular in for-profit organisations (*ibid.*), and that the absence of clear leadership of strategic change may lead to confusion which may strengthen the grip of management control without the appearance of it (Leana & Barry, 2000), but the centralised authority vs. decentralised participation paradox remains very real, with management often pushing towards the limitation of diversity and conflict.

The settlement and partial resolution of conflict, whether through explicit confrontation or not, may lead to replacement, i.e., large degree of change where the existing dominant interpretive frameworks behind strategic change are replaced by new ones (Quinn & McGrath, 1985; Meyerson & Martin, 1987). Replacement is traditionally the most common form of change in organisation culture studies (Meyerson & Martin, 1987). This may be due to both the prominence of the rational perspective, and the practical need to define one strong position in order to change (Lyles & Thomas, 1988). The process is often depicted as an unfreezing - change - refreezing stage sequence, where ambiguity may be temporarily acknowledged in explicitly examining and challenging old assumptions in light of new environmental information, while a deep-structure foundation of clarity and safety prevails

(Meyerson & Martin, 1987; Fiol, 2002). The dominant organisational coalition may experience such restructuring as a source of cognitive order, but it may often lead to long term cognitive disorder for others (McKinley & Scherer, 2000).

By keeping rather than resolving the interpretive confrontation, and emphasising dynamic connectedness in critically reflecting upon underlying issues and assumptions, a more dynamic approach may develop in which creative reframing and transcendence is made possible (Quinn & McGrath, 1985; Smith & Berg, 1987). For management the maintenance of tension might involve changing perceptions of disrespectful and unfounded 'resistance' into something more positive, motivated by individuals' ethical principles or by their desire to protect the organisation's best interests (Piderit, 2000). Subordinate participants may have to go beyond acknowledging present paradox, and confront it with the feeling that it needs to be overcome or altered (Hatch & Ehrlich, 1993). Intervention by third parties might be helpful in order to change the social relationships between parties or the reification of the conflicting oppositions (Janssens & Steyaert, 1999), so that the honest expression of ambivalence, and more subtle means of confrontation rather than determined opposition or firm support, can contribute to dialogue among actors with varied frames of reference to surface their divergent insight (Lewis, 2000; Piderit, 2000). Then by staying within and working through the feelings and thoughts associated with a paradox, a more accommodating perception may emerge in which opposites become viewed as complementary and interwoven (Lewis, 2000). Such efforts at integration, which initially amplifies ambiguity and permit people to enter some transitory and unstable state of mind, may lead to the move to a new and qualitatively different frame of reference which have the capacity to transform the meaning of the given interpretations.

We may distinguish between three different ways of reframing and transcendence, depending on whether this new frame of reference involves an outside perspective, higher level creativity, or an enlargement of the interpretive context and agenda. One form of reframing is the breakaway from the perspective present in the given interpretations and application of a fresh frame-of-reference which make sense of them in a qualitatively different way (Bartunek, 1988; Berg & Smith, 1990; Wood & Conrad, 1983). An example is the 'professional woman' who is subject to contradictory stereotypes, and steps outside masculine definitions of 'professionalism' to argue that hierarchical power relationships and competitive interactions is not professional, while many feminine qualities can contribute to both an individual's performance and an organisation's effectiveness (Wood & Conrad, 1983). She can force communication to occur within a new framework, and try to extricate herself and alter the dynamics of the situation, but such responses tend to address only singular communication episodes and they may intensify others' efforts to maintain the situation, which may impede long-term change of the situation (*ibid.*).

A more powerful form of reframing is the creative merger of present interpretations into a higher level alternative, where contradictions may become united and cease to be opposites (Quinn & McGrath, 1985; Putnam, 1986; Smith & Berg, 1987; Cameron & Quinn, 1988). For instance, while influence may previously have been framed in purely competitive terms where more influence to one position or actor results in less to the others, attention may be paid to the connections as well as the differences between the poles, and a creative metaframe may develop which makes sense of and partly resolves the paradox (Smith & Berg, 1987). Rather than perceiving authority as depriving others of a scarce commodity, which may result in the avoidance of power taking and feelings of powerlessness by individuals, and ultimately by the group as a whole, the dynamics of authorising may reveal conditions in which both

individual contributions can have an influence on the work of the group and the group can be influential within the larger system to which it belongs (ibid.).

Finally, transcendence refers to the transformation of meaning by enlarging the interpretive context and ideological agendas within which the given interpretations are understood (Wood & Conrad, 1983; Levine, 1985). The 'professional woman' may enlarge the concepts of womanhood and professionalism to contemporary ones which include a broader range of attributes so that there is no conflict (Wood & Conrad, 1983). A well-known theoretical example is the introduction of new concepts and a new logic which transcend the action vs. structure paradox in social science (Scott Poole & Van de Ven, 1989; Giddens, 1979). The American president Lyndon Johnson is known for having transcended the apparent paradox 'discrimination vs. absence of segregation' by transforming the understanding of non-discrimination from the mere absence of segregation to active efforts to promote the ability of all people to compete on even grounds in the American society (Wood & Conrad, 1983). The new frame of reference may transcend the conventional interpretations by breaking apart existing ideas and building new identifications with previously unrecognised references, thus reconceptualising given paradoxes as apparent inconsistencies rather than real contradictions (ibid.)

At this level the greatest advances may result, but it is important to note that radical changes also posit a much more visible challenge to existing frameworks and interests and contribute to an escalation of the stakes for all concerned (Cameron, 1986; Frost & Egri, 1991). The interests of all may be better served by responses aimed at stability and organisational survival. Another question is how much ambiguity an individual or an organisation should be exposed to. On the one hand, there is a practical reality of limited cognitive capacity and other managerial resources, and a need to acquire additional resources, which may lead to prioritising a limited set of stakeholders with power over the organisation from input resources and legal claims (Mitchell et al., 1997). Managing an organisation may be easier by framing the environment as more stable than it might be, and by changing it in a coherent direction by limiting the number of possible interpretations that should be admitted into the conversation. On the other hand, there is the empirical reality of dynamic and changing strategic environments with many parties that could affect or be affected by an organisation's strategy (ibid.). Developing transformational change alternatives to highly complex environments might yield very much needed improvements of the capability of effective strategic change (Meyerson, 1991a; Dyck, 1997; Kuwada, 1998; Staber & Sydow, 2002).

The state of affairs from the contributions of the academic strategy field may thus be ameliorated, by developing alternatives which approach broader social and ecological issues and deliver services beneficial to marginalised groups in society (Shrivastava, 1986; Alvesson & Willmott, 1995; Booth, 1998). The broader inclusion of stakeholder interests, which might be facilitated by greater tolerance of ambiguity and voluntary commitment to promote the welfare of others (Jackson, 2001), find support from several ethical approaches. One is the utilitarian wish to achieve "the greatest good for the greatest number", i.e. the maximum amount of social welfare, another the achievement of social consensus in dialogue between the firm and its constituencies, and still another the Rawlsian and feminist moral principles, where improving or at least not harming the welfare of the least advantaged and most vulnerable stakeholders is a precondition for taking care of responsibilities of other close and longstanding relationships (Logsdon & Yuthas, 1997; Burton & Dunn, 1996).

In conclusion, it is again important to recognise that these highest level responses may involve the reconciliation of paradox as well as its preservation. The maintenance of the meaning of apparent or real paradox from lower level efforts might be equally attractive and effective (Quinn & McGrath, 1985), e.g. in the form of a balance of different forces in some form of equilibrium at a higher level or system (Janssens & Steyaert, 1999; Ford & Ford, 1994). A higher tolerance of ambiguity may make more credible the maintenance of contradiction and tension (Riegel, 1973; Kegan, 1982). Exploring paradox can thus more easily continue in an ongoing and cyclical journey, as people remain in the paradoxical relationship while they reflectively uncover and specify other, potentially more appropriate, complex, and fundamental contradictions (Kramer, 1989; Lewis, 2000).

A short survey of theoretical explanations of responses to ambiguity and paradox

The responses to ambiguity and paradox are often explained by individual psychological theories. We may distinguish between psychodynamic and cognitive explanations. The psychodynamic perspective emphasises emotional reactions, while the cognitive focus on perception and thinking abilities in complex domains. Developmental psychologists often integrate emotional and cognitive dimensions, and they have widely accepted the early formulation that excessive emotional ambiguity (ambivalence) may become counteracted by denial of that ambivalence and consequent intolerance of cognitive ambiguity, resulting in a simplistic and maladaptive view of the environment (Levine, 1985). While ambiguity tolerance may also become extreme and lead to psychopathology, the low tolerance of emotional extremes seems to confine responses within the conventional and hamper personal development (Schneider, 1990). The healthy and creative increase of ambiguity tolerance seems to characterise the higher stages of cognitive development.

If the experienced ambiguity is higher than their tolerance level, actors may attempt to reduce the anxiety it evokes through defensive emotional reactions. These defensive reactions initially produce positive effects but eventually foster opposite and unintended consequences that intensify the underlying tension (Lewis, 2000). Two such unconscious defence mechanisms may illustrate the psychodynamic perspective. Splitting is the tendency to separate the world and the people inhabiting it into "good" and "bad" parts - those that act in accordance with the group members' needs and those who act against them (Kets de Vries & Miller, 1984). Projection ascribes to another person or group an attitude or quality that one possesses but rejects in oneself (ibid.). It is an attempt to keep the self conflict-free by "projecting" whatever is painful or dangerous from within onto another person or some part of reality (ibid.). In a strategic issue diagnosis process, a team of managers may come to split other organisation members into those for and against their favoured position, at the same time as they project any doubt they have among themselves onto those opposed to the change (Swanberg & O'Connor, 1995; Lewis, 2000). In order to bolster their own egos, those opposed to their change may become regarded as ignorant of its value, so that rather than listening to them, developing mutual understanding, and getting to the paradox and its underlying dynamics, they transform paradox into conflict and eventually intensify opposition (Smith & Berg, 1987; Lewis, 2000).

In order to escape paralysing denial, actors must reclaim emotions that have been polarised or projected elsewhere, and immerse themselves within the tensions (Smith & Berg, 1987). The "centric control" of even extreme psychic reactions, rather than dread of them, may be involved in the successful acknowledgement and exploration of paradox (Schneider, 1990). To bear the anxiety evoked in approaching the unknown, and resist the dispersion into

distracting patterns of emotional reactions, familiar explanations, and assertive action, a certain degree of humility may be required: "a capacity for empathy and even a certain flexibility of character, the ability to tolerate a loss of self and a loss of rationality by trusting in the capacity to recreate oneself in another character or another environment" (Simpson et al., 2002). Then the reinforcing cycles which inhibit recognition can be broken, and the limits of current understandings can be explored (Sundaramurthy & Lewis, 2003).

Another influential strand is cognitive theories, which often explain the denial of objective ambiguity and paradox by emphasising the stability of cognitive structures and the neglect of new information (Dutton & Jackson, 1987). Cognitive dissonance theory may also be used, maintaining that people often seek to avoid or reduce cognitive inconsistencies even if this reduces the potential for effective action, and accounting for both the neglect of new information and dynamics of replacement and alignment with the new after it has been recognised (Bacharach, Bamberger, & Sonnenstuhl, 1996; Nutt, 1993c). An important function of people's cognitive processing of information from their social context is the reduction of perceptions of uncertainty, which in ill-structured strategic issues often may involve an oversimplification of objective uncertainty (Kuvaas, 2002). However, cognitive theories may also be used to show that people's thinking may develop into more complex patterns permitting the recognition of complexity and ambiguity (*ibid.*). As people become more cognitively complex, i.e., develop the ability to perceive several dimensions in a stimulus array and develop complex connections among the differentiated characteristics, the probability increases that they would perceive events more accurately (Bartunek et al., 1983). They become increasingly able to empathise with others who hold conflicting views, to synthesise diverse perceptions and experiences more completely, and to act more effectively on the basis of perceptions of mutual interdependence and choices of sustainable commitments (*ibid.*).

The ability to understand complexly is dependent on the development of personality structures that constitute qualitatively different ways of understanding and organising experience (Bartunek et al., 1983; Nutt, 1993b). Other strands of development are as important as the cognitive, they include "the character and quality of ethical reasoning, capacities for introspection and self-awareness, capacities for understanding others and interpersonal relationships, and increasingly broad views of society and social issues" (Bartunek et al., 1983). Most developmental psychologists are of the opinion that there are one or more post-formal stages of thought, although there is no conclusive evidence if the higher developmental stages cannot be later parts of what is called a formal Piagetian stage.

Among the central features of post-formal, or post-conventional, thinking, is a new orientation to contradiction and paradox (Kegan, 1982; Basseches, 1980). Rather than having the experience of contradiction "happen to" them, mature individuals seek out contradiction (*ibid.*). They are not ultimately threatened by it, but also recognise their nourishment in it (*ibid.*). While the formal level, conventionally intelligent, person strives to resolve ambiguity because it interferes with optimal problem solving, for the mature and wise post-formal thinker it is something to be understood, appreciated, and treated as fundamental to the world and virtually all interactions with it (Sternberg, 1990). Their cognitive organisation thus not exists solely for the purpose of driving out or equilibrating contradictions. They are ready to live with them, and stronger, yet, accept contradictions as a basic property of thought and creativity (Riegel, 1973). Any concrete object has to be appreciated in its multitude of contradictory relations (*ibid.*). Any system has to be conceived in this larger context, where the relationship between systems is taken as prior to, and constitutive of, the systems

themselves (Kegan, 1982; Basseches, 1980). This orientation to the relationships between systems, not to one pole or another in a paradox but the dynamic tension between them, also involves an orientation toward movement from one system to another, and towards relationships of systems to the process of system construction or organisation (ibid.).

The process of problem finding emerging from this orientation seems particularly relevant for ambiguous strategic issue diagnosis. The typically ill-defined problems require a person to generate different frames of reference, which can then be developed into different ways of organising and asking questions about data from the domain in question, and also allow a person to question or challenge the assumptions upon which his or her knowledge is based (Yan & Arlin, 1995). Knowing "what one does not know" becomes vitally important, and increases the more one learns about a particular domain (Meacham, 1990; Arlin, 1990). It is wise to recognise and admit ones ignorance, and simultaneously with knowledge acquisition strive to construct new uncertainties, doubts, and questions about what can be known (ibid.). An understanding of how judgements can be made in the face of this ambiguity seems to mature in the later stages (Yan & Arlin, 1995; Kitchener, Lynch, Fischer, & Wood, 1993). The process of inquiry may draw on the profound wisdom of the age-related accumulation of information, experiences, and insights (Meacham, 1990), and use relativistic operations to relate, order, and select as more useful one of many mutually-contradictory but 'true' formal-operational systems (Cavanaugh, Kramer, Sinnott J. D., Cameron, & Markely, 1985; Sinnott, 1998), or dialectical thinking to coordinate and/or integrate multiple frames or systems (Basseches, 1980; Yan & Arlin, 1995), perhaps even before the level of formal operations has been fully developed (Riegel, 1973; Kramer, 1989).

It seems vitally important to integrate the higher stages of thinking into strategic problem formulation and the collective process of development of the capability of effective strategic change (Csikszentmihalyi & Rathunde, 1990). At the organisational level, however, several theories show that organisations may reduce rather than facilitate the high-level cognitive responses to ambiguity and paradox. Groups may often suppress the presence of opposition, conflict, and contradiction through mechanisms such as polarisation, ethnocentrism and social-comparison processes (Smith & Berg, 1987), biased cognitive attribution (Hewstone, 1989), and group-think dynamics (Janis, 1972). Various factors in formal organisations, like available written information, may condition individuals towards less conscious but more confident cognition (Dutton, 1993a; Kuvaas, 2002). Organisational constraints which make possible bounded rationality (March & Simon, 1958), and political processes (Pfeffer, 1981), may exclude other than dominant interpretations. In bureaucratic organisations, the ambiguity of power relations may activate and intensify unconscious defences in which authority relationships become perceived as clear and similar to earlier parent - child relations (Baum, 1987).

A focus on ambiguity and paradox do move us away from the concept of organisations as static and closed systems, toward a concept of open and continually dynamic systems (Ford & Backoff, 1988; Ford & Ford, 1994). Several organization and management theories have been developed in order to accommodate important paradoxes and illuminate how paradoxes might be handled (Bouchiki, 1998; Sjöstrand, 1997). Attention may be drawn to situations where organisational and social realities are largely indeterminate (Levine, 1985), like the so-called 'organised anarchies' (March & Olsen, 1976). "Many of these 'organised anarchies' exist in order to reflect the diversity of the multiple constituencies they represent. Thus, patterns of connection are diffuse, membership is fluid, and consensus is hard to come by. When it occurs, it often does so on one level (perhaps agreement on a policy) but not another

(how to implement the policy or why that policy is desirable). Action paralysis is often the norm (Brunsson, 1985), and when it is not, action is often generated without full comprehension or consensus concerning its meaning or intended effects (Starbuck, 1983)" (Martin & Meyerson, 1988). However, most organisational studies that focus on ambiguities, including those of culture research, explicitly or implicitly construct ambiguity as an abnormal condition to control, and in this pursuit of control and manageability, which conforms well to bureaucratic interests, ambiguities must be suppressed in favour of a dominant set of values, beliefs, and interpretations (Meyerson, 1991a).

While individuals may move sequentially from stage to stage in a unidirectional progression, moral and cognitive development in organisations may be far more complex (Logsdon & Yuthas, 1997). Investigations into cultural expectations and processes where different constituencies' interpretive frameworks should be integrated, may be among the more promising avenues for developing insights on barriers and facilitators of higher level organisational responses. As regards moral development, the higher-levels would involve a broader outlook toward organisational stakeholders, explanations of moral reasoning and value stances behind strategies and decisions, and the encouragement of ethical questions and objections in order to acknowledge what one does not yet know (Snell, 2000). This should include open dialogue to avoid the premature mobilisation of bias (Lukes, 1974), and other silence barriers to change and effectiveness in a pluralistic world (Morrison & Milliken, 2000). From different paradigms, this study shall explore in more depth the relation between organisational culture and unobtrusive power which maintain the security of established dominant interpretations. First, a short review of how the existing strategic issue diagnosis studies have succeeded in studying ambiguity and paradox from the established functionalist paradigm might be helpful.

The strategic issues diagnosis studies' functionalist responses to ambiguity and paradox

Denial and restricted recognition through simplifying social reality

The traditional way of thinking, using simplifying assumptions and values of linearity, consistency and narrowness, is recognised as inappropriate for explaining complex phenomena like ambiguity and paradox, and even leads to denying their existence (Cameron & Quinn, 1988; Levine, 1985; Meyerson, 1991a; Van de Ven, 1983). While the strategic issue diagnosis studies often emphasise the importance of the complex and emergent quality of the process (Dutton et al., 1983; Mintzberg et al., 1976; Lyles, 1981), they easily slide into a main emphasis of isolating variables and their covariation (Dutton, 1993b). To simplify models, more complex factors like social and political forces are often neglected or treated indirectly through their ties to such specific factors (Dutton, 1993a; Dutton & Ashford, 1993). Ambiguity may also be removed by reducing the important unique features of organisational culture and context to universal and broad categories (Dutton et al., 1989). When ambiguity is recognised, it is squeezed into another variable which can be scored on some scale and related to other variables (e.g. Highhouse, Paese, & Leatherberry, 1996; Lyles, 1987; Milliken, 1990).

There are a few important exceptions to this pattern, however. Following the early, explorative studies some do investigate complex and unique qualities of strategic issue diagnosis as the process evolves over time (i.e. Dutton, 1986; Dutton, 1988a; Dutton & Dukerich, 1991; El Sawy & Pauchant, 1988; Gioia & Thomas, 1996), also with interpretive

methods (i.e. Isabella, 1990; Nutt, 1998). Even in these laudable studies, the recognition of ambiguity and paradox might have continued to be limited by empiricism (i.e. Dutton & Dukerich, 1991; Gioia & Thomas, 1996), together with analytical goals of process stages distinguished by clear interpretations (also Isabella, 1990), or variable categories which can be used for statistical analysis (also Nutt, 1998).

The theoretical emphasis on the cognitive miser model from social psychology may also contribute, because it highlights strategic managers' attempts to reduce complexity rather than to absorb and internalise it (Child, 1997; Dutton, 1993a). Categorisation theory may, for instance, be used to indicate that ambiguous information is interpreted to conform to prototypical attributes, when information is missing by filling in the gaps and assuming consistency, and when available information is ambiguous by distorting information (i.e. Dutton & Jackson, 1987; see also Nutt, 1993a). The strategic issues diagnosis studies are thus quick to recommend strategic managers to recognise ambiguity, uncertainty, and paradox to avoid "solving the wrong problem": surface and explore the arbitrariness and consequences of assumptions; clarify, exchange, and resolve conflicting interpretations and interests; and utilise (or continue to utilise) more complex inquiry methods (e.g. Dutton et al., 1983; Lyles & Mitroff, 1980; Lyles, 1987; Lyles & Thomas, 1988; Nutt & Backoff, 1993; Thomas et al., 1989; Kuvaas, 2002).

Although the advice is well-reasoned, it would be better-founded if the strategic issue diagnosis researchers themselves followed their own advice and used more complex inquiry methods to recognise the extent to which strategic actors actually deal with ambiguity and paradox. Instead, they continue to follow institutionalised assumptions and methods that lead to radically simplifying their empirical domain (Bettis, 1991; Daft & Buenger, 1990; Hambrick, 1990; Lampel & Shapira, 1995). The ambiguous reality of strategic issue diagnosis is broken down into sets of clearly structured relationships or what Ackoff and his colleagues would describe as well-structured problems (Morgan, 1983a). Restrictive assumptions are not challenged or explored by using other paradigms. Thus, they seem to reduce the complexity of the phenomenon and focus on aspects of the problem that are familiar (Volkema, 1988). Further simplification may be facilitated by the managerialist bias which limit the "number of purposes served by problem statements" by restricting "the number of stakeholders or the extent of their involvement" (ibid.).

Management bias reducing diversity

The managerial orientation may lead to the suppression of much ambiguity in favour of a dominant set of values, beliefs, and interpretations (Meyerson, 1991a). An example is the functionalist view of communication as transmitting ideas and values, i.e. transporting "things", typically from an active manager to a passive and reactive receiver (Deetz, 1986; Morgan et al., 1983; Putnam et al., 1996). Effective communication is held to occur only when clear information and meanings are transferred from the sender to the receiver "with minimal errors" (Eisenberg, 1984; Putnam, 1983; Putnam et al., 1996). The ambiguity that might occur if the receiver actively interpreted the message in a way that differed from the sender's intentions, or if final meanings were allowed to be co-constructed, is conceptualised from the sender's point of view as 'poor communication' that should be removed (Eisenberg & Phillips, 1991; Westerlund & Sjöstrand, 1979). Communication may also be viewed from a pragmatic perspective in which ambiguity may be used intendedly to control the subordinate (Eisenberg & Phillips, 1991). Ambiguous expressions may thus be used to accomplish certain practical interests within the confines of existing managerial meanings, e.g. to avoid political

confrontation or jeopardising relationships, to invoke broad but passive quasi-participation in politics, and to elicit the creativity necessary to encourage innovation (Eisenberg, 1984; Levine, 1985; Meyerson, 1991a).

The most important consequence of the managerial orientation is perhaps to counteract the scientific ideal of variable regularities through emphasising relevance for practitioners. The recognition and strategic use of managerial ambiguity and paradox is thus vitally facilitated. In the strategic issue diagnosis studies, Gioia and Thomas (1996) paid attention to concrete process complexity and descriptively recognised the strategic use of a symbol to allow a variety of interpretations to co-exist and so manage political sensitivities (Dutton, 1993b). Nutt and Backoff (1993) not only recognised a little paradox but normatively argued that strategic issues should be treated as paradoxes, to raise consciousness about underlying difficulties and that a more balanced perspective dealing with both sides of a paradox should be taken; they also suggested that this might result in creative thinking. El Sawy and Pauchant (1988) focused on frame of reference shifts and theoretically acknowledged the underlying creative dynamics of tensions and conflicting processes between competing frames.

The management orientation has also restricted the recognition and use of ambiguity and paradox. First, there is an over-emphasis on the viewpoints of top managers and managers at the expense of other groups, because they are assumed to serve the most significant cognitive function (e.g. Lyles, 1987; Lyles & Thomas, 1988; Thomas et al., 1989). Haukedal (Haukedal, 1994; Haukedal & Grønhaug, 1994), for instance, removes ambiguity and paradox from the interpretation of the strategic situation, by defining complexity as the sheer quantity of information and locating ambiguity in a later phase, thus ascertaining that the open-endedness and creative potential of novel issues is appropriately reduced by managers, who are defined as responsible for diagnosing the strategic situation itself. Second, the implication of any recognised pluralism and political nature of the process is that it needs to be carefully managed by top executives (e.g. Dutton et al., 1983; Jackson, 1992). Positive views of participation and pluralism in participants' beliefs and values may sometimes be suggested (e.g. Dutton, 1993b; Milliken, 1990), but the implication is often that top managers should pick participants who possess dissimilar task related skills and knowledge rather than different values and interests (e.g. Jackson, 1992). Third, the managerial orientation is evident in the communication of the meaning of strategic issues to other organisational participants who have not been active in strategic issues diagnosis (e.g. Isabella, 1990; Thomas et al., 1993). Managers are advised to actively and selectively transfer certain meanings to the rest of the organisation, using language labels to set into place predictable cognitive and motivational processes so that meaning is manipulated and organisational responses controlled (Dutton & Jackson, 1987). In this way the transmission view of communication serves to reduce the ambiguity and paradox potentially drawn on to understand strategic issues.

Conservatism and neglect of fundamental-change-facilitating contradictions

The final reasons that I think the functionalist paradigm is less than perfect in handling ambiguity and paradox arise from the assumption of a relative stable social reality which makes for a conservative orientation (Burrell & Morgan, 1979; Putnam, 1983). The emphasis on the social unity and cohesiveness underlying stability often leads to the denial or minimisation of ambiguity and paradox, but sometimes to an emphasis on them as necessary elements in building consensus and social order, mostly seeking a balance through democratic

and result-oriented debate within the existing authoritative structures (Nemetz & Christensen, 1996). Thus, a few strategic issue diagnosis studies acknowledge the use of ambiguity and paradox to promote unity and managerial control (i.e. Dutton, 1993b; Gioia & Thomas, 1996), to enhance flexibility and adaptiveness to incremental change (i.e. Gioia & Thomas, 1996; Nutt & Backoff, 1993), and to facilitate reframing and creativity within the interpretive boundaries of existing strategic managers or experts (i.e. El Sawy & Pauchant, 1988; Nutt & Backoff, 1993).

Both objectivism and managerialism may contribute to exclude the more fundamental change producing contradictions from our view. The emphasis on concrete realities which can be accurately observed tends to attend to only superficial and familiar concerns of a complex and changing social reality, which is then responded to in ways where tradition is favoured over innovation (Lampel & Shapira, 1995). Threats to the established dominant coalition may be thwarted by a dynamic strategy of confrontation and conquest between dominant ambiguity and paradox which removes radical interpretations (Meyerson, 1991a; Quinn & McGrath, 1985). In strategic issues diagnosis studies these tendencies are most obvious and consequential in the narrow attention paid to the politics of the process. The few studies that focus on politics (e.g. Dutton & Ashford, 1993) make use of just the "strategic contingency" concept of power (Hickson, Hinings, Lee, Schneck, & Pennings, 1971), which defines politics as observable conflict between active parties over clearly defined issues (Bradshaw-Camball & Murray, 1991; Clegg, 1989; Conrad, 1983; Gaventa, 1980; Hardy, 1995). Surface, but presumed 'objective', interpretations of stakeholders, interests, amounts of power, and issue conceptions, reduce ambiguity and paradox by ignoring oppressed interpretations and the underlying contradictions that might lead to radical change. As a consequence, liberation and change may be ostensibly favoured while management control and the established meanings are implicitly strengthened; through the tendency to eliminate the basic conditions - pluralism and the associated conflicts of values and interests - for facilitating the active individual and social process of emotional and cognitive struggle for freedom and awareness of choice through the recognition and constructive use of ambiguity and paradox (Abravanel, 1983; Dutton, 1993a; Willmott, 1993).

Making power unobtrusive

The explicit use of the concept of power is often avoided in the functionalist paradigm. Instead one prefers to use a pragmatic approach presumed to be neutral and apolitical by focusing on the intended rationality of managers having formal and legitimate authority within existing and legitimate organisational arrangements to secure the effective functioning and survival of these arrangements (Burrell & Morgan, 1979; Bradshaw-Camball & Murray, 1991). In this view the concept of power is only used implicitly as a neutral resource used by managers to bring about organisational goals (Hardy, 1995). The rational management bias can also be discerned when the concept of power is explicitly used: the focus is on powerful actors and power has rational and positive connotations as it is seen as functional for getting things done, adapting to external demands, and handling interdependence (Brown, 1986; Pfeffer, 1981).

Within a 'resource dependency' or 'strategic contingency' framework, power is viewed as the inverse of dependence and related to the control of resources which are important for reducing the internal and external uncertainty threatening the survival and effective functioning of an organisation (Emerson, 1962; Hickson et al., 1971; Pfeffer & Salancik, 1978; Mechanic,

1962; Brass & Burkhardt, 1993). "Strategically contingent sub-units are the most powerful, because they are the least dependent on other sub-units and can cope with the greatest systemic uncertainty, given that the sub-unit is central to the organisation system and not easily substitutable" (Hardy & Clegg, 1996). Power is viewed as first and foremost a structural phenomenon, and researchers have developed lists of resources that are sources of power: information, expertise, credibility, control of rewards and sanctions, etc. The possession of scarce resources has not been seen as enough in itself however, "actors have to be aware of their contextual pertinence and control and use them accordingly" (ibid., citing Pettigrew, 1973). The ability to use and accumulate important resources is included among the sources of power.

In this perspective, power as control of uncertainty reducing resources is viewed as an objective reality which is relatively straight-forward and widely understood by looking at who prevails in overt and observable conflicts over the resolution of well-defined key issues (Gaventa, 1980; Bradshaw-Camball & Murray, 1991). The focus is on surface level phenomena, and it is assumed that actors are knowledgeable of the resources that are sources of power, of key actors, and of their amounts of power; that actors have well-defined identities and interests; and that they engage in concrete, intentional, focused and conscious activities intended to resolve conflicts about issue conceptions and decision outcomes (Bradshaw-Camball & Murray, 1991; Conrad, 1983). Power is often defined by explicitly linking it to situations of conflict that arise when groups and individuals seek to preserve their interests, evoking the idea of a 'fair fight' where one group (usually senior management) is forced to use power to defeat conflict and overcome the opposition of another (Hardy, 1995).

While powerful actors are knowledgeable of power and its use, information manipulation and 'management of meaning' are resources used to define and legitimate the reality of power by creating confusion for and submission of less powerful actors. For example, illusions created by information manipulation serve to create in the minds of other actors a great sense of uncertainty, coupled with the further message that the top administrative group are the only ones who have a clear picture of what is going to happen and how it should be dealt with (Bradshaw-Camball & Murray, 1991). Edelman (1964) pointed out that "power is mobilised not only to achieve physical outcomes, but also to give those outcomes meanings - to legitimise and justify them", and Pfeffer (1981) followed and argued that "there is only a weak relationship between symbolic aspects of power and substantive outcomes ... symbolic power is only used post hoc to legitimise outcomes already achieved by resource dependencies" (Hardy & Clegg, 1996). Thus, politics concerns the creation of legitimacy for one's own ideas, values and demands at the expense of those of others, through a process of symbol construction and value use (ibid., referring to Pettigrew, 1977). The functionalist view of culture and communication as neutral tools for effectively transferring information and meaning to passive receivers, ensures that "the interests of senior managers are taken for granted, and opposition is, often, ignored altogether, or dismissed as a simple result of inadequate communication" (Hardy, 1995).

By rarely allowing the assumptions of its managerial orientation to power to be articulated, and much less criticised, the mainstream functionalist paradigm has developed an apparently pragmatic concept, easy to use but also easy to abuse (Hardy & Clegg, 1996). Power is studied within an established structure of formal, legitimate and functional authority; that is, while the power of formal managers was labelled legitimate 'authority', 'power' was illegitimate and dysfunctional resistance toward this authority (ibid.). Managerial interests are equated with organisational goals, while any challenge by other groups are seen as an attempt

at advance of self interests at the expense of organisational needs (Hardy, 1995). One consequence of the widespread, if implicit, acceptance of the hierarchical nature of power has been that social scientists have rarely felt it necessary to explain why it is that power should be hierarchical; this has been viewed as normal and inevitable (Hardy & Clegg, 1996). In this context, the insightful analysis of power as rational dependence on actors who control uncertainty reducing resources "breaks easily down into a technocratic effort to reduce irrational bases of resistance to authority" (Benson, 1977).

Studying power within a given structure of dominance focuses only on surface politics and misrepresents the balance of power: it attributes far too much power to subordinate groups who are chastised for using it, while the hidden ways powerful actors use power behind the scenes to further their position are conveniently excluded from analysis (Hardy, 1995). For example, the effective use of symbolic power only takes place to 'quiet' opposition *ex post*, that it can be used to prevent conflict and opposition from arising in the first place is not acknowledged (Hardy & Clegg, 1996). In this way, "potential abuses of power by dominant groups are downplayed, while those who challenge managerial prerogatives are automatically discredited by the label 'political'", and "ethical issues associated with the use of power are shielded from view, rendering this approach ill-equipped to deal with matters of abuse and exploitation" (*ibid.*). Ethical critiques also follows from limiting the attention to overt conflict. The wider context within which conflict takes place is thereby excluded from our view, and, thus, the outcomes of political processes are confined to outcomes of present and clearly identifiable actors, the results for parties not involved in the conflict, such the whole society, are easily excluded from our view (Bradshaw-Camball & Murray, 1991).

An ideologically conservative picture that implicitly advocates the status quo is painted by hiding the processes whereby organisational elites maintain their dominance (Alvesson, 1984; Hardy & Clegg, 1996). An artificial stability is imposed on power also on methodological grounds (Conrad, 1983): research is primarily focused on the characteristics of powerful members, units or coalitions of organisations, assumes that they have attributes that increase their control of resources and influence over other actors in a variety of situations, and makes observations of behaviour and outcomes of overt conflict processes and attribute these observations to such stable factors. Thereby the conditions, actions and communicative processes through which power relationships are established, maintained, modified and transformed, as well as legitimised, are de-emphasised and obscured (*ibid.*). When traditional theorists equate power with overt conflict and submerge the processes of forming and transforming power into static typologies, they also lose sight of the human actors (*ibid.*). The human capacity of conscious thinking leading to free and rational choice only exists within the limits of an environment of objectively given uncertainty and resources which shapes or determines the actions of rational subjects.

2.2. The New Cultural Paradigms Necessary

In this section the new cultural paradigms will be presented, and it will be demonstrated that they are able to remedy some of the shortcomings of the functionalist studies in investigating ambiguity, paradox, and power. The *interpretive paradigm* focuses on the social construction of reality. Its emphasis on understanding the organisational members' own understanding of strategic issue diagnosis leads to acknowledging uniqueness and the diversity of multiple groups' viewpoints and interests. Complexity and ambiguity may thus be better understood, as well as somewhat deeper and broader political processes. More change is allowed, although relative stability is still favoured. The *realist paradigm* allows for substantially more complexity and depth of causal explanation than the functionalist does, and the contributions of earlier studies are therefore incorporated within the context of this paradigm. The *critical paradigm* focuses on deep power structures that favour dominant groups and interests and stabilise the established social reality. The managerial bias of the present studies should therefore be counterbalanced by this paradigm's critique of dominant power, and their implicit favour of status quo by its explicit preference for fundamental change.

2.1.1 The interpretive cultural paradigm

Focusing on the social construction of reality

While the functionalists may lose some sight of the human actors' consciously constructing their realities through communication, the interpretive paradigm focuses on these processes of social construction of reality. Interpretative researchers are motivated by a desire to understand how individuals make sense of experienced events, situations, etc., and how they come to define adequately shared interpretations so that meaningful decisions can be made and action taken (Morgan et al., 1983; Stablein & Nord, 1985; Smircich, 1983b). By focusing on why and how shared meaning exists, the social world is given a much less concrete status (Putnam, 1983; Smircich, 1983b). It is not just assumed to have an 'objective', independent existence that imposes itself on human beings, but exists mainly as a pattern of symbolic relationships and meanings created and sustained through ongoing interpretive processes (Smircich, 1983b; Morgan et al., 1983; Berger & Luckmann, 1967). In these ongoing interpretive processes, individuals are assumed to interact and communicate with a sense of free will and choice, thus, they have a critical role in shaping environmental and organisational realities (Putnam, 1983).

Basic to the processes of sense making and interpretation are the symbols used to communicate about events and situations. Communication is seen as a basic and ongoing process of creation, maintenance and transformation of meanings, rather than a channel for transmitting existing meaning (Putnam et al., 1996; Putnam, 1983). In this process, symbols are not taken as cultural artifacts, carriers of meaning, or simply reflections of existing meanings, but instead as the essential symptoms and media for creating, maintaining and transforming meanings (Putnam, 1983; Morgan et al., 1983). They are "generative processes that yield and shape meanings and that are fundamental to the very existence of organisation" (Smircich, 1983b). Interpretive research, then, focuses on the established meanings embodied in these symbols as well as on the communicative interactions that create, maintain and alter them (Putnam, 1983; Morgan et al., 1983).

A symbol is defined as something more than simply a sign. As a carrier of meaning, a sign indicate or signify a relationship to the meaning of which it is a representation (Dandridge, 1983; Morgan et al., 1983). Symbols go beyond this static function, as they also suggest other patterns of meaning and must be interpreted as part of a much wider symbolic whole (Dandridge, 1983; Morgan et al., 1983; Alvesson, 1991). "All symbols are created subjectively and are invested with a particular kind of symbolic meaning" (Morgan et al., 1983). To be endowed with its full meaning and significance, a symbol "calls for the association of certain conscious or unconscious ideas", and "other patterns of suggestion and meaning are "thrown upon" or "put together" with" it (ibid.). Thus, symbols "actively elicit the internal experience of meanings" and "help to translate an unconscious or intuitively known internal world of feelings into the comprehensible terms of our visible reality" (Dandridge, 1983). Symbols are complex signs in that they always suggest something more, for instance political interpretations rooted in historical and cultural significance (Putnam et al., 1996)

This view of symbols entails a focus beyond surface meanings in the immediate context. Interpretive researchers become more attuned to the implicit and tacit dimensions of culture, more aware of the need to reveal what informants know but can not articulate in any easy way (Altheide & Johnson, 1994). This tacit knowledge includes "what actors know, take for granted, and leave unexplicated in specific situations, things that may have been "learned" in some formal or semiformal sense at some earlier time, both substantively and procedurally. Tacit knowledge may include deep structures from the emotional memory of past generations, enabling responses and actions deeply ingrained in human emotional and physical survival" (Altheide & Johnson, 1994). Interpretive researchers also transcends surface meanings by deriving insights from underlying interpretations embedded in the larger set of historical events and power relationships (Putnam, 1983).

The emphasis on individuals own subjective experience leads to a recognition of unique characteristics of culture and social reality (Smircich, 1983a; Louis, 1983; Pettigrew, 1979; Schein, 1992). In formulating interpretations that account for the way that subjective meanings are created and sustained, interpretivists study a full range of (circular and reciprocal) causes and focus on those that emerge as significant in a particular situation (Putnam, 1983). Researchers focus on how understanding is established in a specific situation so that particular decisions can be made and concrete actions taken (Stablein & Nord, 1985). The emphasis on individuals own subjective experience also leads to a recognition of multiple groups and viewpoints present in a particular situation. Interpretive researchers are more likely to "adopt a pluralistic perspective by treating the organisation as an array of factionalised groups with diverse purposes and goals" (Putnam, 1983).

The process of social construction thus points toward a more complex and dynamic social reality. Symbols may, for instance, provide a bridge between the familiar and the strange and foster a sense of continuity while simultaneously facilitating change, by concealing threatening aspects within the camouflage of the known, yet revealing aspects that emphasise difference in terms that echo the familiar (Pondy, 1983; Gioia, Thomas, Clark, & Chittipeddi, 1994). Further, when sense is made of proposed changes or other events, people account for influence relationships in ascribing meaning to the situation (Gioia et al., 1994). Such influence in organisations is often more covert than overt; it is likely to be subtle, i.e., couched in symbols, because powerholders seldom flaunt their influence ability (ibid., referring to Frost, 1987). By focusing on such practical matters as how to influence interpretations of a changing situation so that decisions and action become possible,

interpretative researchers have much in common with organisational leaders (Smircich, 1983b). However, while not necessarily immune to a managerial bias, they are more likely to incorporate also other viewpoints (Putnam, 1983). Nevertheless, with the focus on understanding the construction of organisational reality as it is, without passing judgement, evaluating potential harms, or questioning its potential, interpretivists accept and implicitly promote relative social stability and the established dominant interest groups (ibid.).

To better understand the implications of these social constructionist assumptions, I shall now focus on how the interpretive paradigm treats, first, paradox and ambiguity, and, then, unobtrusive power, with a view for the consequences for the potential for effective strategic change.

Ambiguity and paradox

The emphasis on individuals own subjective experience leads to the recognition of the diversity of multiple groups and viewpoints present in unique situations. Interpretive researchers are therefore more likely to "adopt a pluralistic perspective by treating the organisation as an array of factionalised groups with diverse purposes and goals" (Putnam, 1983). Further, ambiguity is easier acknowledged than in the functionalistic paradigm because of culture's less concrete status. A complex and fluid social reality is assumed with the emphasis on studying the creation and transformation as well as the maintenance of meaning systems (ibid.). The definition of symbols as inherently ambiguous allows for the capture and expression of this richness of reality (Levine, 1985). For instance, ambiguous communication can allude to shared experiences and sentiments and evoke a wide array of underlying cognitive and affective responses (ibid.). The replacement of the transmission view of communication might lead to more understanding of richer modes of communication with more contact and dialogue between human beings.

The practical interests related to an understanding of ambiguous communication become less attuned to the need to manage ambiguity, and more responsive to the universal human need to learn how to live comfortably with it (Meyerson, 1991a). It can provide helpful insight for organisations that want to live comfortably with diverse types of people without suppressing this diversity (ibid.). However, other political and managerial interests are also in the interpretive paradigm related to the acknowledgement and understanding of ambiguity. "As a political position, this ambiguity-acknowledging perspective hopes to legitimise diversity in interpretations, beliefs, and interests and challenge forces that seek to value one set of interests, interpretations, and beliefs while suppressing others" (ibid.). Instead of being used to pursue dominant managerial meanings, the strategic use of ambiguity may be more of an organisational and political necessity because it fosters multiple viewpoints or allows for multiple interpretations to co-exist among different constituents groups who contend that they are attending to the same clear communications (Eisenberg, 1984). Reducing the need to compromise or subordinate meanings allows for the true diversity of paradox to prevail, and, thus, facilitates conditions that may be conducive to effectiveness as well as strategic change (Quinn & McGrath, 1985).

The strategic use of ambiguity may facilitate change through shifting interpretations of organisational goals and other central symbols rather than being confined within given interpretations (Eisenberg, 1984). Any change must make sense in a way that relates to previous understanding and experience, and symbols may be key to this process in part

because their inherent ambiguity provides a bridge between the familiar and the change (Gioia et al., 1994). Further, creativity may also be fostered without being confined within given conditional interpretations. For instance, spontaneous humour may create awareness of paradox and ambiguity which permit people to "break away from routine 'single-plane' thinking to 'a double-minded transitory state of unstable equilibrium' where thought and emotion are disturbed" (Hatch & Ehrlich, 1993). Similarly, ironic remarks and humour may cause breakaways from historical frames through reversals in meanings, and provide organisational members with an opportunity to confront social reality with the application of a really fresh frame-of-reference (Hatch & Ehrlich, 1993; Putnam et al., 1996). However, the enjoyment of humour and use of other symbols may permit the recognition of paradox and ambiguity without loss of social balance (Hatch & Ehrlich, 1993). Even fundamental contradictions might be confronted without feeling the need to overcome or alter them, thus contributing to the maintenance of problematic conditions by removing them from the domain of serious discourse (ibid.).

The interpretive paradigm, while perhaps more change conducive than the functionalistic, still implicitly promotes a relative stable social reality. To better understand why the effective strategic change potential of ambiguity and paradox may become diminished it might be useful to locate this discussion within the interpretive paradigm's view of power and politics.

More unobtrusive power

Regarding power and politics, the interpretive perspective assumes that parties exert influence by constructing the meaning of what others experience (Bradshaw-Camball & Murray, 1991). Definitions of actors, identities, issues, bases and amounts of power are not taken for granted but open to social construction and interpretation by the involved parties (Bradshaw-Camball & Murray, 1991). Rather than submerging the processes of forming and transforming power into static typologies, attention become focused on the processes where human actors construct the reality of power relationships; thus, human actors are assumed to be active, thinking people whose choices about how to act are influenced by a complex, ongoing and everchanging matrix of considerations (Conrad, 1983). The interpretive focus on the process tends to uncover several individuals and groups with diverse purposes and goals, thus, a pluralistic perspective will more likely be adopted and one is less vulnerable to embrace just managerial viewpoints and interests (Putnam, 1983).

As actors both intentionally and unintentionally structure reality for others, by means like for instance language, metaphor, symbolic behaviour, myths and humour, a deeper structure of power comes into view; power emerges as a result of meanings and interpretations that flow from symbols which are embedded at a somewhat deeper structural level (Bradshaw-Camball & Murray, 1991). While the role of cultural symbols in creating and changing surface social reality is acknowledged, the more stable underlying reality explain status-quo and the taken-for-granted nature of organisational culture and power relationships (ibid.).

In this way, organisational culture supports the established power relations. The interpretive approach adds to the conventional power resources those of a 'mobilisation of bias', that is, "a set of predominant cultural values, beliefs, rituals, and institutional procedures ('rules of the game') that operate systematically and consistently to the benefit of certain persons and groups at the expense of others" (Bachrach & Baratz, 1970; Gaventa, 1980). The implicitly accepted and undisputed practices works to bias the political process in such a way that

certain issues are excluded from decision-making, confining the agenda to 'safe' questions (Bachrach & Baratz, 1962; Giddens, 1979). In this process, termed 'non-decision making', decisions are made about suppressing or thwarting latent or manifest challenges to the values or interests of the decision makers before they are voiced or have got access to the overt decision making arena (Bachrach & Baratz, 1962). Thus, by using this approach one is able to perceive and study how the mobilisation of cultural bias allows the more powerful actors to influence the processes and determine outcomes from behind the scenes (Hardy & Clegg, 1996).

While the interpretive paradigm is able to describe and understand that power is established and used in this unobtrusive way, it does not question this process or evaluate how it could or should be (Putnam, 1983). Further, the idea of 'non-decision making' is only a partial and inadequate way of analysing how power is structured into institutions, because non-decision making is still basically regarded as a property of agents, rather than of social institutions (Giddens, 1979). The attention is still focused on actions in observable conflict, though covert and more deeply embedded actions and conflicts. The idea that power exists, and becomes exercised and maintained through the inaction of the less powerful is still excluded from our view (Lukes, 1974). Interests are still to be understood as largely subjective preferences, expressed, revealed and constructed overtly or covertly by individuals or groups acting within or outside the political system (*ibid.*). The interpretive paradigm does not adequately address that interests might be unarticulated or unobservable; that people might actually be mistaken about, or unaware of, their own interests; that the very definition of interests may become shaped by the language games of the powerful; and the value of the current structure of power relations, their potential for change, and it does not question how they could change given the stable and unconscious nature of the dynamics (Lukes, 1974; Bradshaw-Camball & Murray, 1991; Putnam, 1983).

2.2.2 The realist cultural paradigm

There is more than one version of the realist paradigm, according to the significance given to social structures on the one side or autonomous human action on the other. In this section, I shall use the largely determinist version, other versions are closer to the integrative perspective in section 2.3 (Outhwaite, 1983; Outhwaite, 1987). In the realist paradigm, then, emphasis is laid on social structures which are understood to be pre-existent and capable of relative independence from human thought and action (Layder, 1990; Porter, 1993), and purposive human action is theorised as causally determined by social and individual structures in a way parallel to the interaction of causal mechanisms in nature (Outhwaite, 1983).

The realist and the functionalist paradigm are similar regarding the emphasis on causal explanation, they differ, however, in their view of the nature of social reality and the way it is causally determined. The realist paradigm takes issue with functionalism for collapsing within the category of experience three ontologically distinct levels of social reality (Marsden, 1993; Bhaskar, 1978; Collier, 1994). First, the ontology of realism is distinguished by its acceptance of an unobservable real domain, which consists of underlying structures which have the causal power to generate the observable social phenomena or events. The second domain, the actual, consists of phenomena or events which in principle can be observed, while the third domain is the empirical, which consists of experiences, of phenomena or events as they are co-created and observed by the researcher. "These three levels of reality are interrelated, but distinct and irreducible: structures can exist but counteract and so produce no actual events, and events can occur without being experienced" (Marsden, 1993). "Thus, "the empirical is only a subset of the actual, which is itself a subset of the real"" (ibid., quoting Bhaskar).

"This ontology turns on its head the conventional primacy of the empirical. Since observation is conceptually mediated, the empirical is tenuous, subject to reinterpretation and expands with our knowledge" (Marsden, 1993). The primary object of science, then, is not the empirical patterns of events but the real entities that generate them (ibid.). Thus, "causal explanation is not about the deterministic or stochastic association of patterns of events, nor about experiences, but the ascription of causal power to objects" (Tsoukas, 1989). In realism, 'cause' is defined as an object's capacity or potentiality to act, this power is intrinsic to its internal structures and mechanisms, and exists independently of its exercise and of experiences of constant conjunctions among events (Marsden, 1993). "Causal powers can be possessed unexercised, exercised unrealised and realised unperceived" (ibid., referring to Bhaskar). The ascription of causal power, then, involves to specify what an entity or structure "is capable of doing in the appropriate set of circumstances" (Tsoukas, 1989).

Realism's refutation of the constant conjunction model of causality and the primacy of the empirical entails rejection of the functionalist view of theory, "the deductive-nomological model of explanation, and the related belief that prediction and explanation are symmetrical" (Marsden, 1993). The constant conjunction notion of causality stresses that the regular conjunctions of empirical events (or statistical covariation between variables) "may be a necessary prerequisite for the establishment of theories", though "they are not to be confused with systematic theory itself", which "consists of sets of logically interrelated propositions from which can be deduced empirically testable hypotheses" and predicted future events (Layder, 1990). The functionalist view of theory renders problematic the status of theoretical terms, however, because it is not possible to decide upon their truth or falsity by 'direct' observational means (Layder, 1990; Keat & Urry, 1982). The resolution to this problem is

typically made by demanding correspondence between theoretical and observational terms, that is, any theoretical term must be 'operationalised' or at least ultimately be translatable into empirical terms (Layder, 1990). This notion of correspondence effectively narrows down the meaning and role of theory to the logical organisation or conceptual depiction of observed regularities (ibid.).

Realist theorising, in contrast, "reasons 'retrodictively' from empirical appearances to underlying essences or structures: what mechanisms would have to exist for the empirical world to appear in the form it does" (Marsden, 1993; Sayer, 1992). Theorising is done "by making 'real' (as opposed to nominal) definitions, i.e., statements with ontological commitments which describe the basic nature of the entity or structure" (Marsden, 1993). "Realism's concern is with the intrinsic nature of objects, their properties, dispositions and capacities to act" (ibid.). The favoured abstractions are "not generalisations from the empirical, nor concepts under which similar categories of events are grouped", but attempts to define the basic nature of social structures so that one can hypothesise on its causal powers, "i.e., what it has done, can do, and may do" (ibid.). 'Correspondence rules' refers not to the formal relations between observational and theoretical terms, as in positivism, but to "the causal relations between these real entities and their forms of appearance" (Marsden, 1993; Keat & Urry, 1982). This view of theory, in which the purpose is to map real relations rather than simply provide a framework for ordering facts, emphasises conceptual precision: "precision in meaning rather than accuracy of measurement is the arbiter of theory" (Marsden, 1993). The realist model of the theory-reality relation are treated in more detail in paragraph 3.1, together with its methodological consequences.

Regarding the model of causality, some realists want to preserve the positivist punctuated linear-chain model, not in the form of follow-on effects of one phenomenon on another, but in the form of the activation of causal powers which set in motion mechanisms which finally produce events, and with the notion of causal feedback loops where events may act back on the original causal powers, themselves or through the stimulation or activation of other causal powers (Layder, 1990). The model more in accordance with the cultural theories I shall use is the conception of "generative networks" (ibid.). The cultural structures are seen as "networks of organically related structures" (Marsden, 1993) "linked to each other in terms of varying degrees of strength and dependency" (Layder, 1990). It is this network of cultural structures with complex interrelations and diffuse reciprocal influences that produce emergent powers which may generate events, this process cannot be understood as an isolated linear sequence of causal effects (ibid.). Also, the relative strengths of influence of specific cultural structures "have to be understood in terms of the operation of the composite relations of the network and not simply in terms of intrinsic powers which can be defined outside the context of specific networks" (ibid.).

The role of people's conscious action in the generation of social reality must also be mentioned. Unlike natural structures, the social structures do not exist totally independent of the activities they govern, of the agents' conceptions of what they are doing in their activities, and they may be only relatively enduring (Collier, 1994). Contrary to functionalism's theory/practice dichotomy, "realism recognises that ordinary people theorise and, in this sense, categories are internally related to and constitutive of social relations, rather than externally descriptive of them" (Marsden, 1993). Because of this concept- and activity dependency of social structures, "the explication of social structure ipso facto involves invocation of reason explanations" (Layder, 1990). According to Keat and Urry (1982) 'reasons as causes' must be admitted as a species of explanation, Bhaskar (1979), however, is

less restrained and “claims that his 'causal theory of the mind' is a necessary prerequisite for the understanding of “any theoretical or practical activity’” (Layder, 1990). Anyhow, the displacement of an “outmoded notion of causality whereby the actor is viewed simply as the transmitter of the external demands of the causal variables (stimuli), goes hand in hand with the recognition that (unlike the inanimate objects of the natural sciences), the human being should be viewed as a spontaneous locus of causality” and “a generator of social behaviour” who might transform as well as reproduce social structures (ibid.).

Though the humanist point that humans are “conscious intentional beings able to respond to, and act back upon, external forces that affect their behaviour” is to some extent incorporated (Layder, 1990), this does not indicate that people are free in any stronger sense. Even Bhaskar’s realism is a form of totality determinism; although particular laws leave things open, it has certainly not been shown that the totality of laws leaves things open (Collier, 1994). The freedom of realism is a ‘liberty of spontaneity’, which involves the power to initiate action in accordance with our own natures (including principles of rational choice) rather than being constrained by the nature of external stimuli (ibid.). It does not mean that human action is not completely determined by the totality of external and internal laws. The freedom to choose between alternatives with nothing inside or outside of us making us choose one way rather than another is not shown possible (ibid.).

People may be emancipated, but only from an unwanted and unneeded to a wanted and needed source of determination (Collier, 1994). It is recognised that emancipation from some previous bondage depends upon the transformation of structures, not the alteration or amelioration of states of affairs (ibid.). The sober acknowledgement of the 'real' nature of relatively independent social structures, however, could also, far from imprisoning actors, open the possibility of freeing actors from the narrow constraints of their own interpretive understandings (Whittington, 1989). The action determinism of most existing strategic issue diagnosis studies, however, where human action is explained in terms of fixed internal mechanisms that dictate regular responses to environmental stimuli, is regarded as too simple (Whittington, 1988; Whittington, 1989). The plural and contradictory nature of the social structures, and the complexity of internal structures (which depend on social structures for their development), especially the diversity of social selves, should provide a range of options that precludes any unambiguous determination and allows some autonomy and choice (ibid.).

The realist paradigm thus allows significantly more complexity and ambiguity than functionalism. However, it does not approach the interpretive, so I shall not detail how paradox and ambiguity may be studied within a pure realist paradigm. Further, the issue of power is avoided or treated as a more or less neutral capability in the largely determinist version I have used, so I shall leave the treatment of this issue to the integrative perspective. The contribution of the realist paradigm, in summary, is its ability to incorporate the causal explanations of existing organisational culture and strategic issue diagnosis studies, without the tendency to simplify social reality as recurrent regularities among its more easily observable elements.

2.2.3 The critical cultural paradigm

While the interpretive paradigm aims to describe and understand social reality and the processes through which it is socially constructed as they are, the critical paradigm takes an evaluative stand (Putnam, 1983; Putnam, Bantz, Deetz, Mumby, & Van Maanen, 1993). Because of this evaluative attitude towards the existing social reality, the often overlooked potential for more fundamental change can be addressed (Putnam, 1986; Benson, 1977). Critical researchers are highly critical of functionalist and interpretive researcher's status-quo favouring non-evaluative stance and what they see as pretensions to make value-free and 'neutral' interpretations (Putnam et al., 1993). "The study of organisational behaviour is replete with research that claims such neutrality but that actually privileges managerial rationality" (ibid.). "The presumption of value neutrality in much current research hides its complicity with privileged interests. The choice of research conceptions, questions, and methods is always value-laden. The question is not whether values, but whose and which values" (Deetz, 1985). It is of fundamental importance that empirical research doesn't proceed in isolation from philosophy to just legitimise and solidify existing dogmas and prejudices, it should instead pay attention to how organisational members' behaviour and beliefs are historically and culturally conditioned, and the way research methodology and instrumentation are prone to reproduce a particular construction of social reality (Alvesson & Willmott, 1992b).

The reason for the emphasis upon questioning the established social reality of organisations is the assumption that the organisations' outputs and processes fulfil certain human interests - for instance those of stockholders, managers, workers, consumers, suppliers, and the wider society - but these human interests are not represented equally (Deetz, 1985). Interest representation and human need fulfilment often become distorted, and this distortion is built into organisations and maintained by symbolic processes of ideological domination (ibid.). The domination metaphor is used to focus attention upon the ways in which a dominant ideology is manipulated and reproduced in the pursuit of the interest of ruling groups in an organisation, particularly those relating to the accumulation of wealth and power, and at the same time sustaining the wider mode of social organisation upon which society is based (Morgan et al., 1983). The human beings working in organisations are viewed as being dominated by the nature of their organisations and captured within a psychological prison of oppressing symbolic processes (ibid.). Therefore, organisational processes can never be apolitical or politically neutral, and science should be "primarily in the service of redressing distorted interest representation" (Deetz, 1985).

The values of the critical paradigm are thus broader than the common formulation of managerial or organisational goals as profit, economic growth or survival (Deetz & Kersten, 1983). Other goals are pursued, too, in particular those related to the quality of life of individual organisational members as well as the welfare of the society at large. Human development, human rights, and human equality are neither ignored nor subordinated to the pursuit of narrow managerial goals, and it is recognised that organisations are important parts of modern society and must be critically examined so that they do not adversely affect participation in political processes or obstruct the development of society in other ways (Deetz & Kersten, 1983; Alvesson & Willmott, 1992a; Deetz, 1992). While critical research is often rather critical of managers, it is basically "proliberation and anticlosure rather than proworker and antimanagement" (Deetz & Kersten, 1983). Managers, like other people, need to be liberated from the closure of "self-laid traps, which channel human consciousness" through "blind adherence to socially created concepts which become concretised and

objectified and viewed as imperatives, which are independent of the individual" (Morgan et al., 1983). In particular, managers may be the captives of "a technological way of thinking about management that often entraps even managers into production activities and decision making that do not represent their own interests" (Putnam et al., 1993). So critical research is not just about "overcoming manipulative people", but deals instead with "self-examination to determine what constraints and possible distortions are present" (Putnam et al., 1993). Further, critical research is not necessarily opposed to optimising long term profit as "there is no inherent contradiction between emancipation and economic development of organisations" (Deetz & Kersten, 1983).

The critical researcher is, then, left with three basic tasks: understanding, critique, and education (Deetz, 1985; Deetz & Kersten, 1983). Understanding requires description of the socially constructed reality in organisation, the conditions under which this reality is formed and decisions made, and the forces that sustain and change social reality. Critique focuses on instances of interests distortion and domination, thus examining the legitimacy of any consensus about the socially constructed reality. Education, or emancipation, is concerned about the capacity of organisational members to engage in self-formation and necessary changes through participation in organisational practices and decision making that are free and unrestrained.

What needs to be understood is how the deep power structures embedded in the status quo constrain human thought and communication so that the status quo is not questioned but accepted as natural and immutable (Putnam, 1983; Putnam et al., 1993). One reason that power structures have such capabilities is that they are deeply embedded in the social and historical context of an organisation. History is not neutral; it carries preconceptions of power that impact upon present and future events (Putnam, 1983). In addition, the organisation and its power relations are deeply embedded within the economic, political and social forces of the larger society within which organising occurs (Putnam, 1983; Deetz, 1985). The existing organisations are constructed, sustained, and transformed through ongoing processes subject to such historical and external social forces (Deetz, 1985). The historical and ongoing nature of these processes is often overlooked, however, and organisations become treated as quasi-natural objects and processes (*ibid.*). Bureaucracies are seen as particularly susceptible to this problem, "because they rely on rationality and efficiency as a means of fostering behavioural conformity", supported by the pseudo-objectivist notion of positivistic science which has become an instrument of social control and domination (Putnam, 1983). Being subject to dominant power disguised as rational and neutral procedures and facts, people easily naturalise or reify the organisation as an external and determinate thing standing over and against people (Benson, 1977).

The reification of the existing social reality is contradictory to the ongoing process of its social construction (Benson, 1977). As people become conscious of this generic, most basic contradiction, they may become able to act to overcome the limitations of the existing social order (*ibid.*). Contradictions, in general, "provide a continuing source of tensions, conflicts, and the like which may under some circumstances shape consciousness and action to change the present order" (*ibid.*). While some contradictions may stabilise an organisation, change is most likely when oppositions between significant meaning structures become intensified (*ibid.*). The intensification of contradictions is most likely when new experiences challenge valued assumptions and/or threaten the efficacy of some participants, and four basic circumstances might contribute (Gray et al., 1985): influence of different organisational contexts on the recreation of meaning, abuse of legitimate authority by the powerful,

increased environmental pressures, and the mobilisation around contradictions by those with views contrary to the dominant.

The presence of contradictions is not enough for change to occur, rather than being intensified contradictions are frequently suppressed by ideological forces which hide, distort or protect them from examination and discussion (Deetz, 1985, referring to Heydebrand, 1977). The symbol systems used in social communication processes frequently work to rationalise the established version of social reality so that it seems natural and immutable and without any alternative possibilities (Deetz & Kersten, 1983; Morgan et al., 1983). Organisational myths may mediate the contradictions, so that the tasks of the present organisation can be more effectively accomplished (Abravanel, 1983). A fair amount of attention has been given to how systematically distorted communication works to hide and distort contradictions to the privileged views and interests. Systematically distorted communication occurs when certain types of information, certain groups' expressions, or certain forms of expression, become arbitrarily privileged, and it leads to a state where people are out of touch with their own experience, needs and interests (Deetz, 1985, referring to Habermas, 1970). Normal and open-ended communication about how to serve human needs thus becomes thwarted, and a particular reality that supports the choices and interests of the dominant groups becomes maintained, concealed perhaps as common sense, or perhaps even as good administration (Putnam et al., 1993; Deetz, 1985). In this way "particular sectional interests may become universalised and experienced as everyone's best interests" (Deetz, 1985; Giddens, 1979). Though some systematic distortion is inevitable in every human system (Forester, 1982), critical research is determined to reduce the ideological distortions that unnecessarily constrain human consciousness and communication (Alvesson & Willmott, 1992b; Deetz & Kersten, 1983).

The purpose of the description is critique to emancipate organisational members. Critique is fostered by the exposure of the underlying interests of the powerful in the present order, exposure of inconsistencies between apparent and deeper meanings, and exposure of inconsistencies in the deep structures of organisational life (Putnam, 1983; Deetz, 1985). The identification of systematically distorted information and communication that produce self-deception and maintain and reproduce social reality by hiding contradictions also contributes to critique (Putnam, 1983; Deetz & Kersten, 1983; Putnam et al., 1993). Distorted communication and interest domination may be contrasted with the ideal of "free and open communication situations in which societal, organisational, and individual interests can be mutually accomplished " (Deetz & Kersten, 1983). Any consensus or shared meaning between organisational participants is thus questioned to determine if it is more than surface appearance; "is the organisational consensus a pseudoconsensus derived through repression or unobtrusive control?" (Putnam, 1983).

Through this critique critical researchers aim to emancipate people, that is to "contribute to the liberation of people from unnecessarily restrictive traditions, ideologies, assumptions, power relations, identity formations, and so forth, that inhibit or distort opportunities for autonomy, clarification of genuine needs and wants, and thus greater and lasting satisfaction" (ibid.). Insight into how the social world and the self is socially produced and therefore open to transformation is essential (ibid.). "Insights into meanings structures provide the basis for generating alternative organisational realities" (Putnam et al., 1993), exposing the pseudo nature of consensus provides alternatives for changing the status quo (Putnam, 1983), and "exposure of inconsistencies in the deep structures of organisational life frees people from a sense of alienation and oppression" (Putnam, 1983). Exposure of the naturalisation and

reification in communications about social reality contribute to changing the less powerful's beliefs so that they "perceive their state not as fated and unalterable, but merely as limiting - and therefore challenging" (Deetz, 1985; Freire, 1970). A more ideal communication situation should be created where true consensus could be developed from "rational examination of arguments, a full and mutual understanding of the other, and the right of the other to take a role in the dialogue as a full and equal partner" (Putnam, 1983, referring to Giddens, 1976; see also Habermas, 1979).

This critical view of emancipation may be contrasted with the view present in mainstream management or organisational development theory (Alvesson & Willmott, 1992b). In mainstream management, the emancipation, or empowerment, of individuals is identified with the provision by a somewhat benevolent management of opportunities for the fulfilment of their needs as long as this fulfilment coexists with and, especially, improves the achievement of "organisational goals". For critical theory, any substantial and lasting emancipation necessitates the often painful struggle of critical self-reflection, recognition of contradictions in own experiences and beliefs (Abravanel, 1983), self-transformation, and difficult efforts to overcome socially unnecessary restrictions on individual autonomy and the fulfilment of more fundamental and broader human and societal needs. Researchers working within this perspective are, thus, "sceptical about, though not necessarily implacably opposed to, the effects of top-down change, which are salient in most versions of humanistic management theory" (Alvesson & Willmott, 1992b). In the absence of reflection and struggle, "increased discretion bestowed by "soft" varieties of management theory is understood to have the (paradoxical) effect of weakening employees' capacity to reflect critically on their work situation, for example, where delegation of responsibility is accompanied by the (centralised) strengthening of corporate culture"(ibid.). "A key objective of critical theory is to challenge those forms of knowledge and practice that serve to sustain the illusion of autonomy" and to replace the illusion with real autonomy (ibid.).

The critical paradigm can be criticised, however, in many ways parallel to their own critiques of mainstream management theory. There is a one-sidedness in many critical studies similar to the technicism of conventional management theory, which is simply dismissed as manipulation of human potential and desire into a falsely naturalised status quo where their needs can only be fulfilled in terms of capitalism (Alvesson & Willmott, 1992b). Further, many proponents of critical theory utilise a highly abstract and inaccessible form of communication that can easily be perceived as elitistic and "putting down" both mainstream management researchers and ordinary people (Alvesson, 1991; Alvesson & Willmott, 1992b). Many critical scholars fail to acknowledge the benefits of conventional management wisdom, disregard or marginalise the contradictions and countertendencies within these philosophies, and overlook the points they share with them (Alvesson & Willmott, 1992b). And there is a tendency for ordinary members of organisations to be theorised as "cultural dopes" who are "taken in" by the unobtrusive power processes (Knights & Willmott, 1987). Often critical researchers can also be criticised for overlooking diversity as "the oppressor /oppressed model does not capture the complexities of the roles and interests involved in social life" (Hammersley, 1992). All interests of a dominant and a suppressed group may not be in conflict (Robinson, 1994), and there may be a multiplicity of groups each possibly dominant or suppressed in each particular communication situation. Critical studies may seek to benefit a particular set of meaning constructions - those of the critical researchers (Putnam et al., 1993), and may therefore be biased in favour of the sectional interests of critical academics and other intellectuals (Alvesson, 1991).

Ambiguity and paradox

The critical paradigm contributes to the study of ambiguity and paradox by focusing on deep cultural structures and power processes as sources as well as constraints on the extent and content of multiple interpretations and paradoxical thinking. A contradiction may be defined as oppositional cultural structures potentially leading to multiple and oppositional interpretations of a phenomenon or set of events (cf. Giddens, 1979; Benson, 1977). This suggests that a paradox is made manifest when deep contradictions which have heretofore been denied or ignored are put side by side and "show" themselves simultaneously (Ford & Backoff, 1988; Putnam, 1986). Alternatively, the deep contradiction may not be allowed to be made manifest, and any empirically existing paradox may be just a surface and apparent one working to disguise the real contradiction. Similarly, ambiguity may result from contradictions that are allowed to be manifested, or multiple interpretations may be concealed or distorted by ideological forces which create ambiguity as ignorance or confusion.

If the contradictions become intensified, this is thought to lead to fundamental change through a dialectical process. Change is seen as stemming from a struggle between internal, or between internal and external, oppositional structures, which demand some form of resolution (Ford & Backoff, 1988). The intensified struggle between opposites eventually leads to a synthesis, to the creation of a qualitatively different new unity which contains its own contradictions and seeds for further dialectics and change (Ford & Backoff, 1988). This dialectical process thus focuses on the more radical change potential of creative reframing and transcendence. In particular, the conceptualisation of ambiguity and paradox as the manifestation or suppression/ distortion of deeper cultural structures, and the emphasis on ideological forces that may conceal or distort contradictions in favour of dominant interpretations and interests, facilitates the enlargement of the interpretive context where given paradoxes may be reconceptualised as apparent inconsistencies rather than real contradictions (Wood & Conrad, 1983).

Being limited by ideological power mechanisms, any given paradox may contribute to relative stability rather than radical change. Paradoxes themselves may be used ideologically if the attention and energy paid to apparent paradoxes serve to hide the more important real contradictions. This may be the case if they are used strategically, for instance, if compromise, confrontation, and subordination of opposing dominant interpretations become dynamic strategies for maintaining status quo (Quinn & McGrath, 1985). To avoid such low level responses to paradox, the critical paradigm emphasises the exposure of real paradoxes, and gives some generic examples of contradictions that may facilitate change: the reification of the existing social reality versus its ongoing social construction; one existing deep cultural structure versus another; apparent versus deeper meanings; and systematically distorted communication favouring dominant interests versus the free, open and rational communication where common interests can be mutually accomplished (Benson, 1977; Putnam, 1983; Deetz, 1985; Deetz & Kersten, 1983).

Ideological forces may not only lead to a false clarity of apparent paradoxes, they may also create ambiguity as ignorance and lack of information about contradictions may result from their concealment and distortion. In this way, ambiguity may be used strategically to obfuscate the realities of underlying contradictions (Levine, 1985). In the pursuit of control and manageability, the multiple interpretations that might be generated by contradictions among underlying cultural structures must be suppressed in favour of a dominant set of

values, beliefs, and interpretations (Meyerson, 1991a). In general, ambiguous communications has been shown to maintain relative stability by preserving and enhancing existing impressions and attributions (Eisenberg, 1984). Ambiguous communications may also serve ideological functions when used strategically to withhold information, avoid political confrontation, convey the feeling of movement from an ambiguous appearance to a clear understanding of an objective reality, or to elicit broad but passive audience support for particular policies together with the perception of real participation in rational and legitimate decisions (Eisenberg, 1984; Levine, 1985).

By the exposure of underlying contradictions and the critique of ideological communication concealing them, the critical paradigm is able to contribute to the identification of more ambiguity and real paradox. This should facilitate the emancipation of more people through increased tolerance and constructive use of ambiguity and paradox in their struggle toward greater autonomy and clarification of true needs and interests (Alvesson & Willmott, 1992b; Abravanel, 1983). The capability of effective strategic change should increase as more real interests would be served and more fundamental change implemented. However, while the theory of dialectical synthesis has the ability to explain creativity and transcendence, the relative stability maintaining features of denial and strategic behaviour within existing paradox and ambiguity are viewed one-sidedly negative as ideological suppression. The effectiveness of less radical change is thus overlooked. Further, while uncovering contradictions and ideological domination could lead to the realisation of more diversity, this diversity could also be reduced by simplifying reality as composed of dominant and oppressed groups between whom there is interest conflict (Hammersley, 1992; Robinson, 1994). It is sometimes possible to interpret the critical perspective's interpretations in the light of its own theory, and find that the contradiction between the oppressor and the oppressed is an apparent paradox. Their dialectics leading to synthesis may also be seen as ideological manipulation in which unpleasant tension is first created and then removed when a dominant truth is introduced. Nevertheless, its significant contribution, in summary, lies in the questioning of existing ambiguity and paradox, and the identification and critique of their basis in underlying political-ideological processes, which could lead to the identification of real paradoxes and their integration in more creative and transformational change.

Making unobtrusive power obtrusive

The critical paradigm views power as *domination*, and actions taken to challenge domination as *resistance* (Hardy & Clegg, 1996). Critical researchers argue that people create their social world within the context of, and under the constraints of, unconsciously taken-for-granted assumptions and practices previously established by those who control resources or possess 'legitimate' authority (Bradshaw-Camball & Murray, 1991). Power resides in the social relationships imbedded in this deep cultural structure which determine how actors deal with the social world, it is not defined as an individual property or as a relationship between individuals (ibid.). But power nevertheless serves the interest of established dominant actors at the expense of the interests of the majority of people (Hardy, 1995).

Power and the exercise of power is no longer confined to situations of observable conflict, as in the functionalist and interpretive paradigms. As Lukes (1974) points out, it can be used to prevent any conflict from arising in the first place, by shaping people's "perceptions, cognitions, and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they view it as

natural and unchangeable, or because they value it as divinely ordained and beneficial". In this way power "influences, shapes or determines conceptions of the necessities, possibilities, and strategies of challenge in situations of latent conflict" (Gaventa, 1980). Thus, power is "most effective and insidious in its consequences when issues do not arise at all, when actors remain unaware of their sectional claims, that is, power is most effective when it is unnecessary" (Ranson, Hinings, & Greenwood, 1980).

Brown (1986) shows how the values, myths and ideologies of organisational culture constitute an 'influence paradigm' by which power defines which actors should set agendas and participate in decisions; access routes and agendas for decision making; legitimate distributions of power and procedures for using it; and the very awareness of their own needs and interests. Within these limits actors defined as powerful can consciously focus on how to deploy their resources to affect decision making; action outside organisational influence paradigms, in contrast, requires attention to access and agendas and awareness of structural power relations (*ibid.*). Domination is created and maintained by a surface structure which is easily apparent in overt conflict and frequently hides, distracts attention away from, and disguises the impact of deep structural forces of domination (Deetz & Kersten, 1983). In systematically distorted communication processes voices are suppressed, the experience and expression of actors' interests are obscured, and information is misconstrued for the sake of maintaining a false consensus about a particular definition of reality (Putnam et al., 1996; Morgan et al., 1983; Deetz & Kersten, 1983; Deetz, 1985; Forester, 1982; Forester, 1983). In particular, ideological mechanisms naturalising social reality, universalising interests, and suppressing, concealing and distorting underlying, change-conducive contradictions, contribute to stabilising the status quo and the established relations of power (Deetz, 1985; Deetz & Kersten, 1983; Benson, 1977).

The power mechanisms of this perspective are the least developed and least understood; they may take indirect and unobservable forms, including psychological adaptations to the state of being without power (Gaventa, 1980). For example, losing overt battles may lead to non-challenge because of anticipated reactions, and over time to an unconscious pattern of withdrawal maintained by a sense of powerlessness regardless of actual or potential power conditions (*ibid.*). The sense of powerlessness may further lead to a greater susceptibility to the internalisation of the values, beliefs, or rules of the game of the powerful as a further adaptive response; i.e. as a means for escaping the subjective feelings of helplessness and dependency if not the objective conditions (*ibid.*); and for defending oneself against aggression toward authorities and the resulting fear of retaliation (Gaventa, 1980; Kets de Vries, 1980).

This paradigm also directs attention to the larger and historical context of power; to the basis of organisational culture in interests and power relations in the larger economic, political, social and material context of society as a whole (rather than the structural context of one organisation) (Deetz, 1985; Benson, 1977; Bradshaw-Camball & Murray, 1991; Deetz & Kersten, 1983). Culture is even deeper and more taken for granted than in the interpretive perspective because it is part of a set of long held and unquestioned social values, perceptions and beliefs extending beyond specific issues or entities (Bradshaw-Camball & Murray, 1991). Therefore, dominant actors are, for example, able to construct and reinforce the myth that the reasons for problems lie within a sub-unit, not in the larger socio-economic system of which it is a part (*ibid.*).

In this paradigm, then, domination is regarded as an institutional phenomenon, in which power structures place limitations or constraints upon the activities of actors, power as relating to the active accomplishments of actors is ignored (Giddens, 1979). It portrays a very deterministic connection between power structures and behaviour. Also when actors get rid of structural power mechanisms, in Lukes' theory, they have no alternative but to act in accord with structurally determined and objectively defined 'real' interests (Whittington, 1989). Other critiques related to the ethical responsibility for fostering practical action conducive to the actors' interests can also be raised. While issues of domination and exploitation have been confronted head on, with an aim to reveal how actors become conscious of these mental prisons and/or the ways action can flow from conscious awareness of the modes of domination and exploitation (Bradshaw-Camball & Murray, 1991; Hardy & Clegg, 1996), most critical researchers emphasise theoretical battles over ontology and epistemology, and more pragmatic and grounded issues associated with how to overcome barriers to resistance, not to mention how to successfully develop and implement strategies for collective action, have been largely ignored (Hardy, 1995; Hammersley, 1992; Alvesson & Willmott, 1992b; Alvesson & Willmott, 1992a; Alvesson & Willmott, 1995).

2.3 Toward an integrative model of organisational culture

The different paradigms of organisational culture are based upon different and opposing assumptions: subjective vs. objective social reality, concrete and observable vs. deep and unobservable social reality, voluntaristic vs. deterministic explanation of human conduct, focus on micro vs. macro realities, individuals vs. society, management and control vs. human emancipation, and assuming or favouring change vs. stability. To be able to use the different paradigms constructively, these opposing assumptions need to be integrated in some way or another (Morgan, 1983b; Schultz & Hatch, 1996; Scott Poole & Van de Ven, 1989). In this section I shall sketch a possible integration using Giddens' 'theory of structuration' (Giddens, 1979), perhaps somewhat modified by a more stratified model of social structures (Layder, 1990). First, Giddens' structuration theory will be presented, then my integrative model of organisational culture with an emphasis on how it facilitates the investigation of ambiguity, paradox, and obtrusive and unobtrusive power.

2.3.1. Structuration theory

In Giddens general social theory 'structuration' refers to actors' application of structures in the process of production and reproduction of social systems. Implicit in this definition is a distinction between structures and social systems which separates things differently than most other theories (Scott Poole & Van de Ven, 1988; Scott Poole, Seibold, & McPhee, 1986). The term structure is often used to refer to tangible, concrete and measurable properties of social practices and patterns. In Giddens theory, the term social system refers to these observable patterns of interdependence between people and groups, while structures are the underlying rules and resources that actors use in producing social systems. These structures are "not directly observable but must be inferred as generative principles underlying observable systems" (Scott Poole et al., 1986). The core of the theory is embodied in the conceptualisation of structures as having a dual nature. Structures are both the medium and outcome of human action. As a medium of action they are drawn upon to make action possible. They are not just a constraint on human action, but at the same time both constraining and enabling. Thus, rather than being conceptualised as a barrier to action, they are essentially involved in its production. And as an outcome of action they are themselves reconstituted by action. Through action people can transform as well as reproduce the existing structures, and thus work on the future conditions for their actions. Hence, although action and structure are ontologically distinct, rather than being separate and mutually opposed, they are mutually dependent and deeply implicated in each other.

While structure and action are mutually dependent, they may also be relatively independent, though never totally independent of each other. Here Giddens emphasises the autonomy of human action, while most realists emphasise the pre-existence of structure (Porter, 1993). The significance of voluntary human action as more than the capacity to choose within a totality of different internal or external structural determinants, is the reason why I chose Giddens' 'structuration theory' instead of Bhaskar's 'transformational model of social activity' as basis for the integration of different cultural paradigms. Even if realists emphasise the diversity and contradictoriness of social and psychological structures, which preclude any unique and unambiguous determination, permit genuine choice by providing a range of options as well as the development of the capacity to choose (Whittington, 1988; Whittington, 1989), and thereby make possible the necessary condition that one always could have acted

otherwise (Giddens, 1979), I assume that at least some people sometimes have the potential to be more independent of existing social and personal structures. This freedom is involved in the creative capacity for paradoxical thinking, which goes beyond the mere selection and transformation of different 'action determinants' towards consciously or unconsciously developing entirely new structures.

The status of structures

Giddens' statement that structures only exist in time-space in the moments they are instantiated in actions constituting social systems, has been interpreted as a humanist empiricist denial of the relative independence of structures (Layder, 1990; Layder, 1994). According to this view, structures "have no independent, objective existence, but instead are continuously produced and reproduced" (Scott Poole & Van de Ven, 1988). There are no structures but those directly and immediately implicated in the activities of human beings (Layder, 1994), hence, there is a danger of 'conflating' action with structure, as structures seem less to generate action than to simply collapse into practice (Whittington, 1992, referring to Archer, 1989, and Callinicos, 1985). However, Giddens also says that his sense of what structures are implies the recognition of the existence of knowledge of "how things are to be done" and rights to resources, that is, a latent reality of enduring capabilities that can be mobilised to generate social practices (Giddens, 1979; Whittington, 1992). Thus human agency can be theorised as constrained and generally influenced by pre-existing and enduring structures, for instance, by asymmetrical structural relations of power (control of resources) as opposed to the given powers of concrete individuals.

The operation of those structures in a particular generative network underlying an action system incorporate features from both the realist and the critical paradigm. Two important features of the network of interpenetrated structures are 'mediation' and 'contradiction'. Mediation means that the instantiation of one structure in action involves the reproduction of another (Giddens, 1979; Scott Poole et al., 1986). Those structures linked to the one used are reproduced and strengthened according to the strength of their linkages, influences or dependencies, while other structures potentially but not actually linked to the one drawn upon may decay. The interpenetration of structures may also occur through contradictions, similar to those of the critical paradigm. "The operation of one structural principle in the reproduction of a societal system presumes that of another which tends to undermine it" (Giddens, 1979). "For example, numerous investigators have reflected on the contradiction between the social, collegial nature of group action and members' individualistic striving for control and rewards in the group" (Scott Poole et al., 1986). The recognition of the network of mediations and contradictions would empower action, but ideological mechanisms often conceal or distort these conditions of action.

How conditions of action influence structuration is "largely dependent on how much actors know about them. If actors are unaware of a conditioning factor or do not understand how it operates, the factor has a strong determining force" (Scott Poole et al., 1986). The structural network and the way it operates is never completely unknown to people, and social structures do not "act on" people like forces of nature, they never operate independently of the motives and reasons that agents have for what they do (Giddens, 1979). But without resorting to a reductive theory of action, one which in emphasising unacknowledged conditions of action is able to grasp the reflexive features of action only as a pale cast of those conditions which really determine them (ibid.), we must acknowledge that sometimes a low level of awareness about parts of the generative network of structures or how it operates makes possible a

relative more deterministic causation of human agency analogous to the realist and critical explanations.

Although structures are dependent on human action for their enduring existence, they are relatively more independent, and the relationship is more complex, than often suggested, for instance by Poole and Van de Ven (1989): “the structures they draw on more often become more important, whereas those they use less decay”. Layder (1990) shows two senses in which social structures are, in Bhaskar’s terms, relatively independent of activity or actors’ concepts. The first is the independence of social structures from the activity and conceptions of particular individuals or collectives. Although they may be dependent on individuals or groups in general, social structures, e.g. capitalism, are not dependent upon specific actors, e.g., specific workers or groups of workers, for their continued existence. Second, a social structure may endure independent of its being drawn upon in human action at particular points in time. “The full coercive power of the state, for example, may continue to be possessed without being exercised” (Layder, 1990, quoting Benton, 1981). Other structures related to the focal one may need to be used and maintained in action to support its survival, though. For example, when the raising of taxes or equipping of military personnel maintains the full coercive power of the state. Such mediation of structures points to further reasons for endurance without being exercised. The whole generative network of, especially social, but also psychological, structures may not be fully known by the actors and therefore operate as unacknowledged conditions of action which nevertheless become used and reproduced or transformed. Further, being unaware of the effects of action on the structural dynamics of the network may lead to unintended consequences of reproducing and strengthening some structures independent of actors’ concepts of what they are doing. Even psychological structures may persist relatively independently of action because they may be located in the unconscious part of people’s mind, where they “operate ‘outside’ the range of the self-understanding of the agent” and become unacknowledged conditions of action (Giddens, 1979).

Action and strategic choice

In emphasising the human capacity for voluntary action, Giddens stresses that people are skilled and knowledgeable, and that they cannot therefore be considered to be just dupes of the social system or mere reflections or bearers of its demands (Layder, 1994). In Giddens scheme, action is governed by three processes of ‘reflexive monitoring’, ‘rationalisation of action’, and ‘motivational components’. The reflexive monitoring of conduct refers to “the intentional or purposive character of human behaviour” (Giddens, 1979). This reflexive monitoring “operates against the background of the rationalisation of action – by which I mean the capabilities of human agents to ‘explain’ why they act as they do by giving reasons for their conduct”. And it “takes place within the more ‘inclusive’ context of practical consciousness”, which consists of “tacit knowledge that is skilfully applied in the enactment of courses of conduct, but which the actor is not able to formulate discursively” (ibid.). The motivational components of action, “refer to the organisation of an actor’s wants”, and “straddle conscious and unconscious aspects of cognition and emotion” (ibid.). “This stress on knowledge and reflexivity is important, because it suggests that organisations can be moved in some coherent and explicit direction – here lies the possibility of deliberate and effective strategy” (Whittington, 1992).

Although actors are knowledgeable, their capacity to control action is ‘bounded’, first by both acknowledged and unacknowledged conditions of action, including networks of pre-existing

structures in the diversity of social systems in which the individuals participate or are aware of, as well as the temporal and situated process within which action takes place; second by such things as the degree to which tacit knowledge can be articulated in discourse, and unconscious sources of motivation; and finally by unintended consequences of action in the production and reproduction of social systems (Giddens, 1979; Scott Poole et al., 1986; Whittington, 1992). Despite the central role of individuals, “the complexity of social systems means that people do not wholly control the process. In complex systems, apparently straight-forward action by individuals trying to control the system may lead to unintended consequences” (Scott Poole & Van de Ven, 1989).

Thus essential characteristics of human beings are their knowledge of the different structures they may draw on to facilitate action, and their access to and control of such resources. As regards the second characteristic, this is the issue of power and asymmetrically distributed resources which I shall return to later. People’s knowledge of the existent diversity of structures is important for their capability for voluntary action. Today the richness of diverse social milieus in which we are involved or exposed to, and the ensuing potential for choosing our own identities and life-styles, is greater than ever before (Whittington, 1992). “This same sense of strategic choice can be translated to the level of organisations (...) modern society is characterised pre-eminently by its richness in organisations”, and “with the access to a diversity of social systems, actors have some choice over the structural principles they enlist in their organisational activities” (Whittington, 1988; Whittington, 1992). This potential of strategic choice may, however, be reduced by the human need for ‘ontological security’, which leads actors to stick to routine patterns of behaviour that unintentionally reproduce the structures of their worlds (Whittington, 1992). To avoid the anxiety of ambiguity and paradox, it is easy for many to become stuck within one or a few structures, often those which are dominant in ones own organisation (Martin & Meyerson, 1988; Putnam, 1986).

Rather than being subject to the determining force of convergent structures, people may gain their agency by active exploitation of the tensions between divergent structural principles (Whittington, 1988; Whittington, 1992). Stress on the structural diversity provides the practical benefit of enhancing strategic choice: actors can get the critical distance from particular rules and resources in order to engage structures selectively for strategic manipulation (Whittington, 1992), whether that would be to advance self-interests within the dominant structures of a favoured institution, or to challenge and change the dominant structures of a not-so-favoured institution. The theoretical danger of ‘conflating’ action and structure can also be avoided by considering not only the structural properties actually mobilised, but also those left dormant (*ibid.*). In this way, structural dominance may be criticised and “agency illumined by insight into what could have been” (*ibid.*).

The acknowledgement of a diversity of structures allows for agency within organisations built upon the authority of values and norms independent of strict capitalist structures. But this particular possibility for strategic choice is no matter of course in the discipline of strategic management. For instance, in the context of discussing how to apply Giddens theory, Whittington (1992) criticises Pettigrew (1985) for describing an organisation’s outer context almost exclusively in the language of ‘trends’, ‘impacts’, ‘pressures’ and ‘triggers’ from the business and economic environment. The authority of people sympathetic to more human and societal values may further be reduced by Pettigrew’s strong distinction between this outer context and the inner context of an organisation, which is treated as a political process determined by personal characteristics and organisational attributes. This leaves readers with little possibility for seeing the organisation as “actually constituted by the mobilisation of the

structural properties of the wider society” (Whittington, 1992). It is only the commercially oriented managers that become able to mobilise external structures to legitimate their actions and choices. Rather than drawing a map of capitalist structures crushing agency by almost monolithic force, the recognition of a multiplicity of structures would but enable strategic choice by complexity and contradiction (Whittington, 1988; Whittington, 1992). “The mobilisation of other acknowledged structural properties allows the firm to be transformed into a vehicle for realising a much wider range of socially legitimate values” (Whittington, 1992). There is economic constraint, though. If their choices over structural principles are to be effective, managers need to secure for themselves, their organisation, or their organisational unit, sufficient profitability for discretion (ibid.).

We can, then, distinguish between three principal forms of strategic choice. The first stems from the active exploitation of the internal ambiguity and plurality of the structures of an organisation (Whittington, 1992). The second from the contradictions between internal structures and the external structures of the wider society, or from external contradictions, introduced either through dependency relations with other organisations, or by organisational members through their membership in or exposure to other social milieus (ibid.). “This second sense of agency is the greater, for here the issue is no longer one of choosing which is the appropriate rule in particular circumstances, but potentially of defying immediate system logic altogether” (ibid.). Existing structures need not, however, define the limits of which structural features are available for appropriation by the individual. As a third form of action people may create entirely new structures or patterns of structures in a way more independent of the existing ones, for instance, through cognitively handling ambiguity and paradox at what I have called the level of creative reframing and transcendence. When it comes to action as the external capacity to actualise new structures effectively in interaction, however, to intervene in the social system to realise them as structural properties of the collectivity, we are relatively more dependent on the enabling capacity of existing structures.

Stability and change

From this short discussion we can see the central tension between two aspects of structure: structure as a created and negotiated, emergent product of member activities, and structure as a stable, given aspect of the social system that members work with and adapt to (Scott Poole et al., 1986). Because the pre-existing structures are salient to the agent and assumed by others in group interaction, they tend to be drawn on and reproduced, and therefore tend to constrain and limit actors' ability to alter or adapt structures (Scott Poole et al., 1986). On the other side, “change is now so rapid in modern societies (...) because the wide scope of contemporary organisations brings them into contradiction with so many other systems or activity” (Whittington, 1992). By structurational theory “neither stability nor change is taken as a ‘basic state’ (...) Both must be explained in terms of definite mechanisms or processes that create and reproduce them” (Scott Poole et al., 1986). Three conditions that describe the relation between strategic choice and structural dynamics may be involved to explain the conditions governing the creation, reproduction, transformation or dissolution of structures (Giddens, 1979). These three conditions are related, and, as explained in the paragraph on power, they can be incorporated as features of domination (ibid.).

Opacity refers to a low degree of awareness by actors of the structural conditions of their action and its involvement in the reproduction or transformation of social systems (Giddens, 1979; Putnam, 1986). The more opaque the structural dynamics, the more the mediations and contradictions within and between the generative structures themselves shape and constrain

structurational processes. If the actors know the particular generative network of structures, however, they have more conscious choice about whether to change structures and social systems through their actions. Contradictions may then shape consciousness and action to change the present order (Benson, 1977). *Repression* refers to “the extent to which organisations stifles the emergence of a contradiction” (Putnam, 1986). Contradictions may be concealed, distorted, or protected from examination and discussion by ideological mechanisms, like systematically distorted communication (Deetz, 1985). Repression leads to lack of awareness of contradictions, and, thus, a relatively more deterministic explanation of the reproduction or transformation of structures and organisations. *Dispersion* of contradiction refers to the existence and fusion of multiple contradictions across organisational events, levels, and boundaries (Giddens, 1979; Putnam, 1986). While their separation into competing contradictions increase the likelihood that they work against change, the unification of multiple contradictions, usually through a primary theme, increase the likelihood of intense conflicts, and can exacerbate a crisis, that radically changes the system (Benson, 1977; Putnam, 1986; Giddens, 1979). While radical change may typically emerge from contradictions that initially are opaque, repressed and dispersed throughout the system, it is eventually the consciousness of contradictions, which is reduced by repression but increased by dispersion, that may lead to radical change (cf. Putnam, 1986; Benson, 1977; Giddens, 1979).

2.3.2 Organisational culture as dynamic structures of meaning

Before working out a definition and model of organisational culture where the cultural paradigms chosen might be integrated in terms of structuration theory, locating this study in a short overview of the organisational culture field may be instructive. Following its introduction to organisational studies in the late 70'ies (Pettigrew, 1979; Smircich, 1983b), the organisational culture concept got a lot of attention from both academics and practitioners. The original promise of a rich concept illuminating complex and previously unappreciated aspects of organisations was soon appropriated by instrumentalist and managerial values, resulting in heated disputes about its appropriate use (Meek, 1988; Martin & Frost, 1996).

The previously dominant ‘integration’ paradigm emphasises the integrative and unifying function of culture, sometimes seductively promising managers a tool for engineering organisation-wide consensus and effectiveness. Organisational culture is defined as shared values and understanding, often viewed as developed from the way a community solves its common problems (Schein, 1992; Swidler, 1986). Implicitly, and sometimes explicitly, it is suggested that powerful organisational members, usually leaders, through some type of common interaction define the agreed-upon cultural viewpoint of virtually all organisational members (Stevenson & Bartunek, 1996). This conception of shared consensus and consistency denies the possibility that ambiguity and paradox can be characteristics of organisational culture (Martin & Meyerson, 1988; Meyerson, 1991b). Only in brief periods of organisation-wide transformation, when the old culture ceases to exist and before it is replaced by a new one, may conflict and ambiguity occur (Martin & Frost, 1996).

Rather than this perspective, which not only neglects ambiguity and paradox but also political processes and the conditions for more radical change, the differentiation and fragmentation perspectives will be more heavily used. The differentiation perspective may first be distinguished from integration studies by its emphasis on the development of multicultural organisations. Subgroups with different occupational, divisional, ethnic, or other

backgrounds, approach interactions with their own meaning and senses of priorities and develop their own cultures (Gregory, 1983; Stevenson & Bartunek, 1996). The resulting multiple cultures usually cross-cut several organisations, for example, functional subcultures within a firm can reflect or be influenced by occupational cultures, so the organisational culture becomes an arena or meeting point for several cultural groupings of the larger society (Gregory, 1983; Alvesson & Sandkull, 1988; Martin & Frost, 1996). Further, the political aspects of the development of organisational culture is recognised as important, as the interests of individuals and groups enters into their meaning construction (Riley, 1983; Lucas, 1987). Some of the differentiation studies also challenge the status-quo and the dominant interests of the established organisational culture (Martin & Frost, 1996; Deetz, 1985). While attention may be paid to cultural pluralism, politics, potentially dominant power, and the possibility of fundamental change, there is not very much room for ambiguity and paradox in the differentiation perspective. Ambiguity and paradox is channelled to the interstices between subcultures; subcultural consensus and intergroup differences are clear enough that cultural members easily may know how they disagree on particular issues or interpretations (Martin & Meyerson, 1988)

In the fragmentation perspective, ambiguity and paradox may be focused. As strategic issue diagnosis, is characterised by much ambiguity and paradox, it seems appropriate to assume that “individuals share some viewpoints, disagree about some, and are ignorant of or indifferent to others”, ”making it difficult to draw cultural and subcultural boundaries” (Martin & Meyerson, 1988). The fragmentation perspective’s focus on issue specific consensus, dissensus or confusion serves to further this mutual relevance of phenomenon and perspective; “when a particular issue becomes salient, one pattern of connections becomes relevant. That pattern would include a unique array of agreements, disagreements, and domains of ignorance. A different issue would draw attention to a different pattern of connections – and different sources of confusion” (Martin & Meyerson, 1988). What holds together the members, who may contend that they belong to a culture, is the common orientation or frame of reference, comparable experiences, and a shared recognition of relevant issues (Meyerson, 1991b; Feldman, 1991). This shared orientation may accommodate different beliefs and interests, however, so they may disagree or be confused about the meaning of comparable experiences and recognised issues, and about to what degree, or whether at all, these issues should be relevant (ibid.).

According to the fragmentation perspective, power plays no strong part as it tends to be diffused broadly among different organisational members and throughout the organisation’s environment (Stevenson & Bartunek, 1996; Martin & Frost, 1996). As regards strategic, as perhaps opposed to everyday issues, it seems reasonable to me to assume that some actors tend to belong to or even represent organisational or societal interest groups, and that their viewpoints and power bases in part derives from such connections. Therefore, the differentiation perspective’s view of cultural groups with their power and power differences, which includes different levels of power in part determining different cultural viewpoints (Stevenson & Bartunek, 1996), will be combined with the fragmentation perspective’s focus on issue specific consensus and ambiguity.

A definition of organisational culture

Organisational culture may for the purposes of this study be defined as a dynamic paradigm of conscious and unconscious meaning structures sustained and transformed in communication through the use of symbols. Organisational culture is thus defined as ideational structures

conceptually distinct from other organisational and social structures and from social systems. Culture is seen as “an ordered system of meaning and symbols, in terms of which social interaction takes place”, while the latter is distinguished as the pattern of social interaction itself and the concrete conditions and resources involved in the interaction (Geertz, 1973; Kroeber & Parsons, 1958; Allaire & Firsirotu, 1984). This concept of culture is a combination of the cognitive cultural school, where culture is people’s knowledge or learned standards for perceiving, believing, evaluating and acting (Goodenough, 1971; Keesing, 1974), and the symbolic school, where culture is not to be found in people’s minds, but as products of mind, as a system of significant symbols which express and can be used to interpret somewhat shared meaning (Geertz, 1973; Allaire & Firsirotu, 1984).

Some significant elements of the definition need further explanation. *Meaning* is defined by Gray, Bougon, and Donnellon (1985) at its most basic level as *concepts*. Concepts result from a communication process by which we interpret and categorise similar experiences. Initially, concepts arise through reference or denotation, that is, the direct assignment of an object or event to a category through use of the category’s label. Most concepts, however, cannot be defined by direct assignment or by shared attributes of its objects or events. They can only be understood by their relation to other concepts used in the same context; the content and meaning of such concepts inherently depends on their relationship to a *network of concepts* used by a particular actor in a particular situation. The repeated use of concepts and their relationships in communication and interaction increases their permanence and the possibility that they may be shared with more people. Obtaining shared meaning among several organisational participants may be inherently problematic, however. They must not only use the same concepts, but also hold in mind the same pattern of relationships among the concepts when communicating and interpreting their experience.

While concepts and relationships of concepts contains beliefs or assumptions about what is thought to exist, that is, about some historical, present, or future reality, they are influenced by *values*, that is, what ought to exist. Values may be defined as broad and relatively enduring preferences for some mode of conduct or end-states of existence (Hambrick & Brandon, 1988; Rokeach, 1973). Meaning has to do with the connection of such values to one’s cognitive schemes (Gray et al., 1985). Knowledge is always socially constructed or negotiated in a way which includes the personal or social values and interests of the participants (Berger & Luckmann, 1967; Habermas, 1971). Achieving shared meaning becomes even more problematic as it involves similar feelings and beliefs about how organisational members’ experience affects and should affect personal and social welfare (Gray et al., 1985). A major issue, which is discussed later, is the power dimension inherent in the ability of an actor to create his or her favoured reality (Riley, 1983). Any resulting meaning system becomes an ideology, that is, “a set of beliefs about the social world and how it operates, containing statements about the rightness of certain social arrangements and what actions would be undertaken in the light of those statements” (Pettigrew, 1979, quoting Wilson, 1973). This ideology often short circuit meaning construction by linking broad and principled moral diagnoses to more specific social situations (Pettigrew, 1979, referring to Smelser, 1963).

Meanings are expressed, maintained and transformed through the use of *symbols*. Following the interpretive perspective, symbols are defined as more than signs that stand for or represent particular meanings. “Symbols are objects, acts, relationships, or linguistic formations that stand ambiguously for a multiplicity of meanings, evoke emotions, and impel men to action” (Cohen, 1974). As they suggest a wide variety of underlying meanings, symbols must be

interpreted as part of a much wider symbolic whole (Morgan et al., 1983; Alvesson, 1991; Dandridge, 1983). They also “actively elicit the internal experience of meanings” and “allow those who employ them to supply part of their meaning” (Dandridge, 1983; Hatch, 1993). This view of symbols entails a focus beyond surface meanings in the immediate context. They make us more attuned to implicit and tacit knowledge that cultural members have but can not articulate in any easy way (Altheide & Johnson, 1994). They help to “translate an unconscious or intuitively known internal world of feelings into the comprehensible terms of our visible reality” (Dandridge, 1983). They also transcend surface meanings by suggesting underlying interpretations embedded in the larger set of historical events and organisational and societal power relationships (Putnam, 1983). As such they may be related to the taken-for-granted and the pre- or unconscious social and ideological processes of domination (Alvesson, 1991).

Two particular kinds of symbols found especially relevant for the analysis of culture in this study are *language* and *stories*. At its most basic level, the naming of some aspect of experience or a situation by some term of language is a partial interpretation as it may indicate which concepts are to be used. The language system people regularly use can typify and stabilise experience and integrate those experiences into a meaningful whole (Pettigrew, 1979). “To come up with a common vocabulary and thus to come to agreement as to what things are to be called frames the understanding of people, things, and events” (Deetz, 1986). Thus, language plays a central role in social reality and its negotiation in organisations. Stories or narratives, sometimes in the form of legends or myths, are prevalent in all organisations and also powerfully influence the interpretation of experience (Martin, 1982; Witten, 1993). Stories are socially constructed and negotiated accounts of past events that are of importance to cultural members, often developed sequentially to indicate causality (Feldman, 1990; Martin, Feldman, Hatch, & Sitkin, 1983; Putnam et al., 1996). Sometimes in the form of myths they contain a sacred quality which explores in dramatic form issues of origin and transformation (Pettigrew, 1979; Cohen, 1974). Their implicit morals and legitimating explanations make stories powerful in generating the meaning of experience, and they can easily become tools created and used for the furtherance of sectional interests (Pettigrew, 1979; Feldman, 1990; Boje, 1991).

As regards the implicit and tacit dimensions of culture, it is important to recognise that much, if not all, meaning is derived from *tacit knowledge structures* (Gray et al., 1985; Polanyi, 1967). People may not articulate the whole background or horizon of their knowledge and actions, they may consciously hide or avoid the articulation of parts of their knowledge, and there may be knowledge elements that in principle cannot be articulated verbally, either not at all, or in such a way that this will not be sufficient for particular purposes (Grimen, 1991). Value interpretations, for instance, involve judgements about personal well-being which are seldom manifest in communication, and, therefore, not necessarily part of conscious awareness (Gray et al., 1985). Spradley (1979) says that most cultural themes remain at this tacit level of knowledge. Even though people know the cultural principle and use it to organise their behaviour and interpret experience, people do not express themes easily, because they come to be taken for granted and “slip into that area of knowledge where people are not quite aware or seldom find the need to express what they know” (ibid.). Politics of propriety, trust and awareness may legitimate official, spoken, unspoken and unarticulated levels of culture (Nielsen & Rao, 1987).

Beliefs and values which have been used and considered valid for some time without having been articulated and consciously questioned may sink into the unconscious levels of the

organisation's meaning structures and become *basic assumptions*. Basic assumptions may arise, for instance, because certain beliefs and values are considered to have worked well enough for a given group in coping with its problems of external adaptation and internal integration (Schein, 1992). This may also occur because beliefs and values are reproduced by power and domination relations based on economic, political and social structures and processes of an organisation's history or the larger society (Deetz, 1985). Basic assumptions define in a basic fashion the organisation's view of itself, its constituents, and its environment, and they are thought to new members as the correct way to perceive, think, and feel in relation to important problems (Schneider & Shrivastava, 1988; Schein, 1992). While these deep structures guide meaning construction, they can only with difficulty be inferred from their more conscious manifestations (Gray et al., 1985). Stories and other symbols are more readily observed than the deep structures which generate them, but they are not easily interpreted as the underlying values and assumptions need to be elicited and questioned to diagnose cultural symbols properly (Schneider & Shrivastava, 1988). The relation between visible and invisible cultural elements, and between deep and surface cultural meanings, is dynamic however. Through various interaction processes, the visible symbols and conscious meanings may influence deep structures, as well as the other way around (Hatch, 1993).

Summing up, organisational culture consists of meaning structures at different levels of depth, and of symbols through which these meanings are made manifest. At the most surface level organisational culture is constituted by the conscious beliefs and values held by organisational members. This includes, for instance, the official facade of the organisation which they want to present to outsiders, but also more hidden meanings that organisational members articulate between themselves. As we move towards deeper levels, the often tacit and implicit knowledge involve more hidden meaning, for instance strategically hidden information about business and political secrets. And at the deepest level are basic assumptions that are largely invisible and most of the time operate unconsciously, often because they have been taken for granted for a relatively long time. While the more conscious meanings and meaning construction processes reflect the interpretive paradigm, the deeper levels incorporate the unconsciously generative and potentially oppressing structures of the realist and critical paradigms.

Cultural dynamics: contradictions and ideological functions

At any given time, the meaning-structures of an organisation may be ordered along a continuum which varies according to the degree to which they are shared by organisational members (Gray et al., 1985). To obtain shared meaning is "essentially a political process in which the powerful shape meaning for other organisational members", whether it is by trying to "define organisational reality for others and to engineer its consensual acceptance" (Pfeffer, 1981) or by drawing attention to certain aspects of their experience and not to others (Smircich & Morgan, 1982; Gray et al., 1985; Ranson et al., 1980). Powerful groups attempt to preserve their power by reinforcing certain concepts, concept networks, and the tacit value system from which their power derives, and by squelching expression of ideologies antithetical to their own (Gray et al., 1985). There will, however, always be factions within an organisation who question the meanings offered or imposed by the powerful to explain the way things are (ibid.). Contradictory meanings, rather than shared meanings, arise from several sources. One major source of contradictions is different levels of power held by organisational participants, others are their allegiance to various occupational and professional

groups, as well as cultural training or membership in ethnic or other minority groups of the wider society (ibid.).

The inherent ambiguity of symbols permits the recognition and expression of tensions between different and oppositional interpretations (Levine, 1985; Eisenberg, 1984). For instance, Martin et al. (1983) found that common stories “seem to express tensions that arise from a conflict between organisational exigencies and the values of individual employees, which are, in turn, reflective of the values of the larger society”. As expressions of a relative stable and realist cultural dynamic, such stories may serve as a pressure valve, accentuating, releasing and then alleviating tension not easily reconciled or dissipated without abolishing or changing the existing cultural paradigm. The ambiguity of symbols can permit and also facilitate change through shifting interpretations of important organisational symbols, by expressing spontaneous humour leading to creativity and reframing, and by providing a bridge between the familiar and the change (Eisenberg, 1984; Hatch & Ehrlich, 1993; Gioia et al., 1994). More fundamental change would normally be facilitated by making manifest and intensifying fundamental contradictions between cultural structures in the oppositional interpretations of critical events (Benson, 1977; Gray et al., 1985). The determinist dialectic of underlying contradictions would then be succeeded by a penetrative consciousness which would make possible change of the present order through paradoxical thinking (Benson, 1977; Bartunek, 1988; Cameron & Quinn, 1988; Ford & Backoff, 1988; Putnam, 1986; Wood & Conrad, 1983; Scott Poole & Van de Ven, 1989).

The forces for fundamental change are often obscured, by the ideological function of symbols which often dominate meanings and sense-making. The critical study of cultural symbols and their relation to what is taken for granted and the un- or preconscious may thus “contribute to a broader illumination of the social processes reproducing social order - or its change through the acts of a dominating elite - thus decreasing its 'automatic' nature and making it more available for conscious reflection and questioning” (Alvesson, 1991). Four functions of ideology, which serve to stabilise the established social relations through symbolic expressions, are the denial of contradictions, the naturalisation or reification of social reality, the neutralisation or universalisation of interests, and the legitimation of the established social system (Giddens, 1979; Deetz, 1985).

The emergence and intensification of contradictions depends upon the awareness of actors about these structural conditions' involvement in their actions which then may transform rather than reproduce social reality (Giddens, 1979). It is therefore normally in the interests of dominant groups that the *existence of contradictions is denied* (Giddens, 1979). And the dominant ideology often do mask contradictions in the existing order, either by excluding them from thought or by attributing apparent meaning to them (Deetz & Kersten, 1983). Language systems may frequently be developed in ways which mediate or cover up such possible sources of tension: “The sets of distinctions made, and resultant interpretations, may keep contradictions from easily being seen as contradictions” (Deetz, 1986). The ideological hegemony may, for instance, be maintained through emphasising other (splitting) opposites than the fundamental contradictions (Todal Jenssen, 1993). The recognition and strategic usage of paradox and ambiguity may work in this way to detract attention from more fundamental contradictions which may threaten the dominant ideology.

Abravanel (1983) finds myths to be “the most appropriate instruments for the inversion of ideological contradictions”. Myth does not inverse contradictions by denying things. Instead, it abolishes the complexity of social realities, and gives them the simplicity and clarity of

essences. For instance, the contradiction between something familiar and something strange or unique may be denied through the identification and reduction of otherness and uniqueness to sameness (generalising) or their relegation “to an ideal type, a pure object, a spectacle or a clown (stereotyping) which then no longer threatens the security of the home, the sacred or the desired” (Abravanel, 1983; Barthes, 1973). However, Lucas (1987, referring to Levi-Strauss) suggests that a myth does not succeed just by reducing the complex into the simple, but rather by rendering an unintelligible complexity into a complexity that is more intelligible, and, in doing so, by providing the illusion of understandability and that contradictions have been overcome.

A second ideological function is the *naturalisation* or *reification* of the present social reality. This is the process by which historically chosen forms and privileges become defined as the natural way things are, so that their chosen quality is no longer open to inspection and discussion, and change is not considered (Deetz, 1985). Even though organisational members participate in the construction of social reality, they come to perceive the resulting constructions as external, natural and concrete realities that are independent of themselves and eventually dominate them (Deetz & Kersten, 1983). The interests of dominant groups are normally bound up with the preservation of the status quo and meaning constructions which inhibit recognition of the mutable and historical character of human society (Giddens, 1979; Deetz, 1985). For instance, the natural-science modelled studies of organisation and strategy in which social relations appear to have the fixed and immutable character of natural laws, blocks open discussion and largely serves to support existing power arrangements and dominant interests (ibid.).

Narrative is a very potent naturalisation symbol “because it compels belief while at the same time it shields truth claims from testing and debate” (Witten, 1993). Through the assumptions or definitions of situations which are taken as givens by organisational participants, they may therefore perform ‘third-order’ control functions (Wilkins, 1983). Stories are capable of attracting attention, persuading by emotional investment and commitment, and commanding belief and memory, with minimal risk of the argumentative challenges that can validly be made of powerful assertions set forth in other forms of talk (Witten, 1993). Legends or myths may serve to “prove” that claims are valid by presenting historical “evidence” and permitting interpretation of that “evidence”, by asserting the truth of historical, present or future events as dogma or taken for granted, and by giving statements of fact in no need of explanation (Wilkins, 1983; Abravanel, 1983; Barthes, 1973). Other mechanisms by which myths may serve to naturalise the established version of social reality are (Abravanel, 1983; Barthes, 1973):

- “The quantification of quality. This is the mechanism through which myth ‘understands’ reality more efficiently by reducing quality to quantity, and then validating its truth by quantitative effects such as success, popularity, citations, etc.”
- “Tautology. When at loss for an explanation this device consists in defining like by like or in taking refuge in the magical, totalitarian response of authority: “Because that’s how it is”, or even better: “Just because, that’s all””
- “The privation of history. History disappears along with contradictions when things are prepared and displayed so that all we have to do is enjoy this beautiful object without wondering where it comes from”.

While the generic and most basic contradiction between the reification of the existing social reality and the continuing process of its social construction (Benson, 1977) may be hidden or masked by naturalisation/reification, the likewise generic and basic contradiction between

dominant interests and the plurality of interests present in an organisation may be denied by *neutralisation* or the *universalisation of interests*. In this process sectional interests become represented as universal ones, for instance by attempts to sustain legitimacy through the claim to represent the interests of the community as a whole (Giddens, 1979). Alternatively, interests are neutralised as value positions become hidden and value-laden activities treated as if they were value-free (Deetz, 1985). A singular position may thus be universalised as a position shared by everyone, becoming one of fact rather than choice: "for example, objective evaluations mean that the criteria for evaluation are no longer open to discussion. "Just give me the data" implies agreement on the criteria for collection and classification. The presumed neutrality prevents investigation of how agreement was reached on these criteria and whether the criteria are appropriate at all" (ibid.). "Disagreement with such a position would appear unreasonable and irrational, or at least time-consuming or merely philosophical" (ibid.).

A story may help to universalise interests by expressing values which "enable or suppress conflict by affecting the ability of people in organisations to identify what they are experiencing as a problem or grievance" (Witten, 1993). "For example, asymmetrical distributions of power will seem appropriate and just when core values legitimise the authority of some over others; similarly, values that ascribe blame to victims of injustice will constrain the definition of grievance by inhibiting attributions of fault to external causes instead of to one's own failings" (ibid.). Apparent conditions of consensus can then hide the fact that certain members' interests are favoured over others (Deetz & Kersten, 1983). Narrative may further its ideological impact by maintaining a culture of conflict avoidance and powerlessness by conveying an invented tradition of the futility of protest, that is, by illustrating the belief of relatively powerless people in a social group that they will fail if they attempt to mount challenges to the status quo and ruling groups (Witten, 1993).

The fourth ideological function, *legitimation* of the established social system, appears in "the rationalisation of decisions and practices through invocation of higher-order explanatory devices" (Deetz, 1985). Value principles of loyalty, courage, and sacrifice often lead people to rationalise their experience so they continue to work in the interests of others and overlook contradictions (ibid.). Goal statements may also be used as legitimating devices, "more to make decisions accountable than to guide actions" (ibid.). Symbols like myths may "justify and sustain values that underlie political interests, explain, and thereby reconcile the contradictions between the professed values and actual behaviour, and legitimate established leadership systems faced with environmental threats" (Pettigrew, 1979; Cohen, 1974). The language in which narratives tend to be told can impart values and assumptions in subtle ways, making it difficult to probe beneath the surface to identify and challenge the legitimating function (Witten, 1993). One particular mechanism through which myth may legitimate the existing ideology is 'the inoculation', which consists of "identifying the evil, pettiness, injustices, vexations and imperfections of the ideology and then at the last moment, saving the ideology by reference to a greater and more important good that is available in spite of, or thanks to the heavy costs of its own blemishes" (Abravanel, 1983; Barthes, 1973).

In conclusion, organisational cultures are dynamic phenomena characterised by contradictions and tensions between cultural structures and interpretations of events and phenomena. It is the manifestation of cultural contradictions in a dialogue of different perspectives that creates the dynamics in which new meanings can emerge (Hennestad, 1990). The ideological functions of cultural meanings and symbols often stifle this dialogue, however. This should raise some concerns about the ethics of, for instance, storytelling as an influential communicative strategy: "Since the claims embedded in stories are both persuasive and

hidden, the protection of rational challenge available when one participates in dialogic forms of talk is not readily available" (Witten, 1993). While ideological myths might disguise tensions and thereby serve to decrease anxiety and increase the productivity in carrying out organisational tasks (Abravanel, 1983), the potential participants of strategic issue diagnosis should at least be aware of ambiguity and fundamental paradoxes of organisational processes. They should not take culture for granted, but be capable of communicating about the basis and mixed premises of their communication, to engage in dialogue and higher-level learning to assess whether or not the perspectives and models they use to interpret strategic issues are fruitful reflections of the situation in which the organisation finds itself (Hennestad, 1990). This concept of organisational culture developed to understand, explain, and criticise strategic issue diagnosis should, thus, help to avoid interpretations 'on automatic'. For instance, because the stories people hear and tell aid them in uncritically accepting organisational values, teach models of behaviour whose underlying assumptions are not questioned, promote acquiescence and submission to "fate", and thereby depoliticise incipient organisational issues, removing them from arenas of discussion and debate (Witten, 1993).

The obtrusive - unobtrusive power paradox

In this paragraph, the concept of power implicit in the above description of organisational culture will be explained. Two main perspectives on power appeared in the different cultural paradigms. One was that power best could be conceptualised as the capability of an actor to achieve intended outcomes even at the expense of that of others who might resist him (Giddens, 1979), based on socially constructed power relations and control over resources vital for organisational effectiveness. The second was that power should be seen as a property of the collective, as a deep, structural context determining or constraining the realisation of common interests or the interests of established dominating groups (*ibid.*). Neither of these modes of conceiving power is appropriate in isolation, they should be connected together as features of the duality of structure (*ibid.*).

On the one side of the duality power is closely related to action. Action depends upon the capability of actors to intervene in the world to 'make a difference' to a pre-existing state of affairs or course of events (Giddens, 1979; Whittington, 1989). Power is a sub-category of such transformative capacity, it refers to the capability to bring about outcomes where the realisation of these outcomes depends upon bringing about a change in the actions of others (Giddens, 1979). In attempting to influence others, actors mobilise resources influencing the course of interactions, which become based on sustained relations of autonomy and dependence. The notion of 'resources' is a key one in the treatment of power; as the 'bases' and 'vehicles' of power they are both drawn upon by parties to pursue their ends, and structural properties of social systems reconstituted and reproduced through their utilisation in social interaction (*ibid.*). Each social system is characterised by certain established structural properties - distributions of resources and rules of conduct for deploying them - which are used as resources and reproduced or transformed through the duality of structure.

However, everyone does not have access to equal amounts of or equally important rules and resources, neither are they equally capable of deploying them: "The powers society grants are highly structured - some have more than others - and it is those with privileged access to social powers who are best able to 'make a difference'" (Whittington, 1989). Power is generated by resources which are asymmetrically distributed. It involves structures of domination if such asymmetrical power distributions are reproduced and sustained in and

between social systems. If chronically reproduced, over time such structures can take on the characteristic of relative independence, so that human action becomes constrained and generally influenced by pre-existing asymmetrical structures of power (Layder, 1990). Domination may thus be maintained at two levels (Giddens, 1979): both by actors harassing structures of power to conceal sectional interests, and by structures which "by themselves" generate tendencies that conceal their dominating functions.

The concept of 'power', then, "intervenes conceptually between the broader notions of transformative capacity on the one side, and domination on the other: power is a relational concept, but only operates as such through the utilisation of transformative capacity as generated by structures of domination" (Giddens, 1979). Power is a capacity to make a difference to the direction of events: some parties are in dominant positions having the resources to impose and enforce their conceptions of reality, others are in positions of relative weakness and must act in conformity with the definitions of others (Benson, 1977). Power is not defined in terms of conflict, as if it existed or only became exercised when the resistance of others had to be overcome, though it is frequently substantively related to conflict (Giddens, 1979). In the same way power is not defined in terms of intention, since the actor is not fully aware of how the structures drawn on generate power, nor in terms of interests, as it is not confined to influencing others to think or act against their subjective or real interests (*ibid.*). Equipped with this concept of power, one is in a better position to study how actors constructively facilitates collective action based on common as well as potentially dominant interests, and the question about whether power is used to realise common or dominant interests becomes an empirical question, to be answered in the context of real organisations.

This model of power at least makes probable the integration of different cultural paradigms' concepts of power. This integration revolves around the concept of organisational culture as dynamic meaning structures at different levels of depth, both surface structures of which the actors are conscious, deep structures of which actors are often unconscious, and mediative structures at an intermediate level (Bradshaw-Camball & Murray, 1991; Conrad, 1983; Lucas, 1987; Frost & Egri, 1991). Like structures in general, these structures are simultaneously both the results of the use of power, and resources actors can apply in ongoing exercises of power. First, the surface politics consists of actors who voluntarily draw on surface structures to intentionally try to influence how others experience power relationships and the meaning of issues or decisions during overt conflict. "Surface power politics typically deals with attempts by one or more of the parties to exploit (bend, resist, implement) the rules of the situations they are in to their own advantage" through "phenomena such as the manipulation of perceptions of power or the withholding of information and agenda-setting" (Frost & Egri, 1991; Lucas, 1987). "The exercise of surface power and its attendant strategies and tactics are more readily accessible and have been the subject of much of the academic work on this topic" (Frost & Egri, 1991; Hickson et al., 1971; Pfeffer & Salancik, 1978). While the surface structures may sometimes be experienced as instrumental in achieving collective action based on common interests, their use is always potentially oppressing and serving dominant interests, because they may unconsciously or consciously activate the deep, asymmetric distributions of resources.

The deep dominance relations may be active because deep cultural assumptions influence actors' thoughts and actions in overt conflicts, and they may prevent conflict from arising at all. Such deep cultural power structures provide un- and preconscious guidelines and constraints that narrow organisational members experienced range of options, their decisions about which battles to fight, which adversaries to oppose, and which issues to raise (Conrad,

1983). Deep structure politics thereby influence, usually in hard to detect ways, “not only the way the rules of a situation are played but the very way in which the rules are framed in the first place” (Frost & Egri, 1991). The deep structures have their origin in historical power battles and power relations in the wider economic, political, social and material context. “These social, political and historical roots of current organisational frames and actions are often forgotten or never recognised by most contemporary actors. It noted at all, they are seen as “the way things are”, or as rationally derived prescriptions for behaviour in organisations” (ibid.). Most of the time these deep structures of power therefore unconsciously guide and constrain employees' thoughts and actions; just during crises or major transformations are they normally violated or even consciously questioned, and a need for organisational members to openly and overtly exercise power over other members arise (Conrad, 1983).

The third, intermediate level consists of transforming cultural structures that operate between the deep and the surface structures (Mumby, 1988). Through these 'structures of interpretation' deep structures influence the surface and surface structures affect the deep ones (Conrad, 1983). Real interests, contextual contingencies and substantial resources are transformed to subjective and conscious assumptions about interests, contextual situations and resources, as well as the other way around. “On the one hand, power in the deep structure shapes and influences (but does not directly determine) the actions on the surface of organisations. Surface, contemporary, day-to-day political action can alter the impact, direction and nature of power in the deep structural influences on tomorrow's surface politics” (Frost & Egri, 1991). Through these dynamics power will be generated, and it may itself be said to become a structure to the extent that it is embedded in assumptions and values about and related to who has power, if that power is legitimate, and how power can legitimately be exercised.

A lot of tensions will exist between structures, both within levels and between the deep and the more surface levels. For instance, between deep structures actually shaping an issue or decision and surface structures used to “construct arguments that justify the decision on other, acceptable, but less relevant grounds” (Conrad, 1983). Some symbols will allow people to handle such contradictions because their multiple meanings allow them to be interpreted as consistent with both sides of the paradox. Perhaps more important are the ideological mechanisms which suppress, conceal and distort deep cultural contradictions through systematically distorted communication, and thereby maintain the established dominant power relations. While the deep structural dynamics of contradictions and ideological mechanisms are mostly beyond the conscious awareness of most actors, there are some who can recognise these sources of power, have access to them through their command of cultural symbols in communication, and are able to harness them to their advantage through surface political action (Frost & Egri, 1991). One form of interaction between surface politics and the deep structural level is the use of surface games to tap into the deep structure by gaining the support of powerful interest groups (ibid.). The efficacy of such actions, which often focus on the acquisition/expansion and maintenance of power bases, is in large part dependent on harmony with the values and interests of the powerful (ibid.). A second form of interaction arise if actors are able to use surface political actions to “fend off the deep structure through either passive resistance, secrecy or confrontation” (ibid.). A third form is the use of surface politics to influence and change the deep structure. Though deep power structures are based on historical struggles and mostly operate to institutionalise existing power relations, the outcomes of current political activity may also influence and form the foundation of future deep structure power relations (ibid.). Through the present day selection of strategic issue agendas, framing of strategic issues, selection of decision premises and criteria, the surface

politics may impact deep structural dominance relations and, in fact, use them proactively to facilitate change.

By beginning to integrate different concepts of power and politics around cultural structures at different levels of depth, one can at least catch a glimpse of how the paradoxes and tensions between different paradigms are acknowledged, managed, and creatively transcended. Power is simultaneously generated by surface, subjective, easily observable and underlying, real, unobservable levels of social reality. As the same structures simultaneously form both the actor and the society, power is both an individual capability and a characteristic of collective social relations (Giddens, 1979). It is both a phenomenon of relative voluntary action and of relative structural constraint and influence. It is both a macro and micro phenomenon; also the broader macro context of power is paid attention to as the basis of the deeper structures. While surface structures of power often change, the deeper levels of power are more stable, but their potential change implies more radical change. And last but not least, power may be instrumental in realising collective action serving common interests, as well as potentially oppressing in realising collective action that privileges dominant interests.

Chapter 3.

METHODOLOGY AND METHODS

Even if realist philosophy is accepted in social science today, few contributions have been made on the subject of how it actually should be done, and it has failed to make much difference in practical empirical research (Sayer, 1992; Layder, 1993; Yeung, 1997). Structuration theory, in particular, "largely remains a process theory of such abstraction that it has generated few empirical studies" (Barley & Tolbert, 1997). Consequently, most empirical researchers are still concluding that the philosophical debate is not relevant to them. The relatively easy accessibility of positivist methods, in contrast, is one of the main reasons why it is "alive and well, and winning more than its fair share of methodological battles" (Allen, 1983, in Yeung, 1997).

In this chapter, I shall describe the study that I have done, not only to make it possible for readers to evaluate it, but also to try to demonstrate one way realism can be followed through to, and make a difference to, practical research. There is a need for making explicit methods used in realist studies, to facilitate discussion, better judgements, and furtherance of the realist project. While the want of practical guidelines creates some room for manoeuvre, and the pragmatic nature of inquiry precludes any general formulas or recipes (Morrow, 1994), one should avoid taking advantage of the situation as an excuse for sloppy research. It is essential to work seriously to achieve reasonable accordance between stated ontological assumptions and the application of scientific methods.

3.1 Methodology - Principles for Practice

3.1.1 The theory - reality relationship

To start with, I shall try to throw some light on the relationship between theory and reality. I do not aspire to give any elucidation doing justice to the complexity and subtlety of this relationship, but by drawing heavily upon and sometimes modifying arguments from chapter two in Andrew Sayer's (1992) realist approach to method in social science, I shall make some major distinctions at this level. First, there is the major distinction between states or properties of the world (reality) and statements about that world (theory). A statement about something is not the same as the thing it refers to, but this distinction is often blurred in popular discourse. We need to keep in mind that not only final theoretical statements, but observational statements, too, belong to the domain of statements about the world. Thus, the distinction between observations and theory is not the most central one, and it is often questionable. The main distinction is complicated, however, as conceptual phenomena (actors' concepts) and concept-dependent phenomena (phenomena constituted by actors' concepts of them) belong to the domain of the world. At the same time the actors' concepts are to some degree influenced or informed by scientific concepts (Giddens, 1979).

The relation between the world of events (the actual domain) and our observations of it (the empirical domain) deserves some attention, as it is on the edge of the distinction between the world and our theories about it. Drawing on research on perception from cognitive psychology, Sayer shows that our perception of the world is strongly mediated by our concepts of that world (Churchland (1979) was one of the earliest challenges to this basic pillar of positivism, the belief that theory and observation languages were different (Lane, 1996)). First, there is an event which generates or reflects some kind of energy, this energy reaches our sensory organs as stimuli, when activated by these stimuli our sensory mechanisms transmit signals to the brain, which gives us sensations or percepts. Then, if, and only if, these sensations are conceptualised in some way, using our concepts or schemes about that part of the world, is it possible for us to make sense of them and identify 'perceptions', or beliefs about the state of the world. After explicating the central role of our concepts, Sayer goes on to emphasise the key role of practice, of active manipulation and exploration of the world, in learning and developing sound concepts about it.

Now there are several transformations between the event and the perception of the event, but even more transformations are involved if we are to translate our perceptions into 'observation statements'. Perceptions must be converted into symbols of language (which often influence the concepts involved in forming perceptions in the first place) that allow us to generate data, in the form of numbers or texts, which can be analysed, interpreted and discussed with other researchers. Atkinson (1992) demonstrates how writing fieldnotes is dependent on natural language, literary conventions and textual devices, and how necessities of writeability and readability reduce their faithfulness to our perceptions of the phenomena. The field researcher depends on his or her command of language to write texts of the field, and he or she writes them with a concern for their readability as parts of a system of retrospective - prospective relationships with other texts (readings of ethnography, earlier and following fieldnotes, final report). Further, to acquire acceptance as genuine, authentic and realistic, fieldnotes and final texts must follow conventions that enable others to understand them and interpretively contextualise them as such within a context of other texts. Paradoxically, to be judged as realistic their content must be further removed from the actual world. In interviewing people about their perceptions, further dependence on language, as well as critical perceptions of negotiations on what to include and omit as well as how it is phrased, are involved. Such problems are not unique to fieldwork. The transformation of other people's perceptions of actual events, even their own mental events, into categories of questionnaires is no less problematic. Having generated data in the form of numbers or texts, further interpretation using procedures and techniques for analysis as well as communication with other researchers, is sometimes used to edit data, and contribute to create the empirical domain.

Several implications follow from this treatment of the reality - theory relationship. Most fundamentally, the theory-neutrality of observations is refuted. Today, the simple version of the ordering framework model of theory, where there is a taken for given assumption of equivalence between 'data' and 'sensations', is hardly accepted. 'Data' in the form of numbers, field notes, survey results or statistics are not untainted by concepts or theories and only subsequently interpreted. Nevertheless, when we try to break away from the empiricist and positivist epistemology of traditional functionalism, from the accepted and habitual ways of carrying out research and the associated established interests there comes a tendency of continuing a rather uncritical and unreflective practice of taking them as neutral by focusing attention on the relation between observations and theory.

If the main function of theory is held to be ordering data into constructs and regularities between constructs, one easily ignores the theoretical interpretations necessary in generating data in the first place. The focus on formal relations between different statements about the world easily leads to simplifying, taking for granted, and practically forgetting the problematic relations between the world and our observations. The distinction between what we regard as less or more problematically observable, as well as observable or unobservable, is not simply a function of the physical receptivity of our research instruments or our sense organs. It is strongly influenced by the extent to which we take for granted and hence forget the concepts involved in perception and communication. When we get so familiarised to a domain of experience that we get accustomed to thinking in terms of a particular set of concepts, we rarely recognise their influence. Observations appear less theory-laden when we feel confident about them. There are many examples in the history of science of concepts which were initially regarded as speculative and 'theoretical', later becoming so familiar and unquestioned that they are treated as observable. Instead of being interpreted tentatively as ways of understanding objects or events, they are taken as unproblematic descriptions of characteristics of phenomena themselves.

Though the relationship between the world and our empirical data is "always difficult", and "the world always has some influence on the data our research instruments makes accessible to us", this should not allow us to practically ignore the first by taking for granted the latter. Instead, we should explore this relation and try to get closer to the real world. Three issues may be essential here. First, we should reflect more on how particular observations are influenced by our theories, personal experiences and concepts, cultural assumptions and values, as well as interests and power relations. Because "these can lead us astray, just as easily as leading us in the right direction", we must be more concerned with "developing the ways in which we monitor them and the inferences we make on the basis of them, and investigate those we judge not to be beyond reasonable doubt" (Hammersley, 1992). Second, as social researchers we should set out to understand the effects we have on the world and the data we collect (Hammersley & Atkinson, 1983). Because we are in a subject - subject relation to the persons and phenomena we study, and our practices are a part of the world studied, we cannot eliminate these effects (*ibid.*). And third, as social structures are relatively concept-dependent and subject to contingent transformations, the exploration of the actual-empirical world relation should include to try to develop better concepts of real events from listening to and learning from practitioners trying to change the social world, if not actually by doing action research or trying to change the social world ourselves. The social world's dependency on actors' concepts and historical circumstances should also make us expect unique as well as universal events and concepts.

Neither should we forget the unobservable real domain, which exists apart from the in principle observable events of the actual world. It is by positing the true existence of this domain realism really is set apart from neo-positivism and other sophisticated forms of empiricism, which recognise problems of neutral observations and even allow for unobservables to inform theories (Godfred & Hill, 1995), but do not believe in a reality beyond what our senses in principle though imperfectly can inform us about. To a realist the principal goal of research is better theories about this reality, and to approach this goal we need rational abstraction from and reflection about which underlying causal structures and mechanisms might exist to make possible the observed events and relations between them. We should not unreflectively resort to only empirical forms when it comes to practical research, but recognise the need for rationalism (Layder, 1990).

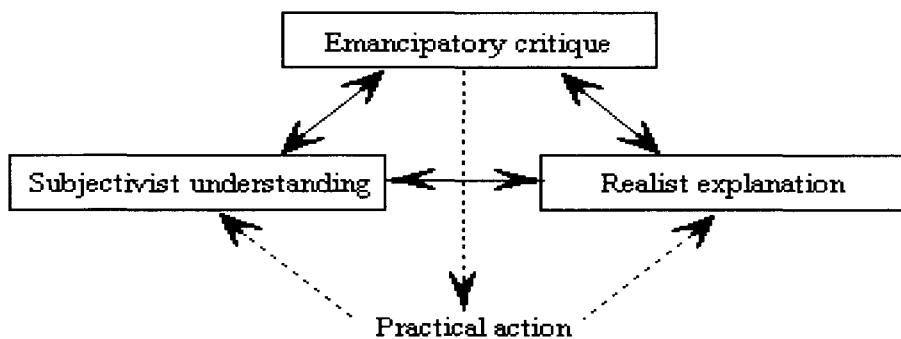
This rationalism involves more than formal logic and techniques for analysing formal relations of covariation between constructs, whose primacy comes from and supports the functionalistic ordering framework view of theory and the positivist view of causality as regularities in relations between events (if not Humean constant conjunctions between single events, still Millian probabilistic and by degrees presence - absence relations between empirical elements (Cook & Campbell, 1979)). As explained in chapter two a realistic view of causality reveals it as a power or capability to do something. It is defined as the capability of a structure to generate actual events and influence other structures, independently of actual patterns of events, and independently of what it actually does or will do in a particular situation. However, the identification of causal entities cannot appropriately be done independently of their empirical manifestations. Abstract conceptualisation of the basic nature of social structures and their causal powers cannot be carried out in a vacuum. Empirical observations of a certain 'richness' and 'density' are normally required to identify the structures and the characteristics or reasons why they have the causal capability to produce events and patterns in events. Such empirical observations are also necessary for other aspects of a rational causal explanation. Causal explanation should include a description of how the causal mechanisms work, a description of the process where different causal powers interact, counteract and modifies each other in generating events, as well as the ruling out of alternative explanations. It should show the contingent contextual circumstances within which the mechanisms are active and the process works as described. And it should indicate that the reason why structures have causal power is dependent on their being intentionally or unintentionally drawn upon by social actors trying to obtain favoured outcomes or expressing themselves in social practices. There are at least four basic rational methods that allow us to reflect and argument on the nature of social structures and their capabilities in human action and interaction (Morrow, 1994): metatheoretical argumentation that includes logics-in-use implicitly understood and effective due to context-dependent logical criteria, contextualisation and discursive reading of research, self-reflexivity and the resulting existential argumentation, and normative argumentation.

Our conceptualisations should contribute to closing the gap between our theories and the reality we struggle to dig deeper into and map increasingly better, yet we have no guarantee that they don't move us further away from it. Though the outlined position leads to a limited form of epistemological relativism, as it denies the possibility of any absolute foundation for knowledge, it does not mean that comparisons between different theories or judgements about their truth value are impossible or unintelligible. The very reference to a world existing somewhat independent of our theories implicates the possibility of making such judgements, about the goodness of reasons for believing that something like the structures of theories really exists in this world, using criteria both internal and external to the theory and paradigm used. I shall discuss validity internal to a discourse based on a critical, hermeneutic, realism, but first a description of my research strategy taking into consideration more of the social constructivist and critical paradigms, is appropriate. Realism does not require entirely new methods. In my context of inquiry it was practised together with established methods of ethnography and critical research.

3.1.2 Moments of the research process

As illustrated in figure 5, the three moments or phases of subjectivist understanding, realist explanation, and emancipatory criticism, corresponding to the three paradigms of my overall approach, are at the centre of the research strategy.

Figure 5. Moments of the research strategy.



The starting point is a set of phenomena or events already defined in specific ways in everyday language or science (Outhwaite, 1983). In this study, this set of events was the identification and interpretation of strategic issues. In the first phase, 'subjectivist understanding', the purpose was to understand strategic issue diagnoses as the actors themselves experienced this process. To facilitate this understanding, the organisational culture concept was used as an epistemological device for learning the meanings ascribed by groups of people to their experience, and holistically articulating thematic relationships expressed in these meanings, which necessarily presupposes an understanding of the wider context of this experience (Smircich, 1983). Deep and contextual insight from the perspectives of the actors themselves, expressed by their own concepts, was first identified and described (Evered & Louis, 1981; Morgan & Smircich, 1980). The resulting complex description of actual processes and actors interpretations of them then formed the basis of my own interpretations, negotiated with actors, other researchers, and cultural literature (Louis, 1985). Interpretation focused on the identification of underlying themes (Geertz, 1973); it involved "an iterative process of analysis that seeks out the basic significance of events (...) much surface complexity can be explained by an underlying organising theme that is more basic and fundamental and that serves to organise the surface phenomena" (Kets de Vries & Miller, 1987). The hermeneutic circle (which expresses the essence of the ontological condition of being a human in need of understanding the social world within which he or she lives) was here used as a methodological device for continually considering the whole of thematic relationships in relation to its parts of empirical material, and my pre-understanding in light of emphatic insight into the social world of those studied, as well as the other way around (Schwandt, 1994; Alvesson & Sköldberg, 2000).

Even deeper, underlying structures were involved in the causal interpretations of the next moment, 'realist explanation'. As Tsoukas (1989) put it, realist scientists are not content with establishing patterns of events, they want to know what has produced such events and patterns, and aim at discovering more and more of the layers behind the empirical surface. The nature of this explanation, where actual processes and actor's interpretations of them are

explained in terms of the underlying causal structures having the power to produce them, was described in the previous section. The status of causal structures clearly goes beyond Geertz's underlying structures or interpretive themes, though they may be closely related, as the themes could indicate and overlap with causal entities as well as elements of the mechanisms where causal powers are drawn upon in action.

The third moment of the research strategy was 'emancipatory critique'. Here I took a critical view on the interpretations made so far, both the actors' and my own. The process of strategic issue identification and interpretation was scrutinised to identify how cultural structures and processes related to sectional interests possibly dominated rational meaning construction. The purpose was to emancipate actors by raising awareness about ideological domination, to increase their capability to engage in more effective strategic issue diagnoses which better realise a greater variety of interests, including human development and democratic citizenry (Deetz, 1985). Rather than the activist mobilisation behind certain visions, issue diagnoses or action alternatives, the concept of emancipation was held to refer to contribution to an existing "foundation of background knowledge and motivation out of which further dialogue can develop that is attentive to the contextual specificity of the local and the overdetermining characteristics of larger social structures and institutions" (Kincheloe & McLaren, 1994). To facilitate this kind of emancipation, I also made some critical reflection on how my own values and ideology influenced my work, to demythologise the knowledge-production process and challenge its own authority (Thomas, 1993). The result of this critical probing of the ideological bases of strategic issue interpretations should lead to more effective practical actions, which would gradually change real cultural structures and mechanisms and make possible changes in actual phenomena, which then would have to be understood, explained and criticised anew.

No simple, sequential sequence between these three moments was assumed. After an initial subjectivist phase considered to be a necessary foundation for the other phases, they were recognised as mutually dependent, modified each other, and iterative and simultaneous execution took place. For instance, the critical as well as the interpretive moment informed the realist about which causal structures were the most important to analyse. However, I found it most practical to conduct the research in stages where the understanding moment was most pronounced initially, then the causal explanatory, and then the emancipatory critical. Finally, the dialectic between different insights created from each of the three paradigms emerged into some kind of synthesis which incorporated and went beyond the understandings of single paradigms (Morgan, 1983a; Lewis & Grimes, 1999; Lewis & Kelemen, 2002).

3.1.3 Validity Criteria

The validity of research results is a long-standing issue in debates over various qualitative studies, and, naturally, it is vital for the legitimacy of any research project. While traditional positivist approaches often defined validity in terms of whether the results reproduced the phenomena studied, and relied on techniques and the following of certain procedures to secure reproduction, there now seems to be a consensus that validity is the *judgement* on the part of researchers that the results selectively *represent* the world (Hammersley, 1992; Maxwell, 1992; Cook & Campbell, 1979). Representation is held to be different from reproduction in several ways. First, representation is always selective, because it "must always be from some point of view which makes some features of the phenomena represented relevant and others irrelevant" (Hammersley, 1992). Further, our judgements about whether

(or the extent to which) an account is true is bound to be uncertain because "we have no independent, immediate and utterly reliable access to reality" (ibid.). We must also recognise that "all judgements about the truth of knowledge claims rest on assumptions, many of which we are not consciously aware of, and most of which have not been subjected to rigorous testing" (ibid.). Thus, there can be multiple, and even contradictory, valid descriptions, explanations and critiques of the same phenomenon.

We must nevertheless judge the validity of claims "on the basis of the adequacy of the evidence offered in support of them" (Hammersley, 1992). While there seems to be consensus that the concept of validity refers to judgements about the best available approximation to the truth or falsity of propositions about some aspect of reality (Maxwell, 1992; Hammersley, 1992; Cook & Campbell, 1979), there is less than consensus on what grounds we should judge about the sufficiency of evidence. Studies building on new methodological approaches seem to be especially vulnerable because there is less work on their validity criteria. This section, then, is meant to explain the validity criteria that I find relevant for my methodological approach. In the following I shall list requirements to the study from different moments of the research process. The later requirements will largely build on the former.

Interpretive validity

My general approach to evaluating the interpretive moment is close to the post-positivist constructivists' (Denzin & Lincoln, 1994; Hammersley, 1992). Emphasis is laid on reflexively accounting for the research process (Altheide & Johnson, 1994), and some common problems are discussed in section 3-3. In this paragraph, I shall focus on the interpretive statements themselves and their relation to the reality they purport to refer to. The interpretive statements are valid if they really refer to this reality.

A basic requirement for interpretive validity is descriptive validity, that is, interpretive validity presupposes or builds on the factual accuracy of observations depicting the conceptual perspective of the people whose meaning is in question (Maxwell, 1992). Thus, observations must accurately and to a substantial extent use terms from the people's own language, and researchers must not make up or distort the things they saw and heard (ibid.). But for several reasons, however accurate and honest these observations are, they are bound to be incomplete and poor representations of the actors' experience. Such observations cannot capture implicit and tacit understandings. Informants always know more than they can articulate and tell us. Researchers are also at a loss because of this problem of communication: how can one write about what is seldom spoken about, and indeed what is beyond words, seemingly more basic and pervasive than words, and especially written words, allow (Altheide & Johnson, 1994). The most challenging dimension of ethnography is to transform into symbols the largely unarticulated, contextual understanding often just manifested in nods, humour, naughty nuances, subtleties, and the sense of the sublime (ibid.). Thus, the key issue is not to capture the informants voices, or words, but to "elucidate the experience that is implicated by the subjects in the context of their activities as they perform them, and as they are understood by the ethnographer" (ibid.).

To approach the subjects' experience, the observations have to be interpreted. My notion of interpretation is different from 'thick' description (though this term indicate descriptions embedded in the cultural framework of the actors rather than rich or detailed accounts (Maxwell, 1992, referring to Geertz, 1973)). Interpretation refers to the themes and the whole

of thematic relationships inferred from the observations and their contexts. A valid interpretation should demonstrate that the interpretive themes are plausible and credible inferences from the necessary amount of observations of the right nature, and from the context of the observations that provides for interpretive meaning. A valid interpretation should put forth the context of the observations, and there are at least three contexts which are vitally important. First, the actors have many perspectives and voices, and the researcher should faithfully point out the multiplicity of perspectives in the setting (Altheide & Johnson, 1994). Second, the researcher should point to the rationality of these perspectives, by setting forth the larger context(s) (ibid.). Knowledge of relevant political, economic, social, material and environmental contingencies, historical as well as situational, and macro as well as micro, at least as these are perceived by the actors, should be displayed so that the reader might judge the plausibility and credibility of the interpretation of observations. Third, the researcher should also evince where his or her own voice is located in relation to the actors' perspectives (ibid.). The author's own perspective should be explicitly specified, and not disguised to give the impression of neutrality and objectivity to produce a persuasive interpretation.

Thus, interpretive validity is "inherently a matter of *inference* from the words and actions of participants in the situations studied" (Maxwell, 1992, my emphasis). We have "no in-principle access to data that would unequivocally address threats to validity", and interpretive validity cannot rest on consultative validity, i.e., the actors' accept of the interpretations (Maxwell, 1992; Sykes, 1990; Hammersley, 1992; Hammersley & Atkinson, 1983). They may be unaware of their own feelings or views, may recall these inaccurately, may not acknowledge all conditions and consequences of their actions, and may consciously and unconsciously distort or conceal their views (Maxwell, 1992; Sayer, 1992). Even their validation of descriptive validity may be problematic, as a preference for favourable presentations, and the tendency to self-aggrandisement, may lead to objections, probably stronger and deeper the more the unique and specific aspects of qualitative data are used (Sykes, 1990; Miles, 1977).

Theoretical validity

The distinction between interpretive and theoretical validity is not an absolute, because the descriptive observations and interpretive inferences are dependent on the researcher's perspective, purposes and theoretical framework (Maxwell, 1992). Theoretical and interpretive validity are different though, as theoretical validity is about statements of a higher degree of inference and abstraction, and they refer to a deeper kind of explanation than the interpretive theme or summary description of phenomena (ibid.). According to Maxwell (ibid.) the line of demarcation is whether the validity issue is concerned with the appropriateness or legitimacy of using a given concept or theory to characterise a phenomenon, rather than with the accuracy of observations or interpretations. Theoretical validity depends on consensus within the research community using a theoretical framework about the appropriateness or legitimacy of applying the framework to established facts.

Theoretical validity consists of two kinds of validity: "Validity of the concepts themselves as they are applied to the phenomena, and the validity of the postulated relationships among the concepts" (Maxwell, 1992). These two kinds of validity are not independent, though, as the intrinsic nature and power of any given structure (represented in a concept) in part comes from and must be assessed within the context of a network of structures (represented in a map of concept relations). Concept validity addresses the appropriateness and legitimacy of the theoretical concepts applied to the descriptions and interpretations of phenomena. It

resembles construct validity, but must be clearly distinguished from the positivist validity of generalisations or abstractions from sensations or research operations to categories or concepts under which similar observables are grouped (Cook & Campbell, 1979; Maxwell, 1992; Norris, 1983; Marsden, 1993). Concepts “do not refer to classes of observables but to entities of which observables are manifestations” (Norris, 1983). Concept validity is, thus, not concerned with the accuracy of ordering facts under theoretical categories or concepts, it is not about the relation between observational and theoretical terms (Marsden, 1993). Instead, judgements are made about the correspondence between the theoretical concept and a real, underlying structure by addressing the causal relation between this structure and its empirical appearances (*ibid.*). The issue is whether the meaning of the theoretical concept precisely describes the basic nature, the properties, dispositions, inner essences, etc., of the social structure it purports to refer to, so that the causal model adequately explains the empirical observations. To help readers judge for themselves if the causal model explains the empirical observations, so that they do not have to rely wholly on the researchers own inferences, a fair amount of the empirical material should be made available.

Relationship validity implies an even stronger commitment to a priori knowledge than concept validity. The internal relations of concepts is different from the nomological network of lawful propositions about recurrent regularities, however (Norris, 1983). Further, it cannot be dependent on covariation between variables, and, contrary to positivist notions, it cannot be assessed prior to and independent of concept validity (Maxwell, 1992; cf. Cook & Campbell, 1979). The validity of any concept is essential to causal or internal validity, but relationship validity also goes beyond judgements about propositions about single or linear causal explanations towards finding the inner nature of the postulated causal entities in a generative network (Layder, 1990). To adequately map this network of relations with complex interrelations and diffuse reciprocal influences, one has to pay attention to and demonstrate the operation of the theoretical concepts in the underlying social dynamics of a particular setting (Dyer & Wilkins, 1991). The validity of propositions is thus established from relations to the cultural themes of the interpretive moment as well as rationalist relations to both cultural theories using the concepts developed and to grand theories used for explanation and criticism. Needless to say, the complexity and the unobservable quality of the underlying social reality makes it difficult to reliably and precisely define concepts and relationships without compromising essential attributes of the phenomenon (Lampel & Shapira, 1995). The testability and falsifiability of the resulting theory is also made difficult by the abstract and general nature of the grand theories utilised.

Critical validity

While theoretical validity is concerned with the explanatory accuracy of theories, critical validity is concerned with their effectiveness, too (Robinson, 1994). Critical validity involves the application of an evaluative framework to make normative judgements about the practices described and explained (Maxwell, 1992; Robinson, 1994). The contribution of knowledge to the potential for autonomous and responsible human action is established as normative standards by the emancipatory interest (Stablein & Nord, 1985). The critical validity criteria may be divided into two main types: judgements about whether the theory reveals oppressive forces reducing human autonomy and responsibility, and judgements about whether the theory contributes to improve people’s understanding of their situation and their ability to change it for a better future.

A critical study is judged by its ability to reveal the power of oppressing structures as they operate in the worlds of lived experience (Denzin, 1994; Kincheloe & McLaren, 1994), in this study the more or less unobtrusive cultural structures and mechanisms as they operate in the social construction of strategic issues. Exposure of constraints to free and rational thinking and communication in the past and present to understand and improve the basis for future action is the goal of a critical study (Stablein & Nord, 1985). One indication of critical validity is whether the study creates a space for multiple voices to speak, also for those who are oppressed and therefore absent from the observed communication situations (Denzin, 1994). Another criterion is whether it includes interpretations of the larger forces that shape both the researcher and the researched (Kincheloe & McLaren, 1994). The specification of the historical situatedness of the study is one indication that such interpretations are present, "i.e., that it takes account of the social, political, cultural, economic, ethnic, and gender antecedents of the studied situation" (Guba & Lincoln, 1994). Further, the study should not be "simply the empirical re-presentation of the world but the transgressive task of posing the research itself as a set of ideological practices" (Kincheloe & McLaren, 1994). The ultimate criterion is whether the study by such exposures "enables actors to engage in self-reflection and hence re-evaluate their conditions of existence" (Putnam, Bantz, Deetz, Mumby, & Van Maanen, 1993). Though the portrayals should be plausible to the people themselves, there may be disagreement because the researcher may see effects of oppression which the participants would hardly acknowledge (Kincheloe & McLaren, 1994).

Critical research is also judged by its contribution to increase the basic potential for emancipation and change in concrete social situations by "the extent to which the inquiry acts to erode ignorance and misapprehensions", and by the extent to which it leads to improved ability of those it has studied to socially construct their conditions of existence (Guba & Lincoln, 1994). Thus, my study should encourage reflective thinking and dialogue among practitioners in the organisation studied to generate more reasoned strategic issue diagnoses. Critical studies should not dictate appropriate action, however, "to do so would violate the emancipatory interest in autonomy and responsibility" (Stablein & Nord, 1985). Neither do I wholly endorse validity criteria which acknowledge the legitimacy of interpretations on the grounds that they move people to transform the existing social structure, such as catalytic validity (stimulates to action), and tactical validity (empowers action) (Deyhle, Hess, & LeCompte, 1992; Kincheloe & McLaren, 1994; Putnam et al., 1993; Guba & Lincoln, 1994). Critical validity, instead, implies that a study supports those studied in understanding the social world and the way it is shaped, and contributes to resources which increase their ability to shape it in ways which more effectively serve human, organisational and social interests.

Generalisability / external validity

The last kind of validity I want to put to use is generalisability or external validity. Again the validity issue may at least be of two types or defined along two dimensions. The first is the degree to which the research can be generalised to universal structures and relations of the real domain, that is to theory instead of populations or situations (Tsoukas, 1989; cf. Yin, 1989). And the second is the degree to which the theory contributes to valid understanding, explanation and criticism of other situations, contexts and populations in addition to those which have been investigated.

An external valid theory has often been defined as a theory that adequately depicts stable patterns in phenomena or events which are fixed over time, space and groups of human actors. Such lawlike regularities, however, are perishable and relatively seldom found, not least

because people have capacities for reflection and intended rationality which lead to consciously trying to take advantage of any universal and invariant laws (Numagami, 1998). For these reasons, case studies have sometimes been dismissed as inadequate, or the external validity requirement has been seen as irrelevant (*ibid.*). Although people's meanings vary across time and space, I have assumed some universality in which structures and mechanisms exist and how they operate together. Some stable patterns in social phenomena may also be reproduced consciously and unconsciously by human conduct, supported by stable and widely shared knowledge and beliefs, together with other stable conditions, universal real structures, and not least power relations of the larger contexts (*cf.* Numagami, 1998). But such regularities in events are neither necessary nor sufficient conditions for the identification of causal relations, and, consequently, generality, or external validity, is "a property of the necessary relations in real structures and not a feature of the empirical domain" (Tsoukas, 1989). Thus, the external validity criterion as generalisability to universal structures and relations is relevant and important, and case studies from one or a few contexts may be indicative of universal and general theory.

Though causal powers are universally valid, their existence, activation, and effects are contingent upon particular generative networks and specific circumstances (Tsoukas, 1989; Layder, 1990). To be "useful in making sense of similar actors and situations" (Maxwell, 1992), a study thus needs to specify the particular generative network which generates the phenomenon under study, and the contingencies or contexts within which the phenomenon develops. The more systematic and widespread the theoretical sampling done, the more holistic perspective and more conditions and variations will be built into the theory, and the better the grounds for judging whether findings may be generalised to other situations will be offered (*cf.* Strauss & Corbin, 1990). Two aspects of such generalisability may be distinguished: "generalisation within the community, group, or institution studied to persons, events, and setting that were not directly observed or interviewed; and generalisation to other communities, groups, or institutions" (Maxwell, 1992). Case studies, particularly if they are adhering to the interpretive methodology, could epistemologically resonate with various readers' experience and therefore facilitate greater understanding of the phenomenon in question than other research strategies (Snow & Anderson, 1991). Anyhow, knowledge of unique aspects of these other settings is necessary for facilitating the contribution to their understanding, explanation and criticism, even if the theories about universal structures and relations already have the necessary "high relevance and accessibility to a range of user groups outside the situation studied and the research community" (Ferlie & McNulty, 1997).

Both aspects of generalisability is facilitated by making explicit the background assumptions or perspectives which the theory is based on and built from. The renewed realisation that all knowledge is perspectival and the ensuing demand that the author's perspective be specified (Altheide & Johnson, 1994) contributes to evaluating the external validity of a theory. By making them explicit, the realism of input assumptions and concepts can be evaluated, rather than just the outputs (usually predictions) (Sayer, 1992). The degree of realism of input assumptions and concepts contributes to the universality and robustness of a theory. One need not worry so much that one gets the right answers for the wrong reasons so that the model may not work on another occasion (*ibid.*). Explicit judgements about the realism of background assumptions also give opportunities for comparison with any particular situation in question and thereby facilitate the judgement about the degree to which a theory is relevant, important and should be applied to this situation.

3.2 Research Strategy

3.2.1 Case Study Design

Three main dimensions of research design are the extent of extensive or intensive study, the contextual levels that are involved, and the temporal dimension (Tsoukas, 1989). First, there is the choice of extensive or intensive type of research design, or the extent to which either large samples or specific organisations are the object of research (Tsoukas, 1989; Sayer, 1992). Several characteristics of the research problem led to the choice of an intensive case study design, that is "a research strategy which focuses on understanding the dynamics present within single settings" (Eisenhardt, 1989). Perhaps most important, the case study is an appropriate context for practising methods fulfilling the need for insight into the actor's own perspectives, which require being present and immersing oneself into their unique situation (Evered & Louis, 1981; Spradley, 1979; Spradley, 1980; Morgan & Smircich, 1980; Smircich, 1983; Meyerson, 1991a). Further, case studies are appropriate for understanding dynamic, complex and ambiguous processes alongside their contexts (Pettigrew, 1990; Hartley, 1994; Summer et al., 1990), thereby providing the rich empirical insight necessary for creative and empirically grounded theory building (Glaser & Strauss, 1967; Strauss & Corbin, 1990; Eisenhardt, 1989) including the nature of causal structures as well as causal dynamics and contingencies (Tsoukas, 1989; Sayer, 1992; Layder, 1982; Yeung, 1997). As organisational culture is a phenomenon which can not be controlled by the researcher, and best can be studied contemporaneously and within its real world contexts, the historical and experimental designs also intensive and suitable to answering 'how' and 'why' questions were ruled out (Yin, 1989).

A case study can focus on either a single or multiple cases, which can involve several levels of analysis (Yin, 1989). This one is a single case study, conducting a multiple case study of several organisations was perceived as practically impossible because of the time and other resources needed for getting access to and studying the phenomena in depth. Within this overall case, subcases at the subcultural and strategic issue diagnosis levels were sampled to facilitate the necessary comparisons. Outside the organisation, various contextual levels were considered relevant and taken into consideration for understanding, explaining and criticising what happened: regional and national opinion and government, the telecommunications industry, and the national and international regulation bodies.

Finally, the temporal dimension of the case study has to be dealt with explicitly. Whether time is treated as constant (i.e., synchronic studies), as a variable having real-time values (i.e., diachronic studies), or as a variable having past values (i.e., historical studies) (Tsoukas, 1989), determines how change will be conceptualised and explained. And defining the beginning and end of a change process sets a frame of reference for what changes are perceived: "the more we look at present-day events the easier it is to identify change; the longer we stay with an emergent process and the further back we go to disentangle its origins, the more we can identify continuities" (Pettigrew, 1990). Further, time is not just a neutral chronology of events but a social construction built around the time cycles and important events in the actors' own perspectives (Pettigrew, 1990; Van de Ven & Scott Poole, 1990). And there is the added complication that there may be different temporal patterns in processes occurring at different analytical levels (Pettigrew, 1990).

Basically, on the issue of convenient 'point in time' versus desirable 'real longitudinal' data this study draws on the compromise of a 'retrospective longitudinal' design (Burgoyne, 1994).

That is, while a good deal of the data on the organisational culture and contexts at various levels are real-time, the strategic issue diagnoses and other prior events were studied retrospectively, through trying to access the participant's memory and/or documentary records. Thus, the micro-processes of cultural change dynamics in strategic issue diagnosis could not be observed in detail. Any chronological sequencing of events revealing the interplay of detailed and short-lived cultural symbols and contingent factors could not be obtained. Further, as far as the strategic issue diagnoses studied were important past events, attributions of success and failure could bias the findings (Van de Ven & Scott Poole, 1990). The study was partly framed from the temporal perspective of participants. Their time perspective was one of the dimensions that were expected to mediate the impact of change events on strategic issue diagnosis, and sites for observation that varied along this dimension were sampled (Barley & Tolbert, 1997). My own perspective included a long historical view on the genesis and development of the organisation and particular cultural structures, as well as the reflection on long term effects on future capabilities of strategic change. The principal unit of analysis was, then, the strategic issue diagnosis episode within a long term context of continuous cultural change. The study could therefore be said to be only implicitly temporal, like Giddens' structuration model, since time was treated more as a background assumption rather than a focus of attention (Barley & Tolbert, 1997).

3.2.2 Modified grounded theory approach

The overall approach can be said to be a modified version of the well known 'grounded theory' (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Central elements of this modified approach were generating theory from existing theory as well as the data, combining empirical with abstract activities, and entertaining both inductive and deductive thinking; the method of constant comparisons; restricted iterative cycling between data collection and analysis; theoretical sampling and saturation. By emphasising the role of existing theory as well as data in generating new theory, the empiricism of the original grounded theory was countered. Though Strauss and his followers are more conceptually oriented than Glaser in his rewriting of grounded theory (Locke, 1996), they are still essentially empirical in that they rely too much on subject's accounts of concrete social phenomena and on discovering theory directly from their data (Yeung, 1997). Social actors (including critical theorists) may not be able to know or account fully for broader social structures and contingencies influencing and constraining their immediate actions (*ibid.*). Particularly when it comes to appropriately explicating how structures of power and domination influence social life, the study of inter-subjective experience must be connected with rational and discursive modes of theoretical knowledge (Layder, 1982; Layder, 1990; Layder, 1993). Theory development therefore becomes a dialectical play between existing theoretical knowledge and the researcher's ability to generate concepts and relationships through confrontation with empirical data and dialogues with informants and other researchers, thus allowing for rationalism, as well as pragmatic, reflective, and normative discourse (Layder, 1982; Morgan, 1983b; Outhwaite, 1987). Throughout the process 'empirical research' must be combined with 'abstract research' (Tsoukas, 1989; Collier, 1994). Abstract activities consists of isolating causal components in the data and postulating the existence of multiple causal structures having the power to produce the phenomena, while empirical research is looking for the contingent ways in which the abstract mechanisms together generate the flow of experienced events. Both must be conducted with a critical eye for identifying, examining and eliminating plausible alternative causal propositions, as well as for oppressing events and causal structures and any potential for changing them (*ibid.*).

The nature of this mode of analysis differs from the procedures and techniques of grounded theory. Regarding the method of constant comparisons, the central focus of attention is no longer the patterning of observable similarities and differences between phenomena in their contingent contexts, but the mapping of underlying causal structures and processes: "Similarities between the units of analysis are explained by the generative mechanisms and the similar type of contingencies that have been responsible for the mechanisms' activation. Differences may be due either to the operation of different generative mechanisms or to the dissimilar contingencies within which the operation of a similar set of mechanisms has taken place. A different set of contingencies either "lines up" the postulated mechanisms in a different way or brings into operation a hitherto inactive set of countervailing mechanisms, thus generating a different set of phenomena" (Tsoukas, 1989). Regarding the overall analytic style worked out, it was more of an 'editing' than a 'template' style (Crabtree & Miller, 1992b; Crabtree & Miller, 1992a) since there were no assumptions of an "original text" of reality which could be the object of analysis independent of the analyst's judgements and interpretations. After being made, observations were mainly sorted into orienting categories. While these orienting categories were selected or sometimes constructed before any in-depth analysis of the data, no further interpretations and abstractions toward theoretical concepts took place without such in-depth analysis.

While the original grounded theory as well as qualitative research in general are essentially inductive, the emphasis on an abstract mode of analysis situated the modified approach within a simultaneously deductive - inductive dialectic (Yeung, 1997). On the one hand, I had to allow for a central role for critical abstraction that was more deductive in nature, on the other hand, this abstraction and subsequent theoretical concepts should not determine the entire concrete research that remained open and flexible. To allow the themes present in the setting to partly emerge inductively, an iterative approach was adopted to the analysis of data (Strauss & Corbin, 1990). This would allow the themes to be explored in cycles of data collection and analysis, which speed analysis and reveal helpful adjustments to data collection (Smircich, 1983; Eisenhardt, 1989). However, on practical grounds the iteration between data collection and analysis in the field was not as pronounced as indicated in the procedures of grounded theory. Most formal analysis was left until leaving the field, because of the huge amount of work necessary for satisfactorily doing all analysis in the field and collecting data according to the theory in progress. Though the iterative interplay of data collection and analysis is at the heart of the grounded theory method, this pragmatic solution is often preferred by qualitative researchers (Yeung, 1997; Bryman & Burgess, 1994).

An important means for carrying out this kind of iteration between data collection and analysis was 'theoretical sampling' (Glaser & Strauss, 1967; Strauss & Corbin, 1990). This methodological principle means sampling on the basis of categories, interpretive themes and theoretical concepts that have proven their relevance to the evolving theory (Strauss & Corbin, 1990). The aim of theoretical sampling is to sample events, incidents, and so forth, that are indicative of categories, interpretive themes and theoretical concepts so that you can conceptually develop and relate them (*ibid.*). This involves looking for variation between subgroups to facilitate comparisons, and seeking both confirming and disconfirming cases to elaborate and deepen initial analysis (Kuzel, 1992). The theoretical sampling continued until theoretical saturation occurred. Generally, theoretical saturation occurs when no new relevant categories, interpretive themes and theoretical concepts seem to emerge from the observations, no new relevant data seem to emerge regarding a category etc., and the conceptual understanding of the category etc. is satisfactory, that is, the analysis is

'conceptually dense' incorporating many concepts and multiple linkages among them (Strauss & Corbin, 1990). While reasonably broad in the initial phase of fieldwork, the sampling gradually focused on the central themes and concepts of the evolving theory. Thus, the usual funnel structure applied. The research problem was progressively focused over its course, and the main emphasis of the analysis developed from familiarisation and description to interpretation, explanation and criticism (Hammersley & Atkinson, 1983).

3.2.3 Triangulation of data sources

Triangulation generally indicates the use of complementary methods in the study of the same phenomenon (Jick, 1979; Hammersley & Atkinson, 1983; Lewis & Kelemen, 2002). The triangulation metaphor comes from navigation and military strategy, where it refers to the use of multiple reference points to locate an object's exact position (Jick, 1979). In organisational studies, its advantages goes beyond the increased accuracy of observation. The use of complementary methods is thought to lead to more valid results since "the inferences drawn from one set of data sources can be checked by collecting data from others" (Hammersley & Atkinson, 1983). Similar findings considerably increase confidence in the results, while divergent findings can add depth to the descriptions and lead to alternative, enriched and more complex explanations (Jick, 1979; Hammersley & Atkinson, 1983; Lewis & Kelemen, 2002). Especially in retrospective longitudinal designs, the selective availability and problematic quality of historical data pose particular challenges to finding informative sources, and cross referencing and validating data (Burgoyne, 1994). In this study, triangulation was also utilised to capture a more complete, holistic, and contextual portrayal of the phenomena studied, by eliciting data and suggesting conclusions to which other methods would be blind, thereby enriching understanding and allowing for new or deeper dimensions to emerge (Jick, 1979).

The three methods of participant observation, unstructured to semi-structured interviews, and documentary studies, were employed, because they were assumed to be sensitive to and yielding data on the phenomena studied. Participant observation is long-term residence and immersion in a culture by living and working in the community for six months to a year or more (Fetterman, 1989). This should help the researcher to identify the meanings of the people under study: by observing patterns of behaviour over time, learning their language, seeing the sequence and connectedness of events that contribute to the meaning of a phenomenon, and experiencing their fears, hopes, and expectations (Fetterman, 1989; Bogdewic, 1992; Marshal & Rossman, 1994). Beside giving data on organisational culture, observation was also thought to be appropriate for collecting data on the later phases of strategic issue diagnoses (though extremely difficult to use in earlier phases (Lyles & Mitroff, 1980)), but unfortunately this possibility could not be realised.

Interviews were appropriate for eliciting information on strategic issue diagnoses as well as organisational culture. Regarding strategic issue diagnoses, the unstructured and semi-structured interviews seemed to be the best suited, because the participants may not have consciously reflected much on this process, and the interviews "allowed for flexible questioning, explanation of questions that seemed unclear, and probing to help them become aware of their own problem-formulation process, so that they would provide complete information" (Lyles & Mitroff, 1980). Informal interviews were most common, merging causal conversations with an implicit research agenda, and letting the interviewee be in control most of the time by raising questions embedded in conversations to avoid sacrificing

valuable data and to develop rapport before moving to researcher defined, sensitive, and potentially threatening issues (Fetterman, 1989). Depth interviews with key informants provided expert, inside information on topic areas that were probed whenever the opportunity arose (McCracken, 1988; Crabtree & Miller, 1992a). Progressively, the interviews became more guided, concentrated and focused by the means of more prepared and specific questions allowing the topics to be more intensively probed (McCracken, 1988; Crabtree & Miller, 1992a). Occasionally, ethnographic questions were asked (Spradley, 1979).

Another source of insights into different actors' interpretations of organisational experiences are documents, "because they are one of the principal by-products of the interactions and communication of individuals and groups, at all levels, in organisations" (Forster, 1994). I collected a lot of documentary and archival material, ranging from informal correspondence between staff to research publications and official policy statements (see appendix 3). Documentation served to illuminate the strategic issue diagnoses as well as organisational culture in general, and was invaluable for information on the broader contexts.

The effectiveness of triangulation rests on one basic premise, that "the weaknesses in each single method will be compensated by the counter-balancing strengths of another" (Jick, 1979). One of the most central criteria for judging the strengths and weaknesses of different methods is their reactivity, that is "to what degree the method is vulnerable because the researcher influences situations and actors and/or actors give wrong information because they know they are being researched" (Webb, Campbell, Schwartz, & Sechrest, 1966). While the researcher would often unconsciously influence the informants in interviews, archival studies of documents are not reactive because of the presence of the researcher (*ibid.*). Company documents are "often contemporaneous records of events in organisations, which can help researchers to look more closely at historical processes and developments in organisations and can help in interpreting informants' 'rewriting' of history in later verbal accounts" (Forster, 1994). But "they are written with a specific audience in mind and can not be said to yield neutral information" (Webb et al., 1966). While PR oriented they can tell researchers a great deal about the kind of 'image' a company is trying to present internally, to its own employees, and externally, to customers, governments, potential competitors and other stakeholders (Forster, 1994). They are fragmentary, subjective and political, should never be taken at face value, and need to be carefully checked, interpreted and triangulated with other data sources (*ibid.*).

In interviews and observations, informants can misled the researcher because they want to look good, or because they want to hide failings and collective secrets (Van Maanen, 1979). But if the researcher has been present in the situations to be observed for some time, observations would be less reactive than interviews (Webb et al., 1966). "As time in the field passes, the inhabitants are less likely to alter their behaviour due to your presence" (Bogdewic, 1992). Interviews and document studies thus capitalise on being used in conjunction with participant observation to make apparent differences between 'operational data', which "documents the running stream of spontaneous conversations and activities engaged in and observed by the ethnographer while in the field", and 'presentational data', which "concerns those appearances that informants strive to maintain (or enhance) in the eyes of the fieldworker, outsiders and strangers in general, work colleagues, close and intimate associates, and to varying degrees themselves" (Van Maanen, 1979; Bogdewic, 1992). Triangulating different data sources helps us to achieve data on both levels of the organisational culture.

Personal interviews are also vulnerable to bounded memory and tendencies to rationalise, and informants can misled the researcher because they are misled and wrong themselves, or because they sometimes are totally unaware of certain aspects underlying many of their own activities (Van Maanen, 1979). These shortcomings was countered by participant observation's and document studies' coverage of a wide range of informants and types of data, especially comprehensive contextual data (Marshal & Rossman, 1994; Forster, 1994). Personal interviews are flexible and have the best opportunity for probe ambiguous information (Webb et al., 1966), in combination with participant observation they are also suited to capture ambiguous aspects of organisational culture (Feldman, 1991; Meyerson, 1991b; Meyerson, 1991a). While observations and interviews are vulnerable to misinterpretations by the researcher, document studies are less vulnerable because they exists independently of the researcher's notes and one could always go to the originals (Webb et al., 1966). Tape-recorded interviews are also less vulnerable to misinterpretations when writing field notes.

Finally, there are strengths and drawbacks regarding dependency and facilitation of cooperation. Interviews depends on the persons to be interviewed to allocate time for this activity, observation does not, but depends on access to situations (Webb et al., 1966). While participant observation and interviews are dependent on the cooperation of a small group of key informants, contrary to document studies, they also facilitate cooperation from research subjects (Marshal & Rossman, 1994).

3.3 Handling some problems of doing qualitative research

Needless to say, qualitative fieldwork is a demanding and time consuming task which can not be carefully planned in advance. "There are no easy or preformulated answers to the dilemmas of fieldwork since one cannot know what one is getting into until one gets into it" (Van Maanen, 1982, in Waddington, 1994). However, certain problems are inevitable, any particular field researcher must achieve some pragmatic resolution of them, and one useful criterion in assessing ethnographic reports is learning about how a given observer practically answered the inevitable field problems (Altheide & Johnson, 1994). In this section, I shall describe how I handled some of the unavoidable problems, those I felt most problematic and consciously prepared to meet, to assist your own assessment of how my observations and judgements were influenced. Appendixes 2 and 3 contain a summary of data collection activities and a list of data sources.

3.3.1 Selecting case organisation and getting initial access

Very early it became clear that methodical requirements and practical considerations converged on the choice of Telenor as case organisation. First, methodical criteria demanded the choice of an organisation experiencing profound change since this would make tacit cultural understanding and processes more accessible to the actors (Louis, 1985). Telenor was indeed going through a radical change as the earlier national monopolies of the telecom industry were liberalised. In addition to rendering cultural knowledge more accessible, their transition from a national public administration body to a business company in international competition, together with their long history and experience between public government and private market operations, also indicated that the knowledge produced could potentially be relevant, interesting and useful for many similar organisations in an age of globally increasing liberalism. Further, profound change also indicated the presence of several strategic problems that would be handled during or shortly before the study, which would facilitate the collection of relevant information on strategic issue diagnosis.

Practical considerations like probability of access also played their part (Hammersley & Atkinson, 1983). Methodical or theoretical attributes often has to be less weighted than considerations of access and even by hospitality (Stake, 1994). The extent to which organisations are open or closed off to public scrutiny obviously has "a bearing on the amount of preliminary negotiation required to gain access, and how far the participant observer must be prepared to conceal or declare his or her true objectives and identity" (Waddington, 1994). I perceived Telenor to be fairly open, as negative incidents often were reported in the press. I also thought this would render them less vulnerable to any hazards from a single research project (Mirvis, 1985; Kimmel, 1988). The radical change process and problems reported in the press also suggest that research access might be facilitated by the fact that the managers of such a company might need some help, "not because they need concrete advice on how to operate, but rather because the researchers' concern may contribute credibility to their difficult task" (Laurila, 1997).

Fortunately, institutional affiliations between the business school whose doctoral program I followed and the case organisation facilitated initial access. An established research program on the economics of telecommunications financed by Telenor at the Foundation for Research in Economics and Business Administration (SNF), an applied research foundation associated with the business school, made contact with other researchers familiar with the company easy.

They soon indicated relatively good possibilities for access, as well as coverage of expenses. They gave me some information on needs of Telenor, and valuable hints about documentary sources with further information, that I could use for preliminary analyses in order to adapt my problem to their needs and thus get access. Already at this point in time I was warned that Telenor was getting more closed because of secrecy concerns, and there were one or two allusions to lack of future for their research activities. I was also told that many people there would find it natural that an external researcher had contact with their own researchers, and one experienced researcher advised me that starting with people who were researchers themselves would help to reduce any misunderstandings associated with my first trial to carry out the field researcher role. After describing my ideas to a few key persons, I got a note from the board of the research program allowing me to approach the corporate staff manager of strategy, and giving me a few words of advice: "The problem with recent studies of this kind has been the too high demands on top management time. The probability of accept will probably rise if this activity is somewhat reduced." I decided that Telenor was accessible, that a project for Telenor more probable would facilitate access than a more independent project, and started to gather more information on the company.

Information from researchers, together with readings of annual reports, information materials and newspaper articles, indicated that the cultural element of change processes was a concern. More specifically my own ideas about strategy and culture change coincided with the concerns of subcultural conflicts between a traditional, protected, technology culture and a new commercial and market-oriented culture exposed to competition, and a cost efficiency orientation which was in conflict with innovation ability. Based on this information I wrote an introductory letter to the corporate strategy staff manager centring on mutual possibilities for learning about these problems. When I called him a few days later, my letter had circulated at the top management, and he told me that he thought that the research institute was a natural place for me if I was concerned about new ideas (later I learned that he himself recently was employed as researcher at this institute). He also told me that the top manager responsible for the organisational change process would prefer to view this in the context of new innovation processes and manning of the corporation, and thought the research institute would be a natural place for anchoring the project, too. Consequently, my project application was left to their research institute, and I was given the name and telephone number of the research manager in charge of judging its quality, relevance and usefulness.

While the introductory letter presented the project as some kind of expertise and exchange of ideas about the company's change process, and thus got at least the provisional and overt support of those at the top, this might create anxieties on the part of gatekeepers that they will be evaluated, not presented favourably, and their interest not served (Hammersley & Atkinson, 1983). Therefore, the full research proposal was sent to the research manager in charge of evaluating my project. As the theoretical perspectives and methodological guidelines were explained, I thought it would be clear that my interests were not confined to any one particular setting or group of people, and I hoped that this openness about the research objectives and procedures, entailing a warning of possible negative consequences, although they were still general and vague, could help to build sufficient trust and reduce the risk of eliciting defensive or self-conscious behaviour (Waddington, 1994). To safeguard against much influence on subsequent behaviour of the people to be studied, I asked that the proposal was not spread to more persons than necessary.

Discussing the project proposal with this research manager, I was once again warned that time at the top was restricted, that secrecy concerns were prevalent, and I was requested a formal

promise of secrecy. In my turn, I promised discretion and anonymity, as well as to sign the promise of secrecy. Perhaps more importantly, the project proposal was adjusted to more current concerns, although still couched in general terms. The research manager finally recommended that I were allowed access to the company, and aptly summarised my project in a note to the top manager responsible for organisational affairs: "The project will study how the problem formulations made early in the strategy process depends on the organisational culture. The different attitudes and knowledge in varying organisational units of Telenor make people understand the challenges in different ways, which can both further and hamper creativity and decisions. Birkelund's project can contribute to identifying and putting into words some differences and barriers, in turn maybe increasing our capability for changing the organisational culture in the proper direction."

Formally, an application was presented to the board of the research programme at SNF, and after a while I received a letter that granted access and covering of expenses (no salary had been discussed). The company representatives had remarked that "the problem statements are somewhat general, but one will still support the proposal because this theme is one that demands small expenses." My project was, then, anchored in The Norwegian Telecom Research Institute who would "open my way into the company". The process of getting formal access had taken me between seven and eight months (but, of course, getting access was not my only task during this period).

Two significant issues of the following process of getting initial access ought to be pointed out. First, the issue of secrecy arose again, and I was requested a formal promise of secrecy. A standard format was used, saying that no information from or about the research institute should be given to third persons without obtaining my contact person's written consent. After discussing this formulation, which easily could be interpreted as a veto over publication and restriction of scientific freedom, with my supervisor, I decided to discuss the text with the responsible manager, but anyway sign if it wasn't changed. Trying to discuss this formulation I got assured that it implied no right to hinder publication, but if I did publish anything that could harm someone I could be taken to court for breaking the promise of secrecy. Although I was uncertain about how this threat was to be understood, I did not probe this for fear that I might appear aggressive and threatening (I got a comment about not publishing stories about a person recognised as a bad manager, though). After a little reflection on what the promise of secrecy might mean beyond the restriction on passing information on commercial secrets and opportunity to correct factual errors (Pettigrew, 1997), I found that it probably should not be taken to indicate any demand for just positive information to be made official, as my critical perspective already was approved of. Further, the cultural focus on power figures might not only make sensitive issues personal, but also depersonalise them as structural problems (Pettigrew, 1997; Forster, 1994). So the promise of secrecy probably did not go beyond the professional ethical requirements of managing and minimising harms to organisations or persons involved in research (Mirvis, 1985), and I do not think it influenced my study to any significant degree.

Second, in my view formal access to a considerable extent depended on one key person, who later also became a kind of sponsor for my project. He informed me about current issues, thus facilitating initial data gathering, and about key persons and their areas of responsibility, facilitating initial access to them. All this is not entirely positive as it involves a central dilemma: "Even the most friendly and co-operative of gatekeepers or sponsors will shape the conduct and development of the research. To one degree or another, the ethnographer will be channelled in line with existing networks or friendship and enmity, territory and equivalent

'boundaries'. Having been 'taken up' by a sponsor, the ethnographer may find it difficult to achieve independence from such a person, finding the limits of his or her research bounded by the social horizon of a sponsoring group or individual. Such social and personal commitments may, like gatekeepers' blocking tactics, close off certain avenues of inquiry" (Hammersley & Atkinson, 1983). While contact with him gradually was reduced, and greater independence to some extent achieved, the initial phases undoubtedly had a substantial impact on the direction of my inquiry.

3.3.2 Establishing field relations

Needless to say, formal access is no guarantee of real access. Further access to people and information has to be negotiated over and over again in the field. Like gatekeepers and sponsors, other people will seek to find out what the research is about, who the researcher is, and how to deal with him or her (Hammersley & Atkinson, 1983). Particularly during my initial social exploration at Telenor Research, when I was trying to gain some initial familiarity with the local scene and establish a social base from which I could continue my field study (Whyte, 1984), I had to work consciously to present me and my study in a way that would facilitate the establishment of positive relations with people.

Often potential informants are more concerned with what kind of person the researcher is than with the research itself - "they will try to gauge how far he or she can be trusted, what he or she might be able to offer as an acquaintance or friend, and perhaps also how easily he or she could be manipulated or exploited" (Hammersley & Atkinson, 1983). Various pieces of advice can be found about how to manage ones identity or impression to become an acceptable though not genuine member of their culture: the ethnographer should maintain a positive and non-threatening self-image (Waddington, 1994); be courteous, polite and respectful (Fetterman, 1989); emphasise whatever features they have in common with people in the field (Waddington, 1994); and adapt demeanour and dress to reduce social differences, though not strive to be exactly like them (Hammersley & Atkinson, 1983). Perhaps most useful, the field researcher should not underestimate the value of pure sociability, but establish normal social intercourse with people, and find 'ordinary' topics of conversation with a view to establishing one's identity as a 'normal' and 'decent' person rather than just a researcher (*ibid.*).

However, perhaps because I first visited people who were researchers themselves, the content of my research appeared to be most important. I was often questioned about what my study was about, and how it went ahead. After one or two days at the research institute I was asked by my contact person to prepare a written presentation of my project to the top management. After having written a general and simple presentation (included in appendix 1) (Fetterman, 1989), I decided to use this same presentation to introduce my research to every person or group I approached, to avoid the impression that I was associated with any particular group (I was often asked who my principal was) (Barley, 1990). In addition, to meet the needs of different participants, I invited them to ask any question they would like about my research.

Thus, I tried to develop an identity and perspective of doing 'participant observation' (Atkinson & Hammersley, 1994). I did not carry out any full, established membership role, however. I did not participate in the daily work of any of the categories of members in the organisation. I did not try to become a complete insider of any group, but I tried to vary between various insider and outsider perspectives. My identity as an outside researcher was

not concealed to anyone. But I have to recognise that the fact that I was doing research and was staying at the research institute most of the time led to being broadly associated with them, and this may to some degree have had an effect on the kind of persons that I could talk with and the information I was able to get from other groups. Some may also have come to forget my identity and regard me as an ordinary organisational member, and I could of course not repeatedly remind everyone that they were participants in my research (Lipson, 1994; Punch, 1986).

While my presentation may have endowed me with some sort of 'expertise', I simultaneously expressed ignorance and incompetence to facilitate learning from informants, and this may have made it difficult for me to establish credibility (Hammersley & Atkinson, 1983). I tried to meet this challenge by explaining that it was not contradictory to both have valuable expertise and being a novice, by emphasising that I depended a lot on learning from informants as I lacked experience and practical knowledge from real organisations.

The identification and sampling of informants is important to secure that relations to people with the right information are established. The term 'informant' should not be confused with 'subject' or 'respondent', as informants should define for the researcher what is important rather than the other way around (Spradley, 1979). Informants should be selected on the basis of access to and comprehension of certain kinds of information, which itself may be a function of such things as cultural knowledge and social position in an organisation (Johnson, 1990). While the sampling of informants was based on availability and not conscious grounds early in the field period, after a while most sampling was judgmental (Johnson, 1990; Hornby P. & Symon G., 1994). Rather than doing random or representative sampling of respondents, I tried to identify informants in accordance with my research interests as they would shed light on a particular aspect of my evolving research problem (Hornby P. & Symon G., 1994). While theory informed the choice, it also resulted from pragmatic considerations together with my developing experience from similar situations and practical knowledge of the area (ibid.).

To be more specific, I often asked persons I met to name other persons I could interview who were knowledgeable about particular areas of concern. From an impressionistic understanding of the identified individuals' positions in the informal, social network (Johnson, 1990; Hornby P. & Symon G., 1994), I tried to identify individuals who were central to key groups as well as in contact with different groups and experiencing high degrees of 'contrast' (Louis, 1985; Johnson, 1990). The choice of who to actually approach were among other things based on several criteria identified in the literature (Johnson, 1990; Spradley, 1979): length of residence in the culture; membership and current involvement in different cultural groups; demographic characteristics like sex and age; position in the formal organisation; functional or disciplinary affiliation; adequate time for interviews; as well as willingness and ability to participate and communicate. The dilemma of breadth versus depth also came to the fore in this context. I went for initial contact with many informants to recognise the heterogeneity of insider perspectives (Gregory, 1983), but then tried to carefully select relatively few key informants for further interviews to understand the different cultures in some depth (Johnson, 1990).

At the research institute the process of developing relations to key informants mostly resembled the 'series of friendly conversations', into which I sometimes carefully introduced ethnographic interview techniques both to build rapport and to assist informants to respond as informants (Spradley, 1979). At this site it was also easier to adapt to the time orientations of

informants by relying on events in the social environment to decide when to conduct interviews, instead of the point in time when analysis was done and new questions prepared (Tuttle, 1997). Interviews with more distant, busy and less accessible informants, particularly at the headquarters, were often more formally arranged. However, as different age, status and physical location also made them more distant and less accessible to several organisational members, I think that to some extent I still didn't require them to depart too much from some of their usual schedules or contexts of interaction (Waddington, 1994). To appear less threatening to business managers, I put less emphasis on the access to sensitive and personal information (Laurila, 1997; Mirvis, 1985; Kimmel, 1988). At the research institute such access was more often explicitly negotiated, and sometimes denied because individuals expressed doubts about my ability to keep information confidential. But I did feel more comfortable at the research institute, and that access to the headquarters was somewhat forced because I was committed to study the already selected strategic issue diagnoses. At both sites, any acceptance and trust I gained seemed to have been largely determined by events and perceptions over which I had little control (Barley, 1990), particularly the 'words-of-mouth' from my sponsor and other key persons that I approached.

3.3.3 Identification and sampling of SID-cultures and strategic issues

Within the company, several loci or sites of cultures (Louis, 1985) involved in diagnosing strategic issues could be selected for more focused study. For reasons described in the section on getting initial access, I decided to start my field residence at The Norwegian Telecom Research Institute. The research institute was acknowledged to play an important role in the company's strategy process as concerns the identification of future challenges, clarification of possible alternatives for action, and taking initiatives in new areas. Besides playing a central role in diagnosing some strategic issues, they were known to have a wide range of contacts with and understanding of cultural aspects of the other parts of the organisation. From what I learned at the research institute, further loci of culture and strategic issue diagnosis should be sampled according to criteria of theoretical relevance and practical feasibility.

Prior to the field study, variation in the degree to which organisational units were subjected to competition and government by public authorities were singled out as criteria for further choices, because they were perceived to be necessarily related to theoretically interesting dimensions of organisational culture. I planned to compare 'business units' more exposed to competition with 'divisions'. Another criterion was that the same or similar strategic issues should be handled by the selected units. However, I learned that it could be difficult to get access to relevant information, which often could be mixed up with commercial secrets at these sites. And there were two or three indications that these units at this point in time were seldom diagnosing issues deemed to be really strategic. These considerations, as well as the time requirements of studying several organisational units in sufficiently depth, ruled out this option. Instead, I chose to focus on work groups or teams composed of people from several divisions, business units and corporate staff, set up by top management and corporate strategy staff. The assumed relevant cultural differences like authoritarian - participative, technology - market oriented and public government - competitive oriented, still applied to the two sampled strategic-issue-diagnosing cultures: the research institute, and cross-unit work groups.

The research staff and the work groups were perceived to be roughly on the same hierarchical level, both were sometimes referred to be "on the level below top management". As regards

theoretical relevance, groups on other hierarchical levels could profitably have been included. Top management centrally involved and lower level staff excluded from the diagnosis of strategic issues, are obvious candidates. As indicated in "getting initial access", and as usual (Laurila, 1997; Thomas, 1993), top management was to be regarded as relatively inaccessible for any deeper study. Thus, I just planned to interview some of them about the strategic issue diagnoses towards the end of my study. Difficulties in identifying suppressed issues, as well as the time necessary for really learning lower level cultures, led to largely excluding them, too.

To identify strategic issues, I followed the ordinary procedure of asking actors known to be familiar with strategic concerns to reveal "strategic problems or challenges", qualified as "external or internal events, developments or trends which can lead to change in Telenor's current or future strategy, for one thing because they can significantly affect organisational effectiveness" (Lyles & Mitroff, 1980; Lyles, 1981; Lyles, 1987; Dutton, Walton, & Abrahamson, 1989). This inquiry was often followed by questions about the meaning of 'strategic' or 'Telenor's strategy' ("quite a few things are considered 'strategic' in Telenor"). Significant impact on Telenor as a whole, or importance for corporate as opposed to divisional, business unit, department or project strategy, typically had to be added. The label 'strategic challenge' was often used, especially at the company's headquarters, and I was occasionally urged to say 'challenge' instead of 'problem'.

Naturally, this inquiry led to more or less official agendas of strategic issues already to some extent formulated. Because of my theoretical focus my ambition was, rather, to track down issues earlier in the process of being diagnosed as strategic and issues being suppressed from strategic agendas by the institutional 'mobilisation of bias'. I wanted to be able to observe in detail the micro-processes involved in making sense of such issues, including power strategies and ideologically distorted communication. During the period of collecting and analysing data on organisational culture, I therefore probed various actors to arrive at current discussions of strategic issues, issues likely to enter the strategic agenda, and issues being suppressed from strategic discussion despite their importance. These early, and largely invisible processes of formulation are very difficult to observe, since years may pass from the first awareness of a problem to the time more observable action is taken to reach a clear formulation (Lyles & Mitroff, 1980). I was also concerned with avoiding to push this investigation too far, as any trust developed might easily be ruined by violating rights to privacy and asking for very sensitive information from vulnerable actors (Mirvis, 1985). With a few exceptions, I was denied access to meetings and other occasions where current strategic issues were on the agenda. The reasons were fear of revealing business secrets to competitors, disclosing information to opponents, or fear that an external observer could hurt the group process. Left with the more feasible option of retrospectively interviewing people involved about the identification, interpretation and exploration of acknowledged strategic issues, I eventually gave up my ambition. While the ordinary line of inquiry was no ideal and fully satisfactory one, I found it quite sufficient for my research purposes.

To better identify the more theoretically important cases, I delayed my choice of which strategic issues to study until the end of my field period. Another advantage of delaying the interviews on strategic issue diagnoses, was the better developed interviewing ability because I was more familiarised with the organisational culture at that time, and could interpret the information gathered in light of its cultural context to identify possible excluded viewpoints, oppressing mechanisms, and areas worthy of being probed. But the participants' memory of what happened was allowed to decay before interviews were made.

A list of strategic challenges was available at the corporate headquarters' strategy staff, at the R&D unit strategic issues were embedded within broader themes of the research plan and identified in several ways and levels of generality by the actors themselves. Consequently, to some extent I had to define strategic problems, i.e. circumscribe their scope, by myself. In both places I used formal strategy documents to justify that the issues identified were indeed considered to be strategic issues in terms of the formal definition. Of the strategic issues identified in this way, I chose to focus on those eight labelled using internal-official or common terminology in table 3. As different kinds of strategic issues could be expected to result in different diagnosis processes, one criterion for sampling strategic issues was that they were perceived to be different in terms of the actors' own categories of strategic sectors or issue domains. From the R&D unit one strategic issue from each of three domains was sampled - one from the technology sector, one from market/services, and one from politics/competition /society - in addition to one issue shared by everyone. At the corporate headquarters two strategic issues were selected from each of two categories: business related, indicating external or market related concerns; and improvement related, indicating internal concerns about the accomplishment of organisational change. Theoretical relevance also led to ruling out issues whose final documents read a summary-of-strategy-on-this-domain or a description of a strategic solution together with argumentation for it, rather than the formulation of the nature of a strategic issue. Similarity with strategic issues in the other strategic issue diagnosis culture to achieve better comparison possibilities was also a criterion, contributing to the choice of issue 1/7 and 3/4/5.

Table 3. The sampled strategic issues.

Telenor Corporate Headquarters	
Strategic issue 1	Multimedia, information-deliveries, and market (business related)
-----//----- 2	Competing product-platforms / companies (business related)
-----//----- 3	Long-term OD in the new corporation (improvement related)
-----//----- 4	Pride, enthusiasm and joy / corporate culture (improvement related)
Telenor R&D	
-----//----- 5	The new R&D organisational unit (shared)
-----//----- 6	Investment in broadband access network (technology sector)
-----//----- 7	Electronic market (market and services sector)
-----//----- 8	Universal Service Obligations (politics, competition and society sector)

Other criteria of sampling strategic issues arose from more practical considerations. Knowledge of and established relations with process participants that could be valuable informants increased the likelihood that an issue would be preferred. Perceived difficulties in getting access to data led to discarding a few issues regarded as too competitive or politically sensitive; similarly, expectations about too extensive data collection necessary to get a comprehensive view of the processing of an issue led to excluding one or two publicly visible and contentious issues. The public interest also justified less critical attention on my part. Finally, interest in organisational culture and organisational change contributed to the selection of issue number 3 and 4. Unfortunately, by these criteria two issues explicitly about internationalisation were jettisoned.

3.3.4 Qualitative analysis

The struggle to analyse qualitative data is often not made explicit, leading to the criticism that qualitative data analysis is easy, soft and unscientific (Morse, 1994; Bryman & Burgess, 1994). Methods of qualitative data analysis are often referred to without any close relation to the operational procedures carried out, in a rhetoric of justification as opposed to a rhetoric of explication, and only a vague legitimating function remains (Locke, 1996). However, rigorous implementation and explication of method alone never explains the whole process. Sudden insight, intuition and creativity are necessary but unobservable and immeasurable features of the process about which we still do not know much (May, 1994). In particular, substantive and methodological expertise with its capacity for pattern acquisition and recognition allows researchers to move beyond method by viewing situations holistically and drawing on a vast data set of past experiences (*ibid.*). The qualitative analyst also draws on the totality of his or her field experience, parts of which may not and cannot be cerebrally written down, but have been gestated in dreams and the subconscious in both sleep and in waking hours, in the field and away from the field, and are recorded in memory, body and all the senses (Okely, 1994). Insight and creativity, however, are often found to operate within the context of careful and rigorous attention to method (May, 1994).

In this section I shall make my analysis methods more explicit. By stressing the analytic procedures I do not mean to support any design and rigid following of general prescribed procedures, but I think that the explication of analytic methods and reflection on their use should be done to support and develop the judgement of both the researcher and the readers. Returning from the field, I initially thought of analysis as a means for checking out and explicating the rather vague intuitive thoughts I already did have about the framework or model I was going to build. Throughout the analysis, however, I felt that I gained a much more complex and nuanced understanding, that the requirements for more creative theory generation became more fulfilled, and that the analysis profitably could go on for some time. But, as usual, the analysis was never fully completed.

Analysis in the field

The first steps of analysis overlapped with data collection in the field. They included the writing of field notes, both observation/interview notes and more analytical notes, as well as reflections on this writing. First, in writing observational statements, a 'nonjudgemental orientation', requiring the ethnographer to suspend personal, inappropriate and unnecessary value judgements of what they observe (Fetterman, 1989), was sought by reflecting on their wording and how it might be influenced by personal, theoretical and institutional biases. At the same time, a fieldwork journal were written to keep track of the conduct of the work and document some of the internal dialogue, feelings and involvement that is essential to reflexive ethnography (Hammersley & Atkinson, 1983). I did not go too far in making explicit such matters and how they might influence data collection and analysis. Mostly, the fieldwork journal contains references to feelings of tiredness, frustrations about how much to write down instead of selecting away, etc. Nevertheless, I did pay attention to feelings and psychological dynamics, and I think this awareness limited the effects of projection, introjection, and so forth (Hunt, 1989; Hartley, 1994). More attention was paid to how observations may have been made by various social and intellectual perspectives (Weick, 2002; Alvesson, 2003; Wray-Bliss, 2003).

A few theoretical memos were written, to push thinking and prepare for topics to be covered in new interviews (Strauss & Corbin, 1990). Beyond this, as well as to accomplish analytical notes, careful readings of the collected data were done in order to gain a thorough familiarity with it (Hammersley & Atkinson, 1983). This involved immersion into the data to get an overview of its richness, depth and diversity (Ritchie & Spencer, 1994), as well as the painful maturing from examining piles of seemingly unrelated bits of knowledge to identify something that was patterned, predictable, and that "flows" (Morse, 1994). The preliminary analytic strategies used included maintaining a constantly questioning attitude: asking myself what had been learned in relation to various issues; whether any interesting patterns could be identified; whether anything stood out as surprising or puzzling; how the data related to what one might have expected on the basis of common-sense knowledge, official accounts, or previous theory; whether there were any apparent inconsistencies or contradictions among the views of different groups or individuals, or between people's expressed beliefs or attitudes and what they do, or between the official view and insiders' view; whether there were any misunderstandings, incomplete understandings, deeper understandings, alternative explanations, changes with time and context; what problems the actors' knowledge had been developed to solve; looking for contradictions, inconsistencies, gaps, omissions and ambiguities in analytical notes; and trying out emerging ideas (Addison, 1992; Spradley, 1979; Bogdan & Biklen, 1982; Hammersley & Atkinson, 1983; Eisenhardt, 1989; Bryman & Burgess, 1994).

As Pettigrew (1990) remarks, the central problem in collecting and preliminarily analysing the data was capturing the complexities of the real world and then making sense of it. Cycles of expanding complexity and simplification were involved, periods of increasing complexity and openness to gain appreciation of the richness of the subject matter, periods of reduction and simplification to reduce the resulting confusions and tensions (*ibid.*). To adequately simplify and make sense of the bewildering data reviewed, they were indexed or coded according to an 'orienting theory' (Whyte, 1984). While quite simple and general initially (culture, important contemporary events, potential informants and informant relations, groups of actors and conflicts of interests), twenty to thirty cultural categories soon emerged. A good half of the categories were given labels which corresponded to existing theoretical concepts, the rest were identified from the actors' or general common sense knowledge. These categories helped me to simplify and organise the data that had been collected; to identify areas where scant information was available so that additional, richer and more complex data could be collected to develop each category; and they also represented the first step in the abstraction and conceptualisation of the data (Bryman & Burgess, 1994; Ritchie & Spencer, 1994; Morse, 1994).

All material were carefully read through to identify the orienting categories, excerpts from data files were compiled into one file for each orienting category, and the content of orienting-category-files sorted according to kinds of data sources. Initially, just the most important data was indexed, but after a while - and one or two brief periods of withdrawal from the field to achieve analytic distance - all interviews and observations were coded. However, little coding of documents took place in the field, documentary observations were not sorted into orienting-category-files, and every orienting-category-file was not sorted. Neither was the data on strategic issue diagnoses coded, reading through this material served to guide further data collection together with thorough familiarity of cultural categories.

As Hammersley and Atkinson (1983) explain, at this stage in their development the categories were not well-defined elements of an explicit theory. Rather they took the form of 'sensitising concepts' (Blumer, 1954). While 'definitive concepts' provide prescriptions of what to see, sensitising concepts merely suggest directions along which to look by giving the inquirer a general sense of reference and guidelines in approaching empirical instances. They provide provisional pointers to relevancies in the data and useful starting points for theory building but their importance may recede progressively as the research produces newly emergent concepts which may prove to be more useful or relevant (Layder, 1993).

Theoretical sampling was done, then, first and foremost with the purpose of maximising the discovery of relevant and important orienting categories at the beginning of this phase, gradually the emphasis changed toward developing knowledge of the identified categories, thereby forcing myself to narrow down the focus of the study (Strauss & Corbin, 1990; Bryman & Burgess, 1994; Bogdan & Biklen, 1982). Theoretical saturation was reached when incremental learning about the cultural categories and strategic issue diagnoses at the selected sites was minimal because I was observing phenomena seen before, phenomena beginning to appear normal, unsurprising, and commonsensical, and I began to feel that I had heard enough and became more anxious about pragmatic considerations such as time and financial constraints (Glaser & Strauss, 1967; Barley, 1990; Morse, 1994; Eisenhardt, 1989).

Cultural analysis

After fieldwork, a week or two was used to organise and systematise all the data collected in order to get an overview of the material. Then three to four weeks were spent on coding documents according to the orienting categories developed, before the more formal analysis was emphasised. The first four months of formal analysis focused on refining the orienting categories so they became more responsive to the cultural themes central to the moment of subjectivist understanding (Ritchie & Spencer, 1994). While most of the "sifting" part of the analysis - weeding the significant from the insignificant - took place in the field, the bulk of "synthesising" - the merging of several stories, experiences, or cases to describe underlying themes (Morse, 1994) - occurred after the field residence. A few important symbols were analysed in depth according to Spradley's principles of semantic analysis, but most of the process focused on examining the material in order to arrive at broad cultural themes. The theme analysis started with an interpretation of important segments of the text of orienting categories, an hypothesis about the theme of the whole text were formulated, this hypothesis was checked out with new text segments, then the hypothesis was reformulated, and this cycling between checking with data and reformulating the hypothesis continued until an accurate formulation of the theme was achieved. To facilitate systematic analysis an analytical scheme was worked out and applied to all data (figure 6). My impressions and understanding of the actors' culture became significantly less confusing when different segments of data were related to different levels of this model of organisational culture. As the themes were often tacit or hidden, I did guess at some of these meanings, or make inferences about the deeper layer themes that existed (Geertz, 1973; Spradley, 1979). The resulting formulations became a combination of summary descriptions of data using important symbols used by actors themselves and more abstract conceptualisations of data.

An important part of the analysis was an historical analysis, which yielded quite a lot of insight about the genesis, development and importance of cultural themes and their relationships. Here, I went through historical material in light of the themes identified, and made analytical notes about how cultural themes originated, became changed or reinforced in

Figure 6. The two main analytical tools.

Theme analysis	Modified paradigm model
Conceptual label	Contextual conditions
Content of theme	at different environmental levels
Official meaning	own organisational unit
Group 1:	organisation
Group 2:	national and regional government and opinion
⋮	the national telecom industry
Informal meaning	international regulatory bodies
Group 1:	the international telecom industry
Group 2:	Causal cultural structures
⋮	(underlying cultural structures generating the
Strategically hidden meaning	phenomena (variables and paradoxes), and
Group 1:	mediative and contradictory relations among
Group 2:	the cultural structures)
⋮	Cultural mechanisms
Unconscious meaning	concrete process (variables and paradoxes)
Group 1:	the actors conscious action strategies
Group 2:	relations to the microcontext of variables
⋮	and paradoxes of other SIDs
Strength	underlying process
Possible causes	significant symbols and their relations to
(historical or contemporary	the processual interplay of cultural structures
events originating, strengthening	the role of contradictions and ideological
or weakening the cultural theme)	mechanisms in this process
Relations to other cultural themes	Consequences,
Mediations	capability of effective strategic change
Contradictions	(interest served and degree of change)
	on a short view
	in actual and other SIDs
	in contextual conditions
	on a long view
	in contextual conditions
	in cultural structures

important historical events. Practically all historical data were from secondary documentary sources, especially books, masters theses and research reports. This part of the analysis lasted for approximately one and a half month. At the end of the cultural analysis, a member check was carried out, using general formulations of the themes. The member check mostly confirmed my interpretations, but there were a few rejections of expressions regarded as biased contributions from other groups and perhaps perceived unflattering or damaging of own group, and disapproval of a few abstract and unfamiliar words unfortunately used.

The overall idea of the cultural analysis was to become knowledgeable about the context of the strategic issue diagnosis cases to be able to interpret them adequately, before pushing to identify patterns within and between these cases. Theoretical saturation of this phase occurred when all themes were adequately developed in terms of the analytical scheme worked out, and I felt "able to understand and describe the context of the social dynamics of the scene in question to such a degree as to make the context intelligible to the reader and to generate theory in relationship to that context" (Dyer & Wilkins, 1991).

Analysis of strategic issue diagnosis

Already before the formal cultural analysis started, I did a rough analysis of strategic issue diagnosis. The purpose was to focus the cultural analysis on a few concepts deemed to be most relevant and important for strategic issue diagnosis. First, each single case was

examined to identify possible variables, then a between case analysis was conducted to identify common variables, and some of the data were rearranged to document the findings. When looking for cultural concepts to explain the variables, quite a few possible cultural explanatory structures reassured me about the feasibility of the study, but made any selection and focusing difficult. Hypotheses of cultural causes were thus not explored at this point in time, not least because the cultural concepts themselves were poorly developed. The emergence of the concept of paradoxes can be traced to these first two weeks of strategic issue diagnosis analysis. According to my notes, I was looking for similarities in content variables between SID cases when I discovered several shared opposing or conflicting meanings, and intuitively formed the hypothesis that the opposing content characteristics were either manifestations or distortions of activated contradictions between underlying cultural structures (while the observed process variables were manifestations of compromises).

While the development of 'the story' was difficult from this rough analysis, it seemed to occur much easier after the cultural analysis was done. Understanding of general cultural processes clearly facilitated understanding of cultural processes in and behind strategic issue diagnosis. Concepts of the process were relatively easily abstracted from shared dimensions of the more concrete variables identified earlier, and the four cultural themes of power distance, information, conflict avoidance and cost orientation soon became perceived as the most central. While this part of the analytic process is the most difficult to describe, it illustrates that piecing together the overall picture is not simply a question of aggregating surface patterns, but of weighing up the salience and dynamics of underlying cultural forces, and searching for structure rather than a multiplicity of evidence (Ritchie & Spencer, 1994). The final choice between these central concepts was delayed until a formal analysis was carried out to assess the relationships to process variables.

This formal analysis was carried out by the means of a modified 'paradigm model' (Strauss & Corbin, 1990) (figure 6). The grounded theory model was modified according to realist and critical paradigms so that unobservable structures and processes could be accounted for, thus using the meta-theory template (Crabtree & Miller, 1992b) of deep causal structures, contradictions and mediations between these structures, and causal processes including ideological mechanisms. Having identified all relevant variables and paradoxes within each strategic issue diagnoses, common variables and paradoxes were selected and systematically related to the other elements of this analytical scheme. As I didn't collect much data on the concrete process, I couldn't produce any detailed description of time sequence or intervening variables. Instead I focused on the symbols evoked in short process descriptions and final documents to identify cultural structures brought to the manifest surface, and on these structures' relations to the paradigm of other cultural structures, to theorise about underlying cultural processes. The analysis was first conducted within each case, and then between cases to identify common hypotheses using a 'replication logic', treating a series of cases as a series of experiments with each case serving to confirm or disconfirm the hypotheses (Yin, 1989; Eisenhardt, 1989). Much of the data was indexed and charted anew, according to the emerging theoretical framework. While this representation appears to suggest that I worked in a mechanical way, making obvious conceptualisations and connections read off straight from the data (Yeung, 1997), each step did require leaps of intuition and imagination; the whole process triggered associations, the origins of which I could scarcely recognise (Ritchie & Spencer, 1994). One source was the already complex results from theme analysis, later I recognised some sources in earlier literature (see chapter five).

Several considerations simultaneously contributed to the choice of power distance and information assumptions as the main concepts in and behind strategic issue diagnosis. Some of them were related to Spradley's (1979) criteria for selecting domains for in-depth analysis. First, and perhaps most important, several informant suggestions about topics they found problematic and important gave clues to these concepts. Some of these suggestions are cited in the introduction and in chapter five. At the same time, power differences and communication were central to the new paradigms brought to the field, and thus appropriate for reaching my research goals of enhancing understanding, explanation and criticism of strategic issue diagnosis. They were relevant for major problems experienced in the particular organisation studied, at the same time they were universal concepts appropriate for coming to grips with strategic issue diagnosis and effective strategic change generally (Fetterman, 1989; Kimmel, 1988). Personal values also affected the choice of main concepts, though perhaps mainly through the choice of theoretical perspectives in the first place. Broadly speaking, I find equality more attractive than authoritarianism, and think large power distance and the dominance of authorities generally should be reduced. Nevertheless, I do recognise that power and even dominance may be legitimate and necessary for achieving collective action and effective strategic change in some situations or periods. The resistance to authoritarianism might have influenced as well as been influenced by the perception that the rather one-sided market liberalism of the dominant actors of today should be balanced by social values and societal welfare concerns, and that the technocratic dominance of earlier times should have been balanced by more social and customer concerns. Personal experiences of bureaucratic culture and control oriented people hampering organisational and personal creativity and development, may also have contributed to the choice of perspectives and concepts.

Writing the dissertation

Approximately two and a half months were spent on formally analysing strategic issue diagnosis according to the modified paradigm model. Analysis then continued in writing the dissertation and a few other publications, and in a little communication with the actors and other researchers. The task of "writing up" research is increasingly recognised as no straightforward task, it has to be approached analytically, paying attention to the form of our reports and representations as it is as powerful and significant as their content (Coffey & Atkinson, 1996). While I early decided to use a traditional realist style in the empirical chapters (Van Maanen, 1988), and to become more confessional or critical in the method discussion section, thinking about how to reach different audiences varying in background assumptions, knowledge and expectations, and how to represent their understandings in my text, undoubtedly deepened my analysis (Richardson, 1990; Hammersley & Atkinson, 1983). In addition to writing a dissertation addressed to the academic community, I plan to write a feature article to present some essential ideas to all employees and try to stimulate them to learn more, and a practice-oriented research report for those who wanted to go further into these matters. Some central issues are discussed in the implications section.

During writing the dissertation, emphasis was laid on theoretically conceptualising the model and formulating how it worked. Reading and making comparisons with other literature was more central now than earlier. The measurement of theoretical concepts, a problem often groped with in qualitative research, had to be dealt with again in this phase. Clearly, the traditional use of a set of standard indicators whose reliability can be established was suspect (Hammersley & Atkinson, 1983). In my realist approach, the core of measurement was not the interplay between conceptualising analytic categories/constructs and finding indicators

which can be ordered to count as evidence for the them (Eisenhardt, 1989). Rather, what was involved was producing a model that could generate the results to be explained (Norris, 1983; Marsden, 1993; Keat & Urry, 1982). However, the iterative interplay of defining theoretical concepts and building empirical evidence was central (Hammersley & Atkinson, 1983). Theoretical concepts were developed using the results of the theme-analyses as a starting point, and by paying attention to and demonstrating the operation of concepts in the underlying social dynamics of the particular organisational setting (Dyer & Wilkins, 1991). Theoretical saturation occurred when it appeared to me that further abstraction brought no significant additional theoretical rigour to the generative mechanisms, and that empirical evidence was strong enough to support the truth of the postulated mechanisms in explaining the concrete strategic issue diagnoses (Yeung, 1997).

3.3.5 Methods to study ambiguity, paradox and power

Studies explicitly focused on paradox and unobtrusive power remain sparse, despite the increasing interest in these topics. One explanation for this scarcity is the inadequacy of traditional approaches for studying such less tangible phenomena (Lewis, 2000). While one could say that science is basically founded upon the conscious awareness of paradox (Teunissen, 1996), the traditional methods or ways of using these methods tend towards ignoring, reducing, suppressing and eliminating ambiguity (Levine, 1985; Scott Poole & Van de Ven, 1989; Meyerson, 1991a). These tendencies may be both emotionally and politically grounded (Frost, Moore, Louis, Lundeberg, & Martin, 1991). People vary in the extent to which they are comfortable with ambiguity, furthermore, certain political ideologies are more congruent with one response than another. For example, denial and strategic behaviour within easily recognised paradox often support and enshrine an established authority. The scientific consequences may include theories which become more and more “perfect” while less and less adequately mapping the multifaceted reality they seek to represent (Scott Poole & Van de Ven, 1989).

Ambiguity and paradox

This study did not set out to focus on paradox, but it included several measures which are recommended for the study of ambiguity. A variety of methods have been used, ranging from quantitative scales and questionnaires to participant observation in case studies. Questionnaires and quantitative scales have been used to arrive at clear indications of individuals’ perceptions of and attitudes towards ambiguity (Bavelas, Black, Chovil, & Mullett, 1990; Denison, Hooijberg, & Quinn, 1995; Durrheim, 1988; El Sawy & Pauchant, 1988), but most authors do not find them particularly usable. The bulk of empirical studies have made use of participant observation and case studies (Levine, 1985; Meyerson & Martin, 1987; Eisenhardt & Westcott, 1988; Martin & Meyerson, 1988; Feldman, 1991; Alvesson, 1993; Nesheim, 1993; Denis, Langley, & Cazale, 1996; Gioia, Thomas, Clark, & Chittipeddi, 1994; Gioia & Thomas, 1996).

In order to identify ambiguity, Meyerson (1991) recommends the use of methods like participant observation, where one can unobtrusively take part in informal settings, attending to chats and jokes, end even listening to lies. These methods may tap into 'operational' data and yield contrasts to 'presentational' data from methods like questionnaires and interviews (Van Maanen, 1979), which are vulnerable to the social desirability bias and may invoke self-consciousness and dominant norms of behaviour and expression. In addition to relying on

conversations in informal settings, Meyerson suggests the use of a variety of symbolic cues, e.g., the form as well as the content of some social practices, types of dress, types of decor and artifacts in offices. People's sense of humour can be rich expressions of ambiguous experiences and release tension from contradictory and seemingly irreconcilable situations and beliefs. "Cynicism, for example, simultaneously expressed feelings of hopefulness and despair, idealism and realism" (Meyerson, 1991a). Hatch and Ehrlich (1993) similarly demonstrate that discourse associated with spontaneous humour provides an appropriate place to investigate paradox and ambiguity, "since spontaneous humour allows individuals a momentarily expanded awareness of (...) incompatible frames of reference".

Building on these experiences and pieces of advice, I made use of documents, less structured interviews, and participant observation in studying a few situations in depth. Diversity was emphasised in the identification and sampling of informants, information sources, and sub-cases (Gregory, 1983). The sensitising devices used to recognise the multitude of interpretations possible included various cultural concepts, manifest symbols as well as intangible and underlying structures, insider and outsider perspectives, and the use of opposing theoretical perspectives and paradigms (Lewis, 2000; Martin & Meyerson, 1988; Sabelis Ida, 1996). The preliminary analytic strategy included looking for contradictions, inconsistencies, gaps, omissions and ambiguities in observational and other analytical notes, not only to eliminate them in collecting more data or in the simplification involved in cycles of expanding and reducing complexity, but also to preserve and make more easily recognisable the important ambiguities and contradictions. The formal analysis also utilised tools which highlighted plural and contradictory interpretations. The theme analysis put weight on documenting the meanings of different groups and on contradictions between the official ('presentational data') and deeper levels of hidden meaning ('operational data'). Contradictions as well as associative relations between any focal theme and the paradigm of other themes were also focused in the theme analysis. In the other main analytical tool, the modified paradigm model, observable paradox and other cultural symbols were related to the plurality and contradictions of the underlying cultural paradigm of cultural structures, and their role in the underlying cultural and political process of diagnosing strategic issues were examined. This included interpretations informed by the critical paradigm about the suppression of potential ambiguity and paradox different from the established and dominant mobilisation of cultural bias. Building on methodological and ideological critiques which challenge the epistemological and political authority of functionalist interpretations, cultural assumptions and processes that explained how one set of interpretations got privileged while the plurality of other possible interpretations was suppressed were illuminated, and ambiguities and paradoxes that potentially might exist were made central and legitimate (Meyerson, 1991a). Multiple paradigms were used to cultivate diverse representations, through immersion within and first-hand experiences of tensions (Lewis & Kelemen, 2002), for instance about the forces pulling toward authoritative information and egalitarian dialogue, more and less participant ambiguity and paradox, and more and less change in participant cognitive and emotional repertoires.

The methodological strategy thus involved attempts to develop my own ability to relate to ambiguity and paradox; entertaining conflicting knowledges simultaneously and working toward tensions and the anxieties they provoke in search of insightful interconnections (Lewis & Kelemen, 2002). In striving to represent ambiguity and paradox in the final text or model, further tendencies toward the elimination of ambiguity by traditional norms had to be countered. Even cultural studies tend to eliminate ambiguity, depending on language which seems to be deficient in expressing what is unclear, and because the authority of the valued

good stories depends on having clear story lines (Meyerson, 1991a). Following Lewis (2000), conceptualising ambiguity and paradox involved building both/and concepts which allowed for simultaneity and the study of interdependence, developing a frame which enabled a more complicated understanding of the coexistence and interrelationships of different interpretations, and the representation of the resulting theory in an ethnographic case study. Abstract second order constructs were used in order to provide a reference system for linking otherwise disparate representations (Gioia & Pitre, 1990; Lewis & Kelemen, 2002). For instance, power distance refers to not only an egalitarian attitude among some organisational members and a more authoritarian among others in particular situations or occasions (e.g. when participating in strategic issue diagnoses), but also refer to perceptions of low power distance on the surface and high power distance if deeper power structures are taken into consideration. Several other concepts also refer to different dimensions of phenomena, involving paradoxes across time and space, such as public and private meanings at different depths or between managerial and scientist organisational members (Lewis, 2000; Koot, Sabelis, & Ybema, 1996; Lewis & Kelemen, 2002; Martin, 1992). A cultural framework was used to develop their co-existence and interrelationships. This model of the organisational culture juxtaposes paradigm representations in search of patterns and conflicts, and reframes broad research questions within different paradigms, but it does not involve more than a little pressure towards the integration of different paradigms (Lewis & Kelemen, 2002). Paradigmatic paradox and tension is preserved in a map which represents the ambiguity and paradox of a particular organisational culture.

Power

The measurement of power is a long-standing problem in social science. Definition of, approach to, and assumptions about power undoubtedly influence empirical findings and conclusions. For example, elitists have a tendency to equate reputed with actual power in a way that leads to elitist conclusions, while pluralists tend to find pluralism by confining studies to situations with overt conflict and participation by many parties (Bachrach & Baratz, 1962). Perspectives do not predetermine conclusions, however, as elitist and pluralists are capable of generating opposite conclusions in cases of relatively easily observable pluralist opinions and elitist decision-making structures (Lukes, 1974). While the need for using different approaches is indicated, there is a lack of empirical studies acknowledging the complexity of the concept of power. For instance, Brass and Burkhardt (1993) found that empirical research has focused on either micro-behavioural or macro-structural approaches, although most conceptual treatments acknowledge both as simultaneous and complementary. When confronting the question about how to measure power, the starting point has to be to acknowledge both surface, observable and underlying, unobservable dimensions of power, and that knowledge of both requires in-depth knowledge of how people themselves come to understand their organisational and environmental context (Fiol, 1991).

Within an overall cultural perspective, I used three methods to make observations of power: the reputational, the distributional, and the decisional. The 'reputational' method relies on the opinions of presumably informed persons to assess the distribution of power (Whittington, 1989). I collected a fair amount of information on different actors' opinions about who had power, especially in conjunction with the sensitising cultural category of 'power distance', even though I seldom asked directly or probed this sensitive topic. In the 'distributional' - or 'who gets what' - approach one makes inferences about actors' power from what resources and similar benefits they accumulate (ibid.). To be more specific, I used the possession of positions in the formal hierarchy as one indicator of power. I also made observations on

informed opinions about which resources were considered important and who legitimately controlled them, assuming that people used perceptions of resource dependencies as one basis for understanding power. The 'decisional' method measures actors' power according to success in decision-making activities. Here, the observations from actual strategic issue diagnoses were used to make inferences about the exercise of power in concrete instances. Participants reported their own observations on what strategic issues were diagnosed and what took place during these processes; which actors participated, whether there was overt conflicts, what cultural resources were drawn upon, and what outcomes were reached (Conrad, 1983). The outcomes of strategic issue diagnoses were also assessed through written data sources. And some documentary evidence on a few major and well known decisions in the organisation was used.

A number of critiques have been raised against these observational methods. While inferences about surface power can legitimately be drawn, they may lead to inaccurate and misleading conclusions. The reputational method have been criticised for the tendency to lead to elitist conclusions, and for giving no common definition of power, while the distributional method is criticised because people may acquire some resources not because of their power but from windfalls or even from the deliberate generosity of the powerful (Bachrach & Baratz, 1962; Whittington, 1989). Whittington (1989) remarks that the windfall and generosity argument may be less relevant to conditions within firms, where resources are perhaps more tightly controlled than in the community as a whole. Together with the fact that I studied an organisation with a long and far-reaching bureaucratic history, this led me to have confidence in managerial rank as one indicator of power. He also argue that it is not unreasonable to presuppose that power will be concentrated and that it holders will be well known in hierarchical organisations such as the capitalist enterprise, but this avowal may not easily apply to present Norwegian companies. The reputational bias towards ascribing power to a stable set of elite actors have to be countered by triangulating the reputational approach with the decisional. The focus upon overt conflict over key issues leads to recognising both several participants with power and variability in power related to concrete political processes. This decisional approach, however, has been criticised for having no objective criteria for identifying key issues as opposed to routine issues; there are no other means to depend upon local opinion - in other words, reputation (Bachrach & Baratz, 1962; Whittington, 1989). The danger of informants' diversity in defining power must also be acknowledged, but bearing in mind that actors' own meaning of power are basically important in my cultural perspective, whatever an informant regards as power is an important dimension of power (Whittington, 1989).

The main criticism, however, is the focus upon observable dimensions alone and the negligence of unobservable dimensions of power. The most potent aspect of power may be its ability to influence or constrain decisions about whether or not to act, or whether or not to exercise powers fully or consistently (Conrad, 1983; Whittington, 1989). Accordingly, any real or potential power cannot simply be read back from outcomes - whether reflected in reputations, rewards or decisions - only its exercise in particular struggles (Whittington, 1989). The negligence of the power that resides in non-action may, for instance, lead to an over-estimation of an actor's power by neglecting what the actor is *not* able to do, or to an under-estimation of an actor's power by neglecting what the actor is able *not* to do (Fiol, 1991). The identified agenda of strategic issues may be a consequence of the 'mobilisation of bias' - the established norms, values, rules, practises and routine decisions - so that only relatively innocuous issues are ever raised in public; the more powerful parties may have acted to influence perceptions about the importance of issues, or the weak may have

anticipated reactions and not have dared or bothered to test the might of the powerful by actually advancing certain issues in the first place (Conrad, 1983; Whittington, 1989). Alternatively, the powerful may even have wanted to preserve their real power by hiding it and allowing certain controversial issues to be raised to perpetuate a myth about equal and democratic pluralism. Thus, the distinction between important and unimportant issues cannot be made intelligently without examining the 'mobilisation of bias' and making judgements about whether the issues or their formulation represent any challenge to some predominant values or established 'rules of the game' (Bachrach & Baratz, 1962).

The unobtrusive power mechanisms are by far the least developed and least understood; their identification and exploration have been avoided in the past at least partially because of the methodological difficulties this was thought to present (Gaventa, 1980; Alvesson & Deetz, 2000). While reputations to some extent "can indirectly take into account the powers of non-decision-making and anticipated reactions" (Whittington, 1989; Crenson, 1971), "deep structures of power cannot be assessed through observations of events that occur during negotiations or in the outcomes of conflicts" (Conrad, 1983). Thus, occasions on which this inherently subtle and covert power has been used are obviously difficult to identify (Brown, 1986). Furthermore, actors who use unobtrusive power are understandably reluctant to discuss their activities, since the future utility of their tactics often depends on their low visibility (*ibid.*). Unobtrusive power relations will remain largely invisible, even to methods that capture the richness and complexity of observed situations. Unavoidably, questions about objectivity have to be raised when making interpretations about something that does not occur empirically. We need to justify our interpretations that the least powerful would have thought or acted differently if they were not influenced by power; and we also need to specify the means or the mechanisms by which they have been influenced to think or do as they do (Lukes, 1974).

It is recognised that the identification of unobtrusive power would begin by investigating the particular 'mobilisation of bias' in the institution under scrutiny (Bachrach & Baratz, 1962). This may include the study of social myths, metaphors, language, and symbols; the study of communication of information - both what is communicated in how it is done; and how these are shaped and manipulated in power processes to stabilise culture and power relationships (Gaventa, 1980; Conrad, 1983). In the context of this study, it involved mapping the cultural context of the observable strategic issue diagnosis, and then using this map as a resource for theorising about underlying power processes. The holistic and historical view on organisational culture evinced the breath of cultural resources drawn upon in organisational life in general to generate power and negotiate about the meaning of events and future courses of action. A comparison between the diversity of cultural resources and those manifest in strategic issue diagnosis made it apparent that several cultural structures were missing in generating the power to influence the construction of the meaning of strategic issues. While this indicated that the total historically produced potential domination were not reproduced, an inquiry into which interests were represented by the cultural structures included or excluded also proved that certain interests and actors were favoured while others were handicapped thereby (Bachrach & Baratz, 1962). In short, the pool of asymmetrically distributed structures of power was moulded to serve a mix of both new and historical dominant interests. The mechanisms of power were then illuminated. The realist and critical approaches established the causal power of just a limited part of the generative network of cultural structures to reproduce historical and present interests without creating visible conflicts, together with an explication of ideological mechanisms that suppressed, concealed and distorted contradictions between present and absent cultural structures and between cultural

structures and new social realities. The critical attention to the larger context of the case, and the resources of this larger context, supported judgements about the capabilities of different cultural structures because of their basis in this broader context, and helped to reveal real and potential power that were not allowed to be exercised and developed in strategic issue diagnoses.

Summing up, I found the combination of these observable and unobservable indications of power sufficient for my purpose of theorising about power in and behind the strategic issue diagnoses observed. A more thorough examination would of course be necessary for more focused studies of the phenomenon of power itself.

Chapter 4.

TELENOR LTD. AND ITS R&D UNIT – THE CULTURAL CASE CONTEXT

A brief survey of the most important environmental changes will set the stage for this chapter's discussion of Telenor's organisational culture. Then the change orientation of the culture will be described, introducing the content of some cultural changes put forth in meeting liberalisation and increased competition. Some of the most important cultural contradictions involved in the change process is then documented, for Telenor in general and for its research institute respectively. Finally, the attention is put on the cultural structures which are the focus of this study - power distance and communication assumptions. The result is a portrayal of a large organisation going through continual change, not necessarily a portrayal of Telenor as the organisation is there today.

4.1 A New Telecommunications Environment

Four broad forces may be said to have transformed the telecommunications industry (fig. 7). Basic technological change has had a tremendous impact on the other main driving forces. Digitalisation and the merging of previously separate technologies dissolve the distinction between traditional public monopoly areas and competitive areas. Thus liberalisation provides for increased competition, change and complexity in an enlarged and growing telecom environment, in particular in offering new and sophisticated services to the customers.

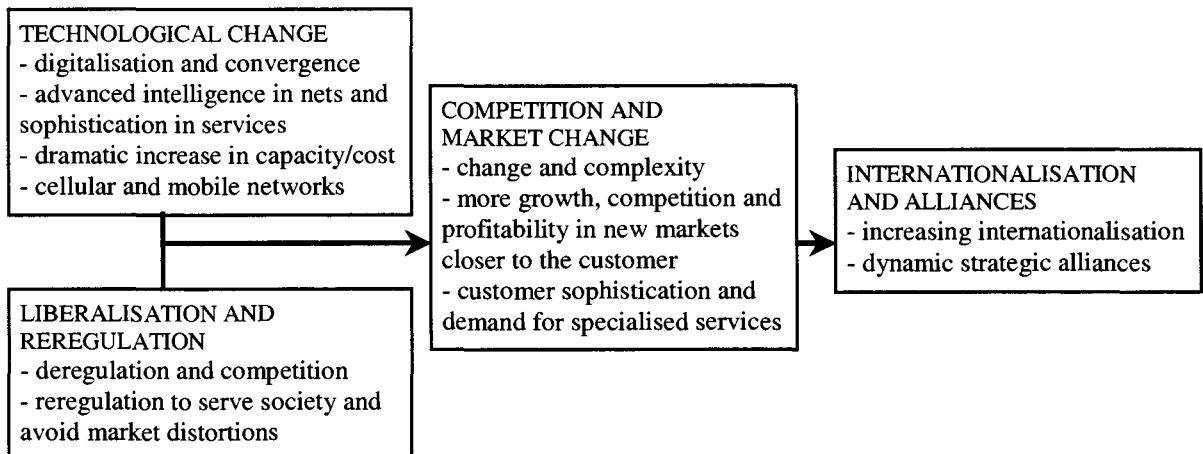
4.1.1 Technological change¹

The technology of telecommunications may be divided into four areas, corresponding to a value chain forward to the customer: transmission infrastructure, network management, user equipment, and user services. In each area profound change occurs, more radical and time consuming in basic technology, more incremental and with more speed in developing new user applications. Across domains, more advanced technology involves rising capacity and performance while the associated costs are reduced, and the transition from analogous to digital technology merges traditional telecom technology with computer technology.

Transmission technology comprises wire based solutions like the traditional copper wires and the new optical fibres, and wireless or cellular solutions like radio /mobile networks and satellite communications. The development of optical fibres, and supporting technology including lasers, amplifiers, and various components, is increasing the capacity of the net dramatically. The transport of signals becomes almost free, as there has been a fabulous development in the price / performance relationship. In the 1980'ies optimistic visions of the

¹ This section is based on presentational material from Telenor R&D (1993 and 1994), Mathisen (1991), Audestad (1995), Dowling et al. (1994), The Economist (Sept 1997).

Figure 7. The new telecom environment.



information society, optical fibres were to be used throughout a broadband network. Given the current expectations of user needs and income from high-capacity demanding new services, however, optical fibres are still too expensive for being used all the way to the end customers. Considerations of economy and actual needs indicate a more incremental evolution and combination of different technologies.

Two parts of the transmission network is often distinguished: the transport net which carries signals across long distances, and the access net which is the part of the net closest to the subscribers. In the transport net the main technology is expected to be optical fibres supplied with radio lines in special areas. In the access net, signals are today mainly transmitted to and from users in analogous form through copper wires, and the existing copper network holds limited possibilities for large capacity communication. But improvements in digital technology makes it possible to increase the utilisation of its capacity sufficiently for services like video-on-demand to households and two-way data transfer to companies. At the same time, calculations show that including optical fibres out in the net until certain service connection points may be profitable already today. The existing copper networks thus represent both strategic opportunities and significant amounts of already invested capital for their owners.

Wireless access technology represents an alternative and may be used in combination with cables. Radio solutions increase capacity and are equal in cost in comparison with copper cables, they give the operator flexibility because they are easy to install, and they may give the user the opportunity to use mobile terminals. The mobile telephone system GSM has become a success in Europe, and a new generation of mobile telephony which make different systems compatible is on its way. Satellite communications is an area of strong expansion, and different solutions are discussed. Low orbit satellites make possible direct communications with personal handsets and little delay. This solution independent of local networks represents new possibilities for rural areas, and if it can be offered at acceptable prices it may involve catastrophic consequences for local network owners.

Turning to the management of large telecommunications networks with lots of users, it must be noticed that it is very complex. For instance, transmission involves the establishment of a variety of connections between communication partners; mixing and later separating again signals from several users who share a channel; transforming signals between different

transmission technologies like electric and optical, analogous and digital; and establishing interconnections between separate networks in which the communications may be originated, transmitted and terminated. More advanced management and control software is increasingly needed and installed to analyse traffic and exploit capacity at the same time as requirements for service quality is protected. Of particular importance is the flexible prioritisation of capacity to different application categories and users according to needs, for instance the different service qualities needed for data transfer and real-time voice communications. An important development is the building of what is called intelligent nets, which contain functions and databases which, in part by using software from computer technology, support the offering of several advanced services based on demands from users. On the whole, there are many different separate networks, much diversity, and incompatibility today, but the digitalisation and further network management efforts at integration and enlargement of capacity may provide for compatibility and a more simplified network infrastructure in the future.

User equipment also develops in the direction of comprising more and more intelligent functions at relative lower cost. The digital coding and compression of information in order to reduce the capacity needed for transport, is continually improved in both network functions and user equipment. In particular, the compression of the signals needed for carrying services containing video, which started with the videophone, continues in the development of application specific integrated circuits. For all satellite and radio systems there is a condition for success that there are small and low-cost terminals. The component development in microelectronics is about realising this prerequisite.

The development of new telecom services for users is what is driving the technological evolution, together with the new possibilities created in basic technology. The innovation rate of new services is very high, and they quickly raise demand for more capacity. "Activities that were strictly for nerds one year (say, voice telephone calls over the Internet) are hot commercial prospects 12 months later; and technologies that started as a businessman's luxury (say, cellular telephones) quickly become a mass-market gadget" (The Economist, September 1997). Innovations like the telefax, the mobile phone, and the Internet show how the net can be used to create new mass-market products. The traditional telephone service is already supplemented by many new telecom services: various games and entertainment services, banking and financial services, news and information services, video conferences, shopping, advertisement, and distance education.

As the digitalisation goes on and the technologies for voice / audio and video communication converge with data distribution, new possibilities arise, and multimedia services emerge as the driving force which gives possibilities for new applications. The development holds the potential for changing the basic concept of the telecom service: new services may become more visual, more intelligent, and more personal than in the past, and there may be greater mobility and flexibility of service. Wireless may soon become the main conduit for voice conversations, as people come to think of the telephone as a personal, portable gadget. However, the increase in the distribution of data and information using Internet may have saved the fixed wires, because wireless will probably never be able to offer as much capacity.

4.1.2 Liberalisation and reregulation²

As the digitalisation has made it possible for several technologies to serve the same user needs, there has been continuing pressure on government regulators to open up more markets to competition. In Norway, the technological development in the mid 1980s made it difficult to draw the border line both between tele- and IT equipment and between different forms of teleservices, thus it also became difficult to draw reasonable boundaries for the monopoly of Televerket. A strong right wind in Norwegian politics also contributed to the early liberalisation. The political process was influenced by the development at the international telesector. In the beginning it was often referred to the deregulation in USA and Great Britain, later to the work with tele questions within the EU-system. The result of the pressures has been deregulation of the earlier monopoly areas, but the incumbent national telecom operators were allowed the opportunity to diversify into new and expanding competitive markets.

At the start of the telecom liberalisation in Norway, another major problem also absorbed the interest of political debate. There was a great need for large investments in the telenet, which had not been prioritised in competition with other pressing societal needs after the second world war, resulting in long waiting lists for telephone, and public discontent with Televerket. Televerket had developed a plan for the digitalisation of the telenet to the benefit of society, but public investment in its technological systems and services involved a danger of increasing the entry barriers for new actors and strengthening its position as a public monopolist. Even against the Right-wind, Televerket got support for a large publicly financed technology-based endeavour. Building telecommunications in a country like Norway is very expensive, and one could not rely on private companies to do this. The early discussions on liberalisation were thus about relatively marginal parts of Televerket's operations, but the establishment of competition as a principle that might be used would carry great significance.

In the mid 1980s the border line between user oriented tele equipment and other information management equipment was being blurred. These two areas were marked by totally dissimilar regimes: state monopoly on the telecommunications side, and sharp competition between private companies in the IT industry. The solution became arranging for competition with participation from the state in this border district. Shortly thereafter a discussion followed about the so called value-added services, which were expected to carry great potential for growth and profitability. An expert committee appointed by the Ministry of Communications recommended full competition on value-added services, defined as signal transmission services to which there were added services which processed the signals in a way that from the perspective of the users increased the value of the services. Televerket got the opportunity to participate in the competition at equal conditions with private suppliers. To secure fair and real competition it was necessary to divide state functions into separate organisational units. The same organisation should not at the same time participate in the competition, sell monopoly services to the competing companies, and have the responsibility for regulatory issues. The previous public administration body was divided into three parts: The Norwegian Telecom Regulatory Agency should take care of the regulatory issues; a basis organisation should take care of the traditional monopoly missions, like the responsibility for the telenet; and a competitive company was separated as a wholly owned company of the basis organisation.

² This section is based on Dowling et al. (1994), NMS business history research centre (1993), Thue (1995), Hammerø (1992), Moberg (1994), The Economist (Sept 1997), Mognes (1994), Cave (1995), Ringlund (1995), Müller et al. (1993), Brekke et al. (1994).

At the time of this study more areas had become exposed to competition: the mobile GSM service, data services, resale of capacity in leased lines, corporate networks, satellite services, personal communications, and cable TV. The basic organisation and competitive subsidiaries became included in one corporation, The Norwegian Telecom Group, which changed its name to Telenor and became a limited company in 1995. Non-discriminatory principles and accounting separation between basic and competitive areas were kept. Following EU recommendations, harmonised conditions were partly implemented for the access to public telenets and teleservices (technical interfaces, supply- and use-conditions, pricing principles). In 1998 the monopoly on the voice telephony service was going to fall, and basic netinfrastructure would have to be accessible for competitors at equal conditions with own companies.

Government regulation has to continue to make the market function without distortions and avoid the abuse of dominant position. While the previous national monopolists say that they are willing to compete as long as the competition is "fair", opponents argue that as long as the incumbent maintain close to monopoly control over basic networks, the government must prevent them from using monopoly power to crush competitors and thereby reduce competition. The new regulatory situation is complex, and experience from early liberalised countries show how difficult it is to create competition in telecom. Leaving aside that incumbents are still closely bound to governments who may have financial advantages from less competition, they start with the advantages of a long-standing market position, and they often control largely depreciated access networks at the gate between the net and the users. In this situation bad regulation can impose huge costs, like delaying new investments in networks which allow high speed access to Internet and other high-capacity demanding services from home.

Three of the most important regulatory areas are licensing, interconnection, and universal service obligations. Licensing of some important services is considered necessary to secure effective competition and the responsibility of competing companies. If the number of new entrants is too high, they might dissipate their forces in fighting one another for a limited market share rather than present a serious challenge to the incumbent, or they might attack from every quarter an incumbent who is subject to constraints on its tariffing and becomes unable to survive at the level required to sustain universal service obligations. Responsible competitors are needed to secure things like technological investments, geographical coverage, and quality of services. To balance the rights of a licence, the licensee assumes such responsibilities, which have to be stronger for dominant actors.

To require new competitors to build new networks would in many instances involve a too heavy demand and/or a waste of resources. Instead, regulators often prefer to kickstart competition in services by instructing established companies to allow competitors to offer services over the existing networks. The result is less competition in the networks, but otherwise the incumbents may see precious little reason to make new network investments, and drop prices to retain customers and keep out competitors. If that holds back the development of new services, people may rightly blame enforced competition.

In addition to the need of new service providers to connect to established networks, there is a need of utilising the total value of different operators' networks by requiring any-to-any connection between all or the most important networks. Many incumbents seem to regard accounting separation and the non-discriminatory offering of basic network services to competitors as a reasonable approach (perhaps preferring it to the alternatives of structural or

ownership separation), given that they get the ability to cover the costs for their network through access charges. It is very difficult to assess such costs, and demands for the upgrading of networks. There is a range of different principles for the calculation of cost based prices, which ought to fall within a range from incremental cost to forward looking fully allocated cost. Incremental cost would be too low for ensuring the incumbent's viability (for example, its ability to satisfy universal service obligations), while fully allocated cost may crush small competitors and stimulate inefficient entry as the strongest build their own networks. Almost every new entrant complain that the interconnection charges bear no relation to their true cost.

The most important regulatory issue is perhaps the universal service obligations. Since basic telephone service is seen in most countries as a right, governments must continue to ensure residential users and enterprises situated all over the country access to some level of basic telecommunications services at equal and reasonable terms. The discussion focuses on what services should be covered, what the cost is, who should contribute to the financing, and how to arrange the financing mechanism. The incumbents may still have to bear a disproportionate burden of ensuring universal services, while competitors contribute to various extents as competition develops, in the beginning to covering the cost through taxes on certain services to a fund.

The challenge for traditional telecom firms like Telenor is thus to deal with continuing albeit reducing government regulation, and at the same time learn to compete in an increasingly complex environment with more innovative, aggressive competitors and demanding, sophisticated customers.

4.1.3 Market and competition changes³

The market situation is and will increasingly be challenging and characterised by change, diversity, complexity, and uncertainty. While strong growth is expected in the demand for new services, the implementation of a separation between services and the basic network will make it easier for a lot of new actors to build their services upon the netinfrastructure and compete with traditional telecom companies. At the same time, traditional telecom companies can compete in the new integrated market segments for telecom, computer, information, media and entertainment services. The divide between technological service and information content provider may also be transcended. The teleoperators' activities are no longer limited to the transport of information, they are also involved in the collection, management, and storage of information. Although most income comes from large volumes of network traffic today, the highest income and profitability potential is expected to be higher in the value chain and closer to the customer. Competition is also expected to be hardest higher up in the value chain, even if the distribution of signals may become a standardised and low-priced commodity. The focus of telecom firms is expected to change to services, network intelligence which support advanced services, the bundling of services to market segments, and to the information or content part of services to the customers.

In network infrastructure, competition comes from new actors who already have networks but now get the opportunity to exploit them better: cable TV, energy distribution, and railway companies. In addition much communications will be offered by large corporations and

³ This section is based on Telenor's strategy document (1994) and yearly report (1994), Audestad (1995), Dowling et al. (1994), The Economist (Sept 1997).

computer companies through the interconnection of local area networks. Although new entrants may build new networks at a lower price with new technology, it still requires a lot of capital to build a high-capacity telecom network. Further, the newcomer will be exposed to at least one competitor with a huge cash flow, an established brand, and a largely depreciated network. These are deadly weapons in what may easily become a price war. The new network owner also needs to connect to the national network, otherwise the value of being plugged into its net is quite low, so the incumbent to some extent controls their biggest cost, too. The main reason for building rival local networks in most countries is to grab the business market, the most lucrative market for the least investment. But wherever you look, the local incumbent remains entrenched. Competitors may have preferred low market share and profitability rather than risk a price war, or licensing conditions may have hindered skimming at the expense of less profitable areas. Competing for the residential customer is even harder: homes are more scattered than offices, so dearer to connect; home telephones are used less than business ones; residential customers often seem less concerned with price differences than with brand, particularly at a time when prices generally are falling; and regulation has held down the price of domestic calls. As larger investments are required and less income expected in sparsely populated areas, the weakest competition may be in the rural districts.

In long-distance calls and in providing services to business customers, competition has flourished thanks to the skewed pricing. Traditional operators have creamed off revenue to subsidise residential users, who mainly make local telephone calls. The largest imbalance is in international voice calls. Fibre-optic cables have cut the true cost of far-distance calls to little more than that of a local call, but this has failed to trigger an equal fall in charges. Competition will increasingly reduce these juicy margins, but the sheer complexity of long-distance tariffs has helped to disguise the fact that prices have been falling more slowly than costs. Increased competition may also be expected in mobile nets, which may represent an alternative to the local near monopoly. The capital cost for cellular networks are lower than for wired, particularly for new technology for densely populated areas. Traditional telecom companies have established their own mobile subsidiaries, however, in addition they charge mobile competitors for access to their own networks, so mobile communications represents their fastest growing income stream. Telenor has positioned itself as the biggest provider of mobile telephony and other mobile services in Norway. Telenor has also expanded in the computer and information technology market, through acquisitions and mergers with several of the larger companies, to become a complete tele/IT provider and exploit economies of scale and synergies in the business market. Telenor owns the largest cable-TV company in Norway, and has positioned itself in the distribution of television from satellite. They are also already active in the content area, through processing and developing information and knowledge based on their catalogues, and through carrying out telemarketing campaigns and marketing research.

The greatest opportunity for new competitors seems to be their presumed better innovativeness and ability to develop new services adapted to the needs and demands of the customers. Customers, and particularly business customers, are becoming more sophisticated and thus demanding a wider variety of services. They are also becoming increasingly price sensitive, and willing to seek alternative services from competitors. While traditional telephone service companies become more market driven, and focus on the needs of various customer groups rather than on the creation of network infrastructure, new actors might have competitive advantages here. As users will pay more attention to content – to the appeal and quality of information, entertainment, artistic performance, etc. - than to technical solutions or

the transmission of bits, traditional telecom operators may increasingly come to lose their customer relationships.

4.1.4 Internationalisation and alliances⁴

The telecom industry is rapidly becoming more international and global, as telecom firms have been encouraged to find opportunities in foreign markets by shrinking market shares at home, constraints on local competition abroad, and changes in technology which makes it easier to establish new international positions. Often telecom firms have joined with each other, equipment suppliers and large customers to complete international projects. Long term alliances are also increasingly established for satisfying big multinational customers who require the ability to offer communication services on an international basis. A more complex market results as the same suppliers will often be in both competitive and cooperative relationships to each other.

The strong tendency of concentration through ventures and mergers among industry participants is another significant catalyst for changes in industry structure and regulations. Competition between telecompanies has resulted in three global strategic alliances. National influence on the development of telecom has been reduced, and there is naturally concern about the effectiveness of competition. The area of competition has broadened, though, and competition as well as new alliances may result with media firms, information technology companies, equipment suppliers, etc. On the positive side, the earlier national telecom operators and their alliance partners have deep financial pockets and may provide for competition in netinfrastructure.

More than 20 international competitors to Telenor were present in the Norwegian market at the time of this study. In Telenor own judgement they may lose 30 to 40 % of the Norwegian market, which should be compensated for by new services and activity in foreign markets. Telenor already take part in several international projects building on their strengths: building new GSM mobile networks, satellite based communications, value added services, and consultancy services. To secure their customers access to a competitive global network, they have joined an international alliance with British Telecom, one of the largest telecom companies in the world. Together with BT and their partner the American MCI, Telenor thereby participates in a global strategic alliance.

Although the telecommunications industry is becoming increasingly international, Dowling et al. (1994) find that it is still fundamentally nationally based. Attempt by carriers like BT to form global networks have not shown much promise, yet. However, in order to be positioned for the developing global telecommunications market place, they think it is crucial that national service providers gain multinational experience and the skill to develop and support alliances.

⁴ This section is based on Dowling et al. (1994), Telenor's strategy document (1994) and yearly report (1994).

4.2 The Telenor Culture

As a result of the new telecommunications environment, Telenor and the culture of the organisation is going through profound change. This change process may make the culture more transparent and easily observable, and a useful place to start looking for culture might be the values and beliefs attached to change itself.

4.2.1 Change Orientation: Willingness but Questionable Ability?

To start with, the CEO may have captured the common attitude to change in Telenor at the time I started to learn about their organisational culture:

“We have to prepare for (...) a future that is characterised by deep changes in technological and market conditions. We also know that the rate of change will be much more rapid than previously, and that we will face a totally dissimilar degree of irregularity and unpredictability than we have been used to. Above all we know that we already now meet competition ... [This] entails that we, as an organisation, to a quite different degree than previously, have to be able to change in order to adapt ...”

(CEO in the management magazine)

The belief that change is necessary to be competitive in an increasingly changing and competitive environment, did seem to be shared throughout the organisation. Most people repeatedly expressed willingness to change, as can be demonstrated by both official statements from the trade union and extensive surveys of employee attitudes. Those responsible for implementing actual changes did cast some doubt on this willingness, however. But it did not seem to me to be any lack of a general willingness to change. Rather, the question was more how willingness was modified by the desirability of actual changes and change implementation processes. The last quote below from a recent reorganisation, may be indicative of the general change orientation in Telenor.

“... the technical development accelerates. It will therefore be absolutely crucial that we show ability and willingness to change, in order to be sufficiently competitive.”

(editorial in the union magazine)

“ ... important results from the preliminary investigation ... there is a good willingness to change among the employees ... On the whole I would say that there is a strong and positive willingness [among managers] to participate in the changes and face the challenges.”

(reengineering consultants in the management magazine)

“The company shall be changed to a change-able and change-willing organisation ... ”

(information manager about the reengineering process in the management magazine)

“Today there is a widely held understanding that something has to be done with Norwegian Telecom Group’s organisation if we shall survive the competition ... the agreement is less when it comes to what changes are needed.”

(the management magazine)

In exploring further what I call change orientation, I shall include the desirability of actual change efforts made, and other dimensions like the ability to change and manage change

processes, which was closely connected to the ability to influence the course of change, and conditions which had an effect on this ability to change.

Willingness depends on the desirability of change

To the members of a culture “change may be seen as desirable, as evidence of progress; on the other hand, change may be viewed as threatening, as disruptive to the social order” (Schneider, 1989). In Telenor, change can not be said to be neither clearly positive nor negative. Sometimes the threatening aspects are somewhat more pronounced initially, often if they are imposed from the outside. But in general change is perceived as a mix of negative and positive elements. Historical experience may have formed this view of change. The automation period, for instance, where the manual switchboards were replaced with automatic technology, was an important common experience. From the 1960s to the first part of the 1980s, with a powerful effort at the late 1970s, one of the most dramatic transformation of the working conditions in Televerket took place (Aarvik, 1993). As the personnel reduction in the operator services dominated the process, and threats to employment in districts with few alternative employment possibilities, the automation was mostly perceived as negative and as a threat (Aarvik, 1993; Hammerø, 1992). Further, the females at the manual switchboards had become a social institution, they always knew about the location and availability of necessities of life and essential persons, and facilitated safe services which automatic switchboards could never replace (Dahl, et al., 1993; Aarvik, 1993; Thue, 1995). However, the automation also involved positive aspects: one had to become skilled at new competencies, which involved a more positive occupational self concept; the net improved and became faster, open day and night, and free of listeners; and increased traffic lead to improved income (Aarvik, 1993; Thue, 1995).

Often technological change and the related need of increased competence are perceived as desirable. The organisational changes that often follow might just as soon be perceived as necessary, although in isolation they might be negatively valued. In the automation, for instance, it would be against the values of the union and the employees to go against the rationalisation following from technical developments (Hammerø, 1992; Listhaug, 1976). Other external changes have often been considered to be negative and threatening. An important common experience was the long waiting lists and public criticism following from, among other things, lack of governmental financing. The organisational changes made to meet this threat were not considered to be sufficient, and for many far from the benefits promised by change agents.

When Televerket had largely finished the automation and reorganisation of the 1970'ies, they faced a depressing reality. The waiting lists had reached a new top, productivity was decreasing, the public complained about bad service, and the media and the politicians demonstrated an increasing and critical interest in the organisation. The union was concerned, in particular about rightist press campaigns arguing that there would not have been waiting lists with private tele companies in order to privatise Televerket, but put faith in the forthcoming Long Term Plan.

A statement from the yearly meeting expressed disagreement with reorganisation as a patent solution to remove the waiting lists for telephone, although one can not discount that small changes in rules and routines can improve effectiveness ... The (...) union is thus of the opinion that one can not reorganise away all the work of establishing telephone connections for about 110 000 new subscribers. On the contrary, the (...) union thinks that experience shows that the effectiveness is reduced during a period of reorganisation. The (...) union is certain that the best requirement for operating a telephone construction work

at a forced rate is giving Televerket big enough and regular grants during a long enough period of time.

(Hammerø, 1992)

The liberalisation of the telecom markets may easily fall into this category of negatively valued external changes. Different groups' ideological positions may, however, shape the perceptions of its desirability. Internal changes in order to meet competition are today perceived as necessary by most people, as we have seen. Whether these changes are perceived as positive or negative, and the extent to which they are, depends on to what degree they are consistent with one's favoured ideology and the degree to which one is able to influence the course of change oneself.

Desirability depends on the ability to change

Change is indeed viewed as something which can be actively managed rather than as givens to which one should adapt (Schneider, 1989). Not only the ability to influence the changing environment is trusted, conflicts often arise when different groups try to influence internal changes. Telenor management largely approves of a new business oriented culture to meet the contemporary external change and competition. They are concerned with the low ability to change resulting from a long period of public bureaucracy and monopoly. In particular, the time needed to implement change has to be improved to catch up with competitors.

“Several has meant that it seems that demands are put on only managers in the change process, and that employees and trade unions seem to be more concerned with how uncertain and difficult it will be, rather than with how they shall handle the new demands and take responsibility for meeting them.”

(corporate ethical work book)

“The (...) union also says that the “breathless” timetable has contributed to lack of engagement and increasing frustration among the employees.”

(the management magazine)

“Previous long time for deliberations and changes implemented step by step ... Now it goes “fast and sweeping” instead. We had do learn on the way.”

(the management magazine, about necessary change in British Telecom)

The trade union often views the consequences of business oriented changes and change processes as negative, and therefore doubts Telenor management's ability to organise positive change.

“Difficult working conditions, unhappiness, bad motivation, and uncertainty ...it has to be a common goal to get the organisation in its place and that everyone can feel the Norwegian Telecom Group as a good and secure working place again – not like now, full of frustration and uncertainty ...

[There are] several courses toward increased employment, less overtime, better health and working conditions, and most of all – better sense of dignity as human beings. The presupposition for gaining our ends is that everybody don't go to trench warfare in order to defend the status quo – and that someone takes the initiative to discussion.”

(from editorials in the union magazine)

“We have now entered into a new phase where we don't talk about advancing new reforms, but about defending what has already been achieved. We have experienced that nor can we expect to the same degree as earlier that laws and contracts are followed. Rather, at

the contrary, employers to a large degree try to undermine and break down the rules. Thus there will arise an increasing need for mobilisation and direct defensive fights locally in the individual company."

(article in the union magazine)

Turning to the ability to change, irrespective of its course, several observations demonstrate that in general it is believed to be relatively low to start with, although there is some variation as experiences of earlier, difficult changes are sometimes interpreted in a positive light. The reason for the low ability to change is the previous relative stable environment and the difficulty of the present challenge. Change is perceived as difficult because it involves radically different conditions and competencies than earlier, and most people prefer and is used to stability and security.

"The experts claim that it is about impossible to change companies [without a crises] in time. The experts also claim that it is almost impossible to change large companies and organisations. Decision processes, routines, corporate culture – and not least the people in the organisation – are adapted to a bureaucratic mode of action ... Even though we can present successful changes earlier in our history, it is clear that we have never had a greater challenge than this time."

(the management magazine)

"The company shall be changed to a change-able and change-willing organisation ... The toughest challenge is perhaps on the human side – with its demands for changed attitudes and behaviours to all of us ... Change demands new insight, it can be painful and frightening, and not least, it demands time and capability of the one participating in the change or changing oneself."

(information manager in the management magazine)

"He explained how we can distinguish between two kinds of personality, extroverts and introverts. The extroverts are outward oriented, they are happy with risks, and have an innate need for movement, while the introvert seek security, they favour the long-term, and prefer order and system in their life ... the introvert are over-represented in governmental administration and thus in the traditional telecom organisation. But many can learn to live with – and even be happy with – more risk and change than before ... "In your situation, I think the company must try to pull as many as possible of those in the middle over to the extrovert side.""

(the management magazine referring to an external expert)

Experience from the early liberalisation of customer equipment may illustrate that change to meet competition may be very difficult, but also the belief that it can be improved. The separated competitive company, TBK, soon after its start-up in the late 1980s lost 50% market share, but later recovered to a market share of 80% (Müller et al., 1993). It is often recognised, particularly among managers, that better knowledge of business matters can improve the ability to implement this kind of change.

Hardly had we discovered the market and the customers, and learned to smile to the world, then stormy clouds appeared on the horizon. It was the liberalisation of the tele market that threatened our secure existence, in particular on the equipment side. Previously it was us that told the customers what equipment they should use, and the price of the finery, and then we should experience such shocks as losing everything concerning the operations behind the customer's wall. No sooner had TBK got on the go and should make an elegant dive into the liberalism's wet element, one stumbled already at the jumping edge. The

whole thing ended in a belly flop which made resonance all over the country. Before one year was gone, the A-team had to be cut down by one third, with notices to quit wholesale.
(Aarvik, 1993)

Conditions which improve the ability to change

Time and preparation - for competent and legitimate change

While management puts emphasis on their business knowledge and action capabilities, the union often argues that the ability to change may be improved by using more time to prepare changes and their implementation.

“Hurry, hurry, again and again hurry. Why didn’t we get the time to do a decent job before a decision was made?”

(editorial, union magazine)

“Gemini says in their deliberation the same that we have told Norwegian Telecom Group’s management ... we started the downscaling process to early ... The Norwegian Telecom Group has the time to gather experience and knowledge before we make changes.”

(monthly remark from reader, union magazine)

More preparation and learning may have been useful, but the belief in well-prepared change may also have been influenced by structures resulting from experiences of change from the public bureaucracy period. The automation took a long time because of employee and district considerations in the Parliament (Thue, 1995). Although the automation was perceived as necessary, most of the employees still thought the changes were implemented too fast (Listhaug, 1976). Management by objectives was discussed from the start of the 1970’s, not before 1981 was performance based budgeting first used, based on productivity and service criteria (Aarvik, 1993). In these changes, political attempts to actively manage change may have included the reduction of negative changes and consequences through delaying their implementation. In general, agreement about what changes ought to be made, or at least sufficient balance between different groups’ viewpoints and interests, may have taken much time to arrive at, but may have led to much improved ability to implement change.

In the reorganisations at the start of the 1970’s, earlier formal reformations had been unsuccessful, but now the demands from the technical basis and the political superstructure were compatible (NMS business history research centre, 1993). The reorganisation exploited the possibilities created by the automation technique, and was perceived as necessary by employees, it also satisfied the politicians’ emphasis on effectiveness and rationalisation. The interests of other groups may also have been thoughtfully matched or balanced. In more recent business oriented times, it is recognised that the large need to get agreement from all participants may easily become an impediment and reduce change ability.

The new organisational structures introduced around 1970s were experienced as a revolution as they followed a period of relative stability. The establishment of a Board on its own represented freedom from the Government and Parliament, and should combine an effective businesslike management with the need for a safe societal control. The regionalisation of the Outer Services, in which administrative and technical competence was built up at the regional level, was perceived as a radical decentralisation by the central parts of the organisation, and as a powerful centralisation by employees and local parts of the organisation.

(NMS business history research centre, 1993)

The (...) union wanted a freer connection to the state in economical questions, too, in order to improve the finances and build and develop the telenet all over the country. They also wanted the personnel to get their part of the increased productivity from new technology that increased the demands on their technical competence and change ability, which was hampered by "budgetary considerations" and "the consequences for the other state services."

(Hammerø, 1992)

The new management of Televerket faced a significant problem: to sell an organisational revolution to the trade unions as well as the politicians. To sell the new organisation a wilderness of management positions were introduced, every unit were allowed to grow, the manning increased more or less uncontrollably, particularly on the administrative side, everybody should have more of everything and Televerket's economy developed from bad to worse.

(Aarvik, 1993)

The 1960s and 70s brought greater legitimacy of change through design and authoritative implementation, which may also have contributed to faith in well prepared change. Based on the assumption that the future to a large extent may be anticipated and planned based on existing trends and bureaucratic goals and procedures, Long Term Planning was heavily used and became recognised as party to the success in getting recognition and financing for removing the waiting lists.

Active and aggressive information - for reduced ambiguity and rapid change

After the Long Term Plan was officially concluded, a period of cultural changes followed at the start of the 1980s. The liberalisation of the telecom market was anticipated, and Televerket should move toward a more businesslike and changeable organisation. According to the CEO, three main principles governed these changes (Thue, 1995): to create an environment which stimulates and triggers initiative, willingness to assume responsibility, and a wish to solve problems; good cooperation with the trade unions; and active and aggressive information, both internally and externally. Much resources were devoted to building up the information services and presenting Televerket as an organisation on the side of the future (ibid.).

The active and aggressive information seems to have remained central to the ability to actively manage change, even if many of the earlier possibilities for arriving at beforehand consensus have been removed. The good cooperation with the trade unions seems to have lost some of its attraction among business managers as the liberalisation continued. There has been a long tradition of fighting for, getting, and institutionalising increased participation in important decisions and change processes in Televerket (Hammerø, 1992). As bureaucracy has been reduced, a good deal of the formalised opportunities for consulting the unions have vanished. The increased action orientation and tempo may reflect most managers' view of how good business change should be accomplished, although trade unions and many employees may disagree. The reason may be the importance of information and participation for the ability to influence the course of change. A lot of resources are spent on distributing information to promote management's view of how and what changes ought to be made, at the same time there are widespread complaints about lack of information. Two-way communication and influence may often be what is desired by employees, and what is meant by "good information". As their ability to influence the course of change is central, among both managers and employees there may be a tendency to think and argue that one has

sufficient willingness and ability to change oneself, while others need to acquire such qualities.

“Lack of real participation leads to management not getting feedback about what happens and what ought to be done. Management should, for instance, waited with outsourcing to see what was profitable. It is important to get the employees to join in seeing changes as reasonable and fair.”

(shop steward in interview)

Question: “Do you think many managers today are of the opinion that increased participation leads to less change, and less timely change?”

Advisory staff person: “One seldom observe remarks like that, but it may be so in practice. It may be that management thinks that broad participation creates delays and lack of willingness to change. And several probably think that “others need to change, we don’t.””

(advisory staff in interview)

Although there seems to be common agreement that the uncertainty which make many Telenor employees prefer stability instead of change has to be reduced, there is less than agreement on what such uncertainty reduction should involve. A number of people think that their feelings and sense of dignity has not been respected by managers imposing fast changes without sufficient and certain information. The end of the security of earlier times has for many been the largest change (Solbrække, 1994). The union emphasises slower change and reciprocal information and participation in order to meet the human concern for security. Management seems to continue to rely on the forceful information and the common world view significantly influenced by business values, although they may acknowledge that more time is needed. Much resources are used on centralised information in order to engineer a common world view which includes an experienced need for change, if not the certain acceptance of actual changes put in force, in combination with more concrete information from the manager closest to the employee in question. Both may be overemphasising the reduced uncertainty at the expense of the ability to tolerate ambiguity.

“It is people that feel respected and valuable, who have a sense of purpose and meaningfulness in what they do, who have a reasonable sense of being able to influence their own situation, people that know their own and others value and dignity – yes, it is these people that endure change, that learn, that takes challenges and create change, that perform at their best, to the best of the community and themselves ... In general, the time it takes for people to prepare for a transformation has been underestimated at many sites. A lot of energy is wasted in adaptations because people have not changed.”

(external psychological expert in the management magazine)

“The company shall be changed to a change-able and change-willing organisation ... The toughest challenge is perhaps on the human side – with its demands for changed attitudes and behaviours to all of us ... Change demands new insight, it can be painful and frightening, and not least, it demands time and capability of the one participating in the change or changing oneself. As our CEO has pointed out several times, the foundation here is a common world view. Without it people won't accept any need for change.”

(information manager about the reengineering process in the management magazine)

“Security is implicated in the ability to change, not in trying to defend oneself against demands for change.”

(the CEO referred in the union magazine)

Conclusion

A preliminary abstraction of the concept of change orientation might be attempted, before illuminating further how it functions in the particular network of cultural structures in Telenor. A management centred view might easily have led to the fact that managers are pro-change and work actively to improve the ability to change, while employees view change negatively and resist change. However, one does not need to dig very deep to get beyond this surface interpretation. There seems to be a shared assumption in Telenor that one has to be willing to change, that change is a mixture of the desirable and the undesirable, and that a good ability to change involves the ability to influence change as much as possible in the direction of the desirable. As change orientation involves questions of what is desirable, which diverge for various stakeholders, it can hardly be treated in isolation from other ideological meaning structures and processes. We have seen that technological development is often viewed as positive, and its possible negative consequences as necessary. Other external changes are often perceived as more negative than positive. Very different views exist about the liberalisation of the telecom industry, but there is common agreement that internal change to meet increased competition is necessary. While change is viewed as difficult, partly due to the long period of relative stability, the ability to change is held to be capable of being improved. An improved ability to change may involve good and forceful information, reduced uncertainty avoidance, improved competencies and other resources needed to actively influence the course of change, in addition to both speed and taking care of the interests and rights of different stakeholders.

In the following, we shall develop insight into the content of some of the cultural contradictions and conflicts resulting from the change process. Often new managerial themes are first presented in opposition to other views, continuing with some of the central tensions and interrelationships. Content themes and contradictions will first be discussed for Telenor in general, then for their R&D institute. Afterwards we shall return to cultural structures which are essential for the process of change.

4.2.2 Business vs. Society Orientation

The strengthened business orientation

We have seen that a business orientation has been introduced by management as imperative to make change a positive experience. During the time of this study, this business orientation was to be strengthened. At the core of the business orientation is a result orientation, which emphasises that Telenor must become more achievement oriented in order to get reasonable profitability in the competition. Other themes are often treated as means for achieving better business results: the customer orientation which emphasise better understanding of customer needs in order to achieve customer satisfaction and loyalty; the cost orientation which emphasise that costs have to be reduced so that prices can be competitive; the action orientation which emphasise the improved ability to take self-directed action, instead of being governed by detailed instructions and plans. It is recognised that the demands on managers and employees have to be stronger than today. To satisfy such demands, increased knowledge of business related methods is necessary, instead of technical or bureaucratic specialities, and experience from hard competition is becoming more and more important. Often traditional managers are replaced by business competent generalists, which may involve conflicts.

	<i>From</i>	<i>To</i>
<i>Result Orientation</i>	<i>Plan economy</i>	<i>Achievement economy</i>
<i>Manager Competence</i>	<i>Specialist</i>	<i>Generalist</i>
<i>Manager Demands</i>	<i>Detailed Requirements</i>	<i>Results</i>

(from transparency at a leadership course for new managers)

“In the reengineering process it is important to learn new methods from the consultants. Core asset strategy, for instance, investment portfolio thinking, risk, and uncertainty ... We have to become better at this. More clever at judging the profitability and sequence of investments, uncertainty, risk, in particular risk. We can not take too great risks, we have to take options as long as possible, where this is possible.”

(manager in interview)

“Some organisational units have faced competition to a larger extent. We have an approximate monopoly on the net itself. The income in the public administration part comes from the traffic machine, it is not the result of good management. The companies in Norwegian Telecom has walked the hard way and developed a business culture. Concrete actions are implemented. I support that manager positions in the public administration part are filled by experienced managers from Norwegian Telecom. This is strongly criticised, you know, potential candidates for manager positions feel passed over. Among the man in the street there have been chocks: the TBK culture has come in. I do not oppose it, but I can see that there will be collisions. Those managers have come because they are good managers, they represent a business culture which we ought to get in as soon as possible.”

(advisory staff manager in interview)

A business orientation and conflicts related to its expansion are not something new in Telenor. It has been there and gradually grown throughout history, so it can be said to have deep roots in the organisation. Already at the start of the 19th century, Tele managers claimed more freedom from the state, and the right to raise loans in the private sector on their own, in order to finance a faster telephone development (Gundersen, 1976). Such discussions about freedom for autonomous action in business has since then occurred at regular intervals. Proposals for getting a board, with persons with business competence, also demonstrate the wish to have a more autonomous economical position. But politicians, in particular the labour party, have argued that telephone investments had to be evaluated in relation to other societal missions, and that more freedom would reduce the possibility of superior judgements and holistic government (NMS business history research centre, 1993). Shifting trends in the private business sector seem to have influenced the way Televerket has been managed, e.g. rationalisation in the 1920s, and long term planning in the 1970s (ibid.). Inspirations for the present business orientation may also have come from the acquisition of private telephone companies. In the reorganisation around 1970, Televerket got its own board, and better economical results and increased investment in the net were stimulated, as profits beyond the budget became added to a fund rather than transferred to the state (ibid.). It has often been pointed out that the following automation was one of the most profitable investments that Televerket could make.

The real revolution started at the beginning of the 1980s, however, as the anticipated liberalisation and competition would support and even make necessary a much stronger business orientation. In Televerket there was early an understanding that the monopoly could not be maintained to the same degree in some new service areas as for the old services (Thue, 1995). In the first phase of deregulation Televerket in fact pushed for more competition, there

was broad agreement in the board that Televerket had to secure a position in the growing market for company communications (ibid.). In the cultural changes that followed, goal directed and result based management was introduced, together with an effort at better economic management and business related competencies (ibid.). The CEO was particularly concerned with the reformation of the instruction oriented and centralised government structure, and he put great emphasis on the development of a more customer and service oriented culture (ibid.).

The Common Society Orientation

While much disagreement exists about the content of the society orientation, and the degree to which it is opposed to the business orientation, there seems to be a shared assumption that telecommunications are very important for the society. The importance for society has often been maintained and strengthened through historical events, as well as through discussions about how telecommunications should contribute to society. References to the origin of telecommunications may illustrate the very basic and central position of telecommunications in society:

“Far-distance communication, that is transmission of signals across distance, is not something new, however. The human beings have used drums, smoke signals, cairns of fire, and more advanced signal systems, for instance using light and flags, for several thousands years. These have been particularly important in war, but also in times of peace the signals have served important societal purposes ... By the telegraph the society got a significantly more effective tool for transmitting information across distance ... The development and diffusion of technology takes time, and the dependency on telecommunications has developed gradually. Through more than hundred years it has been intertwined with a lot of activities in all social areas ... Telecommunications changes the society.”

(Mathisen et al., 1991)

At the foundation of Televerket (or more accurately Telegrafværket), the importance of the telegraph for the Norwegian society was emphasised. While the need for communications in times of war was most important at the start, gradually economic and administrative considerations was made the basis of the development (Rafto, 1955). It was important to establish the telegraph soon, among other things to avoid lagging behind in the maritime industry international competition. The telegraph was perceived as a condition for the economic development of the industry of different regions, and there were district political fights about the resources for the development of the telegraph (Erdal, 1991). Concerns were expressed that the telegraph would lead to the movement of population to the large cities, and that the central administration would increase its powerful position in comparison with the periphery (Gundersen, 1976). In other countries large conflicts arose as the telegraph was used as a tool for political control and exploitation (Erdal, 1991). It is widely acknowledged that the telegraph contributed to the development towards the money economy and the industrial society.

Similarly, the telephone changed peoples' way of living, many things took place faster than before, and time itself became more important (Dahl et al., 1993). Many were concerned that the telephone might strengthen the position of the cities, at the same time as people in the districts got better opportunities for increased influence. The enormous increase in the demand for telephone from between the two world wars reflects its growing importance for both society and personal communication. Long waiting lists developed as politicians

prioritised other societal sectors, like energy production and building houses, and later telephone for public administration and business companies. The employees could not agree with the politicians that the telephone was “a distinguished need” (Hammerø, 1992). They wanted more freedom of action in order to finance a faster telephone network construction. There were large geographic variations in the availability of telephones and modern telephone nets.

In the second world war, the importance of telecommunications for a society in times of war, which the Defence Department had not got support for, was emphasised (Dahl et al., 1993): The Germans took control of the organisation, censorship was established, and they prioritised the development of those parts of the net which were important to them (international connections). This led to increased consciousness that telecommunications should serve the interests of the Norwegian society.

The building of the telephone up until the 1960s also contributed to societal development by creating employment, in particular for women in the districts, where alternative employment was rare. As this employment disappeared in the automation process, the following public discussions contributed to strengthening the social assumption. In the 1970s development of the Long Term Plan, one of the purposes was to increase the understanding of the importance of teleservices for the society among the public and the politicians. The following excerpt may summarise the shared view of the importance of telecom at that time:

“Telecommunications will in the future among other things make the possibilities for contact less dependent on geographical distance, and can thus reduce the use of energy for transport. This will give more freedom as regards the localisation of companies and population, and create the conditions for a more decentralised society. The teleservices’ importance for society will increase in the future, and to an increasing extent the society’s information and contact needs will be met by teleservices. Well-developed teleservices are both a necessary tool for a more competitive economy and a more effective public administration, and a tool for human contact and social well-being. In our social life, the teleservices will become more and more important, and make life easier for the handicapped, the elderly, and the single.”

(excerpt from the Long Term Plan in the company magazine)

Society Orientation vs. Business Managers

After the liberalisation of the telecom market and the strengthening of the business orientation, several have become concerned about the organisation's ability to take care of telecommunications in a socially responsible way. In general, there is a fear that the liberalisation and increased competition will cause companies to prioritise profitability at the expense of societal considerations. Much critique is directed at politicians, who let such things happen without sufficient political control. Regulations are needed in order to reduce the harmful consequences of the competition, and secure everybody equal access to teleservices. A good offer of services of equal worth is a necessity for both industry, employment, population, and the individual's safety and welfare. In short, business economical interests must not be superior to societal interests.

“The Post, Railway and Tele represent the society’s infrastructure, and contributes to securing equal rights and political control so that people can feel safety, said [top representative of the country’s main federation of trade unions]. He was afraid of the symbolic effect of what has now happened. Together with the education- and health

services, the infrastructure is the foundation of the society ... and one may ask if the government now has different ambitions for the welfare society."

(the union magazine)

"There is a difference between producing and fertilisers and steel and producing telecommunications. The teleservice has become an important part of the society's infrastructure. A good and of-equal-worth offer of services, based on equalisation, has gradually become a life necessity for both business, employment, population, and the individual's safety and well-being. It is state government which has coordinated this offering.

Therefore we ascertain that we are at a road fork when the Labour Party now lets go of the public administration organisational form as governing model for Televerket. The Labour Party has thus said that the political need for control is not any longer present to the same degree as before. This is a value choice, although [our CEO] tries to present it like something else."

(debate article in the union magazine)

More specific critique is often directed at Telenor's own management. In particular, the new business orientation may be criticised because managers prioritise profitability at the expense of district considerations, the average customers, weak groups in society, and employees' work conditions.

"Signals from corporate management give reasons for suspicion that market economical criteria to a larger extent will be used as a basis for activities, among other things at the expense of district considerations."

(editorial in the union magazine)

"Several of the country board representatives were concerned about the consequences for district-Norway ... – If we shall have cost based prices at Helgeland, nobody at Helgeland can afford having a telephone."

(the union magazine)

"There are always someone who want to enrich oneself at others' misery, who only think about profit. I think it is a pity that the company I work for shall join in legalising this degrading and women hostile activity."

(monthly reader remark about telesex in the union magazine)

"... see to it that profiteers get a short life in the industry, and effectively hinder that bad pay- and work conditions become a competitive advantage."

(from article in the union magazine)

Such discussions have developed since the start of the liberalisation of the telecom industry in Norway at the start of the 1980s. Much political activity have occurred among managers and other employees in Telenor. At the societal level also politicians, other organisations, and the public have been engaged. The trade unions have been particularly concerned with the negative consequences of the increasing liberalisation and business orientation:

Late in the autumn of 1981 the two unions contacted the Federation of Trade Unions in Norway and asked for the tele politics to be deliberated upon in the cooperation committee with the Labour Party ... utilised every occasion to discuss the issue internally in Televerket and conducted extensive lobbying toward politicians from all parties. Open meetings were held, where the same issues were discussed with the same politicians. And time had arrived for alarming "the public", the common tele user ... achieved good

publicity and response from the media. The message that was distributed was that the privatisation propositions would lead to:

- *more expensive telephone, in particular in the districts*
- *reduced service*
- *ambiguous relations of responsibility*
- *different offers to the subscribers*
- *reduction in the disciplinary quality of the services, and*
- *loss of employment in Televerket and the Norwegian tele industry*

(Hammerø, 1992)

The 1984 Congress of the Federation of Norwegian Trade Unions warned strongly against the establishment of arrangements within Televerket which might lead to different price levels, different service offers and tele offers in different parts of the country. Societal considerations, and in particular district considerations, speaks in favour of Televerket's continual responsibility for uniform telephone connections in Norway. The Congress also wanted to put forward the questionable industry political consequences of privatisation.

(Hammerø, 1992)

The VAS-deliberation warned that the old order at the tele sector was now definitely over. A system marked by being surveyable, monopoly, international cooperation and regulation was about getting disintegrated. The telematics revolution created new services, some of them so closely connected to the "old" simple transmission services that it became difficult to draw boundaries between what should be public services and what could be liberalised. The (...) union's fight for keeping the teleservices as public services was not made easier by the fact that this was a political contentious issue: The prospect of good profitability put the telemonopoly under a constant pressure, from business and from the political right side.

(Hammerø, 1992)

A society orientation in opposition to liberal business gets much support from the long history of being a public monopoly. At the foundation, the State's responsibility for basic investments was emphasised, because of fear that only the most profitable lines would be built if the development of the telegraph was based on private or partly private actors (Oland, 1993). While the needs of the shipping industry and trade followed the central routes which would quickly be profitable for business firms, the fisheries and other district industries required the largest investments, and involved a profitable construction effort only at the society level. This society orientation also emerged from debates about the public or private development and operation of the telephone, in particular before and around the century shift, and in the mid 1930s. The telephone was first built locally, by a combination of private initiative and local cooperation. This organisational form has both then and later been regarded as a success for the first phase of the building of the telephone (NMS business history research centre, 1993). In Christiania, the need for connection, compatibility and a unified telephone operation between two private companies' networks, soon led to the establishment of a private monopoly (Bestorp, 1990). Several customers, in particular business companies, earlier had to be subscribers in both companies. As the establishment of telephone networks between the big cities became a topic of discussion, Televerket started the construction of national telephone connections. These were not as profitable as the local networks, and as time went by they required large investments. Toward the end of the 1890s it was debated if the State should take over all telephone networks to finance the construction of a national telephone. The arguments from both sides are summarised in table 4. In 1899 the state monopoly on telephone was established, but the take up of private companies took a lot of time because of economic depressions. In 1935 a labour government took over, and

Table 4. The early public or private telephone debate.

Public monopoly	Private competition
<p>The telephone will be very important for the whole society, therefore the state should develop and operate all telephone networks. The telephone can best be developed when this is done by the state, by the whole society. The separation between the state companies and the private companies can not be maintained across time, for both technical, administrative, and economical reasons. The quality of the private networks are worse because they have to operate in a cheap way. Parallel systems creates inefficient operations, and parallel connections are entangled and creates problems. Lack of coordination between the private, and potential conflicts between the national telephone and the private in the cities, make state government necessary. The national telephone can unite the country. Development and operation by the state requires large investments, and the state needs the income from the large cities, too. One can not let the state have just what the private do not want.</p>	<p>Norway is among the best as regards telephone, as private companies have had the initiative in the development of the telephone. Norway has more telephones per inhabitant than other countries, and the private companies have better technology, lower charges, and more satisfied customers. The state engagement limits the private possibility for action, the private can at their own create coordination and reasonable unification in the choice of technical solutions. The more affluent parts of the country, where the operation of the telephone is profitable, must not be used for the financing of the development and operation of telephone networks in less profitable districts. The state should not grant money for development in districts where private companies are able to be responsible for the development, because this creates unnecessary state expenses. The state's engagement in the telephone should be limited to grants to network expenses in those districts where the telephone can not be developed by private initiatives alone. State operation of the telephone will be more expensive: the administration will cost more, the personnel service will be worse, and the whole operation more difficult. The proposals for state operation are not to the advantage of the subscribers, they are only put forward because the state wants to make money, which the state is not able to do.</p>

better economical times made it possible to acquire the private companies at a faster rate, but the last local telephone was not included before 1974 (Dahl et. al, 1993).

Throughout the history of Televerket, the society orientation has been maintained and strengthened in both everyday behaviour and important events and decisions. Often district considerations have been related to discussions about the decentralisation of the organisation. In the reform of the outer services around 1970, district considerations were opposed to considerations of effectiveness by centralisation and economies of scale, the result was a regionalisation which appreciated both (NMS business history centre, 1993). Few of the employees of Televerket thought the result was any geographical decentralisation, most of them thought the changes involved a centralisation and bad district politics, and the opposition was strongest among those who were in contact with the environment (Listhaug, 1976). Another example of how the society orientation has worked, comes from the long waiting lists period and the rationing of the telephone. The principle of justice was followed: the rich and powerful should not be given more than their share at the expense of a lot of others who might have as good reasons for using a telephone (Dahl, et al., 1993). Prioritised telephone services, with a lower waiting time and a higher price, were only to a limited extent allowed.

Business People's Society Orientation

As the liberalisation continued and the business orientation was strengthened, a different orientation toward society developed. The influence of telecommunications on the society is still regarded as strong and important, but the society's interests are best secured in new and different ways. In general, a more liberal society orientation implies that market conditions must facilitate effective competition so that telecommunication can contribute to improved

industry competitiveness and societal welfare. Thus Telenor must contribute to a competitive market. The more one-sidedly business oriented people may see only advantages of competition: a broader offer of services, lower prices, and better quality - also for private customers and customers in the districts. Others emphasise that within a competitive market Telenor must be able to balance the business orientation with societal responsibilities. The competitive freedom to differentiate offers to different customer groups thus exists together with considerations for district customers and price equalisation. Some undoubtedly transcend self interests in order to promote the welfare of the society (Jackson, 2001). However, most individualist and liberal managers seem to hold a strong Telenor to be a prerequisite for being able to take care of social missions. The interests of society are best secured if Telenor give priority to its own competitiveness and profitability. This society orientation can be seen in the recent argumentation for a change in organisational form and association to the state, and in the current strategy document:

“... the reorganisation into a Ltd. is at the political and public agenda ... in particular many will do what they can to cast doubt on our intentions. How will the societal responsibility of Televerket be taken care of now? ... Our answer is that Televerket’s most important societal responsibility is to secure its own profitability, economical solidity and financial freedom to take action. Only in this way can we secure the necessary carrying capacity for still being able to give supply and maintain organisational presence all over the country.

Nor should we forget that Televerket as a dominating actor according to the ONP-requirements is still instructed to offer all customers basic services at affordable prices. This obligation will exist irrespective of the organisational form of association. The Telecom Group will also be at disposal for taking care of distinct societal commissions, or to maintain offers of services for which there is no market underpinnings. Our conditions are, however, that this ought to take place according to the law / directives or according to particular contracts. If the agreements involve costs for the Norwegian Telecom Group, it is natural that these are compensated for.

Only in this way can the future societal responsibility be taken care of, and our competitiveness be maintained and strengthened.”

(strategy staff in the management magazine)

“A competitive Televerket is a prerequisite for securing that important social missions in the tele sector is taken care of ...

When Televerket shall contribute to realise the societal visions and goals in the telesector, this will be in four main ways:

- 1. To operate as a company in the market for tele- and telematics products, with presence all over the country, and with offerings all over the country ... the basic services shall be offered at costrelated, equal prices all over the country.*
- 2. To contribute to a Norwegian telematics market which is rationally developed and effectively functioning, both internally in Norway and with regard to the relation to the international market.*
- 3. To take care of social- and district-political considerations, and secure the solution of prioritised tele- and telematics missions of which there are no market underpinnings.*
- 4. To stimulate and participate in the development of the whole Norwegian research- and industry milieu in the tele- and IT-technology area.*

At the same time, Televerket has a business responsibility for its own competitiveness, profitability and economy. The challenge lies in the combination of these missions. This presumes a balance between superior political government and freedom in business.”

*(cuttings in the management magazine,
from the orientation to the Ministry before the Ltd. reorganisation,)*

“The main element of our strategy is to maintain our relative share of the European tele- and IT-market ... If we can handle this challenge, we can still have a tele business in our country which is owned by Norwegians, and which is governed in accordance with both the demands from the market and with those demands that come from the activities anchoring with the state and the political governing system.”

(corporate strategy document)

Self Interest Biased Balancing and Integration Efforts

While the ideologies of different groups point out both differences and integration efforts of business and society interests, more informal meanings indicate enlarged interest based cultural differences as well as practical agreements around concrete issues. To start with, the official stance that Telenor shall continue to be a social responsible company is weakened by the long held belief that companies in competition are less than responsible. The business orientation is particularly made dubious when people experience that their new competitors do not act in fully moral ways. Some business managers raise the question if Telenor should act morally when competitors do not, and others act in what is normally considered immoral ways to achieve competitiveness and profitability. The promises of social responsibility are thus not always kept in practice, and there are concerns that the social orientation will be weakened.

“Some has, for instance, expressed that in a competitive environment, one has to be as though as “the wolves” one competes with out there. One cannot act one hundred percent morally. The competitors in the same market don’t. This attitude is directly opposed to the basic values that the Norwegian Telecom Group officially is committed to ... expresses a problematic attitude towards business, which does not harmony with the ethical consciousness that many business managers and organisations want to stand for.”

(corporate ethical work book)

“We have for several years pointed out that Netcom does not fulfil the obligations for getting licence. It is not until now that the Minister reacts. The worst of all is the reactions from people in Tele Mobil, they reacted by not fulfilling the obligations for licence themselves. Then our reputation is reduced. It does not help saying that “when others don’t want to, then ...”. We get a reputation that we are not to be trusted. I think the employees want that we shall be someone who can be trusted. I fear what free competition can mean to us, and to the society. I fear that we will have five large multinational telecom companies in the world, and that the district politics of Norway is determined in board rooms around the world.”

(shop steward in interview)

Union representatives often express fears that social responsibility would be more and more reduced as the liberalisation continues. Those managers who honestly try to integrate business and social responsibilities do experience pressures from more one-sided business oriented managers, perhaps managers at lower levels with only business responsibilities. The observation below, from the leadership course, may illustrate this kind of pressure. Such pressure for achieving results may become stronger than public political power or state owner directives in more and more areas.

Young manager: “We have very competitive prices on foreign traffic, the competitors lie at a higher price level. We want to exploit the possibilities for price discrimination in this area.”

CEO: "We shall progress toward a price structure that is cost based. The market will see to that this occurs, the customers press the prices downward. We have had too large profit in distance calls, therefore we reduce our prices a lot."

Young manager: "We want the possibility to take out profit. Our competitors are free to make profit ..."

CEO: "I am spokesperson for taking out cost reductions. If we take out too much profit in individual areas, the competitors will perceive this as niches that they may go into."

(observation from leadership course for new managers)

"There are limits to the minister's invention, it has been reduced. He may issue directives in advance, but you can not see everything in advance. The gracious CEO couldn't care less about the Parliament and Government in many cases. Particularly concerning what they said about employment in districts, that they would use the new technology to maintain employment in the districts. There are clear tendencies that they will not keep their word. We can see it now in their plans for support units, this will involve huge consequences for employment in the districts."

(union top representative in interview)

"All issues that the owner wants to hear about shall be included in this document. It will be a big document, I think, at least in the beginning."

(advisory staff manager in interview)

However, there are also indications that the perceived better society orientation than competitors may provide for practical agreement around concrete issues, and unite groups with different views of social responsibility to influence politicians:

"... make Televerket look suspicious as regards cross-subsidies ... The intention of the attackers is clear – to privatise Televerket. The desire for profit blossoms ... For me, there is just one trustworthy and serious teleactor at the field, and this is Televerket. I do not believe that the others have the customer's well being as a goal. But pure profit. This is decisive for my choice, the choice between greed and social responsibility ... Who is the most competent to operating teleservices (...) transforming the new technological wins into (...) exploiting the possibilities in the fibre cable net ... At the very end the question has to be: What is in the best interest of the society?"

(editorial in the union magazine with relation to a current political issue)

One does not have to be particularly creative to relate such practical agreements to the context of the changed telecommunications environment, and see that they may be brought about by common interests in securing Telenor a favourable position in a competitive market. Contrary to Telenor's interpretation, competitors may argue that the incumbent has not acted particularly morally in the past, enjoying weak productivity and surviving due to monopoly profits. At present cross-subsidies and benefits of a dominant position are used to reduce competition, perhaps even in alliance with governments who favour revenue. So very different interpretations exist about such terms as "fair competition" and "equal conditions". "BT supported increased competition as long as it was "fair competition" - which meant it wanted, and received, more flexibility in its pricing to large customers and the ability to cover costs for its network through access charges to new competitors" (Dowling, Boulton, & Elliot, 1994). The different business- and society orientations within Telenor may soon come to further practical agreements about what is fair.

The (...) unions strongly emphasised that Televerket itself should decide how the VAS-services should be organised. For instance, it would be unreasonable to require that so called net-close VAS-services should be separated in individual companies. It was also

pointed out that the requirement of “equal conditions” had to be applied to private suppliers. Televerket’s “handicap” as responsible for social services and with a duty to deliver services at equal prices all over the country, had to be compensated by imposing certain commitments on the competitors, too, for instance through a concession arrangement.

(Hammerø, 1992)

What can then happen if competition is perceived as not fair? For instance, if the requirements of cost coverage for net access is not fulfilled. One can easily suppose that Telenor may want to decide itself conditions of net access (e.g., prices, technical quality) to re-establish justice, and in fact do this in ways that are largely opaque to government and competitors. Another possibility is the use of different society orientations to achieve public support for what may be more in Telenor's own best interests (i.e., the universalisation of interests through illegitimate claims to represent the interests of the community as a whole). In particular, one may suspect that technology related interests may, in combination with a dominating position in relation to the environment, succeed in such hegemonic argumentation.

Reduced but continuing Environmental Control

Environmental control may be defined as the degree to which an organisation can control and change its surrounding environment, rather than have to accept the environment as it is and adapt to it (Schneider, 1989; Schein, 1992; Triandis, 1983). Environmental control reflects cultural views of domination, harmony or submission to the laws of nature (Kluckhohn & Strodtbeck, 1961), and parallels the contrast between external and internal control at the individual level (Rotter, 1966). The externally controlled person feels that most events are caused by influences that are external to him or her, by contrast, internally controlled persons see most events that affect them as caused by themselves. Competition has increased the need to adapt to the market and the customers, and the business orientation thus reduces assumptions about environmental control. However, as Telenor is still a large organisation both business and society oriented people have faith in its ability to influence the development at the telecom market.

“The point is to have strategic control of as much as possible of the value chain, and in particular master the relationship to the end user, and the invoice that the person in question receives.”

(strategy staff in the management magazine)

“... the reputation of business is weakened so that both customers, the public, and media, are concerned with rebuilding confidence and trust. The Norwegian Telecom Group is so central in Norwegian business and society that we have a responsibility ...”

(corporate ethical work book)

The superior governmental and political bodies may have been an exception to the large environmental control. But up to 1980 Televerket's activities had almost been an internal case for the organisation and its specialists within the framework of the grants of the state budget (Hammerø, 1992). The formal reorganisation process around 1970 was an exception. Toward its end the top managers had to give in to external politicians, and this was not consistent with the employees views of the power of top management (Falck, 1978). Around 1980 politicians became more interested in Televerket, as the long waiting lists had become a political problem, and the possibility of a profitable telesector put the monopoly under pressure (Hammerø, 1992). There are many examples that the Ministry of Communications

intervened in the strategic decision process in Televerket, and a lot of strategic decisions were made outside the company (Thue, 1995). Throughout this period it has been a main case for Televerket to become autonomous from political and departmental intervention. Conditions were not favourable for quick business decisions in a changeable competitive market, and more freedom has been achieved (ibid.).

In addition to the state, the international development and the large equipment suppliers have been characterised by relatively low environmental control. The dependence on two international equipment corporations with Norwegian subsidiaries (Gundersen, 1976) has been reduced as Televerket's own technical competence improved much from the mid 1960s. Following discussions about the relative importance of Norwegian industry against the quality and cost of teleservices, more international companies could take part in the competitive tender for supply in the big investments of the digitalisation program (Thue, 1995).

On the whole, the long period of monopoly has obviously created and reinforced a belief in large environmental control over the Norwegian market and society, and the emphasis on the importance of telecommunications for society has undoubtedly contributed to this belief. Recently the increased competition and marketing orientation have reduced the faith in large environmental control, but the emphasis on active and aggressive information and selling probably counteracts the reduction significantly. While adaptation to customers is officially endorsed by all, most people seem to believe in the power of a big market leader to secure its interests. There is reliance on the company's resource base: advanced technology and netinfrastructure all over the country; finances; competencies; and good relations with government, the public, suppliers, and a large base of customers. Liberal business people seem to believe in the maintenance of this position as asymmetric regulation ought to be reduced soon, several seem to trust the power of the argument that a large telecom company owned by Norwegians is needed to ensure a sound development in this socially important area. A bad political regulation of competition seems to be held to be the largest environmental threat. Stories are told about the CEO's command of such environmental obstacles, probably indicating some tension between the desire to control the environment and events that indicate lack of the power to do so (Martin, Feldman, Hatch, & Sitkin, 1983).

Cultural conflicts and relative power

In the rate policy debate early in the liberalisation, Moberg (1994) found that trade unions, the labour party, and the socialist party used traditional arguments about the significance of telecom for societal and rural development. Telenor management, other suppliers of value-added services, large business customers, and the right parties, argued that the rate policy had to change to facilitate increased competition to the best of the competitive ability of the industry. The rate policy was changed, a cornerstone in Televerket's strategy for offering equal service all over the country. The visions from early 80'ies about the development of a competitive Norwegian electronics industry, about securing employment, and about technology's significance for comparative advantages, also disappeared (ibid.). These factors were the technologists main arguments for increased backing of technology, and had created legitimacy for public investments in Televerket's endeavours. The introduction of competition in more and more areas introduced economic judgements as the dominating decision criteria for more and more parts of the business. The new CEO's knowledge of the ministerial and political milieu, and his cooperation with the strong trade unions for several years, were important to manage this transition towards a more business oriented company (Thue, 1995).

However, the business orientation was implemented and interpreted within a culture characterised by bureaucratic centralisation and uncertainty avoidance. The implementation of plans and budgets thus gradually became more important, and the emphasis reversed towards the previous economic and cost control (Thoresen, 1992). Established powerful groups, like the administration, the technologists, and the economists, did not demonstrate much ability to delegate, at the same time the subordinates had little self confidence and necessary competency for making autonomous decisions (ibid.). Uncertainty and lack of understanding easily led to falling back on the old patterns. Actor constellations in high regard and with strong positions in the old system thus continued their dominance in the new (Moberg, 1994). Technology based arguments, earlier the visions about the technology's significance for societal growth and welfare, now more and more often show up as the necessity of market- and competitive orientation, and considerations for company profitability and large customers' competitive ability, as conditions for continued growth and distribution of technology (ibid.).

Although the core business orientation seems to have gained a strong position among managers as the external competition has increased, it exists in opposition to the weakened but still strong trade unions, and to many lower level and rural colleagues. Some of the reason is the cost orientation's contradiction to employees' collective interests, and the action orientation's problematic relationship with both bureaucratic management and employee uncertainty avoidance. The contradiction between market - and technology orientation is of course very important.

4.2.3 Technology- vs. Market Orientation

“The cultural hegemony is strongly divided between the net- and the market side. Traditionally, in the monopoly market situation, it was where the huge capital and the heavy technical competence was, but the cultural hegemony must be moved toward the market. We cannot afford not functioning on the premise of the customers, but we have to be careful not to proceed in a way which tells that we don't understand the significance of the competence of the Net division.”

(CEO at leadership course for new managers)

As the above citation of the CEO says, the contradiction between the long held technology orientation and the more recent market orientation may be the central cultural contradiction in Telenor today. Although many managers and fellow workers seem to an increasing extent to agree to the business orientation, the real acceptance of the market orientation may be harder. The most business oriented people argue, and in particular those with market responsibilities, that the company has to base its ways of operating on the premises from the customers in order to achieve results. As people are proud of their high technological competence, it may be difficult to get acceptance for reducing the significance of technology, beyond the market units and the official image aimed at customers.

“The managers still bear the marks of belonging to a technology oriented company ... business understanding, market knowledge, and economical consequence thinking are mentioned as general areas for improvement ... marketing is probably on the whole the weakest disciplinary area ... Our impression is that many managers verbally express to be very concerned with customer- and market orientation. In practice rather few ... to the extent that one has had contact with customers this has not happened on the customers

home ground ... To someone, the downsizing is the major driving force behind the reorganisation, and not the adaptation of the organisation to the market."

(consultants about Telenor's managers in the management magazine)

"The intention behind the design of the logo is expressing both continuity and change. You can see the lightning, or at least the red part of it, is kept. The change is implicated in the drastic new form. It has changed from masculine to feminine. It has changed from technological to more humanist. From rule to more customer oriented, to read a bit more implications into it. It is no longer a lightning, a signal, standing there for its own sake, but a human being, a Telenor person or a customer, who has full control over the technology and can use it for human purposes."

(information manager in interview)

The significance of technology and technological competence

To understand the significance of technology and technological competence, a brief review of the organisation's history makes clear that technology has always been a superior driving force for industry and company development. From the foundation, technology has been the reason d'être for the organisation. The technological possibilities of an optical telegraph, which neighbour countries already had, and the new electric telegraph was discussed, and led to its birth. In order to achieve necessary competence, experiences from other countries were collected before the construction work began, and the necessity of international cooperation and coordination of the telegraph development was emphasised. The demand for technical compatibility contributed to the establishment of a monopoly. The organisation was early in the front internationally with respect to net development. But after the first world war, the standard was allowed to decay. Televerket became a lagging behind organisation, with little possibility of autonomous technical development, and it stayed with the well-known and secure within the telephone technique (Collett and Lossius, 1993). In the 1970s Norway was the only country of the industrial world with waiting lists for telephone, and those who had a telephone fought about the dialling tone because of the lack of net capacity. The quality of telephone services was very bad, and people could listen to others' conversations (Dahl et al., 1993). Aarvik (1993) portrays the period as the gloomiest Televerket has experienced:

The waiting lists were long, we were the only country in the industrialised world which had waiting list for telephone ... The fitters refused to wear uniform, for fear of being mobbed, and the children barely told where their mother or father worked. The public criticism rose to the highest levels, while Televerket became more and more self occupied. If we only didn't have all the troublesome customers at that time, life would have been not at all bad.

(Aarvik, 1993)

However, things were about being improved. In the mid 1960s, there had been hard discussions about the need for technical competence in Televerket. In the automation process large grants were given to improve the net. New technologies made increased specialisation necessary, and more specialised technical competence was included in more decentralised parts of the organisation, too, in the reorganisations around 1970, at the same time as the automation technique led to the disappearance of many local units (NMS business history research centre, 1993). Focus was set on the advantages of new technology, and many were exposed to demands for improved technological competencies. The establishment of the research institute followed, new data communication services, and satellite communication to the oil platforms in the North Sea. Pride and commitment to Televerket became related to high technology and high technological competence. Visions about a broadband or high

capacity network emerged. The international orientation was strengthened as it was important to be informed about what happened internationally to be in the front of technology development. New technology and new teleservices emerged in international cooperative organisations. This technical and international orientation continued in the new digitalisation and fibre optical period which started in the 1980s.

As Thue (1995) describes this époque, Televerket had gradually implemented digital technology in the transmission between switchboards from 1966. Norway was in fact close to the frontline, and this work continued with full force. In the Long Term Plan, the intention was to realise a fully digitised telenet. Digitalisation would involve far lower priced equipment, lower costs of operation and maintenance of the net, and improved signal quality. In addition, the introduction of new services was easy. While Televerket earlier had been very dependent on the equipment suppliers in the development of switchboards, several own special committees were in the 1970s used to develop frame specifications. In 1986 the first digital switchboards were used, and the digitalisation continued faster than before. Increased use of optical fibres in transmission also led to increased capacity. The technological visions about a broadband net from the end of the 1970s, which were not adopted because of lack of political accept at the start of the 1980s, were gradually realised in the large increase in capacity. Emphasis was put on the integration of traditional tele technology and computer technology.

Not all of the new services introduced in the strong emphasis on technical development were successful. Several were developed in engineer dominated milieus without much contact with the markets, leading to increased demands of market adaptation in the new service development efforts (Thue, 1995).

Sources of a market orientation

Throughout the technocratic period, strong emphasis had been laid on the subscribers' demand of cheaper and higher quality tele services, so that new technology had to be used. Better service beyond the technical, and bureaucratic support routines, was in practise not prioritised by management. However, among fellow workers and in the districts there were concerns about user service. One source may have been the private companies taken up, which were established based on local market needs and closeness to local customers and conditions (Bøen, 1990). Another may have been the manual switchboards with telephonists fulfilling many societal functions. In the automation and the large reorganisations around 1970, the unions often referred to local service functions in defending employee and society interests, and required that a sufficient number of local units were maintained in the reform of the outer services (Hammerø, 1992). Schiefloe (1977) found that many employees were concerned with service, and that a large majority thought that the service had been reduced, 60% that the reputation of Televerket had been reduced. Organisational loyalty was reduced because of reduced service and contact with the public (ibid.). The opposition toward geographical centralisation was larger among those who were in contact with the environment (telephonists, subordinates, districts which were not automated) (Listhaug, 1976). Harbo (1985) found great involvement from different parties in the new emblem issue. "The grass root" in the outer services did not want the new emblem, which should be modern, and signal advanced technology. They rather wanted the old which was associated with Televerket as a public and even royal institution, and the employees as public servants.

In the cultural changes at the start of the 1980s, much emphasis was laid on the development of a more customer and service oriented culture. The cultural change program involved using the customers' needs as a starting point, purposeful communication toward the customers to build a new profile, individual treatment of different customer segments, anchoring of activities in the market, viewing other parts of the organisation as customers, and last but not least good service. This effort must be recognised as very important for the success of Televerket in removing the waiting lists and improving its public image, and for the development of today's business and market orientation:

At the union's yearly meeting in 1983, the top representative could ascertain that "the systematic carping at us was tiring, but now it is over". He thought that an important cause was the service attitude that Televerket and its employees had developed and that to a large degree had been successful.

(Thue, 1995)

"... mentioned his predecessor's personal commitment and far-sightedness as an utterly decisive precondition for the basic changes technically and culturally toward customer orientation, focus on economical results and goal directed management. Already in 1976 Televerket decided to go for goal directed management as the governing principle ... "The break with the instruction management created a basic understanding that it is the results that count. This has contributed to raising the view of management and personnel and in my opinion paved the way for a more customer oriented corporate culture."

(CEO in the management magazine)

Current market orientations

The early emphasis on technology reflected a production orientation, which "holds that consumers will favour those products that are widely available and low in cost" (Kotler, 1997). The focus of the automation was on making the telephone available for everyone, at the same time as the net operation was made efficient. The products were dull and standardised, without any choice possibilities for customers (Dahl et al., 1993). Later the product orientation became dominant among technologists: "Consumers will favour those products that offer the most quality, performance or innovative features" (Kotler, 1997). Today the necessity of developing an advanced network with good services in order to increase net traffic and income, is often emphasised. However, there are also a wide-spread belief that Telenor is far too concerned with the organisation's inner life. Most people say that a more external focus will be necessary as competition come. Attention must be paid to customers and competitors, and competitors that are better at customer adaptation must be faced. The most customer oriented persons of course emphasise the marketing orientation: the organisation must be directed towards finding and satisfying the needs and wants of target markets (ibid.). The focus on the satisfaction of customer needs, in order to develop and maintain customer loyalty and good customer relations, seems to me to be more of an official value to most people. Instead, and largely consistent with both the technological orientation and the emphasis on aggressive information, they seem to favour the selling orientation. As customers, if left alone, will ordinarily not buy enough of the company's technologically advanced products, aggressive selling and promotion efforts is held to be necessary (ibid.). But technology does not alone determine what shall be developed and sold, customers have to be taken into account if one shall be able to sell them the right technological solutions:

"We shall be a market oriented company – in opposition to what was previously, we shall now learn to make what we can sell, rather than trying to sell what we make."
(monthly remark from reader in the union magazine)

The active selling orientation is not necessarily inconsistent with the satisfaction of customer wants and needs, however. As advanced telecommunications are so important for society, and customers may not understand their own needs with respect to complex technology, emphasis has to be put on influencing customers so that they see, or at least behave according to, their long-term needs. Thus, a societal market orientation aimed at the individual's and the society's long term interests and well-being (ibid.) might also be consistent with and contribute to the huge resources spent on active selling, promotion, and brand building. The market orientation may thus include the technological development which determine much of what goods and services will be available at the market in the future, together with both political goals and regulations, competitive conditions, and customer needs (Colbjørnsen, 1995). It might be appropriate to keep the tensions though, and also to keep in mind the tension between a business oriented adaptation to large customers and the traditional society oriented support of small and peripheral customers.

The extent to which people embrace some market orientation may be changing as competition develops. Colbjørnsen (1995) finds that the more exposed to competition an organisational unit is, the more the employees get and use information about customers. The traditional service orientation and closeness to customers may also have an important influence. Employees in regional parts of the organisation get and use information about customers more often than those in central parts (ibid.).

Linking efforts and relative influence in product development

Although the technology and market orientations may sometimes be logically consistent, experience suggest that the reality is often conflict between people holding different priorities. In the development of new products, this conflict may be particularly intense at the same time as technological and market possibilities must be effectively linked to develop commercially viable products (Dougherty, 1992). Problems with market - technology linking are pervasive and persistent, suggesting that such problems are not rooted only in poor management (ibid.). In Telenor, a manager trainee describes the efforts at market-technology linking as great struggle:

“Where the dynamics between technology-push and market-pull works, it takes place under great struggle, either there is great struggle or people sit resigned each on their own side of the fence.”

(manager trainee in interview)

Colbjørnsen (1995) makes use of the concepts market prioritisation and market failure to illuminate Telenor's market orientation and consequences for product development. Market prioritisation refers to beliefs that market divisions and market based ideas should have more influence on product development, rather than just on the selling of products developed by other parts of the organisation. Those who emphasise market failure think that the technical development will always be in the front of customers demands and needs, that technical products are too complicated for customers to understand, and that customers do not have the necessary qualifications to express their needs for new technical products. Thus technology research is more important than input from customers in the development of competitive products. Results show that the market divisions, and particularly the company market division, together with local units in the net division, are driving forces for increased market prioritisation. There are small differences about market failure between different organisational units, however. The great independence between these two factors seems to

indicate that there is agreement that there is some point beyond which market based ideas should not get more influence, at the same time great disagreement exists about where this point is. This relative influence, and the contact between technology and market people, may differ in different domains of service development. While technologist may have a lot to say and little contact is needed closer to the basic network, there may be more difficulties as well as possible gains in the development of advanced user services.

Manager1: "I do not believe that the market can be able to drive the technology forward. We have no examples of this. The strategy plan says that we shall be in the front line technologically, and then we have to be technologically driven".

Manager2: "We have to be more market oriented ..."

Manager3: "We have to get a better interplay with the market ..."

Manager4: "We have to distinguish between infrastructure and end user services. The users have little possibility for influencing infrastructure. It is to a large extent controlled by technologists. The market thinking have to take part here, too, but to a less significant degree than in end user services."

(observation from leadership course for new managers)

Dealing with the technical specialisation problem

The fact that people may often sit resigned each on their own side of the fence points towards a larger problem with the fragmentation of experience. In general, we often fragment problems into pieces, resulting in "walls" or "chimneys" that separate different functions into independent and often warring fiefdoms (Kofman & Senge, 1993). In Telenor, this is particularly held to be a problem resulting from many years of continually increasing technical specialisation into different technical functions and sub-units. The early introduction of the marketing orientation may often be perceived as not having taken this problem seriously enough. A more pronounced task orientation of technology people, in comparison with marketing people who may be more people oriented (Dougherty, 1992), may have contributed to maintaining fragmentation problems. Anyhow, at the time of this study, a large reengineering program was directed at linking different sub-units in value chains directed toward the end customers.

"... continually increasing focus on customers and markets in every value chain. We have to view all internal deliveries as ordinary customer – supplier relationships, because this is the prerequisite for market orienting the whole organisation."

(manager of reengineering project in the manager magazine)

"The previous CEO's way of management was holding director meetings where the organisation's different specialist units sent their directives upward, and there was no discussions or intercourse across the specialist units. It was the individual director who put forward his propositions and got support for it, and he was allowed to manage his own business. "Televerket is a nice place to live, here everybody can mind their own business", said the present CEO when he came to Televerket."

(manager in interview)

" ... the division of labour and specialisation that dominates business and industry today has to a large degree been preserved unchanged from the time of Adam Smith and the industrial revolution. In large companies this is reflected in a functional- and specialist-oriented organisational culture, where suboptimisation and subcultures often have been well off ... It is imperative to recreate the whole company and all its processes ... one of the key words for reengineering is radical, and it fits well with the challenges Norwegian

Telecom Group faces. Radical implies pulling up the old by the roots. We shall avoid surface solutions and quasi-changes.”

(editorial in the management magazine, central organisational officer)

Appropriation by bureaucratic and technical control?

As we have seen, the early marketing and service orientation may have become driven back by the established powerful actors' bureaucratic emphasis on economical control, together with others' uncertainty avoidance and lack of business understanding (Thoresen, 1992). It seems that this tendency is still active today. Any decentralised customer orientation exists in opposition to bureaucratic centralisation, e.g., the development of routines for customer service (Solbrække, 1994). As a result, there are often complaints about lack of customer adaptation and reductions in customer service.

“... we in the outer part of the so called “value chain” shall “learn” customer service. What about the management? ... Further I read that we are also suppliers and customers internally and that we can not become any better than the weakest part of the value chain ... This sounds very good, BUT (and as you can see there is a big BUT): HOW DO OUR CUSTOMERS (external) EXPERIENCE THIS? Well, they have never been further away from Televerket / Telenor than now, and never got more inferior service than they get now ... For certain, those who shall serve these customers are doing their job, and rather more than that. BUT – do management know how the everyday of the employees has become, and how customer friendly Telenor has become? ...

As all decisions are pushed upward in the system the way they are today, “people” just do what they are told to do – BUT if the (external) customers shall have trust in Telenor, the (internal) customers must also get trust (and understanding) from the management.”

(monthly remark from reader in the union magazine)

Manager: “We can not wait for centrally written deliberations, the customer would not tolerate that.”

(observation from leadership course for new managers)

One might ask if decentralisation, like the continual disciplinary specialisation, has become associated with the relative weakness of the earlier market orientation, so that the more powerful market orientation of the whole organisation today must be implemented in a more centralised way. The balance between technology and the customers may then shift in favour of technology, as technocracy goes more easily with centralisation and bureaucracy. Anyhow, the present market orientation cannot be understood fully as only ‘outer-directed’, it is also essentially inner-directed and engaged in issues of identity and control (Christensen, 1995). Market communication may often become self-referential. The active selling and promotion of technological services has significance for the receiver's (the sender's) perception of itself. The identity of a technological organisation also shows up in the measurement of performance in the market domain which include several technical parameters. Depending on the degree of environmental control, Telenor may in this way project its own world view in its surroundings and create and sustain specific relations to the market thus specified.

4.2.4 Action orientation vs. bureaucracy and uncertainty avoidance

Encouraging initiative and taking action rather than following formal prescriptions

At the same time as the new market orientation was introduced at the start of the 1980s, emphasis was laid on creating an environment which stimulated and triggered initiative and willingness to assume responsibility, in opposition to the previous bureaucracy and centralisation which easily created passivity. It became more important to focus on what was done instead of how, and performance demands were accompanied by a freedom of action that was unusual in public administration (Aarvik, 1993). Valuing achievement rather than belonging to the organisation, the action orientation should encourage more proactive behaviour when facing customers and competitive conditions (Schneider, 1989). Since the early 1980s this non-trivial change effort has been undertaken, with most progress in the commercial parts of the organisation:

“The worthy merit of the previous CEO, was his legitimation of people’s self determination. He emancipated, in a way, the creative powers that existed round Televerket, by letting all regions manage their own business. He legitimated free space for taking action.”

(manager in interview)

“TBK has a typical action culture as opposed to an analysis culture ... We shall go for implementing simple actions in our way ... While TBK was a project and part of the public administration, we were despaired because of the framework conditions, and what TBK was not allowed to do.”

(TBK managers in the management magazine)

From its very start, Televerket had been characterised by a bureaucratic administrative form, a hierarchy with close relations to the State administration and the Ministries at the highest hierarchical level (NMS business history research centre, 1993). Up until the start of the 1980s, several important events had contributed to reproducing and strengthening the bureaucracy. It is no wonder that an unconscious assumption that bureaucracy demonstrate how an organisation work and should work may have become attached. In the large changes of the 1970s, bureaucracy was perceived as necessary for coordination and information exchange in a large company. Hectic committee activity took place in the fight against the waiting lists. The business orientation of the 1980s may eventually to a large extent have become implemented through centralised bureaucracy rather than the decentralised market and action orientations. As the established powerful groups thereby continued their dominance, the strategically hidden meaning that bureaucracy was useful to secure their interests may also have been operative. In today's achievement oriented business culture, the strength of the long time practised bureaucracy still hampers the efforts at building an action oriented culture:

“We are so used to being “brought up” by circulars (...) that we become unable to take action without them. The attitude is that if you don’t do anything, then you don’t do any mistakes. It is required of managers that they tell people what to do. This is a trait of the culture that we want to leave. Our CEO expects managers to make plans themselves based on the strategy document. He expects managers to live up to this. We have a waiting attitude to written prescription of the real life. I am of the opinion that we have to live with

this for many years. But I can see differences here between autonomous units and those connected to the governmental system.”

(advisory staff manager in interview)

Employee: “Here I am told that I have to follow the formal guidelines for dealing with matters. But I think this is not right. You have to be able to take action.”

Question: “But they try to change and remove these formal procedures, don’t they?”

Employee: “Yes. But then you need the safety necessary to take action.”

(previous TBK employee in interview)

Action requiring tolerance of uncertainty

One reason that the action orientation faces difficulties in the present environment may be that people are avoiding the risk and uncertainty of taking action. Uncertainty avoidance can be defined as the degree to which the members of a culture feel uncomfortable with or threatened by uncertain, unknown, or otherwise ambiguous situations (Hofstede, 1984a; Hofstede, 1991). This feeling leads them to beliefs promising certainty and to maintaining institutions protecting conformity (Hofstede, 1984a). Managers who have a low tolerance of uncertainty may prefer stability and hold a tendency of not taking action which alters their environment (Geletkanycz, 1997). By contrast, managers who score low on uncertainty avoidance may be more comfortable with instability, and more open to novelty, experimentation with new or untested initiatives, and entrepreneurial activity (ibid.). As the consequences of taking action in the changeful environment are uncertain and involve risk, people may prefer the security of stability and bureaucracy. Thus, the CEO argues that a greater tolerance of uncertainty is required in today's future oriented business culture:

“Of course, there are unrest, anxiety, and uncertainty in an organisation which goes through such large transformations as we do ... Everybody must learn to live with and master such uncertainty. If we train this skill, we will also succeed when circumstances shift ... In public operations, one seems to observe more good moods in what is behind than in the uncertain future ahead ... There is a far too strong tendency that managers in Norwegian businesslife are concerned with security and safety in a world that is characterised by uncertainty. We therefore put much emphasis on managers agreeing to, and also actively finding satisfaction in, working under uncertain conditions ... A large part of [our personnel] will wish to change what they do and shall do to what was previously.”

(CEO in the management magazine)

The image of Televerket as a company that can offer security started to vanish already in the automation of the 1970s. The most important reason that people had applied for jobs in Televerket was that the organisation was able to offer a secure job (Schiefløe, 1977; Korbøl and Gjestland referred in Falck, 1978). The emphasis on internal education and promotion by seniority, had resulted in a security oriented and stable work force. Many lost their jobs because of the automation and reorganisation of the outer services. The insecurity this created, spread to the other parts of the organisation, too. One feared a new reorganisation, and the consequences of new technology (redundancy, too high demands for new competencies, reduced content of jobs). The less resources the employees had when they began their jobs (education, socio-economic status) the stronger the uncertainty (Gjestland, referred in Falck, 1978). Although the later development has furthered reduced safety and certainty, employees may still be too safety oriented and long for the security of earlier times (e.g., Solbrække 1994). The continual growth of Telenor may have contributed to a

perception that the company is at least more secure than other companies, and thus maintained the safety orientation:

“Televerket has experienced strong growth all the time. Although one has not managed to deal with the large demand, things have always improved. Thus it has been safe, and that has been important here.”

(staff in interview)

Action propensity to avoid uncertainty

Uncertainty avoidance may not only hamper action taking. Although at first glance it may seem counterintuitive, uncertainty avoidance may also favour actions which promote change (Geletkanycz, 1997; Schneider & De Meyer, 1991). The reason is that adherence to the previous strategy in times of environmental change poses greater risk and induces more uncertainty than does adaptation (Geletkanycz, 1997). Thus business managers in Telenor may try to avoid uncertainty by a posture of taking actions which promote the new business culture. As far as adherence to bureaucracy and public government policies involve relatively more risk, uncertainty avoidance may further lead to the unquestioned confidence in the new business values and beliefs. Managers may thus react inappropriately to events, taking action earlier than needed and before enough knowledge of the consequences of actions has developed. More uncertainty than necessary may then be created for those exposed to their actions.

“Even though Televerket has been accused of “reckless driving” – both by the trade unions and others, there are in fact many who think that things move too slowly ... The reason for the impatience is of course that charity begins at home, and that it is difficult to live with long-term uncertainty about ones future job situation ... not least is this difficult for managers.”

(editorial in the management magazine)

“Our co-workers is of the opinion that we are like the fire department – reactive – and that we ought to anticipate organisational consequences better.”

(the management magazine, referring to consultant report)

“... those who participate in the work groups do not at all know all the functions, and depend on consulting those who do – but with too short time allowed it is difficult to do so – is it to be wondered that one can become frustrated? One can hardly label this a democratic process, where everybody can make their voice heard.”

(monthly remark from reader in the union magazine)

“By contributing to change by themselves, the managers are not exposed to change from above, and thus avoid a lot of uncertainty.”

(manager trainee in interview)

In addition to union concerns about unnecessary downsizing, they are concerned that the propensity to take action may lead to the arbitrary treatment of employees. As participation can no longer secure good enough information, the fairness of the process may suffer. Management's uncertainty avoidance may thus interact with the employees' to reduce their motivation for change:

“The top managers have not been with us for any long time, and they have difficulties with understanding a safety oriented personnel, and thus difficulties with motivating for change all the time ... Security of a fair process is the main goal, not that people shall be planted

in the same chair forever ... By a fair process I mean concrete and measurable criteria to a large extent. Seniority was very safe, but one has moved away from it. Now the question is who can perform the task we need to perform. And it will no be possible to divide the tasks in a way that nobody who has been here earlier recognise, and can say that this I have done earlier so here I shall participate. If they in advance could say that we need competence on this and this, then those who wanted to participate had the possibility to get that competence ... This is right information at the right time."

(shop steward in interview)

Another problem is the propensity to create and spread rumours when objective information is not available:

"At the start of a transition process there is often much ambiguity ... The uncertainty makes people use a lot of time at speculation and discussions, and vague rumours are often attributed more importance than objective information."

(advisory staff in the management magazine)

"... rumours create frustration, frustration creates uncertainty, and uncertainty creates more rumours ... if these elements disappeared, we would get a more meaningful everyday in more safe environments ... some researchers even have the opinion that we exploit, develop, and distribute rumours concerning other people, to protect against uncertainty. Rumours about ourselves, we on the contrary kill by silence."

(monthly remark from reader in the union magazine)

4.2.5 Pragmatism vs. politics and disciplinary expertise

In determining what their uncertain environment is like, people rely on differing assumptions regarding the nature of truth and reality. The pragmatism - ideologism dimension refers to the extent to which truth is established inductively from empirical evidence and subjective experiences, or deductively from abstract frameworks like philosophy, theory, religion, and political ideology (Schein, 1992; Triandis, 1983). In pragmatist cultures, information is gathered to arrive at specific interpretations of separate issues (then perhaps deriving principles from the infinite diversity of events) (Triandis, 1983). In ideologist cultures, the information is supposed to have meaning within a broad framework within which all events and issues are related and principles are emphasised (ibid.). Pragmatic cultures, which may tend to be more tolerant of uncertainty (Schein, 1992; Schneider, 1989), are often found in pluralistic societies and societies experiencing rapid social change (Triandis, 1983).

More pragmatism and implicit politics

The Telenor culture seems to have become more pragmatic than previously. In particular, business oriented managers often emphasise the importance of concrete experience of competition and business, in opposition to the political-ideological and disciplinary principles of the past. While the belief in truth as what survives and prevails in conflict and debate may be implicitly evoked by this context, the increased weight attached to experience of what works and gives the best results implies a more pragmatic attitude (Schein, 1992). Broad experience from situations with competition is more important to be able to make sense of the new environment and come to sound business judgements about what to do:

"Business thinking" is something you get to know by experience of competition. It is difficult to learn this way of working and thinking through theoretical exercises. This

implies that we have to acquire a far more pragmatic solution to many problems, with more cost / benefit considerations. Today we too often make a very uniform concept, with the same standard and service offer all over the country. When competition comes, and we are pressed concerning prices because the others apparently are able to do things at lower cost than us, we have to learn to live with something that is good enough and not necessarily a dream vision."

(top executive in management magazine)

"Corporate management emphasise the mutual opportunity for exchange of experience in the leadership programme ... Management rotation is justified for one thing by broader experience."

(the management magazine)

In the union, too, knowledge of reality is claimed by arguments referring to concrete experience. However, the ideology of business managers is also confronted by openly calling for less narrow ideological debate which includes societal considerations:

"When we oppose the new company model, we build on concrete experience with this model in our own and other countries."

(top union representative in the union magazine)

"... purely internal company issues ... discussions that unfortunately in recent years has been led by the premises of management. The union must withdraw from this wrapped up in oneself position and join in shaping the Norwegian society based on the premises of our members. The union must take initiative toward a political ideological debate that can engage the members."

(debate in the union magazine)

The truth value of disciplinary expertise seems to have been reduced, after probably reaching one of its heights in the technocracy of the 1970s. It seems to me that the previous bureaucracy may have put much fate in disciplinary expertise, but held it to be secondary to upper level politics (from the foundation of Televerket disciplinary competence was an important prerequisite for the telegraph director, but it was subordinated to the politics and juridical competence of the Ministry (NMS business history research centre, 1993)). For disciplinary staff and experts, scientific knowledge may still constitute the basis of an appropriate understanding of reality at approximately the same level as concrete experience.

"Logical thinking is dangerous in our industry. It can often hamper new ideas, because everything is not logic in what we are up to."

(manager in the management magazine)

"Top management's evaluation of the consultant report was far more than a symbolic evaluation. There was somewhat tough encounters on the speciality content. The disciplinary content of several of these reports and debates is heavy. It requires significant background knowledge."

(advisory strategy staff in interview)

"My personal attitude is that a corporate staff department shall ascertain some landmarks and stake out a course of action which satisfies the board and top management's need for progress and coordination. At the same time, we must guard against being too dogmatic, clever clogs, or too far removed from the daily operations."

(advisory staff manager in the management magazine)

The role of disciplinary discussion and political conflict

Discussion and conflicts of meaning are at least officially embraced because different understandings and experiences must be surfaced and scrutinised. Thus, decision making in groups of resourceful persons with good disciplinary knowledge and relevant experience is emphasised. If this group can not reach some consensus, however, there is often an awareness that managers have to take a decision about which understanding shall prevail.

“To have people that are critical in a negotiation and discussion phase is practical in order to surface all elements and survey all sides of an issue ... We seek agreement. If we don't reach one, I take a decision. There shall be a manager, but as a starting point the others are as competent as me to come up with reasonable propositions and have a point of view on issues.”

(manager interviewed in the company magazine)

“We have selected very good persons from the involved areas in the Norwegian Telecom Group, and composed heterogeneous groups of resourceful persons who shall cover the diversity and possible interest differences in the corporation.”

(advisory strategy staff in interview)

The more implicit and underlying meaning may nevertheless be that personal experience and expert knowledge count as input arguments in political debates about what works best. Within this political context, the personal experiences of managers from a higher level will be more authoritative than expert knowledge and scientific results, supposedly because their broader experience and background have produced the necessary knowledge and holistic perspective. Thus, what is decisive is at the end what power different participants have, and what ideologies the most powerful support. Even more hidden there could be an understanding that premises from managers for all practical purposes counts as truth, since they have the authority to decide what shall prevail in any conflict of meaning. Advisory and administrative staff should therefore contribute with points of view and new ideas based on disciplinary knowledge and standpoints from different parts of the corporation in order to detail and cement their understanding. Together with the above observations, the following remarks might be indications of such an underlying reality:

“Our starting point is that we have to argue persuasively with the politicians.”

(observation of advisory strategy staff in discussion with researchers)

the most important task of our management is to “see that everybody has a common basic world-view so that they can work and do the right things because they know the tasks. Blind orders undermine the motivation. It is therefore important that one understands why.”

(advisory organisation staff manager in the management magazine)

“The ‘yes-man-culture’ is on its way. I have seen some attacks on people who think differently. The TBK's, who think they know but don't, they are coming in and taking over, the rumour goes about.”

(management trainee in interview)

4.2.6 Cost Orientation vs. Employee Interests

The need to reduce costs

The need to reduce the cost level of the organisation is one of the main concerns of management. Some even perceive it as the main driving force behind the change process. One of the reasons is undoubtedly the emphasis laid on the customers' demand of cheaper tele services, and its implication that new technology has to be used. Another is the pressure from competitors who can operate a new network at lower costs with less employment, thus making painful downsizing necessary.

"Our most important weakness is our high cost level, and this permeates the whole corporate strategy in many ways."

(advisory strategy staff in the management magazine)

"One of the clear challenges is to run a continual price reduction oriented development in order to be able to reduce prices to a level where we can be robust enough to respond to any significant price competition. We proceed with a cost reduction operation which naturally to a large extent has to involve downsizing of employment. This concerns every company in this industry, you know. It is not something that is unique to our company. It is mainly because of technological gains, but also gains from effectiveness and competitive pressures."

(strategy staff in interview)

CEO: "We run a company which is not cost effective. We have considerable bounded capital, and we have too huge employment in comparison with what our competitors can do if they employ a Net division from the start with new technology."

Manager: "The problem is to get competition at equal conditions. We have societal commitments which our competitors don't have. If we didn't have those societal commitments, we would be able to compete with anyone."

CEO: "Societal commitments? We do not suffer hard times because of our societal commitments. We shall sort out cost covering and rules of the game. We suffer because we are not very cost effective. We must not cover up the real problems. We are at work on a cost effectiveness operation at the Net side ..."

(observation from leadership course)

Another reason that cost reduction is emphasised may be the low productivity of the work force from the second world war and throughout the public bureaucracy period. The reorganisation around 1970 took place against a background of a common belief that the productivity was too bad. In addition to cost reduction through the use of new technology, economies of scale and centralisation were emphasised. Time studies based on "scientific management" techniques were implemented, and piecework, but the consequences were ambiguous. At the start of the liberalisation in the 1980s, it was still a widely held belief both inside and outside Televerket that the productivity was too weak (Thue, 1995). Management emphasised a unified front toward limiting cost increase and improving income. "One can not any longer continue with the almost automatic growth which is imbedded in our present system", the CEO said in the company magazine (ibid.). Several wanted reduction in the number of employees. In the cultural changes that followed, improvements in productivity has been recognised. But the most significant force for cost reductions have always been the introduction of new technology. In the automation the number of man-labour years was reduced from 7000 to 1700 between 1960 and 1986, in spite of an enormous increase in traffic, and the emergence of the information services (Aarvik, 1993). Later the digitalisation

has considerably improved efficiency. The trade union supports such rationalisation efforts, e.g., it was committed to view the automation as positive as both user service and the economy of Televerket was improved (Hammerø, 1992). However, in the trade union it is often argued that today the amount of work is so large that there is no space for downsizing in Telenor as a whole, and increased manning is expected in several units.

Employee considerations

Although the trade unions accept the need for cost reductions, the large downsizing creates worries. Avoiding unemployment is a main concern, having to do with human dignity: To feel that you are valuable, that you are important, that the society needs you, is basic for human beings. Further, necessary downsizing often comes too early, and it creates large strains for the employees. It produces too much uncertainty, work pressures, frustration, and a worse psychological work environment. Management is perceived to prioritise short-term profit, to the detriment of both employee considerations and effectiveness.

“In order to achieve this short-term profit, the management of TBK used the simplest means, namely dismissals. When short-term profit is made the focus of attention, the considerations for employees take second place.”

(monthly remark from reader in the union magazine)

“The consideration for income has become part of the manager culture in Teleservice. Everything is about being as economically successful as possible, irrespective of considerations for the employees.”

(monthly remark from reader in the union magazine)

The trade unions enjoy a strong position in Telenor, among the strongest in Norwegian companies. This position was evident in the reductions in the workforce of the new competitive company TBK referred to above. The Union Congress could not accept dismissals of such magnitude, and was of the opinion that there was no documentation that there was a need for this and that this was necessary (Hammerø, 1992). They argued that there were sensible reasons to question the way the organisation had been managed. After a short time the top manager resigned from his position and left the company.

The power of the unions comes from a very long and proud tradition of organised struggle for fighting for and getting respect for employee interests. At the start of the century, the telephone network construction represented hard and risky work, the pay and work conditions were bad, and the managers could treat the workers as they wanted to. As workers did not want, or could not, bear this any more, the consciousness grew that stronger community and organisation could lead to taking initiative to and win fights for better conditions against the organisation and the governmental authorities (Dahl et al., 1993; Blom, 1955; Telenor information leaflet; Fondevik, 1980). Civil servants and telephonists hesitated about getting organised and putting forth demands, as they often had a cultured background and perceived their occupation as distinguished and “an offer to life” (Fondevik, 1980). However, through the KTL union Televerket’s strong and proud women early became a driving force for equal status and women’s liberation (ibid.). In the period from the mid 1950s to the end of the 1970s, workers’ fights for increased co-determination through the trade unions were successful. The threat of being fired or getting worse conditions at work improved unity and organisation among the workers. One could see that community provided strength. Co-determination was secured through formal agreements, committees, and procedures, i.e. through bureaucracy. In the large reorganisation processes in the 1970s, the cooperation

between management and the trade unions became recognised as crucial. The unions led a fight for better information and directives for how to handle personnel problems, and personnel difficulties gradually became more emphasised in the implementation phase. The personnel problems in the telephonist services dominated the process. Disappointment and bitterness was created among the telephonists, who in spite of long seniority and a self-sacrificing relationship to their job, were perceived to be redundant. They often got the choice between quitting or moving, and many were very attached to the locality. The state's responsibility for employees in Televerket was established. The automation proceeded slowly because the Parliament because of personnel and societal considerations did not want too many notices to quit, and the work to find alternative employment became concrete and committing.

Although the power of the trade unions has been reduced, and the state does not intervene so heavily in personnel issues, the less one-sided business oriented managers acknowledge mutual dependence and describe cost reductions as a balancing act with employee considerations. They emphasise that every manager must get to know and take into account employee reactions to uncertainty, redundancy, and transfer to Telenor New Possibilities (a separate organisational unit had been established for the purpose of re-educating redundant personnel and generating new profitable activities within the corporation), but when margins come under pressure business managers often admit that they can not prioritise human considerations.

“In 1995 we had the largest price reduction ever. We deal with a lot of money, more than what the politicians often quarrel about. The societal consequences of our decisions are considerable. Pricing decisions involve a delicate balancing act between prices and employment. The politicians do not need to go through this. When our CEO was at (...) and said that “Televerket does not produce employment but services”, the newspapers wrote “he doesn't love his employees”...”

(top manager at the leadership course)

“If we don't adapt the costs, we will loose at the market, and we will have to cut down employment a lot later. If can manage to adapt employment in the short term, we can create growth, and the need for later reductions is much reduced. Perhaps we may on the whole create a situation in Telenor where employment is really increasing.”

(CEO in the management magazine)

Business and result based arguments against downsizing

From the start of the 1980s, management has increased the emphasis on people as an important resource, and the primacy of people as a good investment. Trade unions were positive of seeing people as important resources for improving effectiveness. The present strong emphasis on reducing the cost of employment is often perceived as contradictory to these arguments, and it is criticised for being too negative. Management should instead focus more on income possibilities, and what human resources can contribute with respect to improved competence, innovation, increased sales, and better service. When their primary focus is short-term results, however, the employees are seen as a cost.

“The preliminary project showed that we in Televerket still perceive ourselves as order takers, mostly concerned with Televerket's inner life. We perceive us to be governed by cost considerations ... The co-workers are of the opinion that we are too cost focused, and should have a more balanced view of costs and income.”

(the management magazine)

“[The consultant company] states that reducing the number of employees does not support Televerket, because the employees represent a too small part of the total costs of Televerket. We employees represent about one fourth of the total costs of Televerket. The last three quarters are investments, real property, technical equipment (...). Domains which are difficult to cut down. [The consultant company]’s conclusion: Televerket has to increase sales enormously.”

(monthly remark from reader in the union magazine)

Of course management often do stress that people are the most important resource of the company, and that this resource must be nurtured and exploited if the organisation shall be able to achieve effectiveness and profitability. They expect the high competence of the employees to become more important as competition increases. People must have the opportunity to thrive, use themselves, and develop their abilities. Emphasis is also put on sound health programs, and good working conditions, in order to achieve employee well-being and satisfaction. However, such statements are often held to be little more than window dressing in light of actual proposals for cut downs, and increasing costs associated with the use of outside colleagues:

“... not satisfied with the conditions of employees in the TNP. Many believed the management’s words about innovation, development, and increased competence when TNP was established. Today many TNP employees feel that the only goal of management is to get rid of them as employees. At the same time we observe that many individual employees, offices and departments are dependent on considerable use of overtime, renting of employees, and work for free due to cancelled flex time, in order to manage their work tasks. This can not be the right personnel policy. The union can not accept that TNP becomes the forecourt of unemployment.”

(statement from union yearly meeting)

“ ... a question if there really is so much news in the reengineering project. Isn’t this much the same that we shop stewards, on behalf of those we represent, have pointed out for a long time. We got feedback earlier that this was just “peanuts” which would give small gains in the operations. The old Televerket got for free many of those pieces of advice that they pay hundreds of millions for today. We shop stewards would very much like to know what Telenor pays for the support of consultants ... Let us have the figures on the table.”

(monthly remark from reader in the union magazine)

Achievement vs. equality and employee well-being

The approval of people and competence as important resources for achieving business results is not unproblematic for the trade unions. As Walter (1985) puts forth, corporations in a competitive economy often hold that superior performance is imperative, since companies with average performance eventually tend to be overwhelmed by better competitors. By contrast, the view that comparable competence is good enough seems to be important for employees’ self-esteem and security. Thus trade unions prefer to pursue job rights and compensation as pertaining to seniority rights and efforts (inputs) rather than to exactly what employees accomplish (outputs) (ibid.)

After the introduction of a more business oriented culture at the start of the 1980s, management has increasingly emphasised achievement and result orientation. Although trade unions were positive of seeing people as important resources, they also emphasised that human considerations like employee well-being were important in themselves. In the 1960s

and 70s increase of technical competence, the importance of the earlier salary equalisation, seniority principle, and uniform internal education was reduced. In the establishment of a new competitive organisation in the late 1980s, however, the trade union fought for equality among the employees in traditional and competitive areas (Hammerø, 1992). They wanted as few employees as possible to be singled out from the basis organisation. Installation and service ought to be done by the fitters of Televerket. One was afraid that a specialisation into single work tasks and products would lead to an A- and a B-team among the fitters. Further, the union based their work upon the principle that the personnel conditions in the separated company should be as similar to Televerket's as possible. Later larger differences in salary and working conditions have been established, not without conflict as employee security and well-being have suffered. For instance, co-workers transferred to TNP at average experience that their safety and dignity as employees has only to a low degree been taken care of in the change process, and that they did not get a fair treatment (Solbrække, 1994).

The increased achievement orientation also involves a more individualist culture, which assumes that individuals look primarily after their own interests. The collectivist assumption that individuals belong to and work for the interests of one or more close "in-groups", e.g. the organisation, the union, or the subculture, who in turn protect the interests of their members (Hofstede, 1984a) has been reduced. Also management fears that the individualist considerations for personal advantages or own unit's results should come at the expense of what is best for the community. Thus the achievement orientation has to co-exist with and be balanced against the other interests of the community (Jackson, 2001), including employee well-being:

"... individual achievements are dependent on a good community. We have seen this not only in sport. In business, too, it is found that one does one's best, both as an individual and as an organisation, when the individuals act as a part of the community. But this is not just about the achievement of results. Our experience of belonging to a good community is a goal in itself. It makes it meaningful and joyful to work in a company."

(corporate ethical work book)

4.3 Telenor Research and Development Culture

4.3.1 From technological authority to support unit

The new telecommunications environment and the more market and business oriented Telenor have reduced the strategic authority of Telenor Research and Development (TR). In a reorganisation at the start of the 1990s, Norwegian Telecom Research Institute (which was their name at that time), with about 200 technical and 30 economic and social science researchers, lost its privileged position directly under top management and became more a support function for the divisions. The research director lost his membership in the top management group. R&D should be subject to government by customer demand. At the same time, a new strategic level was established to secure the relationship between technological development and market needs. Central Product Management should have the principal responsibility for the composition of the total product portfolio and the distribution of product responsibility among the divisions. It was composed of the technical director as chair, the divisional directors, and the IT and research directors, and it was the internal board of the research institute.

According to the historians Collett and Lossius (1993), TR had always had a two-sided mission: to contribute to the strategic management of the corporation, and to give concrete support to defined developmental tasks. With its position in central product management TR was still located in the core of Televerket, with short distance to the management, the TR magazine also emphasised. An important change had occurred, though. TR had always had much freedom to define its own missions, within the for the most part formal control from above through budgets and strategic plans. In the new organisation the decisional authority for both formal strategy plans and concrete programs and projects would be located outside TR, at corporate management or divisional employers. In an interview in the TR magazine, the new research director summarised the situation:

“He emphasises two sides of the director position: the responsibility for the disciplinary level at TR and the responsibility for market governance of the content of the research. A dilemma and balance act for both management and researchers. But [the new research director] is very clear on the basics, the fact that TR shall be changed from researcher governance to need governance ... By the next century Televerket is a Ltd. in very hard international competition. This puts even stronger demands on TR, and on disciplinary excellence. We have to be best in world in some selected areas. In this way, the potential opposition between disciplinary interests and the needs of Televerket can be abolished: If we shall be useful for Televerket, we have to both do the right things and do the things right. However, [the new research director] wants to avoid the pendulum swinging to far. He also thinks that TR from old times already is occupied with the needs of Televerket. The challenge is to find firmer forms of user government in practice.”

A history of technological strategic leadership⁵

The research institute was founded in 1967 in order to improve the technologically lagging behind Televerket. As a result of the recognised defence technological research milieu's battle for a research unit within Televerket after the second world war, Televerket established its own research institute, going along with the public political process of developing a new and less hydro power based research and industry policy. The research activities should be

⁵ This section is based on Collett and Lossius (1993)

something new, which represented a clear break with the traditions of the organisation. The unusual choice of the new research director from the outside was a signal of facing the challenge of getting totally new competence into the organisation. The program proposal emphasised that TR should not accept and solve everyday problems for the rest of the organisation, but actively participate by providing knowledge premises to the long term and far future planning. Technological leadership should be carried out both internally and externally. In the co-operation with the technical university, other research institutes, and the equipment companies, TR should have the system competence: survey all tasks, analyse them, and delegate them to the others. Access to the best technology internationally was necessary. To make oneself felt in the international cooperation, it was a requirement that one could participate with own high-level expertise.

The need to build competence within all areas necessary for mastering and planning the future telenet, was the guiding principle of TR the first 10 years. The philosophy was that early efforts in selected technological areas should give Televerket and the industry the necessary competitive advantage. The centrality of TR in the long term planning provided an arena where it could play an important part in defining the premises for the government of Televerket, at the same time one could more easily spot the areas where more research work was necessary. At the end of the 1970s, TR had established itself as a central strategic unit for the top management of Televerket. This strong internal position made it possible for TR to take a leading position also externally. Televerket was an important customer for the industry, and TR could itself - based on their grants by way of Televerket's budget - act like an important customer toward the institutes. TR became the central institute for tele-technical research in Norway, and they also perceived their role in the relation to the industry as a leader role. The most visible external work was perhaps within satellite communication. Here TR had managed to play a decisive part in national industrial mobilisation, and they had seriously asserted themselves internationally.

At the start of the 1980s, TR was central in the definition of the premises for the public discussions, through their participation in the development of the Long Term Plan. The research director became member of the Tele Committee, and TR got direct access to the principal debate about the teleservices in Norway and Televerket's function and organisation. In a time of growing impatience with Televerket, TR came out as a light spot in an otherwise dark tele environment, and the politicians expressed concerns about the future of TR. Within Televerket there was a conflict with management about the speed of the digitalisation, and the growth had stagnated. TR got support in the Tele Committee for realising the technology and research visions, but those recommendations were not realised. Management wanted to follow a flexible development adapted to the real needs, and this also became the political conclusion. At the same time, the Ministry supported large increases in Televerket's budget for research, because of the dependency on new and continually changing tele- and computer technology. TR's role as a leader in the relation to the IT industry in Norway was strengthened in this period. The changed premises for leadership nevertheless involved a change in the position of TR in the relation to management.

The organisation should become more market and service oriented, in part in opposition to technology considerations. Within a technology optimistic social planning it had been a matter of staying ahead of the market in order to not become left behind internationally. Now it was emphasised that Televerket had to adapt the development to the real needs. The long term planning got a more peripheral position, to the benefit of the new CEO's open and including style of leadership. The decade was characterised by investment in new technology

far above earlier periods, but as teleservices went beyond the basic services which had priority as part of the national infrastructure, the centre of gravity moved from technology and plan towards market and economy. The strong position of TR as a supplier of premises and knowledge could not be maintained. In addition, the technical department had recruited a very competent staff and became able to prepare and take decisions on their own. It was even no matter of course that the research should be done independently of the rest of Televerket. At the same time there were confrontations between TR and the other technical departments. TR often came out in the public and got much of the recognition for the improvement of Televerket. They experienced outstanding growth in budgets and staff, and enjoyed great freedom to take on projects of a very long term quality, while those responsible for implementing the technical revolution felt very strained and underemployed. A basic principle for the management of TR had always been distance to present problems and maintenance of the surplus energy for looking forward and taking care of the long term position of Televerket. The research director's authority made changes in TR's relation to the rest of Televerket of no present interest.

Toward new cultural and strategic challenges

At the start of the 1990s, the development has continued and the reorganisation positions TR more as a support unit than a strategic authority. Several questions are raised in the new situation. Is it possible to maintain the authority and autonomy of TR within Telenor? Earlier the focus of the strategy process had been more on the technological development and how fast the telenet might be built up, now it was more on how Telenor to a large degree could keep its position in the national market and expand in new international markets (Collett and Lossius, 1993). Specialised high technological competence was not enough, this required competence related to business economics, politics, marketing, and to an increasing degree experience from competitive environments. A related question concerned TR's autonomy and what kind of R&D would be most important in future: strategic research and long term technology development, or more market oriented and flexible service development for the operative divisions? Signals from top management indicated that it would be difficult to maintain the previous degree of freedom. TR changed from a national research institute to the research institute of a corporation in competition. How would TR's leadership role in the relation to Norwegian industry and other R&D institutions develop? Would Telenor's profitability and competitive advantage become more important than national goals?

4.3.2 Change orientation: short-term adaptation vs. long-term transformation

While most of the general change orientation of Telenor seems to be shared at TR, a significant unique characteristic concerns what kind of change is considered to be desirable: short-term flexibility or long-term radical change. Which one is favoured is related to the degree of accept of reduced autonomy and power, and thus to what domain of activity is regarded as most important: strategic research, long-term technology development, or market-oriented product development. Those who accept the new position of the research institute argue for the adaptation to the more or less short-term minded business divisions in order to survive and prosper in the new situation, the others would rather do research on basic technology and develop the future society. The discussion easily focus on who is the most willing and able to change.

The new market-oriented adaptation and flexibility

Among the new management, the administration, and the service developers, the most market oriented tend to accept the short-term adaptation. Their perspective often highlight the stability of the history of TR, and the expectation of increased change in the future:

“Our past is characterised by stability in our environment – Televerket has “administered the dialling tone” without any interference worth mentioning, and TR has had the main responsibility for the country’s telecom research. Our inner life at TR has therefore been naturally well-ordered and structured, with the tidiness and safety this create. When the next chapter of TR’s history shall be written, 1992 will be characterised as a more turbulent year than the last 24. To be sure, both the Norwegian Telecom Group and TR has reorganised previously, but never have we seen so radical changes in our surrounding conditions. To many colleagues in the Norwegian Telecom Group, being classified as redundant and transferred to new work tasks is experienced quite strongly. For TR, the changes has been less dramatic, but nevertheless we have had an unusual situation characterised by changes and uncertainty ... In the future, we must expect increased change both externally and internally.”

(the new research director in the TR magazine)

In order to meet increased change, the innovative development of new teleservices is needed. They can create growth and positive change, rather than redundancy and cut-downs. It is also often emphasised that the organisation must be continually adjusted to the customers. The new system of user governed R&D is necessary, and it may make it easier to close down relatively unproductive activities.

“A basic value is that our internal organisation shall be dynamic and continually adapted to the tasks TR shall solve for our customer-principals.”

(TR personnel policy document)

“The Norwegian Telecom Group’s (and TR’s) ability to adapt to changes in contingencies and environment becomes more and more decisive for total productivity and thus the ability to survive. It is realistic to expect the rate of change to increase rather than to decrease in future, I think. TR’s ability to survive will also to a large degree depend on our ability to perceive our role as a part of the Norwegian Telecom Group in the future and how we adapt our organisation accordingly.”

(administrative staff in the TR magazine)

“It is easier to start up new activities than to close down existing ones, but now we are becoming stronger controlled by our customer-principals ...”

(observation of administrative staff at introductory course for new employees)

The long-term technological transformation ambition

More technological and research oriented people tend to favour the more long-term and fundamental change. Basic research and the development of new technology is preferred, as the foundation for the more short-term product development. The increased weight on the adaptation to present corporate interests is perceived as too conservative, reducing the capabilities for long-term research, and hampering the development of technology for a much improved future company and society.

“This is about large telecom systems that are very conservative, and telecom research that is dynamic on the long term. We are dealing with radical innovations ... Typical for TR, and telecom research, is radical innovations which proceed slowly and take a long time

before they give results ... The incremental, market oriented innovations – what is called product development – they progress quickly.”

(research manager at the introductory course)

The common conflict between short-term market and business people and long-term technology and R&D people is thus invoked. TR technologists and researchers are very conscious of the time horizon concept, and often use it to differentiate themselves from others, in particular the new divisional employers of the user governed R&D-system. “A business world that tends to revolve around quarterly reports can be a very threatening place for engineers and managers advocating long-term investment in radical innovations ... As Quinn (1985, p. 79) notes, “Time horizons for radical innovations make them essentially ‘irrational’ from a present value viewpoint”” (Page & Dyer, 1990; Song & Parry, 1997).

“When there are many short-term internal tasks from other departments within the corporation, there are neither means nor energy left for the creativity and the self-initiated basic research that is a prerequisite for being able to support other departments with new ideas ... Basic research almost always has long-term goals, which are often completely incompatible with the goals of the new liberalised, deregulated, and privatised tele operators which are instructed towards cost efficiency and short-term profit goals.”

(researcher in the TR magazine)

“In the new system, the divisions shall plan their own R&D budgets. This can lead to research becoming an item easily reduced to balance the budget. There can be reductions.”

(researcher at lunch)

The long history of TR as a pioneer and leader of a technologically more and more successful Televerket gives strength to the belief in research and radical change. Already before the foundation, the radio line conflict between the research milieu and the lagging behind Televerket set the stage (Collett and Lossius, 1993). With little governmental financing Televerket was a technologically weak organisation and did not have much chance of autonomous technical development. One stuck to the well known and secure within telephone technique, and bought equipment from a few established suppliers, with little room for creativity and innovation. The research milieu, outside the organisation at that time, early wanted to make use of new radio technology in the high-frequency area. The researchers demonstrated strength and go-ahead spirit which would not be knocked out by the negative attitude of Televerket, who bought cables and later lower frequency radio equipment from its foreign suppliers, instead of supporting the promising domestic research milieu and industry. First when the Parliament decided that television should be developed, and that Televerket should be responsible, the choice was broadband high-frequency radio lines.

Great technological visions have been typical for TR: the most sophisticated technology known internationally should be taken home to Norway, and be made use of in the production as soon as the technical-economical optimal time occurred (Collett and Lossius, 1993). The radical change orientation sometimes led to painful conflicts with the rest of the organisation, although the Long Term Planning “was a bit of a breakthrough for future minded thinking in Televerket, and gave not least TR a possibility for distributing its ideas” (research manager in the TR magazine). The transition from analogous to digital technology is a well known example. From the middle of the 1970s, TR started the work with optical fibres, but Televerket was to a disappointing degree not influenced. They questioned the reliability of

the technology. Researchers also point out the background of the recently commercially successful GSM mobile telephones, and question if Telenor would back such efforts today:

“To the technical development of this system TR provided large and decisive contributions ... TR was one among several actors who all the time fought for GSM as a larger technological leap forward, in fact a whole new generation of mobile technology adapted to our [Nordic] circumstances, and not an optimised NMT or TACS, as many – among others the equipment suppliers – had rather preferred ... GSM is an example of what the old, dusty Televerket was able to bring about in relation to pioneer spirit, technical authority, and influence, at the time one of the objectives was that Norway should be in the lead of the worlds’ tele-countries.”

(technological researcher in the TR magazine)

Technologists' view of the organisational changes

While technological change is perceived as positive, organisational change is more of a nuisance, and often criticised. In some ways, the criticism is similar to what is heard elsewhere in Telenor:

“... the local (...) union raised several comments and questions concerning the reorganisation of TR. In particular, the tempo of the reorganisation was criticised.”

(the TR magazine)

“It is a heavy challenge to change a large organisation from technology- to market-focus. It is not done from one day to the next. There is great willingness to change in the Norwegian Telecom Group, supposing that people get the possibility to keep in touch with what is happening, and are included in consultations. There are few organisations that have had so frequent changes as the Norwegian Telecom Group, I think. How much change can an organisation tolerate? One can reach a saturation point, if the information channels are not kept open. One has to listen to people at the bottom. Some frustration and resignation have already spread, which can involve resistance and departure. It is important to justify the changes, one has to get over the psychological effect of not informing good enough.”

(research manager in interview)

Researcher: “There is much reorganisation, and bad information to the employees. Nobody puts any weight on the negative aspects of reorganisation.”

Research manager: “The trade unions often put such things on the agenda, and they are considered.”

Researcher: “People are disappointed with these reorganisations. Management implement changes step by step, they hide what changes are to be made and what is the actual purpose. They just inform about incremental changes, so that one gets used to them and accepts them. It takes to much energy to be angry all the time ...”

(observation at lunch at TR)

A distinctive critique concerns the questionable value of reorganisation in itself. Business oriented managers are often criticised for elevating it to a goal, but at TR it seems to be mostly used as a means for cut-backs. On the contrary, technological innovations can give growth and positive change. So it feels good to ridicule the use of reorganisation as a means for improving the capability of good change.

“What do the professional manager do when the goals are not met by results? Answer: he reorganises, because this is the means of action that he is master of. Reorganisation is

elevated to a kind of universal condition, and a main activity for managers. Here one often makes the error of equalising change and reorganisation. Change is necessary in a dynamic world. But reorganisation is just half of the job, the half of clearance of what has to give way. You can “downsize” and reduce costs by reorganisation, but you can not reorganise to create innovation and growth. Innovation does not arise from organisational efforts. It requires a management that focus on talents and ideas, and who can assess risks and make choices using insight into the company operations.”

(technological researcher in the TR magazine)

RD (research director): “Which situation is every modern company management, managing according to sound businesslike principles, sooner or later getting into?”

Everybody: “Being at their wits end!”

RD: “Correct. And what does they do with it?”

Everybody (unison aha experience): “They reorganise!”

RD: “Yes!! And when does they stop reorganising?”

Everybody: “Never!”

RD: “Hereby I present the most lucrative patent in history, the patent on the permanent reorganisation.”

CEO (ecstatic with his arms up in the air): “We are Saved!!”

The board in wild and enthusiastic chaos, the RD and CEO carried in triumph to the strains of Pomp and Circumstances.

(from show number at the Christmas party at TR)

Mutual dependency and difficult integration

Heated conflicts may occur among proponents of the different orientations toward change as the radical and incremental innovations threaten to divert resources from each other, evoke political activity, and introduce high levels of ambiguity and uncertainty (Page & Dyer, 1990). But there does not seem to be lack of insight that both orientations are needed. For instance, the research manager at the introductory course continued his presentation of radical and incremental innovations with pointing out the necessity of pursuing both. However, while the long-term development of radically new basic technology is a matter of course internally, there may be a need for getting broader acceptance of the new short-term product development. This need is met by pointing out the continuity with the past: TR has always been concerned with short-term and practically useful technology development.

“Typical for TR, and telecom research, is radical innovations which proceed slowly and take a long time before they give results ... The incremental, market oriented innovations – what is called product development – they progress quickly ... What the corporation earns money from is invented a long time ago, we must get out products and services faster. It is positive that we have the whole process from the ideas arise until the final service is finished internally. I think it is necessary for the survival of the Norwegian Telecom Group. We have to take care of research, but we also have to get things operative.”

(research manager at the introductory course)

“A message that [the retiring research director] has emphasised, is the fact that research, when it is started, must quickly show results. At the same time research must have a long term horizon and long term goals. That is, research must be both short-term and take the long view. Then research gets free hands, but is all the time able to show that it gives results and is useful.”

(CEO speech at the retirement of the old research director, the TR magazine)

“The Yearly Report confirms an impression from work with the last year's reorganisation: many activities at TR are adapted to relatively practical and useful short-term goals. Also

the activities adapted to more long-term goals are justified in fairly concrete terms. Here is little "research for the sake of research itself". In that way the change to a more commission based way of life will hardly involve any dramatic transformations. The changes will rather concern who shall decide and which concrete goals we shall go for."

(research manager in the TR magazine)

In the new situation, with less autonomy and less power to decide and to change the environment, what seems to be needed is an improved short-term adaptive capability. The beneficial powerful position of the monopoly past may thus be prevented from developing into a long run liability (Levinthal & March, 1993). The strong internal position, together with the participation in the common international development of technical standards, may have nurtured the ability to organise the service development around some more or less specific plan. Without other changes in short-term contingencies than postponements, the dynamic adaptation capability may have suffered. Many researchers may have developed a de facto static short-term orientation, and commitment to the present strategic policy of service development (Geletkanycz, 1997). However, some would protest that the foresight and planning ability is just an official truth. The informal organisation has always been adaptive on the short-view, taking into account alternative paths of long run technology development. The critical comments below may thus express conflicts of who shall decide and the priority of different specialities as well as conflicts of different change orientations. Anyhow, in order to avoid any self-defeating rigid adherence to present short-term intentions, it seems wise to beware of potential status-quo preserving tendencies of the culture.

"All the time there are new signals about what to do. If we are going to adapt all the time it will be difficult to do any research. We are deeply absorbed in one speciality – at the technological side at least. We are experts in a very narrow area, and it will take several years to become competent in another."

(researcher at lunch)

"It is always the case that people would prefer to do what they are competent at doing, what they do today. Nobody wants change, if this is not a necessity ..."

(research manager in interview)

Researcher: "The program works well as regards implementation and industrialisation, but you have to be able to discuss what will happen in ten to fifteen years."

Research manager: "What we believed would happen on a longer view is taking place already. The development is faster than we believed."

(observation from meeting at TR)

"Understanding of the convergence of tele- and information technology is necessary for the profile of any modern research institute in telecommunication. We can over and over again observe that the information technology side is not to a sufficient degree included in the thinking of our present two top research managers."

(debate article in the TR magazine)

The fact that the maintenance of a long-term technology development capability will be necessary, may be less controversial. There is ample evidence of time lags in the development of technologies and markets, leading to later syntheses and mass-market successes, like the video-phone (Garud & Nayyar, 1994). The ability to change may thus depend on possessing R&D projects with a diversity of strategic time horizons (Judge & Spitzfaden, 1995). It is worth keeping in mind, though, that TR and its partners will have a

very difficult time determining the variety and depth of knowledge that ought to be developed where situations or proper responses are numerous and shifting (Levinthal & March, 1993):

“By the time knowledge is needed, it is too late to gain it; before knowledge is needed, it is hard to specify precisely what knowledge might be required or useful ... Knowledge that has clear, immediate uses is specialised to current technologies and markets. It is easily specified and has relatively early and local returns. Broader or deeper knowledge is less likely to have immediate pay-off but results in a greater ability to adapt to changes. Moreover, knowledge facilitates the use of other knowledge. Organisations that have some competence in an emerging technological domain are better able to assess the potential importance of that domain and to evaluate possible investments in new knowledge in that domain.”

4.3.3 Research vs. product development orientation

Before illuminating some of the differences between a long-term research orientation and a short-term product development orientation, the common assumption ought to be stated that the very reason d'être of TR is the development and use of high disciplinary competence. Further, people are proud of their competence and the practical results of the R&D efforts of the institute.

“TR shall be the leading milieu for research on telecommunications in Norway, with the disciplinary core in the knowledge about the tele net. On this platform TR develops services and applications, in cooperation between technologists and social scientists, and in cooperation with customer-principals and users. In selected areas, it is our ambition to be at the same level as equal international milieus. In general, we shall have a level of competence that makes us able to communicate with international milieus across the whole tele-technological platform. Own efforts give access to the results of others. Our broad competence, and our point of view outside divisions and business units, makes us able to get a general view of and contribute with perspectives on the totality of the Norwegian Tele Group's operations. TR wants to contribute in both the corporate and divisional strategy development.”

(the research plan)

“TR is today a natural part of Televerket – and everybody recognise today that research is needed for Televerket to be among the best. –But it was not like that. Before TR arose Televerket had no reputation of being in the lead, at all. One of our veterans at the headquarters touched on this one of the days at lunch. “It was horrible to tell that we worked as civil engineers in Televerket before TR came into being, that carried no status.”

(researcher in the TR magazine)

“... it has been said a little about what we have done, but (...) has tried to put our “feats” in numbers. He should like to check the figures a bit more, but the conclusion is clear: Televerket – and the society – has been paid back for their investments at compound interest through the products, services, and savings that TR's efforts have yielded.”

(research manager in the TR magazine)

The history shows that the scientific ambition has been central since the foundation (Collett and Lossius, 1993). The chosen research director was the best candidate scientifically, and had a broad international network. His proposal of changing the name of the new unit from research laboratory to research institute also signalled science and ambition. At the start of the 1980s, there were complaints that TR did not work like a real research institute, but more

like an institute for deliberations, and many qualified researchers left. Partly as a result of these criticisms, the scientific ambition level was raised, and the disciplinary activities increased significantly in both breadth and depth throughout the 1980s. The high disciplinary competence in comparison with the rest of the organisation partly explain why TR managed to establish a very autonomous position. The institute has been able to itself define its missions, within an increasing budget. As we have seen, envy and confrontations have resulted, and the relation to the rest of the organisation may also have suffered because researchers have reprimanded people with less competence. In the present situation, with increased competence in other departments, and management principles emphasising that research shall be governed by corporate and divisional customers, there are fear among researchers that the scientific freedom and ambition shall be reduced. TR also has to face the challenge of protecting its strategic position in the corporation from further decline. A new research plan represents an attempt to resolve these partly conflicting considerations.

“TR has a particular responsibility to point out future threats and possibilities, participate in strategy work, and put forward proposals for R&D-work. This research plan is an expression of this, at the same time it is anchored in strategic goals at our principals. User governance of research requires creativity from both parties.”

(the research plan)

The user governed increase of product development

The present management of TR, who have the responsibility for the introduction of the system of market mechanisms to govern R&D, are of course aware of the conflict of different time horizons. They are also concerned with the potential fragmentation of disciplinary milieus, and in order to avoid more short-term activities than what is intended, they try to establish long-term contracts with the customers. The research plan has been developed for supporting the negotiations.

“User government requires creativity from both parties. A classical conflict between customer-principals and the research milieu is the relationship between short- and long-term considerations. In practice, the tendency toward fragmentation has been an equally large challenge. With many customer-principals and projects there is a real danger of splitting up the disciplinary milieus.”

(the research plan)

“User government of any research operations very clearly involves a danger of loosing the long-term perspectives. However, TR enjoys great confidence of our users, and it is expected from us that we have well-justified points of view on what the Norwegian Telecom Group shall do research on:

- From the experiences we have gained so far, we want to enter into new framework contracts with a time horizon of the budgetary period, but in addition we want to establish intention contracts with our customer-principals. The intention contracts shall be anchored in TR’s research strategy and thus in the needs of the Norwegian Telecom Group on a long sight (5-10-15 years).

- Corporate management has established that TR’s customer-principals themselves have the responsibility for taking care of their long-term needs, while the corporate grant shall finance the long-term research from the total needs of the Norwegian Telecom Group (i.e. in a disciplinary dimension).

- The disciplinary board at TR has started the work with our new research strategy, which shall constitute the foundation for planning and resource allocation on both a short and a long view.”

(the new research director in the TR magazine)

There are great variation in opinions about the extent to which the new system has worked. Some research programs seem to have been able to come to a reasonable satisfying agreement with their customer-principals. The negotiations seems to have been easier closer to basic technology activities, where somewhat similar background and competence of engineers may have provided for common long-term perspectives and/or more disciplinary authority. In programs and projects with market oriented divisional customers, the customer governance of R&D has been met with resistance. Different priorities of technologists and market people may have played a part, but other researchers complain, too. They have become victims of short sighted principals enforcing the market premises of today instead of the needs of the future customers and society. Researchers experience frustration because of difficulties in selling R&D to customers who are lacking the necessary competence for evaluating R&D projects.

“We are being forced into a system of taking orders from short-term minded customers from market oriented divisions. The market does not know what the future will be like ...”
(researcher in interview)

“On this program you are just told that this is what you are going to do, because our principals have said so. It is no use saying that we can’t do any research on so-and-so approaches to the problem. It is very frustrating, because the orders change all the time. In this way we can’t do any good research.”
(researcher in interview)

The market oriented customers perceive the reasons for difficulties with product development otherwise. They want to take part in the growing service part of the market, with hard competition and short time requirements for finishing product development projects. In addition to the long time orientation of many projects, the lack of common goals at TR is perceived as an impediment. Research managers are concerned with the potential fragmentation because of lack of coordination among the customers, but fragmentation may also result from the high disciplinary specialisation of autonomous researchers. While the customer-principals want to develop concrete goals to favour product development, researchers may prefer more ambiguous goals to preserve the scientific freedom.

“There are no common goals here. Every person are probably very motivated, but only motivated to achieve ones own disciplinary goals ... Everything is difficult and complex, with different groups which are mutually dependent, and all have different priorities. This leads to a casual attitude toward work. TR is big and difficult to handle, with many local kings that you have to ask “please”. If you don’t have any common goals, I don’t think there will be any product development, at least not in the tempo of our competitors.”
(manager trainee visiting TR)

“... we have been particularly occupied with (...) to be able to achieve a better coordination within and between customer-principals. This is important to avoid the fragmentation of research tasks.”
(research manager in the TR magazine)

“Knowledgeable people have quite strong drives and wishes of their own, and I think there is often a conflict between these and common goals. We are not so used to being controlled, we are somewhat free around here. There have been changes here the last years, we have been forced into projects, but the projects are pretty fragmented, or to put it

rightly, they cover a pretty fragmented reality.”

(researcher in interview)

Research manager: “The goals have to be made clearer and more concrete.”

Researcher: “The goals must be long-term and therefore more vague.”

(observation at lunch at TR)

The research orientation critique

In the present situation, the researchers are eager to point out the differences between research and development or deliberation. They fear the erosion of their high competence and that the previously esteemed research institute shall be reduced to nothing more than an advanced service institution.

“All real research has a basic element of uncertainty - i.e. the fact that if we in advance knew what we would happen to find, it wouldn't be research any more, but deliberation or development ... If we at TR can not take care of a relatively larger degree of free or unrestrained research than what is evident from the report. I am afraid that the real tele research will take place in other forums than TR. TR will thus gradually be degraded to an advanced service institution for the rest of the organisation, while the real competence of the area will be developed and will be acquired from other research institution than TR ... The total effect will be a weakened Televerket who to an increasing degree has to buy its services from external consultants and research institutes because Televerket's own competencies will be lagging behind the development.”

(researcher in the TR magazine)

“If we are going to adapt ourselves all the time to the desires of our market oriented units, it will be difficult to do any research ... If our tasks change more often than not, our competencies would erode ... We would lose any long term direction for our competence building, and lose our position as an esteemed research institute.”

(researcher in interview)

Management are charged with lack of understanding of the importance of disciplinary knowledge and long-term research. In some respects, this is a reiteration of the critique leading to a raised scientific ambition level at the start of the 1980s, when many qualified researchers left to start working in the private businesses (Collett and Lossius, 1993). The better salary possibilities were probably important, but several suggested that they left because of too few disciplinary stimuli and problems with seeing any results of research both in Televerket and the industry.

“My goodness, what shall a modern company do with an expensive and large library filled with dusty, old books in an age characterised by Internet, WWW, and all the knowledge data-bases of the world?” ... It was the stated and practised policy of the old regime that the library should have reasonable wide resource limits, and that knowledge search and knowledge acquisition was a necessary part of the work of building telecommunications in Norway ... “Are we really going to find any use for books that are more than 10-15 years old?” is a statement from the recent local library debate ... The library at TR will be one of many tests of Telenor's understanding of the importance of knowledge as a long-term and strategic resource.”

(researcher in the TR magazine)

“Kenning's message about the professional leadership ... Disciplinary insight into what the led do, is not a necessary prerequisite for management. The problem is not in itself

connected to the managers knowledge or lack of knowledge – no manager can in any way compete with the organisation's specialists. The unfortunate development follows from defining management as a function that is independent of what an organisation do ... The damaging consequences of Kenning's teachings as they are preached and practised in Norway can hardly be overrated. They have been implanted into a culture which downgrades disciplinary substance as such, this is particularly evident in technical areas. The danger of disciplinary disclaim of responsibility ... has further involved a massive focus on the outer, on presentation and lay-out, on questions round organisation, governing systems, and rule of red tape, on verbose manifesto about strategy and visions – everything at the expense of the content, at the expense of disciplinary questions and problem statements."

(researcher in the TR magazine)

"... management's concerns about the average age at TR and continual emphasis on TR as a recruitment base for other parts of the Tele Group indicate no great understanding of long-term work by research groups who have got the hang of things ... a very bad signal for TR's future as a leading and prestigious institution in IT-Norway."

(researcher in TR magazine)

The success of R&D projects from the previous times may often be idealised in contradiction to the more narrowly oriented present business managers:

"Is the ambition level for R&D from the GSM-time something that Televerket will bring along into a highly effective and cost reducing Ltd.? In spite of all energetic assurances that maintenance and even significant increase of our disciplinary and academic level the next 25 years, few us actually believe it, I think. At a Tuesday-colloquium 3-4 years ago, the at that time technical director (...) talked about the cooperation between the research institute and the rest of Televerket, thus it was discussed at that time, too. In the debate I used the GSM as an example of Norwegian tele research which yield great results, but also require large investments throughout time. The answer from (...) was in so many words: "Was it really any point in backing up GSM so heavily; the system would have arrived anyhow?" The answer may stand as an illustrating example of the "Umwertung aller Werte" that has characterised Televerket the last decade: Why use time and money on public utilitarian value on a 5-10 years sight (...)when in the fight for the market we should ... a good example of a valuable, technical basic investment for the nation that all parties – in fact our competitors, too – benefit and will benefit greatly from, and with spreading consequences that no economist can put a figure on. The fact of the old, names called Televerket has had important functions beyond what can be fitted into narrow company-self-interest, is not least the TR a good example of. When this theme – which is far more important than if we are becoming a foundation or Ltd. or part of the Tele Group – has been kept hidden as a non-question, it is difficult to explain away that TR has let go of one of its best cards in the play for its future position."

(researcher in the TR magazine)

A preliminary authoritative solution

The preferred solution in the present situation seems to be to get approval from external and less business oriented authorities to support longer term and broader research. There are serious rumours that corporate management have instructed the divisional managers to use a certain amount of resources on R&D. Thus the divisions can not use too much force in promoting their own product development ideas. At least, there may be a period of adaptation until they develop sufficient competencies for being both sophisticated and demanding customers. There is also the possibility of getting the Ministry to instruct the corporate board and top management to increase the resources granted to research.

Informal mumbling among research managers: "Managers at TR are - or at least present themselves as they are - on the offensive in the relationship to corporate management and divisional top managers."

Research manager1: "Research director, what about the formulations in the Governmental Budget Document?"

Research director: "Corporate management have uttered a few statements to be published in the next issue of the Norwegian Telecom Group magazine. We have to wait and see ..."

Research manager2: "Are the divisions instructed that there is a limit that shall be used on R&D?"

Research director: "There is something about formalities and realities here. Corporate management have said that this is up to the individual unit ..."

Research manager2: "We can increase the R&D grants."

Research director: "There will be a period of adaptation here. Don't laugh."

Research manager3: "How about our relation to the Norwegian Telecom Group. Does the Norwegian Telecom Group have to adjust their system to adapt to us?"

(observation from manager meeting at TR)

"The framework conditions are probably given from the top. It works according to the old system still, I think. But the divisions are probably allowed minor cut downs. There will be more budget reductions and such in the future, I think."

(researcher at lunch at TR)

"It has happened several times: Politicians have intervened, and later it has turned out that they have been right. Political discussions often take a more long-term view than narrow business discussions ... In Europe there is a tradition of authoritarian government of research. The government in USA controls research in a concrete way which would have been unacceptable here. In Norway, too, the management of research is characterised by control ... I support corporate management, rather than business division management, here."

(research manager at lunch at TR)

4.3.4 Technology vs. market orientation

As we have seen, the research institute was established in order to secure a technologically successful development for the lagging behind Televerket. The role as a technological authority and a driving force for technological development has characterised the institute. A basic assumption is that technology is the primary driving force of the development in telecommunications. Therefore, knowledge about technology development and the active development of technology must be pursued. However, the dominant technological orientation has been challenged by some researchers who argue that there is more need for understanding various social forces at the market.

"Knowledge about the telenet is the primary advantage of TR in the competition for R&D commissions. This knowledge is anchored in two disciplinary traditions which overlap more and more: teletechnology and computer science. At the same time the need for R&D in the Norwegian Tele Group shifts from research on infrastructure towards higher levels in the value chain, to user-oriented applications. The cooperation between technological and social scientific competence is another of TR's competitive advantages ...

Across time there has taken place a displacement of the effort at TR, toward more emphasis on the development of applications and services, and less on basic technology. The challenge is to market-orient the research without losing the anchoring in the knowledge about the development of the telenet, where our unique contribution to the Norwegian Tele

Group lies ...What is the technological possibilities on a ten to twenty years view? The task is not impossible to answer. Most of what will be commercially available in this period exist in the laboratories today, or is already on its way out on the market ...

For TR it has become even more important to prepare the commercialisation of the applications and service areas that are developed. But a basic condition, both for TR and the Norwegian Tele Group, is the further development of what is the Norwegian Tele Group's core technology: the net and the support systems."

(the research plan)

"According to the authors, the telecommunications industry has reached a bottleneck. On the one side the ever increasing competition makes demands on the industry for the development of new technology and new products. On the other side the market does not seem to be able to obtain many of the new products that the public telenets can offer. To get out of this dilemma, the authors think there is a need for a paradigm shift or a new dogma in telecommunications.

The dominant dogma is based on telecommunications being driven forward by technological innovations. From different periods of the tele history, the authors claim that the development of telecommunications is not driven forward by technological innovations and products, but on the contrary by demand and the customers' pressure on the governments. To succeed in a competitive market, the participants thus have to acquire understanding of the forces that has formed the industry and will continue to influence its success in the future. These forces are expressed through demand."

(societal scientist and research manager, book review in the TR magazine)

The dominant technology orientation

Already before the foundation, the laboratory committee's proposal can be interpreted as an attempt at changing the decision premises of the board, based on a concept of technical optimality instead of economic-administrative calculations (Collett and Lossius, 1993). When technology changes fast, so that terms about price and performance must be revised, such calculations would quickly become irrelevant if they were not based on judgements about the development of technology (ibid.). In the following years, TR and its technology orientation was established and continually strengthened.

"With regard to the inner life in Televerket, the entire culture here has by and large been characterised by a huge technological effort. From the end of the sixties, in connection with the establishment of TR, perhaps above all as a result of the establishment of TR, there has been a focus on digitalisation in Televerket. Digitalisation is a prerequisite for the ability to offer effective information communication services, it enables the linking of computers, but is also a prerequisite for the effective operation and surveillance of the telenet itself. This was why Televerket implemented a technological program in order to build up competence on digital technology. The entire TR was marked by this, all its history. And from TR, this competence has become part of Televerket's operations and services, as time went by."

(research manager in interview)

Researchers have thus become committed to the development of their technological competencies, and proud of the results of their efforts. From the foundation, the technological research should be directed toward the international cooperation in telecommunications (Collett and Lossius, 1993). To get access to the important international research results, it was required that one could contribute with own high-level expertise. The research director had long international experience and a good international network, and the ambition was to aspire to a leader role also internationally. The pride in own technological competencies has

grown as TR researchers have often been among the first internationally, and had a relative stronger influence on the international development than its relative size would indicate. Technological visions have thus been developed and realised in the active cooperation with international technology development and standardisation organisations, and an international orientation has become part of the technology orientation. After 1985 the international engagement increased, in part because of the increased emphasis on the development of own competence in basic technology.

“Another dimension which sets us apart from the rest of the Norwegian Telecom Group is the relationship to international cooperation. We are doing a better job than other countries as regards realising ideas within international cooperation. The problem is that one may lose the anchoring in the market that shall be served.”

(research manager in interview)

The technological dominance over the rest of the organisation probably reached its heights at the start of the 1980s, when TR became an influential actor in the national tele debate. The national tele committee stated that it was not realistic to hinder the technological development, and supported the researchers' visions about realising a broadband network. In the face of the defeat in the following political decision process, the ISDN effort was perceived as the first phase of the realisation of such a broadband network. At the time of this study, there is yet another opportunity in taking the domestic initiative for a national information network.

“TR is not an organisation that decides on national goals. But we have knowledge about which goals can be reached with what technology. This knowledge must be distributed. We must continue to be an important technological supplier of premises.”

(editor of the TR magazine, in article about a planned “National Information Network”)

While many technological researchers seem to believe in some modified kind of technological determinism, the increasing uncertainty and complexity of the competitive market also support other disciplines of knowledge. Rather than providing the superior premises for important decisions, it is more and more realised that technological knowledge provides possibilities that may or may not be realised, depending on income and demand in a competitive market. Other forces imply that investments in the best basic technology may have to be postponed, and that the best solution may not be developed because use has to be made of earlier solutions where the quality is not yet satisfactory.

“We have to do economic assessments of investments. We can not let the technology govern, and just buy all the equipment we want.”

(technological research manager at lunch)

“[It is] decisive to make the right investments, at the right time. Investments must be made according to the ability to achieve revenues. To satisfy demand in a competitive market, it will be necessary to make use of solutions that on a technical view is not perfect. In other cases it will be useful to delay investments until new, lower cost, and better technology is available ...

There will emerge a great diversity of net alternatives. At the same time one will experience increasing complexity and uncertainty about the investments in infrastructure. The technology side will be characterised by a relatively predictable development dynamics concerning what will be technologically possible as time goes by.”

(the research plan)

Although the technology orientation has been weakened, its continuing domination is made evident as well as challenged by criticisms from people from other disciplines.

"It is easier to get money to travel abroad if you have such a box ..."
(societal researcher at lunch)

"Economics is not a subject at an equal level to the technical disciplines."
(economist in interview)

"I have an advantage here at TR from being educated as an engineer. I didn't experience being regarded as dumb, but I know others who did."
(manager trainee in interview)

"He was the first social scientist who applied for financing of his doctoral project from TR. He went the hard way, first got a rejection from Televerket management. The technicians, however, easily receives recognition. There have been many doctoral degrees, and easier financing. Now there will be more people following this sociologist, the CEO would be happy with more economists, I think."
(researcher in interview)

The technical service orientation

In some of the research programs which are directed towards product development, a service orientation towards the market has developed among most engineers. This orientation is different from the traditional technology orientation as the focus has shifted from the basic telenet to the development of new services. Within this service orientation, the emphasis is put on developing new services with good functionality. The services should preferably be based on the best available technology. It is supposed that future users will require services with good and innovative features, in accordance with Kotler's product orientation. In this way, it is technology which gives possibilities and creates the market. Several observations bear evidence of the service orientation. For instance, a product development case description from the Norwegian School of Management supports that "The researchers at TR and the technical experts were mainly concerned with what would be the best technological solution, and what was technically possible."

"The Norwegian Telecom Group has today most competence based on the telenet, while the new products and services, which perhaps represent tomorrow's market growth, are perhaps based on platforms outside the actual net. It is a big challenge to change a big organisation, both as regards new technology which is not connected to particular types of net, and to new political frame conditions."
(research manager in interview)

"We shall not be proud of technologies, but of services."
(researcher at lunch)

As the emphasis on the basic telenet is left, there is much discussion on how far out in the value chain one should move. There are different kinds of services. Some communication services are closer to the traditional netinfrastructure, others are user applications which should build on these platforms. While the business division customers are expected to favour the customer applications, researchers seem to try to influence the service development toward the basic platforms. The influence of the technology orientation at the expense of market orientation is also evident in the use of the label "close to the customer". It is often

understood as working with technical services rather than the more basic netinfrastructure. Further, the importance of environmental control is common in discussions. One should not move so far toward the customers that control is lost.

Researcher1: "One has to get close to the customer to earn money, pure net development is not enough."

Researcher2: "We have to get upward in the value chain, upward where the money is. Into services. It is those who have the services who are close to the customer."

Researcher1: "How far out in the value chain should we have control? How close to the customer, who is interested in the services and not in the platform, should we be?"

Researcher2: "I am not sure if one shall go so far out in the value chain."

Researcher3: "There is a question, then, if it is customer relations and knowledge about the customer which will become important, or if it is the ability to produce services."

(observation at lunch at TR)

"... from the informal framework conditions:

- one shall increase the offerings of products and services that are not pure communication services, but the offerings of communications services shall be largest and the offerings be reduced the closer one gets user applications.

- The Norwegian Telecom Group shall see to it that it is best in communication services, which is the core activity. Other services shall build on the communication services."

(from a TR research report)

Market oriented product development

Among the more market oriented product development people, the sales vs. marketing paradox is more relevant. The sales side is probably the strongest, as it is largely consistent with the technology orientation. Most researchers seem to perceive the task of marketing as offensively persuading customers to buy the products and services that can be developed based on their disciplinary competence. Left alone the business divisions would not buy enough of their projects, in particular the more long-term research projects. However, marketing is regarded as something which ideally should not be necessary.

"One of my most important tasks is to be a "salesman" for TR. It is my conviction that this piece of soap – with the label TR – is very marketable."

(new TR information manager in the TR magazine)

"My experience is one of great interest in what TR do, also regarding more long-term work. As I said, this can change, of course, but we have every possibilities to influence the development by taking initiatives and presenting our own propositions to the customer-principals. This does not involve that we shall become "sellers with ties", but (...) that we shall co-operate actively with other parts of Televerket."

(research manager in the TR magazine)

To be able to co-operate actively with the rest of the organisation, better knowledge about the customer-principals needs and wants are required. It is also emphasised by research managers that one must listen to the customers, and get a constructive dialogue, in order to use the high competence and product development to satisfy the needs of the Norwegian Telecom Group. In this way, the sales orientation's acknowledged contradiction with the marketing orientation is managed. However, the perceived lack of competent customers often leads to technological knowledge taking priority over knowledge about the customers.

"Why do US companies dominate the market? How can they be so prolific?"

- *Lack of European marketing culture. When compared to the United states, the European marketing culture is naive. In many European countries, where mercantilism has a negative connotation, marketing is not even talked about in schools. According to Peter Drucker, "Selling and marketing are antithetical rather than synonymous or complementary. There will always, one can assume, be a need for some selling but the aim of marketing is to make selling superfluous. The aim of marketing is to know and understand the customer so well the product or service fits him and sells itself."*

(press citation in the TR magazine)

Business unit participant: "It's too easy to just say that we know that the customer wants packages of services. We have (...) who says that given certain conditions this will be important, other teleoperators have market research that say that the customer does not want packages."

Researcher: "The products are so complicated that if they have to relate to single products from sub-contractors they will not have a sense of the product."

Business unit participant: "Then you presume that the customer want packages."

(observation from internal seminar at TR)

Although the recognition that product development has to become more market oriented is growing, there are some very real problems associated with too much priority assigned to the market orientation. The often referred to differences in time horizon for change is essential for understanding the conflicts. While market oriented people want a faster development in order to adjust the products quickly to the changing needs, expectations, and demands of customers, the more task oriented technologists want to use more time in order to build a good quality product according to disciplinary considerations (Colbjørnsen, 1995; Dougherty, 1992). Technological researchers focus on the long-term emergence of technologies underlying the product, and want to know from the marketing people what functions the product shall perform (Dougherty, 1992). The design parameters from the market are not so obvious, however. This problem is exacerbated if the application is new: customers cannot articulate their needs, and the needs may change in any case as the product is used (ibid.).

Research manager: "The market oriented innovation model is a problem for us. It has not always been a problem internally or within telecom, but to some degree within Norwegian research politics. "The ideas come from the market". Research is very far from this, and it has suffered from this conception. It is usual in incremental innovations, for instance the mobile telephone becoming smaller and smaller, but the marketing thinking can not create radical innovations, like for instance GSM. In the telecom world, there is an ability to create radical innovations, because there is a will to do it, one goes for a system which have the right qualities ...

New employee: "Isn't this wishful thinking ...?"

Research manager: "Let us say that this is a goal. What happens within the market oriented model is important, too. We shall manage this, too. And manage the interplay between these two models. If we leave out the market oriented model, the radical innovations will become more casual. In the radical model there is long time before one gets results. One needs long time horizons."

(observation from introductory course for new employees at TR)

"The product development has to be more governed by the market. It is a heavy cultural challenge for a technology focused organisation. We have had subscribers, not customers. We have talked about customers for a while, but ... The time it takes to get products into the market has to be reduced now, so a few quality requirements has to be reduced. And it is impossible to collect market information about totally new products which nobody has heard about."

(research manager in interview)

The growth of the social user orientation

Taking one step back from the current problems with internal customers, there has been change towards increased user orientation since the strong technology emphasis of the 1970s (Collett and Lossius, 1993). To strengthen TR's position in the long term planning, and manage conflicts in the cooperation with the industry, a new group which should do research on needs for future teleservices was early established. Experience indicated that Televerket had underestimated the demand for telephone, and the need for better information only increased as new services which required large investments should be introduced. Social market research became a search for domains where the new technology had application potential, and often led to the modification of the most optimistic expectations. Throughout the 1980s, the marketing orientation of the rest of the organisation increased the interest in TR's expertise in this area, and the activities were much expanded. New directions included the active influence of the market through user trials, contributions to the development of equipment through competence in people-machine communication, and analysis of Televerket's strategic possibilities in the new competitive situation.

A holistic user orientation has resulted, which has much in common with Kotler's (1997) societal marketing orientation. The total consequences of new teleservices for the users has to be taken into consideration within a society perspective. As the users do not know and learn only slowly how new teleservices influence their everyday life, research using both technological and social competence must be done to understand the contributions of radically new technology for the satisfaction of the needs of the users and the society.

"At TR one is mainly concerned with more far-reaching social considerations, consequences for the users everyday life and social interaction ... Some think marketing people are too confident of traditional market research. Words like segmentation, positioning, and market development, give some associations like "grabbing as much money as possible from people's pockets"."

(product development case description from the Norwegian School of Management)

"With a higher educational level among people Norwegian Telecom will meet more sophisticated and articulated needs ... Innovative subcultures is a fertile soil for exciting experiments with new communication technology ... It has been a matter of course that common services shall be user friendly, but also that they may be tailor-made for the single user or organisation."

(TR research plan about the far future)

4.3.5 Society vs. business orientation

The society orientation and its long history

The society orientation, which supports the holistic user orientation, has a strong standing at the research institute. Since the foundation, the research and development activities has been directed toward building telecommunications for Norway. The society orientation holds that telecommunications has many benefits for the society, and investments should therefore be made in the development of this technology. Some of the probable social benefits are listed in the recent initiative for a National Information Network:

“Computerworld rightly asks for a national policy at this area. We have in many ways turned into a pioneer country in Europe within telecommunications. Much of the reason can probably be attributed to our CEO’s vision in 1986 that “Norway shall become one of the best telecountries before 1995 – and this is our common mission!”. It created enthusiasm within the ranks.

Perhaps the next political goal at the telecommunications area should be to become a pioneer country in developing a national infrastructure for information and communication – or a National Information Network – which can realise important national goals like

- * give equal and affordable access to information for all inhabitants*
- * improve the exploitation of technology*
- * create new possibilities for industry, at established and new areas*
- * more environmentally friendly communications*
- * maintain population in the districts*
- * make effective Norwegian industry and public administration*
- * improve health offers and education possibilities ...”*

(editor in the TR magazine)

The social significance of teleservices has been actively promoted also externally (Collett and Lossius, 1993). Throughout the 1970s, TR participated actively in the long term planning to increase the understanding of the importance of good teleservices for the society among the public and the politicians. In the following public debate, TR contributed, in particular through the work of the national tele committee, to the qualitative change of habitual misconceptions about the teleservices and their position in society. Instead of waiting lists and charge levels, the debate focused on how the telecommunications could contribute to improve the way the whole society worked. IT-politics became a central theme, and much attention was paid to the growth of the information society. The tele committee did not see any reason to wait for the demand before starting to build a broadband network. This project for changing the fundamental conditions of Norwegian industry and local societies was important for competitive advantage and district considerations. The traditional disadvantages of Norway, the dispersed population and the long distance from central Europe, would more or less be compensated by the effective use of teleservices.

TR has since the start had a special responsibility for the development of telecom related industry (ibid.). The competence of the industry should be built up so that the industry could be competitive and fulfil the needs of Televerket and the society. In particular the electronics industry was important in order to avoid too much dependency on other countries. The two main suppliers of Televerket were subsidiaries of foreign companies, and the research director argued for a better protection of Norwegian interests: the research results should only be used to support the Norwegian subsidiaries. For their own contracts, TR emphasised that the company's competence and motivation should be the decisive criteria, favouring and too much protection of Norwegian industry could be negative. The use of development contracts increased toward the end of the 1980s. There were great expectations that the increased effort should result in good industrial projects, but the reactions from the industry were often disappointing, for example the response to initiatives for mobilising the Norwegian companies in the GSM effort. An often mentioned successful example is the cooperation with Tandberg in the development of an ISDN videophone.

Early awareness of liberalisation and the desirability of business

The international orientation early led to the recognition of liberalisation tendencies in other parts of the world. TR was one of the first to point out that competition would come, and that

a stronger business orientation was indeed desirable. When the majority of the tele committee proposed limitations in the monopoly, these thoughts had their source at TR (Collett and Lossius, 1993). One reason for supporting liberalisation was that the participation in the competition on tele equipment would give possibilities to develop advanced solutions for business customers with special needs. Company networks would be the first opportunity to realise the ideas about the digital service integrated network.

“Historically, it was here at TR, early in the eighties, a better consciousness about getting in a commercial orientation toward the market than elsewhere in Televerket. When TBK was established, for instance, it started as a project at TR ... I was appointed as a member of a committee that should take a look on the tele market, and I said, on the background of what I had read and heard and seen from other parts of the world, first and foremost from USA, that the competition was coming. I was labelled as a “thatcherist”, then. The attitude at that time was that competition was not going to come to Norway. So both the selling orientation and the holistic user orientation, they have been strong here in comparison with the rest of Televerket.”

(research manager in interview)

In today's competitive situation, the consequences of liberalisation and commercialisation have made TR more critical than many others in Telenor. But TR managers and researchers have to face the increasingly competitive and less controllable environment, with the more powerful management of Telenor who emphasises the utilisation of disciplinary competencies to the benefit of the company's own profitability and competitiveness. Some TR managers and researchers argue that an increased business orientation is necessary in order to survive and prosper in the new situation.

“... change to a limited company ... competition in the telemarkets makes such changes necessary ... Although we in Norway have been among the first internationally in many domains, we are now among the last who adapt our national telecom operator to the international realities.”

(new research director in TR magazine)

“The telecom milieu is used to working with public standards, the IT milieu is used to choice of standards being made in the market. The IT-milieu is often right.”

(research manager in interview)

“The ministry will approve of a stronger and faster growth than the Board has proposed ... “also include products within the telecommunications area which is useful for other public and private companies, too”. This we interpret in such a way that TR shall still support Norwegian industry and Norwegian institutes through an extra expenditure load on Televerket who not only benefits ourselves, but also our present and future competitors in the increasingly deregulated telecommunications market ... The governmental report does not take into account the totally new situation that Televerket finds itself in, with more and more increasing competition, but still directs Televerket toward a general tele-political societal responsibility.”

(researcher in TR magazine)

The argument that one may risk lagging behind the international development is critical. Being among the first internationally has always been a source of pride, but many fear that this position might be lost as the traditional standardisation work becomes less weighty. The new research director thus argue that the international orientation will continue to be very important, and may be even more important in the new situation. This would require some

changes in how the international work is carried out, though. It must support the business strategy of the corporation.

“International work is still (at least as) important as before, but there are some new guidance for our work:

- We have to put stronger demands on how we manage our resources, both working time and pure money. This implies that we have to prioritise stronger than before, and we have to get more effect out of the money we have allocated to our travel budget ...

- We have to use resources on the standardisation activities where it is decisive for the Norwegian Telecom Group which standard is chosen, and instead withdraw from projects where it actually is of little importance if this is one or the other standard ...

- Participation in international research projects is an important means for realising our own research strategy. We must also be better at making visible the results of our work.”

(new research director in TR magazine)

“based on our participation in international R&D projects, we have good prerequisites for continuing our work with our international “horizon” ... these wholly or partly owned companies abroad are potential customer-principals for us! Trough enlarging our project portfolio with such principals we can widen our space for action, and we can become even better able to follow “where things happen” at the international arena.”

(new research director in the TR magazine)

Support for the business orientation may also come from the experiences with industrial cooperation. Even before the foundation, the researchers had a close co-operation with NERA in Bergen, whose purpose was to arrange for commercial production of the radio line equipment (Collett and Lossius, 1993). After the start of the liberalisation, totally new perspectives arose about the cooperation with the supplier industry (ibid.). It was difficult to get committed participation as long as Televerket was a state owned public monopoly, and plans were developed for a new competitive organisation. The plans were stopped at the political level, instead TBK was established. Support for the business orientation may also come from contradictions between the society orientation and the R&D orientation. For instance, the organisational decentralisation required by district considerations may be countered by the disciplinary advantages of a large, geographically concentrated R&D milieu. Further, the wish to have the best competencies in the corporation within business related fields, too, may increase the number of researchers who hold businesslike values.

“The reorganisation of Televerket can easily displace the relationship between the number of employees in central locations and the districts ... We will of course assess if it is of current interest to establish more/larger units outside (...), but this will implicate large disadvantages of organisational and administrative kinds. Our strength today in comparison with sister organisations in other countries is just the fact that we are gathered in one location, and we have to be careful with splitting up the strong disciplinary milieu we have today at TR.”

(research director in letter to the chief organisational officer)

“The Ministry put forward good services, low prices, and cost efficiency as the overall goals of Televerket, but still wish a good geographical distribution of the activities.”

(research manager in the TR magazine)

“We want as much as possible of what is useful for understanding our market. We have market research in our division, too. The location of market research competence in the Norwegian Telecom Group has to be discussed. Which competencies shall be located here

and which competencies in our division?"

(market division manager at project meeting at TR)

However, the consequences of liberalisation are often negative from the perspectives of the society, research, and technology orientations.

Consequences of competition: structural inefficiency and unreliable business participants

The most common opinion of people holding the society orientation is that the introduction of competition often keeps the society's interests from being served. Therefore, political initiatives and interventions are required. The regulation of the otherwise ineffective organisation of the telecommunications market was one of the disciplinary areas studied at the research program where I stayed. Some of the problems may be noticed in typical informal discussions:

Researcher1: " ... we have to take care of society's interests, too, in our study of the regulation of the telecommunications industry. Not just the interests of the Norwegian Telecom Group. We have to be fair and reasonable here, and prepare for competition."

Researcher2: "This is complex. Have a look at those who really have competition. How many people are working with how to distribute the costs between different operators using the same net?"

Researcher1: "It keeps a lot of academicians alive." (laughter)

Researcher3: "There is some underinvestment, the competition keeps people from taking risk."

Researcher2: "This is one of the really great problems."

Researcher1: "Nor is it the case, as many believe, that if one has competition one moves toward perfect competition. Everybody tries to limit the competition. Also the Norwegian Telecom Group, of course, if it becomes a private company ..."

(observations from project meeting at TR)

"It would be stupid if both Telemobil and Netcom built their own nets in [some less populated districts]."

(observation at lunch at TR)

"One is very concerned with competition in the USA. But one does not question it, one only questions if it works. There is something good with competition, however, lower prices of long distance talks, at least. Many new services is a result of overinvestment in technology, I think. There are large costs associated with regulation in a competitive situation ... When they asked me about how things were at home in Norway, I told them that we had a monopoly. Then it is simple to make a call, he said."

(observation at coffee break at TR, researcher returning from a study trip to USA)

The reason for the structural ineffectiveness is to a large degree attributed to the new logic of the business oriented companies. Most people fear that short-term profit will be favoured at the expense of socially responsible and long-term operation. Some perceive the greediness to grow among the business oriented management of their own company, too. Below one of the social researchers explains the differences between the old public service thinking and the new businesslike market orientation, awaiting the appearance of a more serious disciplinary perspective:

"In telecommunications, one has moved from public service thinking to a competitive regime thinking. As long as you have a monopolist company with a purpose of building infrastructure and giving an equal offer to the population, then telecommunications is a

public good that everyone who need shall have with the same performance and at the same price. But when you change to a market orientation, you think that it is those who demand services who shall have them, of course. There is no demand from the others, so they don't want new services. But when teleservices become more similar to media, there will be stronger conflicts in this area. As you can observe in the media politics, there is much discussion on if you have a good citizenship perspective or not. There will be more discussion on what services you actually need – should you offer more of concrete information services even if the market demand is not as high as the demand for the sex-telephone, for instance ... There are many perspectives here at TR, but at least at the programs closer to the market, people are perhaps concerned with such a citizen perspective.”

(researcher in interview)

“There is already, and there will be even more, competition between many participants and kinds of participants, something that challenges the rules of competition. I have a gut feeling that already today traditional tele companies and IT companies compete in very different ways. They have different traditions – tele companies have traditionally been operating in regulated markets with a long time horizon, while IT companies has operated like wolves among other wolves. There will be even more half-serious participants who are looking for short-term profit. Televerket has to remain a reliable, trustworthy, serious supplier with a long time horizon.”

(researcher in e-mail to the research plan work)

Researcher (technologist): “Have you heard what people say about the new logo? It means doing like this ... (putting his arms around something, laughing)...Grabbing. Being out for everything that you can get.”

Me (laughing a bit too): “Grabbing as much customers and money as possible.”

Researcher (business economist): “Or trying to keep as much as possible - not loosing customers.”

(observation at lunch at TR)

The managers' acceptance of the liberal business orientation is accompanied by strong critique. They are often perceived to be rather naive and uncritical, and lacking or disregarding the disciplinary competence necessary to understand the way the organisation works.

“What calls for reflection is the totally uncritical, without reservation, and completely without modifications principles meant and developed for entirely different circumstances are transferred to the Norwegian corporate culture. And this is something one should pay more attention to, because this process occurs incessantly with newer and entirely different ideas than Kenning's theses. It occurs in many forms, but generally with two kinds of actors as the main characters: 1) Big, foreign consultancy companies with organisation theory as speciality, who move round like travelling circuses with one show more impressive than the other, and with 2) an audience of local company management: wide-eyed, impressed, and with few or no mental barriers.”

(technological researcher in TR magazine)

Researchers in business economical disciplines may suffer from the same critique. They may easily be taken as rather superficial and short-term oriented, lacking the deep understanding necessary for serious research.

“Economics is no subject on the level of technical disciplines, there is a difference between social and business economics, though ...”

(social economist at coffee break at TR)

Researcher1: "[Business economist] got in on this new area ..."

Researcher2: "Yes, these business economists jump quickly at new domains. They pass lightly over several new domains. We should rather make an effort on technology."

Researcher1: "Well, I am sure it is useful for economists competence. They are connected these domains. But we cannot slur over too many technologies, at the technical side. You can be sure of that. [Business economist] was at that conference in London, it proved out that home-shopping was not as profitable as expected."

Researcher2: Yes, but there is a question about how short-term view one should take on this matter."

Researcher1: "It was experiences from USA ..."

(observation from lunch at TR)

Tensions between the business orientation and the society orientation may "arise from a conflict between organisational exigencies and the values of individual employees, which are, in turn, reflective of the values of the larger society" (Martin et al., 1983). Obviously, they may also be accentuated by the perceived consequences of the business orientation for long-term investments in R&D and new technology. We may also notice the contradiction with social values at work:

"Value creation is expressed through our economical results, but the concept also includes social values that are created in the work process, like comradeship, joy of work, and safety."

(staff in the TR magazine)

"A common trait is that people here are good at taking care of each other. Take care of the employees, and not just think of what one can get out of them. There may be some changes on the way, with reference to what takes place in Telenor New Possibilities. I think people think that now it is competition, and one has to sacrifice something."

(manager trainee visiting TR, in interview)

Reduced investments in long-term research

The business orientation is perceived to reduce long-term research because managers will give priority to keeping budgets and saving money in order to achieve short-term profit. In particular in combination with the recently introduced user-demand based management system to govern R&D, the investments in long-term research are reduced. This system is not perceived to solve problems in the management of R&D. Rather, it creates further problems as divisional principals are granted decisional authority in a situation where it is profitable for each of them to let others pay for the common benefits from research. Most researchers would prefer that top management took a long-term and authoritative decision.

"The era of "the enlightened leadership" is to every excesses joined with a Manchester-libertarian stream so romantic and unrealistic that even the last century couldn't exhibit the like of it, where the illusion is that the market solves every problem. Not just between companies, but within them too; the thesis is that the company development is best where the atomic units of the company acts freely and unrestrainedly – like in a market – with each other. If the company's research unit shall be maintained, for instance, thus never becomes a troublesome and binding choice to be taken by top management, the question is left to the market instead: the research department must itself demonstrate that it has the right to life by constantly offering "goods" which is marketable and sought after at the internal market."

(technological researcher in the TR magazine)

“The goal- and result oriented management system involves a “free-rider problem” as regards research and development. I think the solution is to lift the financing to the top management. Let them decide on the limits of grants, then the project negotiations with customer-principals can deal with the concrete content of projects.”

(research manager in interview)

“All experience from industrial/private research laboratories show that it is often difficult to follow up entirely new findings/inventions because the organisation is occupied with earning money or staying within activated budgets and time tables within narrow deliberation- and development programs ... Partly many department managers want to be “clever” and save money, either to stay on the budget while there are excesses in other areas or when they are instructed to cut down the budgets, and then it is research that most of the time must suffer in order to achieve short-term profit.”

(researcher in the TR magazine)

There are other problems with long-term research in a liberal business world. For instance, the higher salaries offered in more short-term oriented parts of the corporation, and in other competing companies, may make experienced researchers leave.

“(...)'s work in Televerket and transfer to Netcom makes clear and current many problems associated with R&D in a company exposed to competition ... There is reason to believe that people at Netcom is rubbing their hands. The fact that Televerket educates an expert for seven years and to a cost of X millions, and the fact that this one thereafter can be collected by a higher salary bid, must be said to be a good deal ... (...)’s position in the ETSI and CCIR activities about the task of developing a third generation mobile communication system (...) a very special position that we now loose (...) would have given the Norwegian Telecom Group a survey of the situation and influence possibilities in the developmental work, and TR a very large circle of acquaintances within all leading development milieus.”

(researcher in TR magazine)

The researchers have seen the willingness by business oriented managers to invest in profitable product development, however. What they are concerned with, is the reduced autonomy of research and the erosion of the foundation of broad knowledge and competencies necessary for successful product development. Thus the business oriented managers have to recognise that more resources devoted to long-term research may be a very profitable investment.

“The downsizing of Televerket illustrates the importance of creating new products, new activity and new employment, in sum value creation. This (...) burns to, at the same time he snorts a bit at the word “market orientation”. It is often used by people who really means short-term profit. Fast money is only made through pure mercenary activities. In research a long term perspective is necessary, just in order to develop new products which stand a chance in the market.”

(the TR magazine)

Research manager1: “One cannot save for death. In other telecom companies like AT&T the effort on R&D was increased. Our sister organisation Bell labs doubled R&D in from 1984 to 1989. We can see a considerable backing of R&D in the change processes.”

Information staff manager: “AT&T increased the introduction of new products a lot. It is important to introduce a lot of reasonable products which have market possibilities. I have not talked enough about product development.”

*Research manager2 (experienced with successful product development): "The improvement potential is enormous. Just a little bit of resources is needed to improve product development." (followed by a little laughter among the other participants)
(observation from a management forum at TR with a visiting information manager)*

There is belief in the value of R&D for long-term private business profit. But there is even more belief in the long-term social value of R&D. When the "privatised" company is not perceived as socially responsible enough to invest in research that may contribute to the larger social benefits, the favoured solution may again be the authoritative higher level decision. The financing of long-term research for more than narrow business goals should be lifted to the government and the parliament. At the time of this study, this attitude was supported by the ministry's proposal to instruct the board to support societal useful research and increase the total amount of resources used on research.

"Why is there such an enormous willingness to invest in R&D? There is a very high private business profit, but the main driving force is the social gain, the welfare benefit, what the society receive from R&D."

(research manager at introductory course)

"Have you heard the formulations in the Governmental Budget. Top management have said that we exist for the benefit of the Norwegian Telecom Group. But now the Norwegian Telecom Group's goals are in opposition to national goals."

(research manager in informal discussion at TR)

"If you read the Government Budget Document, you can see that the formulation on societal goals is a clear corrective to top management."

(researcher at project meeting at TR)

Underinvestment and fragmentation of technology

The liberalisation of the market and the business orientation of companies are also perceived to reduce investments in new technology. When competition is introduced in national markets, the risk of the very huge and capital demanding investments will grow large. In the face of this risk, even the largest telecom operators are expected to become rather cautious. They will stay with the old technology longer than necessary in order to not risk losing money. The customers will not provide the signals sufficient for any future oriented and socially optimal strategy. Further, the need to adapt to big customers and to competitive moves of competitors is expected to lead to a mass of disjointed, short-term adjustments which will drive out the more uniform and reasonable technological solutions.

"Investments in telecommunication infrastructure is very capital-demanding. The extensive investments in the 1970'ies and 80'ies were a success; the undercapacity at the supply side was removed and the operations rationalised. Toward the millennium shift the challenges are of a quite different kind. With increasing competition – also at the net side – it is no longer sufficient to go for a modernisation of the technology. Under competition, the income capabilities are put to the test. Unsuccessful investments can involve economical overloads with dramatic consequences. Telecommunications have become both a growth area and a risky business."

(the TR research plan)

"Previously the company was subject to protected operations, now it is on its way out of this situation and into competition. When Televerket was a monopoly company, what was

the technical-economical optimum was optimal for the market, now political regulations have been introduced in addition..."

(research manager in interview)

"The society does not have any clear idea of what kind of future teleservices and net infrastructure is wanted ... we will also in ten to twenty years experience inertia in the (...) introduction of new teleservices, applications, and products ... Many teleservices that from product development should be attractive is rejected by the market – while other, often banal incremental innovations, enjoy great success."

(TR research plan draft)

"Even dominating net operators are cautious with making large scale investments. This have made political interventions more and more common and necessary. The Norwegian Telecom Group has made a strong bid for rationalising its infrastructure and production platform, but has only partly succeeded. The considerations for fast solutions for big customers and over and over again stemming new kinds of competitors, has undermined the efforts of developing a uniform infrastructure."

(scenario from TR research plan)

Previously, the international standardisation work contributed to the development of a uniform infrastructure. Throughout the 1980s, the domination of the union of national teleoperators was put under pressure from the converging, fast changing, and competition characterised information technology industry (Genschel, 1997). In the new competitive situation, competing standard setting organisations emerged. Eurescom was established as a closed consortium for the teleoperators, for the purpose of cooperation on strategic and future directed technology development. The effectiveness of different standard setting regimes has been the subject of much discussion (ibid.). At TR the researchers seldom express any belief in the sufficiency of the new system (cf. Ulset, 1996). The previous efforts at developing a uniform infrastructure - which reduced the risk for teleoperators and also carried great benefits for the customers - have been undermined. The success of mobile telephones in Europe, where one standard has been implemented, in comparison with USA, where three competing digital standards has been one important reason that mobile telephones has done less well (The Economist, September 1997), is often referred to as an example of the superiority of the old standard setting system.

"Earlier international organisations in which we participated decided on which standard should win. Now this will gradually be decided in competition, and it is the "de-facto standard" that will win. In Europe, we are closer to the monopoly situation, and therefore we have been able to agree to go for the GSM. In USA there has been hard competition and many different standards, everyone fighting to keep customers within their standard."

(researcher in interview)

"On the surface, we may appear to be making reasonable progress towards a single market. But underneath there are titanic struggles as countries try to bend the rules to suit their own requirements. Nowhere is this more harmful, than in telecommunications ... Rather than harmonisation, the European telecom businesses face the prospect of continued fragmentation, with the agenda dictated by the interest of large telecom firms or national self-interest rather than the needs of the network users ... The dream of harmonisation appears to be disintegrating, with the result that countries with advanced networks will accelerate away from those who are dragging their heels."

(press cutting in the TR magazine)

TR is proud of its active participation in the standardisation of telecom technology, where it has succeeded to influence the development at the international arena more than its small relative size should indicate. A difficult and time demanding diplomacy has been required, as many different interests and viewpoints met in this process - own country's industry, national prestige, international power relations, "the technology itself" (Collett and Lossius, 1993). As environmental control is reduced, even more within the national borders than outside, the ability to implement radically new, and purportedly socially optimal technological infrastructure, communication platforms, and user oriented services, may suffer.

"This is the evaluation of finance experts in ... The success of Tandberg in the development of Vision has to be seen in connection with their cooperation with Televerket's research institute (TR). TR possesses some of the most outstanding competence of the world within the kodek-technology. By virtue of this competence, TR has participated with great influence in international standardising committees. Thus they have been able to contribute to reduce the risk of a possible false effort and waste of resources."

(the TR magazine)

"TR has participated much in projects outside TR, in the Norwegian Telecom Group, in Eurescom, and in other international groups. Previously there were fewer tasks, but one could be more certain that what one did was implemented later. Now it is more windy, with many inputs. We have also had much cooperation with Norwegian industry. It has been reduced, but it is still of current interest."

(research manager in interview)

Balance in favour of the society orientation

The business orientation may gain strength as researchers to an increasing extent realise that in the new situation it is not a threat but a way to realise their interests. As far as contributing to the competitiveness and profitability of Telenor is the best or only way to serve also the long-term research and technology interests, the business orientation may come to gain the upper hand. While some society orientation and a long time horizon seem to exist among top management, they do not want to finance research which is not directed toward the economical interests of Telenor itself. However, support for social useful research seems to exist outside Telenor. The conflict with business oriented top management can not be presumed to be managed by governmental instructions throughout time, but financial support of social useful research can be attained from some public source. The favoured solution of both top management and researchers may thus be product development and its foundation backed by Telenor, and socially useful research financed from outside sources. In this way, the balance may move further toward the business side but continue to lean toward the society orientation as the R&D unit becomes less dependent on business oriented managers.

"For the Norwegian Telecom Group as a whole it has been particularly difficult to find the balance between the expectations of societal commitments following from the NIN, and purely commercial considerations. In the horizon period, the latter are becoming more and more importunate. For TR it has therefore become even more important than before to prepare commercialisation of the applications and service areas that are developed."

(scenario from TR research plan)

"What about a compromise? Long-term research is available to everyone, while short-term product development is only for the Norwegian Telecom Group."

(researcher at lunch at TR)

Both parties emphasise that there is not necessarily a conflict of interests between these two orientations. For instance, the business oriented new research director points out the possibility of mutually beneficial projects with other companies in the telecom industry. Society oriented people often point out that supposedly weak groups can show up to be good customers. In situations of conflict, however, the business logic maintains that TR should only contribute to national goals if this support the interests of Telenor. The society orientation may hold that the profitability and competitiveness of Telenor should not be given priority at the expense of weak groups or the society at large. But they have in common the interest in promoting telecom technology.

“As Televerket becomes our “only customer”, will this happen at the expense of our relationships with the industry? Not necessarily, claims our new research director. There are practical problems, in particular as regards money administration, but the goal has to be finding projects of mutual benefit to industry and Televerket. Televerket will do the industry a disservice if it is no demanding customer and partner. TR shall not be a mini research council, or hand out “charities.””

(the new research director in the TR magazine)

“In my opinion, it is absolutely in the interests of Telenor that we produce research results which support the rest of the industry and the country.”

(research manager in interview)

“A green technology ... As a technology telecommunications has a positive image, by virtue of little pollution and energy use. In the horizon period, this is used for what it is worth to sell teleservices, both by the Norwegian Telecom Group and others. This is reinforced by a series of political interventions in order to make the most of telecommunications in the environmental struggle.”

(TR research plan)

TR's ambition is still to play a leading role in the national IT- and telecom milieu, although the environmental control has been reduced. As an authority of a monopolist organisation, TR was characterised by relatively large environmental control. Televerket had much power to influence the national telecom market, within the limits set by the ministry and the politicians. In the cooperation with the electronics equipment companies, the technical university, and other research institutes, TR should have the system competence: survey all tasks, analyse them, and delegate tasks to the others (Collett and Lossius, 1993). It was a large customer for the tele-related industry, but at the same time dependent on their multinational suppliers and with small power resources in the case they did not fulfil their commitments. With increasing competition, the power of the two dominant suppliers has been reduced, but so have also both Televerket's dominant position and TR's position within the new corporation.

“The Norwegian Telecom Group was in the past a dominating actor who has been able to control most within own market domain and national limits. Now the borders have fallen: Not only is there more actors in the market, which has become global, but the cooperation between the tele-market and the rest of society is far more intense than previously ... this will require a cooperation between many participants. The Norwegian Telecom Group should be in front.”

(the research plan)

“...we aim at being a driving force in the national research and development milieu at the tele- and IT-sector also in the future. Our ability to do so, however, depends on our

economy and competitiveness.”

(the TR magazine)

The vision of most researchers is that the R&D unit shall be in front of more than securing Telenor's own economy and competitive ability. The development in the whole telecom sector should be influenced in order to secure the future welfare society, and to hinder that future telesystems shall "work like a pimp" (TR research plan draft). They feel they have the right and possibility to work for realising new technology in a way that does not depend on, for instance, earning money from dubious sex service content providers. New telecommunications should not be held back from serving more worthy ethical and social responsible purposes, e.g., the human right to basic telecom services, and the equal distribution of the welfare it creates.

“Access to telecommunications, in particular telephony, will become, and is perhaps already, a human right, as a component of what is included in an existential minimum and human dignity. This will be opposed to the liberalisation tendencies, but at the same time so basic for society that it will be taken care of ... a source of conflicts and tensions between those who regulate the tele sector and those who social burdens are laid on: Everybody will wish to have a social arrangement, but nobody wants to pay for it. But this will be overshadowed by the fact that in addition to the social responsibility it will be in the interest of society that teleservices are widely distributed: It will be a prerequisite for future welfare development and efficient engineering of the social machinery. This can imply that:

- In Norway district considerations will be included in the social dimension, with all the political power that lies here*
- A social basic attitude does not need to involve just large costs, but interesting customer groups. The elderly will still be among the most solvent in ten to twenty years*
- Future minded service suppliers will find that it does not need to be a conflict between business operations and social profile / responsibility. The development of teleservices and –equipment for elderly and other “weak” groups can prove to be good business.*

Anti-theses

- The structural changes will lead to a fragmentation of responsibility which makes weak groups and districts lack behind as concerns access to telecommunications and IT.”*

(TR research plan draft)

*“Following some rounds of adjustments our vision goes like this:
The research of Televerket shall lay down the foundations for tomorrow's value creation, so that Televerket at any time can satisfy the customer's requirements for good telecommunications and contribute to national industrial goals ...
The word that binds it all together is value creation. After a decade in which values was equalised with money, and money was most easily earned by moving money, it is hopefully once more become a common point of view that money is at best a measure of values. The foundation of welfare is human work.”*

(research manager in TR magazine)

4.3.6 Action oriented pragmatism vs. disciplinary judgement

The action oriented pragmatism

In accordance with the new and more action oriented business orientation of Telenor, the new research director works to implement a more action and pragmatic way of management:

"We are in the process of change from 'committee management' and 'decisional meetings' to personal responsibility of managers. I want decisions in the R&D unit to be taken at the 'lowest' possible level, because there you normally have the best qualifications to find good solutions and learn from experience ... The advantage of a small top leadership group is easier coordination of the R&D unit and better ability to take actions both internally and externally."

(new research director in the R&D magazine)

The pragmatic action orientation is introduced to replace an old regime characterised by bureaucracy and technocratic expert governance (Johannesen and Ulvestad, 1994). Individual initiative and responsibility within a more decentralised organisation and more informal communication should lead to better learning, increased creativity, and more competent decisions. In particular, the time needed to take decisions should be reduced. The action orientation also involves increased emphasis on research managers' personal loyalty toward the organisation and its results. This pragmatism is opposed to the previous loyalty toward their disciplinary groups, and the top leadership group is made small "in order to avoid narrow thought" (ibid.). In using science as a means to reach results that are useful for the organisation itself, disciplinary truth may be both balanced with and subordinated to managerial judgements. Truth and reality emerge more from pragmatic considerations and political conflicts about what leads to the best results than earlier. The following assumption may have some support, first and foremost among technology- and product development people: Researchers have specialised knowledge about different alternatives for technology development and its consequences, knowledge which must be made available and distributed, but judgements and decisions about future realities should be made by the responsible managers, customer-principals, and politicians.

"The research of TR has often been short-term and practically useful. The difference is that now the principals will decide on what is of utilitarian value, while previously we did this ourselves. Earlier there were no competent principals with the exception of the Net division. There were more civil engineers in TR than in the rest of Televerket. Now there are more competent people round the Norwegian Telecom Group, for instance there are market departments."

(research manager in discussion with other research managers)

"We administer the truth. If we are asked we have to speak up, then top management can decide how things will be."

(the new research director at introductory course for new employees)

Some negative consequences of the new leadership philosophy are reported. Much ambiguity is introduced, and people long for the security of earlier times. Decisions are casual and badly justified, there is lack of information and controlled circulation of rumours, it is not visible who participates in decisions, and there is doubt about how much managers know about the competencies of people (Johannesen and Ulvestad, 1994). From the interpretive framework of the new leadership, these grievances may easily be seen as results of the uncertainty avoidance developed in what should be an old era of bureaucratic stability, order and clarity.

"Our past is characterised by stability in our environment ... Our inner life at TR has therefore been naturally well-ordered and structured, with the tidiness and safety this create ... For TR, the changes has been less dramatic, but nevertheless we have had an unusual situation characterised by changes and uncertainty ... In the future, we must expect increased change both externally and internally."

(the new research director in the TR magazine)

“The very process has moved faster and has at times been less structured than many have appreciated. The reason is the time pressure on us in order to “reach” the rest of Televerket.”

(new research director in the TR magazine)

Bureaucracy and uncertainty avoidance

There is support that some employees at TR avoid uncertainty. The new leadership philosophy was perceived as lacking structure and direction, and as a danger to the disciplinary development of the organisation (Beech & Cairns, 2001). A lot of criticism was raised against the new organisational structure, with a changed matrix organisation, because it was not clear to whom one should report when "researchers were to be allocated dynamically". In addition, there are arguments that people naturally want to work in areas in which they feel secure, and suggestions that technology may be such a safe domain.

“If we dispose of cosmetics and trivialities we are left with the following “basics” for TR to be functioning and surviving:

** the tasks have to be distributed in such a way that responsibility relations between units / management is clear.”*

(administrative staff in the TR magazine)

“The manager will, like other human beings, prefer to limit his task to that area where he can manage with safety. He would rather avoid those areas in which he feels insecure. The dogma about the professional manager allows him to confine his manager function to what he can do based on a common basis, with no insight into the organisation’s disciplinary activity.”

(researcher in the TR magazine)

“The safety of the technical details could again conquer the active part of the brain.”

(humorous travel report from researcher in the TR magazine)

As regards bureaucratic formalisation, much of the literature asserts that it undermines the commitment and innovativeness of scientists and engineers who typically aspire to high levels of autonomy (Adler & Borys, 1996). This view is not uncontested, however. The use of formal procedures to perform the more routine parts of the tasks, when they capture lessons of prior experience and when they help coordinate larger-scale projects, may enhance researchers' effectiveness and subjective self-efficacy (ibid.). This may be one reason that many embraced the formalisation and clarification of responsibility relations, another may be the need to avoid reporting relationships to informal and arbitrary business managers without respect for disciplinary knowledge. Bureaucratic formalisation may thus in itself be no better indication of uncertainty avoidance than adaptation is of uncertainty tolerance. As the other observations indicate, however, it would be wrong to conclude that there is no uncertainty avoidance at TR. Mathisen (1989, referred in Collett and Lossius, 1993) found that at the same time as the researchers enjoyed great freedom, ambiguity about their own role might undermine the motivation and inspiration of some of them, in particular the younger ones. There was lack of criteria for the quality of the research other than utility for Telenor, as the recognition from support in the international standardisation work was reduced, and not always any clear feedback from Telenor management and users. Additional evidence that some prefer to avoid such ambiguity comes from the present discussions about appropriate goals for research and development projects.

“One of the advantages of working on external projects in Telenor is having clearer goals than those we have at TR.”

(research manager at introductory course for new employees at TR)

“The goals they set are fairly far from the realities, there is no concrete and precise measurement and following up.”

(researcher at lunch at TR)

Research manager: “The goals have to be made clearer and more concrete.”

Researcher: “The goals must be long-term and therefore more vague.”

(observation at lunch at TR)

Disciplinary judgement

Some researchers and research managers appear tolerant of and rather comfortable with ambiguity. They often emphasise that one can never be certain as the world is complex and not predictable, and scientists work on the border of the unknown:

“Some have to dig deep, if the rest of us shall have a safe foundation to stand on. The one who works on the border of the unknown, can never be secure about where the solutions is to be found ... Much of the telecom technique that we use today as a matter of course, is built on something that was just thoughts, ideas, and experiments in the research milieus fifteen to twenty years ago. In the same way, today’s researchers are mostly occupied with how the future will look like – on both a short and a long view. Concerning the anticipation of the future, Telenor R&D has through more than 25 years of work developed methods that are far more credible than crystal balls and oracles.”

(presentational brochure from TR)

“The development of society will always be equivocal. Even afterwards – and with access to hard facts – professional historians often disagree about what really happened. Even greater is the uncertainty about the future, not least for the individual person and the individual organisation. The wise one plans for several contingencies, but this also presumes a selection of assumptions, which in turn carry the mark of the assumptions of the past ... The advantage of the open approach that was chosen will be its ability to take a wide look, see the big relationships, perceive nuances in another way than in more rigid approaches. When one shall form opinions about a far future, where the uncertainty is great and the constituent of gut feelings at least will be significant, the chosen method will – with all its weaknesses – probably be well-suited to the main intention: To form the foundation for TR’s research plan.”

(TR’s research plan)

As a result of this complexity and uncertainty, judgements about the "truth" of the relevant aspects of reality should be done by experienced researchers. Their long and broad disciplinary experience is a necessary foundation for making judgements about future technology development and decisions about what would be useful research for the future. Through the competent use of scientific theories and methods, they have developed expertise and judgement ability that is more credible than others’ methods for anticipating the future. To experience that some want to leave the important judgements and decisions to customer-principals, corporate management, or politicians who do not have the necessary competence, may evoke strong feelings and remind one of totalitarian attitudes.

“We are told that the ideas come from TR, that we don’t need to have objections, while we will meet opposition in the Norwegian Telecom Group. Corporate management fall in with

our ideas, there is no sound business side judgement of them. Scientists are no wild people with a lot of ideas but not able to take decisions. We have to take decisions about what we shall do ourselves. It is necessary with a sober, disciplinary perspective. In the newspapers and the speciality press there are sensational notices that easily fire up the public. If one doesn't know better. People in the Norwegian Telecom Group are upon us at once things have been on the news. First they are not interested, then things are in the newspaper, and they want everything done at once. We can not let us be pressured into being more optimistic than what there is a sound basis for. We can not underestimate the complexity of the solutions that shall be developed and the time it takes to realise them."

(research manager in interview)

Question: "How about this statement: "we have knowledge and must speak up when we are asked, but others have to decide what shall be done in future?""

Researcher: "This is nazism ... pure disclaim of responsibility ... you cannot be allowed to do such things!"

(senior researcher in interview)

The experienced disciplinary judgements seem to be largely pragmatic. They can seldom be understood as something close to holding pure science and technology determinism assumptions. Often they are basically not far from the pragmatic and political bases of managers. Further, it may at times be important to take action and get things done fast. One example occurred at the start of the satellite technology effort. The difference is rather one of precedence. Heavy disciplinary judgement should not become subordinated to the less informed managerial and political ones. As regards technology development, it is considered more predictable than other areas of the telecom market, but "many features and qualities of the objects that a technologist thinks about cannot be reduced to unambiguous verbal descriptions" (Ferguson, 1993). The more experienced engineers deal with such ambiguity by a visual and nonverbal process which recognise the myriad subtle ways in which the real world influence their work, and solve ill-defined problems that has no single "right" answer but many better or worse solutions (ibid.). Sometimes the facade of scientific methods as the rational basis of some safer truth about the future may be put forth. But most of the time this is understood as a somewhat dubious way of increasing the pragmatic and political value of disciplinary competence.

"Instead of focusing on prognosis and one strategy, we have taken a view of changes in the environment. This enables us to operate with several alternative strategies – that are made use of contingent on how the world develops ... Scenarios do not aim at saying the truth, but contribute much richness and breadth to our perception of the future. We usually state that the four scenarios constitute the corners of our future room for action."

(researcher in the management magazine)

Question: "Which standard will be successful?"

Researcher: "It is impossible to say, often even afterwards. And this shows how difficult these things are. It is necessary to follow closely the international technology development, and to have "hands on" experience with the services. We use our judgement ability."

(researcher in interview)

"The TR history book is characterised by hindsight. They present it like a few persons have known what was going to happen in future and planned the whole development. But this may be good for TR ..."

(researcher in interview)

In disciplinary and innovative milieus the attitudes towards politics may often be very negative. The reason is that "politics is frequently associated with "red tape" and the capricious use of power to support politically expedient but technically unworthy technologies and "sandbag" ignore exciting, radically innovative efforts" (Page & Dyer, 1990). At TR there seems to be much variation in attitudes towards politics. Most technological researchers seem to accentuate the lack of competence among politicians. Others point out that expert judgements are not neutral, so the politics of the decision processes must be recognised. In particular, the social scientists seem to point to the necessity of politics, and sometimes that disciplinary activity must be pursued within limits set by politicians.

"Highly competent personnel at TR has developed a so-called "phrase-block system" ... It contains among other things an (operational) definition of "political expressions". The starting point is four blocks of phrases. Each contain ten expressions or sentences ... You can choose an issue yourself, and then a chance ten-digit number."
(researcher ridiculing political statements in the TR magazine)

"Even though the prices of telecom services are at the very lowest, he says that they have to be reduced by half of the present level in future. This implies reduction of the number of employees, but he has not shown how these figures arise. The assertions are not documented ... concerned about his choice being based on faith and beliefs, while analysis and knowledge seems to be absent ... I record no other utterances approaching the CEO's belief (superstition) in market liberalism."
(researcher on a CEO speech, in the TR magazine)

*Research manager: "One cannot base decisions on surveys and suppose that the majority cannot be wrong. But the problem with experts is that they are not independent."
Researcher: "They have interests in their technological projects."
(observation at lunch at TR)*

"... the division between net infrastructure and services ... service transparency ... This division is dictated from a political tendency that has lasted at least 20 years, and that probably will be strengthened the next 20 years."
(TR research plan)

As radical innovations often fall outside of established political processes, the informal organisation among researchers may nurture, buffer, and protect otherwise vulnerable projects until more appropriate times for formal reviews (Page & Dyer, 1990; Morand, 1995). Interpersonal networks between project managers and key actors in different groups may substitute for conventional political activities. Built on a foundation of trust, open channels of communication, and expectations of mutual benefits, they may allow different groups to quickly develop understandings around novel technologies, and permit resources and collaborative efforts to be utilised more effectively (Page & Dyer, 1990). Strong informal networks seem to be in place at TR, too, and promote certain disciplinary interests by organising the work of scientists.

"There is a strong informal organisation here. The individual experts talk over a cup of coffee about what they think will occur in their specialities in future, and base their work on this recognition."
(senior researcher in interview)

4.4 Power and Communication

Returning to the whole organisation including its R&D unit, we shall now direct attention towards the cultural structures and contradictions of focal interest in this study. How does power distance and communication assumptions work in the described cultural change context? It turns out that power may often have been centralised in order to influence the changes, and that powerful information transmission is favoured over dialogue. First, the theoretical cultural concepts have to be more closely identified.

4.4.1 Definitions of power distance and communication assumptions

Power distance is a well known cultural concept: the extent to which the members of a culture accept and expect that power is distributed unequally (Hofstede, 1984b; Hofstede, 1984a; Hofstede, 1991). People in large power distance cultures expect and accept as normal a hierarchical order in which everybody has a place. They consider this an existential necessity in need of no further justification. In organisations and institutions power is thus centralised as much as possible, and subordinates are expected to be told what to do. People in small power distance cultures do not expect and tolerate such differences in power, they strive for power equalisation and demand justification for power inequalities.

The fundamental issue involved is how a society deals with inequalities among people when they occur (Hofstede, 1984a). When people are unequal in physical and intellectual capacities, some societies let these inequalities grow over time into inequalities in power and wealth, which may become hereditary (Hofstede, 1983). Other societies try to play down inequalities in power and wealth as much as possible. The degree of power distance in a culture thus depends on its less powerful as well as its more powerful members (Hofstede, 1991). Authoritarian leadership can only exist if there is a complementary degree of subordination. Cultures with a large power distance can remain so because of processes of domination, and because people develop psychological needs for power and dependence which are satisfied and maintained by this situation (Hofstede, 1983).

For the purposes of this report, two concepts dealing with cultural communication assumptions might be contrasted (table 5). In a culture favouring the *transmission* view, the essence of communication is the transfer of information or meaning from a sender to one or more receivers. Effective communication is held to occur when the receivers interpret the message in the way the sender intended (Eisenberg & Phillips, 1991; Putnam, Phillips, & Chapman, 1996). It depends on senders and receivers having some common frame of reference, which they might passively assume or actively choose by taking into account the context of established interpretive frameworks. When communication is viewed as *dialogue*, people are concerned with learning about each others' frames of reference, as well as the contexts and processes by which these frames of reference are formed. Attention is devoted to other persons, and a genuine attempt is made to see the world from their view (Hummel, 1987). Free flow of meaning is established, a series of statements and qualifications may occur, and experiences are shared and learned from (Tannen, 1990; Schein, 1993). Deeper inquiry is fostered into the collective background of thought, feeling and communication, to surface and probe into the reasons for defensive exchanges and fundamental assumptions (Isaacs, 1993). Ideological constraints on communication may be identified and removed to contribute to free and open communication situations (Deetz & Kersten, 1983).

Table 5. Information transmission vs. dialogue.

	Information Transmission	Dialogue
Essence of Communication	The efficient transfer of information or meaning to others	To get insight into the meanings of each other and basic processes governing meaning creation
Validity of communication	Assumes validity which depends on common understanding	Builds validity and sufficient understanding of each other
Ambiguity and Conflict	Clarity or intended ambiguity, conflicts avoided or resolved by debate and power differences	Identify and explore ambiguity, suspend and reduce the involved conflicts
Social reality, Power relations	Separateness; concealment of deep power relations; mostly maintained or incrementally changed reality	Involvement; inquiry into and challenge of assumptions and power relations; create, maintain and transform social reality
Associated paradigms	Functionalist / (Interpretive)	Interpretive / Critical

Within the transmission view, ambiguous communication is often viewed as a problem. Such poor communication should be removed by a competent sender, who is able to formulate a message in a way that reduces the number of frameworks that might be used to interpret it (Eisenberg, 1984), and to choose an appropriate channel where deterioration in the "signal" is minimised (Ngwenyama & Lee, 1997). When the complexity facing the participants is high and multiple meanings exists, however, the ambiguity problem must be overcome in another way. Rich communication media⁶ should be used to convey ambiguous aspects of issues, surface different frames of reference, and then clarify and resolve this ambiguity through changing mental representations in discussion and debate to arrive at agreement and a common interpretation (Daft, Bettenhausen, & Tyler B. B., 1993; Daft & Huber, 1987). Ambiguous messages may also be employed strategically to allow for multiple interpretations between diverse groups, and so foster abstract agreement and avoid conflict (Eisenberg, 1984). Conflicts are thus attempted suppressed by supreme clarity, avoided by political vagueness, or resolved in discussion and debate featuring powerful communication.

In dialogue you are concerned with understanding what other persons are saying, not just with defending your position or winning an argument (Tannen, 1998). In discussion and debate (the root of which means "to beat down"), where some win and others lose, parties easily revert to rigid and familiar positions, maintain their certainties, and cover up deeper views (Isaacs, 1993). The shared commitment to empathy and deeper inquiry in dialogue, makes one more sensitive to the various underlying meanings of diverse participants (ibid.). Meaning is not already possessed, but always incomplete and partial, and the reason I talk with others is to better understand what I and they mean (Oswick, Anthony, Keenoy, & Mangham, 2000). The importance of the capacity of receivers is enhanced, as they participate in enacting and apprehending richness in messages (Ngwenyama & Lee, 1997). Rather than seeing communication as the elevation of particular groups' perspectives to become the collective world view, communication may bridge the gap between individual and organisational learning in a meandering, hazy and complex way where deeper plurivocal insight is created (Oswick et al., 2000). There is an anticipation of meaning creation and

⁶ "media used in organisations can be organised into a richness hierarchy based on four features: (1) the opportunity for timely feedback; (2) the ability to convey multiple cues; (3) the ability to tailor messages to personal circumstances; and (4) the power to convey ambiguous or subjective material, which can be called language variety" (Daft et al., 1993)

transformation which include previously silenced, marginalised, and distorted perspectives (Putnam, 1983; Freire, 1970). While more conflicts, and more fundamental conflicts, may typically appear, they are suspended and their intensity reduced (Isaacs, 1993; Tannen, 1998). Shared understanding may even result (Schein, 1993), though the purpose is not necessarily agreement but appreciation of peoples' backgrounds and frames of reference, assessment of the validity of communication, and emancipation from distorted communication (Ngwenyama & Lee, 1997).

Both approaches have their advantages and disadvantages. A transmission oriented culture may be very efficient, a minimum of time and other resources have to be used in communication. It may also be very effective in resolving relatively clear conflicts, and in producing incremental change. But often it creates more problems than it solves. In such a culture people may be criticised for not necessarily being very much in touch with those they communicate with and the reality they communicate about (Hummel, 1987). In today's complex society which often require intelligence beyond that of a single individual, a transmission oriented culture may have huge problems in overcoming the specialisation and fragmentation of experience into numerous isolated bits that seem to have no connection to one another (Isaacs, 1993). A dialogue orientation may be better suited to tap the collective intelligence of groups of knowledgeable people (ibid.). Particularly in the face of complex, challenging, and highly conflictual issues, communication may easily break down into rigid defence of their own "part", while specialists reasoning together across isolated domains are needed (ibid.). A transmission oriented culture may also be criticised for hiding the power interests of communication participants, and thus maintaining power relationships from the top down (Hummel, 1987; Deetz & Kersten, 1983). A dialogue orientation is committed to overcome any separation of people from their world, including underlying power relations and basic assumptions, and thus makes possible reflective action and transformation of social reality rather than accommodation to a historical and normalised "today" (Freire, 1970). As such it may be constructive for better understanding, strengthening, and serving the needs and moral claims of all stakeholder groups through a critical assessment of strategic issues (Snell, 2000).

As long as one can assume that the participants understand each other and their social world well enough, discussion and debate are valid communication strategies (Schein, 1993). When this assumption does not hold, there is a danger that any consensus is not genuine but false. Non-valid communication may result from lack of authenticity in telling what is really on one's mind, hidden tacit meanings of words and other symbols, the acceptance of compromised information as legitimate and authoritative, and the hidden interest and power biased framing of issues (Tannen, 1998; Daft & Huber, 1987; Deetz & Kersten, 1983). Dialogue, on the other hand, is a basic process for building sufficient common understanding, and it may make it possible to determine whether or not the communication that is going on is valid and restore valid communication (Schein, 1993; Ngwenyama & Lee, 1997).

4.4.2 Increased power distance in the new competitive environment

The official new management culture

To start with, it appears that the recent change processes in Telenor shall reduce the large power distance of what has been a public administration body. In a competitive organisation, managers must become more equal to their co-workers, and manage in a more motivating

rather than controlling way, in order to take action and achieve results. The new organisational structure is more decentralised, and the basic values support the initiatives of co-workers. Their critique in case they disagree with managers is also encouraged.

The new management role

	<i>From</i>	<i>To</i>
<i>Role</i>	<i>Controlling</i>	<i>Engaging</i>
<i>Relation to co-workers</i>	<i>Boss</i>	<i>Team leader / ally</i>
<i>View of co-workers</i>	<i>Employee / Subordinate</i>	<i>Ally in achievement efforts</i>
<i>Governance</i>	<i>Hierarchy</i>	<i>Market</i>

(from transparencies at management seminar)

“The new [organisational] framework makes room for extensive delegation of the responsibility to manage one’s own operations and resources ... We will see a replacement of today’s systems where managers and employees meet through two centralist chains, to the empowerment of direct contact at the relevant organisational level. Managers, shop stewards, and employees will have responsibility and authority to get a hold of their own situation and not be dependent on pushing responsibility upward.”

(central organisational officer in the management magazine)

“... strong support for co-workers who want to take responsibility and initiative, even in situations where they don’t have support from established rules, routines, habits, or authorities. The basic values express a demand on co-workers to take such responsibility, and speak up even if they don’t agree with e.g. the manager.”

(corporate ethical work book)

This new business form of management is contrasted with the old government administration culture with bureaucratic politics and clear responsibility relations.

“Not too many years ago, we were only concerned with responsibility, who is superior and who is subordinate. In governmental administration there is too far a distance from the top to the bottom.”

(senior staff at leadership course for new managers)

“... today we have a different kind of managers ... earlier diplomatic abilities and a nose of politics were crucial if one should make a managerial career ... we got managers who indeed were uncontroversial and pliable, but who easily got into old tracks and who contributed little to creativity. We rewarded effort and good will – the results one achieved often counted less as long as the intention was good. In the organisation change, we put weight on the ability to take action and the achievement of results.”

(article about British Telecom in the management magazine)

There are doubts if the reduction in power distance has been achieved in practice. Sometimes it may seem that the difficulties are attributed to the subordinates and their problems with moving away from the old bureaucratic way of thinking about management:

“... the co-workers think we use our time upward ... and that everything has to be accepted at the highest level ... they think we should be out in the field instead, and that we should delegate ... the co-workers think changes are coming down from the top without any possibilities for discussion.”

(survey results from an early phase of the reengineering, the management magazine)

"What has been received from the centre by the periphery and the individual seems to be understood as demands, instructions, and limitations, not also as offers, guidance, and possibilities."

(external psychiatrist consultant in the management magazine)

"Fear of authorities is an old trait of the culture."

(the company magazine)

"Many think that such a fear exists at all levels in our organisation. If a manager has decided or perhaps just expressed his view on an issue, there are several who do not dare to raise oppositional views, not even when they think the manager is in an ethical grey-zone ... Just the suspicion that there is much fear of authorities is obviously a serious obstacle to the development of the responsibility and autonomy which is an important ambition of the value framework. The question is what managers and co-workers in each individual unit can do to overcome this trait of the culture."

(corporate ethical work-book)

Cultural change difficulties within managerial levels are also evident. For instance, the meaning of the often used, low-distance signalling term "delegation" is easily defined, and thus limited, in opposition to the previous bureaucratic instructions, and not in connection with more recent approaches to organisations.

"Having 'yes-men' in a management team is fatal for a manager today ... It is important to delegate, that is, give a person a goal rather than to give a task with instructions ... You have to trust the co-workers, give them goals and let them find the way themselves. Then they can learn to become good managers, too."

(manager in interview in the management magazine)

Question: "How will you defend a method in which a group of persons themselves define the demands to their work? Can this be a real process?"

Answer: "... We had to use the implementation milieu as our starting point ... It is just by key persons being active that the necessary legitimacy and anchoring is created, you know. Moreover, all suggestions of gain goals were thoroughly discussed by [authorities] before acceptance. This is the core of the reengineering process, we want a balance between control from above and propositions from the working streams."

(manager of reengineering project interviewed by the management magazine)

"... career culture ... We are so occupied with positions at home, abroad people seem to be as occupied with learning and challenges."

(senior personnel advisor in the management magazine)

More informal: Centralisation to increase change capability

More informal observations confirm that people display a range of beliefs about the legitimate structure of authority. Some espouse a low power distance, supported by the official attitude and the egalitarianism of the rest of the society, some show signs of ambivalence, and more people than what might have been expected support a relatively high power distance.

"A common trait is being governed from the top. An unbelievable amount of energy is used to look upward and at each other, instead of outward at the market ... People are perhaps committed to ones supervisor, but not to any task or process."

(manager trainee in interview)

"You have to ask my boss first, so I don't "bypass" him. By the way, I recommend that you talk with people in formal management positions about this."

(advisory staff responding to my enquiry about an interview)

On the whole, it seems to me that the younger, female, and marketing managers favour a lower power distance than other managers. But as we have seen, the marketing and service orientation introduced at the start of the 1980s may eventually have become implemented through bureaucratic and control oriented economic management, and the efforts at reforming the centralised governed company may gradually have become reversed (Thoresen, 1992). The internal customer- and service orientation paradoxically made the top managers' signature more important in order to signal authority. Today informal observations reveal that power distance may have been increased rather than reduced the last period.

The former CEO was often in the cafeteria, he sat at the tables, and ... but the present CEO and CTO [central technical officer, member of top management] are more seldom seen here."

(advisory staff at lunch)

"Earlier there was much bottom-up in the strategy process. Now there is more strength in the top management, and a combination of bottom-up and top-down process."

(advisory strategy staff in interview)

The reason seems to be that both management and other groups revert to centralisation in order to gain strength and influence the change process as much as possible in what is considered to be the desirable direction. The action propensity in order to avoid ambiguity may also contribute, as well as the economic bureaucracy. However, the fact that managers may prefer to demonstrate strength need not be interpreted as a preference for high power distance, it can also express the felt need to be "bossy" in an environment that demands co-worker participation every step of the way (Sirevåg, 1999). Further, the countervailing power of technical competence makes it possible to resist business managers' change efforts. To treat the technology orientation and high-tech competence as drivers for reduced power distance is not unproblematic. The possession of task relevant competencies may easily turn into a differentiating power resource (cf. Sagie & Aycan, 2003). In the strong emphasis on technological development and increased technological competence from the mid 1960s, status became related to advanced technology in addition to position in the formal hierarchy (Harbo, 1985). The technology orientation may thus contribute to maintaining and strengthening the existing culture with status differences and hierarchy. The informal discussion below may illustrate some of the ambivalence and variation among managers. The need for manager capability to govern the change process is clearly involved, so is the equalising power of technical and disciplinary competence.

"Our problem is to orient the Net division toward the market. Net got off the last reorganisation. That was because nobody knew what they were doing. Net has high technological competence, and very strong culture, the strongest in the whole Telenor. I participated in the change project myself. I had to send a letter where I pinpointed what they were doing and should not be doing. Then he moved."

(advisory staff, informal observation)

Manager1: "Norsk Data went down, and Telenor has to be careful not to go down, too. One must not be too cocky ..."

Manager2: "Do you get clear signals from our company customers that we are too cocky?"

Manager1: "It has to do with technology. In Norsk Data people were very proud of building computers themselves. Here in Norway. One was asked to take responsibility, and took responsibility. And one was very proud of what one did. Everybody assumed responsibility, but this also made the company very difficult to manage from the top. So when the market didn't want proprietary systems, they wanted standards, it was impossible to change the company. The fact that they had a large development department is equivalent to our technical top manager having the position next to our CEO. This shows that technology controls the company."

Manager3: "We have got a good marketing department ..."

Manager1: "An organisation needs managers that are capable of running it."

Manager3: "We are in Norway ..."

Manager1: "Okay, we expect them to delegate (somewhat hesitating) ... But I will question the management abilities. The strategy process is all too vague. We need managers that are able to speak clearly on goals and what course to take, then the employees can make some adjustments in implementing what they say."

Manager2: "A bit knowledge is needed. What if you meet a very low level clerk who knows more than you?"

Manager1: "Yes, okay. But they are too weak. I am sceptical about management waiting to see who wins in the strategy process before they make up their mind. So we have to fight, while they ... It is right, in my opinion, to listen to everybody, and then decide what direction to take ..."

(informal discussion between managers at lunch at the headquarters)

Employee solidarity and organisation

Trade union complaints about less participation and influence strengthens the interpretation that power distance has increased. Statements from the debate on the symbolically important event when the organisation became a limited company may be illustrative. The employee union complained that participation was made more difficult. Official management information was ambiguous. It may appear that information and consultation had been well taken care of at the official levels, while overall the clarification of management responsibility was most crucial. In particular in combination with informal implementation dynamics of action keen managers and push-up of any problems to the higher management levels, a more centralised structure would emerge.

"The management of Telenor wants to restrict the right to negotiations concerning reorganisations ... What is to count as "organisational unit" is carefully established in the old agreement ... Several of these units have disappeared ... Organisational change within [the new units] will not trigger the right to negotiations ... The local shop stewards have already lost much of their influence, because of the centralised power structure of the new Telenor."

(union magazine)

"What is the problem? The premises of the reorganisation has been laid in advance. People therefore have felt that they don't have had any real participation."

(monthly reader remark in the union magazine)

"Broad participation has been set up in this project ... the (...) union put forward that both consultation and information have been well handled so far."

(summary of comments about new organisational structure in the management magazine)

"We made them pure management forums, but we organised other forums at the regional and corporate level to lead the dialogue between employee unions and management. There are those who miss the previous. Consultation and information are reduced, it is claimed."

Let one thing be clear. We do not have any intention of withdrawing the clarification of management responsibility implied in our composition of management forums. Let another thing be as clear. We shall have a living dialogue with the corporations shop stewards. Following a communication from the (...) union, we are in the process of making clear premises and forms in order to meet both ... Active use of the part-composed committees (...) is a responsibility shared by both parts."

(central organisational officer in the management magazine)

While management ideology is ambiguous on whether co-worker participation would be increased or decreased as the organisation changes from public to private, recent union ideology is clear. Part of their society orientation is the resistance due to reduced employee considerations and participation in important decisions. Informal observations confirm that the new management culture is in practice experienced as more authoritarian. It creates frustration and fear among employees, even lower level and local managers may not dare to voice their opinion. The main consequence is, of course, that employees' collective power must be organised and centralised in order to be taken seriously. A recent sociological study may have observed a common pattern: "The office services have had little if any possibility to participate in decisions that affect them. Not that unions have not been involved, but not the personnel generally" (Solbrække, 1993).

"In public deals the requirements for consultation can be higher than in private deals. The case of employment can be an example ... [it is] important to have a good cooperation with the trade unions. We are committed to take objective decisions that we think is good for Telenor Ltd."

(staff in the management magazine)

"I can tell you a little about the organisational culture. We have noticed that the management have a clear strategy, they want the backbone culture of Telenor removed. They want more of the title to control, and less right of agreement on working conditions. This is a new management culture, and in my opinion it doesn't work ... A bit clumsy said, they behave like the agreements made don't apply any longer, and the employees fear that they may loose their job, they accept everything, one works overtime for free, without demanding any salary ... We have got many frustrated employees in Telenor."

(union manager in interview)

"This is the new management culture in Telenor. People put up with being pestered to the last gasp, to avoid unpleasantness with the management."

(union representative in the union magazine)

"In my everyday life as a shop steward I have often wondered why the central administration has prepared for a solo course of action where one to such degree choose to use the title to rule. This leads to a minority of persons developing the new organisation, and how it shall be governed down to the smallest unit. Unfortunately one often observes examples of managers who don't consult with those who have the everyday operational experience. Often I have the feeling that even the local management is not heard or given the opportunity to give their opinion in the process."

(monthly reader remark in the union magazine)

In the bureaucratic Televerket, stronger co-determination has always been won through increased solidarity and better organisation among the employees, resulting in formal representation, procedures and agreements, and more local committees with decisional authority. The long bureaucratic tradition has thus seldom been challenged. The new action orientation, which may involve more fragmented power relations between individual

managers, employees, and shop stewards, and less decisional authority to part-composed committees, may thus represent a significant challenge for the unions. Employees will certainly feel that they are more influential if they participate enthusiastically within the new framework of their managers (Hardy & Leiba-O'Sullivan, 1998).

“Little influence? Damned. Why do they say so? This is an assertion that cut off one's nose to spite one's face. Assume shared responsibility, don't be so occupied with the formal, with rules and procedures! This is a concession, but they probably don't recognise what the statement can lead to. It may become self-fulfilling. They may get bogged down in a quagmire. To say that one does not have any influence may become self-fulfilling. The shop stewards must not distribute this message, the situation is not like this today. Many employees have faith in Telenor, they have guts and go-ahead spirit. We have to unite our capabilities. I will put weight on discipline. This will secure employment on a longer view.”

(advisory staff in interview)

Although there may be hints at developing the capability to defend employee rights at the individual and local levels, the preferred response from the union seems to be the internal centralisation and the political mobilisation at the societal level. In this way the hard-won freedom from government to take action in business may be somewhat reduced.

“The (...) union has had a reasonable good cooperation with the present Government about the telecom politics and the personnel problems that the reorganisation of Telenor has brought. Of course, there is not agreement on everything, nor is this to be expected. It is most important that we have had possibilities for conversation and discussion at a high political level. This is benefits that we still want to protect. It is important to be capable of making propositions before decisions are made.”

(editorial, union magazine)

“What if the PTTI unions decided to join forces? ... search for new means to counter unfair competition and social dumping. One approach is to seek political accept for making demands on the operators at the European telecom market. The PTTI-congress went for demanding a “social clause” which guarantees union rights and secures certain norms of working- and employment conditions included as criteria in connection with post- and telecom-projects invitations to tender.”

(the union magazine)

“There is much tacit knowledge in (...) just in the very work process. This tacit or hidden knowledge of course gives a foundation for power, because management doesn't have any insight into it – they don't understand it, but they are dependent on it ...In scientific management there has been a wish to achieve knowledge and control over the work process. To break down more multifaceted work tasks into many, simple, transparent and measurable operations (...) was a way the management tried to get control of the work process ...

We have now entered into a new phase where we don't talk about advancing new reforms, but about defending what has already been achieved. We have experienced that nor can we expect to the same degree as earlier that laws and contracts are followed. Rather, at the contrary, employers to a large degree try to undermine and break down the rules. Thus there will arise an increasing need for mobilisation and direct defensive fights locally in the individual company.”

(union magazine)

Societal concerns and politics

Because of the social importance of telecommunications, the external political milieu has always been important for the internal power relations and politics in Telenor. From the establishment, strong hierarchical authority relations with the political government and ministries characterised the organisation. The increasing power of employee unions was achieved in cooperation with local and central politicians. Exceptions to the strong union influence were made when co-determination was in opposition to the democracy of the surrounding society in the 1980s good cooperation between management and unions. With increasing but far from perfect competition, higher level business management must admit that the relation to the political and regulatory authorities remains very important today.

“may be this was the reason that the so formally powerful managers in Telenor became the victims of the capricious goddesses of powerlessness!? ... many instances in which subordinates in an organisation have got direct contact with the top management, and short circuited the departmental management in that way. It is therefore beyond doubt that the political contact between the grass roots and the political management of state monopolies has been one of the many traits of the organisation culture, in Telenor, too. Perhaps this is the reason why discussion in Telenor not really take off until after a decision is made?”

(Aarvik, 1993)

“The real decision makers on strategic matters are first and foremost the five persons in top management. Other decisions are made in other ways ... politicians are central, too ... and the trade unions are very strong. With the exception of the railway company, Telenor has the strongest trade unions in Norway. This is how we experience them, at least, they are very engaged.”

(advisory staff in interview)

“... the market is of course important. We shall be market focused, but our problem is not the market. The problem is the regulatory authorities.”

(advisory staff manager in interview)

The market orientation may as a starting point constitute an opposition to the hierarchical governmental focus. If all the customers themselves can govern the company from below, societal control from above authorities can be reduced. However, we have seen, for instance, that the market oriented reorganisation also represents a strengthening of the central business management at the expense of more customer oriented regional and local units. A central theme is the reduction of employment and population in districts because of the emphasis on cheaper services for the customers, supported by the cost orientation and new technology.

“In the North, of most concern is of course the extensive centralisation and continued downsizing. Not just to the union, but to the whole local populace. This theme has been continuously repeated the last year, so I shall be content with only stating the fact that they seem to carry their point who claim that it is the districts of Norway that receives the hardest blow.”

(monthly remark from reader, union magazine)

“There is much potential for cost-cutting, in particular in the large planning units. They can be cut down, better co-ordinated, and centralised. For instance, when the fibre net should be introduced, it was not prioritised by many geographic departments, because it didn't fit into their plans, and then everybody had to wait.”

(advisory staff, informal observation)

Further, the societal marketing orientation points out that the business and customer orientation may prioritise the large and centrally located customers. So there is need for social and political processes that can restore equality in both internal and external power relations.

“The liberalisation has lead to a large sample of telecommunication solutions for the large business customers. The small business customers and private subscribers in practice receive limited possibilities and limited access to new services, particularly in the districts. Internationally we observe a redistribution of costs to the advantage of large customers.”
(union top representative in the union magazine)

“A stronger focus on competition leads to reduced service. Perhaps not for everyone, because the customers are differentiated into prioritised and less important groups. It is a matter of concentrating on the customers that are most economically profitable. The competitive mentality affect not only the common Norwegian telecom user, employment also suffers. First and foremost in the periphery, but neither are more central areas sheltered.”

(editorial, union magazine)

Research and development ambiguities

In the R&D unit, the power distance between managers and researchers is clearly lower than elsewhere in Telenor. While there are variation and ambiguities of power distance, in particular regarding relations to different kinds of people and managers, researchers and their managers should be on a more equal footing:

“There is a culture of no difference between people here. In the R&D unit there is less fear of authorities, less ‘yes-men’, but this has nothing to do with the employees here. It is the management of the R&D unit that ask for feedback. In my department one is rewarded for agreeing, here people dear to speak out. I think this is good. But the consequence is that the management has less power.”

(manager trainee in interview)

Researcher1: “The manager has to be connected to his own group, otherwise he is no good manager ...”

Researcher2: “This is what burned (...)’s fingers, just one-way loyalty.”

Researcher 1: “Yes, a good manager has to be loyal toward his own group. We can refuse to think. One needs the support of the people, at least people so important as us.”

(observation from lunch at TR)

Researcher: “He doesn’t delegate, he doesn’t distribute information, most is chaos ... He is no good manager.”

(observation from lunch at TR)

The new leadership philosophy and action orientation has undoubtedly contributed. Both because it contains elements of delegation, and because its "business" managers are met with opposition. In the previous period there seems to have been a much more centralised structure and a disciplined work force. For 25 years, from the establishment of the research institute until a few years ago, the first research director enjoyed a strong position both internally and externally.

"I just caught this start-up phase, where the directors (...) reigned over their troops. They both enjoyed an unusual firm discipline, and Telenor Research early got the reputation of a department with order in the ranks! This reputation was a benefit for Telenor Research – the rest of Telenor could be unbelievable sceptical towards these "paper tigers" who should revolutionise Telenor and Norwegian industry, and it was important that we didn't kick over the traces like undisciplined academicians. Already in this phase, Nic's style was clear, with strict demands internally and strong defence against external critique. It was a hard days toil to get our proposals accepted for official distribution outside Telenor Research. But this was more than compensated afterwards."

(research manager in the TR magazine)

"I want decisions in the R&D unit to be taken at the 'lowest' possible level, because there you normally have the best qualifications to find good solutions and learn from experience."

(new research director in the TR magazine)

"At the research institute the former research director was never seen in the cafeteria. So at that time the situation was the opposite, there were more distance at the research institute [than at the headquarters]."

(advisory staff, earlier researcher, at lunch in the headquarters cafeteria)

"First generation ... Research departments were enclosures of their own where strong leaders ruled mostly after their own head and very little from signals from the companies top management (as I said: here are elements of recognition!)"

(researcher in book review in the TR magazine)

This seems to contradict Mathisen's (1989, referred in Collett and Lossius, 1993) conclusion that the individual research sectors and researchers enjoyed a significant degree of independence. Informant comments indicate that this freedom did exist, but it did so within certain limits. Those who went outside and tried to challenge this framework could be rather hardly punished. The respect for the research director, who was an influential member of top management, probably prevented this from happening often. Today it may seem that this pattern has resulted in great respect for top managers. There is variation, though. In particular among senior researchers and research managers accustomed to different management philosophies and conflicts.

Senior engineer: "The two top managers discussed something, and then this trainee interrupts ... [the top manager] did thumb the table, I think."

Junior engineer: "Kids interrupting when grown ups talk ..."

(observation from lunch at TR)

Research manager: "Did top management really believe that ..."

Visiting information manager (interrupting): "What did you mean ... ?"

Research manager: "I thought this was impossible."

Visiting information manager: "Nothing is impossible for our CEO."

(from management meeting at TR)

"We administer the truth. If we are asked we have to speak up, then top management can decide how things will be."

(the new research director at introductory course for new employees)

Question: "How about this statement: "we have knowledge and must speak up when we are asked, but others have to decide what shall be done in future?""

Senior researcher: "This is nazism ... pure disclaim of responsibility ... you cannot be allowed to do such things!"

(senior researcher in interview)

The new action orientation may also contain its own tendencies toward large power distance. On the one hand delegation is encouraged, and the individual research managers are liberated from above decisional forums. After its introduction, managers were perceived as more available, willing to listen, giving possibilities for critique, and learning from experience (Johannesen and Ulvestad, 1994). But on the other hand, the personal responsibility of managers is more vulnerable to being abused than the power of management committees. The small top leadership group also indicate centralisation of decisional authority at the expense of the many specialised disciplinary groups. Further, its shorter time frame may result in a more hierarchical approach to management (Tuttle, 1997). The external evaluation reports that decisions are too dependent on the new research director, and that the involvement of those it concerns is still lacking (Johannesen and Ulvestad, 1994).

"We are in the process of change from 'committee management' and 'decisional meetings' to personal responsibility of managers ... The advantage of a small top leadership group is easier coordination of the R&D unit and better ability to take actions both internally and externally."

(new research director in the TR magazine)

"Earlier you had to give grounds and argue for your decisions, but I don't know what it will be like in future ..."

(researcher at party)

"The group leader had decided about the report conclusion in advance. I do not agree in this practice. I think the research manager was abusing his power when he didn't want me to write this in our deliberation. I have talked with many about this, and they agree. I talked with the trade union, too, and they became engaged in some discussion after the report was printed."

(researcher in interview)

The management of the institute invites much participation from researchers, for instance in the strategy work. But "the way the strategy work has been done does not seem to involve a sufficient number of co-workers in such a way that these principles become living in the organisation" (Johannesen and Ulvestad, 1994). In particular in combination with the new user oriented system for governing research and development, it seems that the action orientation may involve much power to those managers who are responsible for managing the relation to the customers.

"In order to anchor the research plan throughout Telenor R&D, input proposals are invited ... The individual programs are free to decide how to organise the work, but broad involvement is important. Program managers and research managers are responsible. In addition a sample of 'seniors' are selected and asked about their points of view. Others who feel called upon may well come directly to me with their proposals."

(research manager in the TR magazine)

"Selling ideas about what should be done next year is encouraged ... even if at the end there must be a central judgement at the customer-principals and here on what should be included in the agreements. Inform the program manager about any attempts and the possibilities for a 'sale'" ... the program managers must handle the continual information

to and from the researchers about inputs to the process (even if you are of course allowed to contact us with questions, ideas, and comments)."

(research manager in the TR magazine)

"Who governs what happens here? I think this varies from one program to another. At some programs this is very dependent on those who work there, who has real influence, and manage to lay down the frame conditions at a very early time. Here you only get to hear that this is what the customers want, and when we argue that it is impossible to do any research on this and that problem ... This program is at one extreme, the tasks just fall down on us, and we are told to do everything. It is very frustrating, because the tasks change all the time."

(researcher in interview)

Reactions from researchers indicate that they expect the strategy work to be governed by senior experts. If customers should be involved in planning or implementation, they would have to possess the necessary high competence. Differences in participation and influence are thus more easily accepted if they involve disciplinary authorities. The long technocratic tradition may have resulted in some dissociation from democratic approaches (Sager, 1997). However, some may also hold belief in the legitimacy of the process since the perceived participation or possibility of participation of individual researchers has been present.

Senior researcher: "The intention with the research plan was good, I think. It was meant to give the direction for what we should do in the future, but as time went by it became clear that the reality was no top-down process. It was controlled from below, from negotiations with the customers. The research plan then becomes nothing more than a sales catalogue, a summary of what we do."

Junior researcher: "The research plan was made two or three years ago. There was a lot of discussions about its content."

(observation/interview at lunch at TR)

"Too much time is used in project negotiations, not only by management, but down to the individual researcher."

(observation from lunch at TR)

"Authorities hindering the development of younger scientists is not typical for Telenor Research. Rather, every new idea gets its chance – without being called to account for market potential and utility."

(researcher in the TR magazine)

The alternative of increasing democracy by including external customers and users in decision processes that are important for long term societal development, seems mostly to be absent. The low power distance arguments from researchers instead frame the customer oriented managers as the powers that be. The customer oriented managers, in turn, seems to accept that they are or should be the authorities. The final excerpt may illustrate some problematic aspects of the situation from the perspective of a customer oriented manager:

"One doesn't have the same goal. One isn't on ones way in the same direction. I participated in one task, was result oriented and concerned about profit, but Telenor R&D was not. The person I worked with cared most about publishing an article. I don't know if what is rewarded is getting published or contributing to getting Telenor ahead ... I am shocked that people quite far up in the management ranks could ridicule the whole administrative process. They have a casual attitude to management. The core is making priorities. Some thinks that it is enough to maintain competencies. They are good experts,

but despair of the demands of leadership, though they want to learn ... If one takes this negatively, it is seen as a tool for keeping people from doing what they want and manipulate them to meet managers goals. If one takes it positively, it is motivating, an effective way to work ... If one points out something, one gets to hear that this is research and not product development. The customer-principals don't have any alternatives, R&D people therefore don't recognise that methods of management make any difference for work effectiveness. It feels like people here think I am incompetent, and that management by results should not be implemented."

(manager trainee in interview)

4.4.3 Information transmission of facts and authoritative judgements

In Telenor there seems to be a shared assumption that good information is imperative. In the change process we can often observe belief in the value of distributing information. Learning may thus be facilitated; the assumption that communication and information are central to organisational well-being makes people demand that necessary and relevant information is made available (Schein, 1992). At the same time, they complain about lack of information because this transmission has not worked:

"In change processes (...) information is decisive for co-workers to take a positive or negative stand towards the change ... Without sufficient background facts anyone will feel that the change is forced from the top down, that it is a change to something unknown and uncertain, not a change to something exciting and challenging with new possibilities for personal development and career progress. When something goes wrong, there is always a booing crowd complaining about how bad the information has been. And they are often right. Very often we implement actions without "remembering" to inform those involved. When dissatisfaction starts to spread, notices and circulars are being poured out. But people don't want more information from circulars and newspapers. At the contrary, they want information from their closest manager."

(the management magazine)

This pattern seems to permeate the whole organisation. All emphasise that information must be distributed and made available, but co-workers complain that information is lacking, and managers admit mistakes and argue about responsibility. The lack of information seems only to reinforce the belief that things would be much better if only information was made available.

"We will also prioritise to make available factual information relevant for our employees so that rumours and speculations are avoided, in particular plans about changes that directly influence the situation of the employees."

(TR personnel policy document)

"... an extraordinary situation characterised by changes and uncertainty. This has naturally created a need for more information than has been available."

(editorial in the TR magazine)

"One year ago we wrote on this page about "the reorganisation that stumbled in the start". At that time we were concerned with all the unrest that was created and all the rumours buzzing before Telenor's plans for the reorganisation were made public. We were very critical of how Telenor's management handled the duty of information, and reminded about openness and cooperation as basics for the success of such a large reorganisation."

(editorial in the union magazine)

“In turbulent times the need for information will be great. If enough information is distributed, everyone will better understand why we always have to implement change processes ... If information doesn't come out, rumours will easily become a truth that is difficult to restore. All the time one must consider how the information is interpreted – therefore it is important to repeat it.”

(monthly remark from reader in the union magazine)

The roots of the assumption of good information and problems following from lack of information may lie in earlier organisational changes. In the 1970s automation and reorganisation, the trade unions gradually gained influence in demanding information about the changes that should be made as personnel problems became recognised (Schieflöe, 1977). Despite the administration and trade unions efforts at informing people, many employees still complained about lack of information. Clear and accurate information about what should happen and ones future situation was expected. Problems also arose because the information was too different from what one was used to, and the juridical-formalistic language was difficult to grasp. Lack of information led to feelings of powerlessness, i.e., not being involved in the continual communication processes that lead to decisions (Falck, 1978). In the cultural changes at the start of the 1980s, a study of the new emblem issue indicates that manipulative and political use and withholding of information was widespread. The information office had close to monopoly on information and kept it from reaching the employees (Harbo, 1985). Several observations confirm the continuing withholding of information and knowledge because they are more valuable as power resources if they are not shared. The premium and power attached to valuable ideas is even larger in the present knowledge economy, and any market cannot be established because their value is unknown to the receiver beforehand (Kim & Mauborgne, 1998). Anyhow, the availability of information is problematic, and participants' uncertainty tolerance, proper understanding of each other, and possibility of mutual influence are brought into question.

CEO: “You - managers out there - are not good enough at demanding to be properly informed. You have a duty to inform people, too, but the most important duty is to require and get the information you need.”

Participant: “This is a problem concerning power. I don't think they don't try do get the information they need. I think the problem is that information is not passed on to others.”

(observation from the management course)

“New research show that the information flow stops at middle management. They get information, but never have the time to inform their employees.”

(information from labours organisations in the company magazine)

“The Union South has withdrawn from the regional reorganisation project because they think they have not had any real influence on the decisions made. The Union North has thought about doing the same, and for the same reasons, but have decided to continue because participation gives access to important information.”

(editorial in the union magazine)

“Why is there so little information? I think it has to do with the competence you possess, the fewer the people that know, the more valuable.”

(advisory staff at lunch at the headquarters)

The need and contest for a common world view

The development of a shared world view seems to be the new management's main instrument for improving information and communication. A common picture of the environment and the forces that influence the organisation would reduce the need for centralised and bureaucratic information of every detail in all situations. The employees' uncertainty and anxiety about the future would decrease. Their closest manager would be able to develop and inform about clear action implications for new and unanticipated situations. So the common rumours, misunderstandings, and conflicts would also be reduced.

“An organisational change process is not just about agreeing on new ways to do things. It is necessary to arrive at a common picture of the environment and the forces that influence from the outside. If the employees and the management have a different world view, this will unavoidably lead to misunderstandings and unrest. At worst conflicts will arise.”

(external expert referred in the management magazine)

“The employees’ anxiety about the future is real. The situation therefore tells us to with great humility continue to transmit our understanding of reality and the following actions.”

(CEO in the management magazine)

“Motivation of the demotivated and uninterested in Telenor ... can only take place through a combination of mass communication and personal influence – and the latter is the most important.”

(the management magazine)

The need for a common world view to improve communication resonates well with the technological perspective. Here communication is seen as the transport of information from a sender to the receiver through the appropriate channels, and it requires common standards and compatible interfaces among information and knowledge processors (Garud & Nayyar, 1994).

“We have in earlier articles about team development referred to the value of using shared models, concepts, and language in an organisation. This facilitates communication and makes drawing on each other’s experiences easier. This is an obvious truth within technology. But Telenor has such needs also in other important areas where common information and understanding is important.”

(from article about team development in the management magazine)

“The corporation should use the same language and measurement scale on competence areas to get good communication between different units and disciplinary fields.”

(from article about learning in the management magazine)

“If something shall come of this and other projects, it is important to transmit some information into this platform-definition activity of the business process reengineering. It is important to canalise information into the right work processes.”

(research manager at meeting at TR)

The managerial "engineering" of a common world view may also get support from the active selling part of the market orientation. The aggressive form of information has been common since the start of the 1980s, when it contributed to the radical improvement of the external image and the employees' perception of their company. People may thus have learned that good communication is an active managerial process of advocating a position, in order to defend and build support for one's own world view and actions (Deetz, 1986; Isaacs, 1993). The strong sender and weak receiver do seem enticing for many, but at a closer view it may

not prove so easy to persuade others. When several strong groups try hard to sell their position, discussion, debate, and conflicts may result. The ideal seems to be to resolve the conflicting meanings and achieve convergence through debate and powerful education (Daft et al., 1993; Lind & Zmud, 1991). But the emphasis on powerfully defending and promoting ones own position sometimes leads to problems, like the "trench warfare" and negative publicity referred to below.

*"We have set up an ongoing and offensive communication activity with the organisation. It is extremely difficult to communicate the need for change to ones own organisation."
(information staff at TR management meeting)*

*"I learned a lot about bargaining in the labour union. About selling a message, haggling over something, and win by argumentation. This has helped me a lot in the development of my role as a manager."
(manager interviewed in the management magazine)*

*"... create shared attitudes by resolving conflicting meanings, and not by one-sided arguments."
(corporate ethical work book)*

*"[There are] several courses toward increased employment, less overtime, better health and working conditions, and most of all – better sense of dignity as human beings. The presupposition for gaining our ends is that everybody don't go to trench warfare in order to defend the status quo – and that someone takes the initiative to discussion."
(editorial in the union magazine)*

*"In Telenor we are used to freedom and conflicts of opinion. Management wants it to continue to be so, but loyalty towards decisions is an invariable requirement. We presume that one can recognise that the company now is in a competitive situation, and that this limits discussion to the internal arena."
(staff presentation of the new corporate strategy in the management magazine)*

The last statement that the new competitive situation makes it necessary to reduce conflicts of opinion, at least after a decision is taken, is one of the subjects of debate. Others argue that open communication is even more necessary now in order to arrive at realistic judgements of the competitive environment. The official values encourage everyone to speak up, even if they should disagree with their managers and organisational decisions. But many are reluctant to stand up with their opinions.

*"We need open communication in today's situation to surface true and realistic judgements of situations; frank, honest and candid messages upwards, downwards, and sideways."
(editorial, by central organisational officer, in the management magazine)*

*"In the editorial office we may notice an increasing tendency that many are reluctant to stand up with their opinions. Therefore we want to encourage as many as possible to come forward with points of view on the newspaper and thereby contribute to the newspaper also after the 1st of November contributing to a positive company culture where it is allowed to call a spade a spade."
(editorial in the company magazine)*

The reasons that many are reluctant to speak up may be found in the old fear for authorities and the actual increase of power distance in the new competitive situation. Rather than the official or intended increase in authoritarianism on the part of business managers, such

behaviour may often be supported by their action orientation in combination with the firmer market governance and the shorter time frame necessary for taking decisions and action. Thus management may think that conflicts of opinion are resolved through debate and power differences, while other participants perceive the reduced opportunities for information and internal debate so serious that external media are used in order to get influence on the course of change.

“Some people in Telenor still use the media to try to influence a decision process that is over a long time ago.”

(central personnel officer in the management magazine)

“Dragging down into the mud ones own organisation in media does nothing but harm ... Unfortunately we have to handle certain issues in this way ... We hope that somebody has learned better ways to resolve disagreements, and that we will be treated as an equal part. Then I think most things can be resolved even though points of view can be very different. Without communication and mutual respect one cannot resolve important divergent points of view.”

(editorial, by top representative, in the union magazine)

At TR the increased competition and business orientation has highlighted the need for using more resources on marketing and developing the profile of the institute. While various decision makers will thus more easily recognise important knowledge, the increased result orientation is also expected to lead to more difficulties in airing divergent opinions. Further, the reduced distribution of research reports because they may reveal confidential competitive knowledge may reduce the opportunities for discussing important societal and organisational issues.

“... increased publication and information activities from researchers, and to arrange the information effort toward Telenor itself ... also use mass media to reach Telenor itself ... The change makes it more important than ever that we put forth our results, and manage to show how we contribute to Telenor’s competitive strength.”

(research manager in the TR magazine)

“ ... in many projects where Telenor R&D has had a central role, the credit of the research is given to others ... By profiling ourselves outside Telenor, we will also become better known within Telenor.”

(editorial in the TR magazine)

Researcher 1: This marketing manager is OK, we can disagree without him getting angry.

Researcher 2: Yes, but they will get angry as times go by, as their margins and deadlines gets scarcer.

Researcher 3: May be things will be like this with marketing people. They are difficult to talk with. They have a different view on the problems.

(informal small talk after a project meeting at TR)

“Because of competitive conditions and the relations to our principals, it is necessary to limit the distribution of certain publications.”

(document from introduction for new employees at TR)

“Some things are labelled a secret just to teach people that everything that is said in Telenor is not public anymore, [the CEO] himself said so once at a visit here.”

(researcher in interview)

The airing of serious information and points of view which are different from those of the surface and business oriented management is therefore deemed necessary. The one-sidedness of centralised information may be experienced as quite frustrating:

*“A certain degree of publicity is necessary to burst the worst bubbles.”
(technology researcher about the new management culture in the TR magazine)*

Researcher: “There is a lot of nonsense in the company magazine these days ...”

Manager trainee: “Yes, everything is very good ... Perhaps some still believe it, those who haven’t come near any conflict areas ...”

Researcher: “There must not be too large gap between their images and the real activities of the organisation.”

(observation from coffee break at TR)

“I am glad that (...) is used as a forum for important information and points of view from both management and employees, which marks this issue in particular. A company newsletter that is only a conduit for management, so that real problems are not surfaced and discussed, is not read and lacks credibility.”

(editorial in the TR magazine)

The diversity and dialogue challenge

Among the most important reasons for the common world view emphasis (at times the sheer necessity of a common recognition of impending hard competition is another), is the previous functional and specialist oriented organisational culture. The traditional separation of specialist functions in autonomous units has inhibited the good information and communication necessary in competition. Thus the development of a common world view is held to be necessary to facilitate some integration and acquaintance between otherwise distinct units (Fryxell, 1990). In particular, we have seen the long period of isolation of the research institute from the rest of the organisation.

“The previous CEO’s way of management was holding director meetings where the organisation’s different specialist units sent their directives upward, and there was no discussions or intercourse across the specialist units.”

(manager in interview)

“There are tight dividing walls between the milieus. One does not know about the needs of others for information, and one partly gives a damn about the needs of others.”

(advisory staff in interview)

First generation ... Research departments were enclosures of their own ... (as I said: here are elements of recognition!)”

(researcher in book review in the TR magazine)

Serious organisational problems may have followed from the separation. Highly specialised high-tech people may have developed unique and absorbing experiences that yield unique understandings, supported by long periods of success or at least sufficiency, so they may not have nurtured the capability of developing relationships with those who hold other views of the world (Beyer, 1990). They will perhaps tend to develop antipathies, and demand that others adapt to their view. Similar tendencies may have developed among other groups as a result of the emphasis on aggressive communication. When people focus on defending and promoting their own position, the relational problems following from separation may easily be maintained and aggravated rather than alleviated. The lack of respect for others' points of

view is often mentioned in observations. Conflicts may not be well understood, and one easily concentrates on how to improve the power of ones own message.

“A common trait is the belief in a monopoly of truth. In my marketing department, one thinks that people at the R&D unit are stupid because they don't know the customers. It is a big problem that people cannot talk with each other in a respectful way. In my department there is much communication, across functions and units, and new understanding about what is important now is quickly established. Here people don't communicate much, world views and goals are not so easily shared.”

(marketing manager in interview)

Researcher: “It is a whole job in its own to transfer knowledge about what we do to those out in the organisation.”

Research manager: “Yes, it is a hard process.”

Researcher: “TR has become a bit disliked, I think. Previously it was often the case that somebody had given their opinions on something, and then we got a notice down from the research director saying that we should give our opinions on this matter. So we were often reprimanding people out in the organisation. We have to get into other roles, where we can give advice informally, and tell things in more open ways.”

(observation at lunch at TR)

“Respect means that we treat each other as equals and listen to each other, even if the other has quite different meanings or attitudes than we. It is the respect for another human being that can make us disregard our prejudices and decide that the other tells something valuable, even though we don't immediately understand it, like it, or agree. Respect is the basic quality of every community. All trust between people starts by deciding to respect each other.”

(corporate ethical work book)

“They are not used to people who express their opinion here. They are perhaps used to it, but then there is more like disagreement about what is good and bad. When you have top managers who can not deal with conflicts, you can not gain respect. Most of today's top research managers can not deal with conflict.”

(researcher in interview)

Participant: “We must stop being so kind-hearted. We are fairly soft with each other. There is no culture for internal debate ...”

Advisory staff manager: “... and we are a bit touchy, too. When one respects each other, one can have a somewhat sharp tongue in internal debates.”

(observation from the leadership course)

The need for co-operation and learning from each other in the new competitive situation seems to be acknowledged, however. But sometimes it seems that separation must end so that others can recognise and learn more from ones own important knowledge. Marketing orientated people do put more emphasis on the advantages of diversity, but they often remain somewhat ambiguous as regards the need to maintain diversity in future. The action orientation may lead to faith in the development of a simple and surveyable environment, and they may perhaps rely on their own superiority as others come to recognise their significant contribution to the fulfilment of organisational goals.

“Third generation R&D ... Strongly simplified: Then the managers of all important departments (NB! also the research manager) resume leadership to let what was fragmented and sporadic cooperation in the second generation firm become the norm that permeates the company, but now permanently and organised, the so called “corporate

strategy". The purpose is to find the most open and effective form of management and communication at the top level in order to arrange all the company's power vectors in such a way that the business resultant becomes the greatest possible. One has recognised that the fence around the field which made difficult communication and management, and facilitated scepticism on both sides, was a completely inadmissible and purposeless luxury; one can not simply afford at the top to not know, coordinate and follow up all important parts of the company."

(technology researcher in book review in the TR magazine)

"Team work reveals significant cultural differences within the Tele Group, but this does not inhibit good cooperation ... We want creative solutions to the best of the customer, and the differences can contribute to a bit extra blooming of creativity ... Fighting between the units of the Tele Group is no big problem in the team, but at times there may be traces of competition between the participants."

(the company magazine)

"Televerket faces a complex reality ... and the missions are multifaceted ... the goal of "a uniform, simple, and surveyable organisation" has to be pushed a bit into the background. A researcher who plans a research project on "Organisational challenges of market orientation" has acutely formulated it like this: "To a complex organisation like Televerket, the challenges are to exploit conflicts and paradoxes in a sensible way, rather than finding unambiguous answers."

(research director in the company magazine)

"To a question about how the melting together of the different cultures in Telenor Company proceeds, he answers that this is a lengthy process. TBK's last year of operation was 1994. At that time one was far from finished with this process in the old TBK, although one had been busy for more than ten years. "We want to organise ourselves in such a way in future that we can exploit the diversity in the organisation and create group pressure in the direction of the goals that we want to reach" ... "I do not believe in high flying culture programs as though they should melt us together. I am of the opinion that one melts together by force of the fact that one shall fulfil the goals the organisation has put up."

(top manager in the company magazine)

The capability to exploit diversity often suffer if people revert to rigid and familiar positions and maintain their own certainties (Isaacs, 1993). Thus the need for the development of a different mode of communication closer to dialogue is increasingly recognised. The ability to listen is often suggested as an addition or alternative to the heavy emphasis on transmitting information. Perhaps most relevant for our purposes, it is increasingly recognised that successful product development depends on resourceful sense-making, i.e., "the ability to appreciate the perspectives of others and use this understanding to enact horizon-expanding discourse" (Wright, Manning, Farmer, & Gilbreath, 2000).

"But there is one ground rule in good marketing, one shall also listen. The purpose must therefore be to get a good dialogue with others in Telenor, rather than drowning them in information."

(research manager in the TR magazine)

"... typical of women ... the ability to listen to the signals of the organisation."

(female manager in the management magazine)

"... a cultural difference between the traditional telecom-milieu and the recent IT-milieu. The IT-people both speak and argue differently ... A different viewpoint on the net ... The

IT-people view the net from the viewpoint of sophisticated users. These users have clearly defined demands to the public net and experience it as a bottleneck. This can be the ground for a very fruitful dialogue between telecom and IT, as long as they manage to communicate."

(research manager in the TR magazine)

"In the future, we must (...) expect more dynamics both externally and internally than we have been used to previously. In many ways, we have together with our users and principals started a mutual learning process, with the purpose of developing Telenor R&D as a strategic resource for Telenor. This creates new demands on us, and on the utility-effect of our efforts ... We must get into close relations with our users and principals through knowledgeable cooperation, good communication, and understanding of each others' problems and challenges."

(editorial by research manager in the TR magazine)

Several sources for improving dialogue capabilities may be found within the organisation. The marketing and service oriented people may be an important example. They have a social orientation which facilitates interpersonal contact, as they perceive personal sources to provide information that is trustworthy while the more task oriented technologists often prefer impersonal and objective information (Schneider, 1989; Dougherty, 1992). The recent proliferation of the individualist business orientation may, however, lead to more concern with the efficiency of communication (saving time and avoiding hassles) to get the job done, and therefore to more instrumental styles of verbal communication (Chen, Chen, & Meindl, 1998). Information can thus probably be improved as regards what can be directly spoken about, but the social, emotional and non-verbal cues in face-to-face communication may have become less essential to convey - not to mention to discern from the other - desires, concerns, and preferences in order to build particularistic relationships (ibid.). Another important source that may have been weakened is the earlier telephonists of the manual switchboards, who were involved in a lot of exchanges, developed the art of conversation, and became "central information units" in the local communities. Such female communication competencies could have become the basis of a service oriented culture, and an alternative to the masculine management culture (Honerød and Hoveid, 1989). Today, the not much available top managers are often held to be those who possess the most valuable personal communication abilities:

Advisory staff person1: "The management is not much available, they are in meetings all the time. Perhaps they are available to people at a certain level ..."

Advisory staff person2: "There was a lot of notices on the (...) case. Our manager wanted it to be solved by personal contact at a higher level. There will easily be a huge heap of case preparations."

Advisory staff person3: "There is better information out at Telenor R&D, I think. The information in Telenor is very bad ... It is more informal ... It is more neatly and orderly out at Telenor R&D, more cross-project information. Here it is a whole days work to find out what is happening in isolated projects."

(observation at lunch at the headquarters)

The differential power problem would thus probably remain one of the most difficult parts of any progress toward the use of the dialogue mode of communication. Anyhow, dialogue would have to interact with and be balanced against transmission. Perhaps the ideals held up at TR may speak of some of the challenges involved:

"The advantage of being integrated in Telenor, is that we can have a continual dialogue

with our principals. It is our responsibility to contribute to making them demanding customers that also have a long time perspective.”

(research manager in interview in the TR magazine)

“A classical conflict between long and short time perspectives ... The principle assumes, however, that Telenor R&D (mainly) is the active part – that Telenor R&D propose, plan, and justify what R&D should be done ... This presupposes a constructive dialogue and harmonisation with the principal’s plans for the future (strategies).”

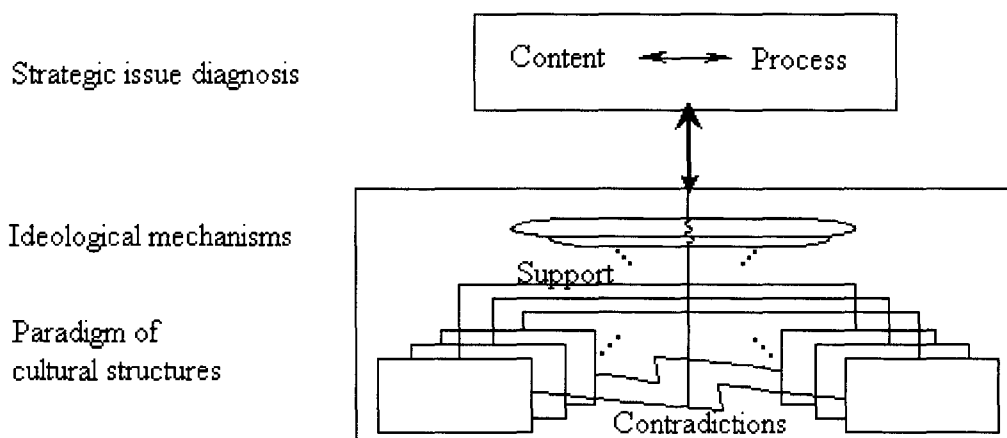
(the TR magazine about the principle of “user control”)

Chapter 5.

CULTURAL ANALYSIS OF STRATEGIC ISSUE DIAGNOSES

In this chapter, the description, partial explanation, and occasional hints at critique will be developed further, towards a cultural paradigm, in analysing the observed strategic issue diagnoses. The main analytic model that will be used is laid out in figure 8. As a cultural process, strategic issue diagnoses represent manifestations of the paradigm of cultural structures, with their relationships of supports and contradictions, and the mechanisms through which these cultural structures interact and modify each other. The explanation will gradually be deepened as we move from the upper or surface part of the model towards more structural relations.

Figure 8. The main analytical model.

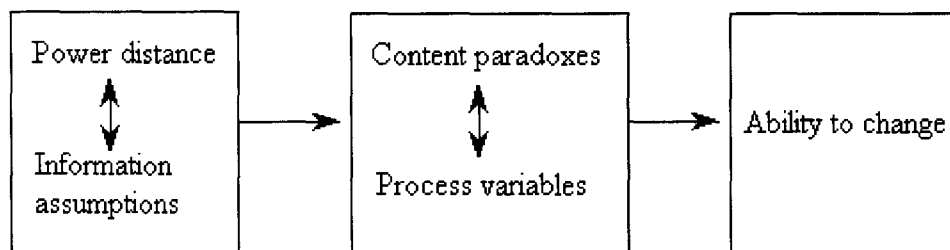


The first section is an interpretive description of the strategic issue diagnoses as they are experienced by participants themselves. The content of ambiguous and paradoxical meanings is focused, together with the interrelated and mutually influencing process variables. The interpretive description is, together with the organisational culture analysis, a basis for the following sections, and it contains much of the empirical material. The second section, which starts with a summary description of the empirical regularities, aims at an explanation of why the strategic issue diagnoses appeared as they did. Here an attempt is made at mapping the cultural paradigm beneath the processes in a realist approach. The purpose is to explain how the strategic issue diagnoses were generated as a result of the activated cultural structures and the mechanisms of their interaction. The third section dig even deeper and add a critical dimension to the explanation. The idea is to illuminate how the activated cultural structures and their way of interacting may have involved the suppression of some cultural structures and processes. By revealing the oppressive power of ideological mechanisms which distort cultural contradictions, one may contribute to an increased potential for more effective strategic change.

5.1 Description of Strategic Issue Diagnoses

This section will be organised according to the categories of the model in figure 9. It starts with describing the perceived important paradoxes of the observed strategic issue diagnoses. This will introduce the content and significance of the strategic issues, but the individual issues will not be focused and discussed themselves. The purpose is to illuminate the cultural themes and dynamics pervading the issues and the processes through which they were diagnosed.

Figure 9. Overview of strategic issue diagnoses description.



5.1.1 Business :: society orientation

The fundamental business :: society orientation theme was particularly central in the USO debate. In general, people holding the society orientation argued that the competition introduces "a threat against the principle of equal access to certain basic teleservices at equal terms, irrespective of where in the country they live" (the company magazine), while liberal business people maintained that competition contributes to both an improved offer and lower prices.

"The OECD-report rejects this criticism and thinks there is proof of a larger and better offer instead. This is a development which is observed in countries with net competition."
Company magazine, USO

"The PTI has sent the following statement to the Communication Committee of the Parliament and to the Norwegian Government ...PTI has also experienced that the establishment of limited companies leads to the fact that business economical considerations become superior to societal considerations, and makes it difficult to maintain a universal and equal offer of services at equal price."

Union magazine, USO

At TR the general atmosphere was expectation of stronger influence from business interests, at the same time as the access to basic telecommunications would remain a social issue that required some extra effort to be solved.

"... some kind of compromise between business interests that want to abolish the obligations altogether (the Bangemann report), and welfare interests should be expected. The solution signalled by the European Commission may have the characteristics that this compromise will need. If so, it will also replace the Norwegian definition that is based on uniform prices and national coverage."

TR research document, USO

"The access to telecommunications, in particular telephony, will become, and is perhaps already, a human right, as an element of what is included in an existential minimum and human dignity. This will stand in opposition to the liberalisation tendencies, but at the same time be so basic that the society will see to that this is taken care of."

The 1993 research plan, USO

The official standpoint taken by corporate management said that Telenor wanted the USO to be limited to the basic telephone service, and that the costs should be compensated for by all competitors contributing to a fund. An internal work group seems thus to have been established in order to find how to best secure Telenor's interests: by first limiting the obligation and then including all items in the cost calculation and getting the fund as large as possible.

"Telenor will probably be represented in the ministerial USO-committee ... [The purpose of the new work group is to] develop the disciplinary basics that the committee probably will ask Telenor to get hold of ... Telenor has already through its comment to the public inquiry of the EU commission, taken a provisionally standpoint in this question and thus wants the US limited to the basic telephone service The task for Telenor seems to be limited to obtain the best possible argumentation and justification for limiting US to what is at any time the basic telephone service ..."

Put forward proposal for calculation of costs associated with USO

Irrespective of what US will contain as regards services, it will be a large problem to calculate the cost of the loss that Telenor will suffer ... Telephone boxes because of "weak group" considerations and special solutions for the handicapped are examples of other services that Telenor must expect to offer as societal obligations. This will also put Telenor to expense which shall be compensated for, and thus have to be calculated.

Put forward proposal for calculation of contributions to Universal Service Fund

In our comment to the EU commission Telenor has already stated that USO should be financed by a Universal Service Fund [rather than access charges]

Since many probably would be of the opinion that Telenor by force of its dominating position should take a relative larger part of the USO deficit than the new/small actors, it has to be in Telenor's interest to get the fund as large as possible, and in such a way that there is a somewhat mathematically correct proportionality in the actors contributions to the fund."

Call for corporate work group establishment meeting, USO

"Following an extensive discussion and clarification there was agreement that one should first start with the work of finding/developing a model for the calculation of the USO-costs with the telephony service as a starting point. The question about financing mechanisms should then become of interest."

Corporate work group meeting minutes, USO

More socially oriented TR researchers found the corporate attitude too negative. In order to foster a more positive view of social responsibility, they wanted to develop the argument that universal service obligations might involve advantages for the corporation. In particular, their proposal pointed to the need to develop knowledge about the net impact on competitiveness, including advantages of wider distribution of new technology, societal financing, new and more customers, and better image than competitors.

Participant: "The problem is that one is very negatively focused on this obligation to take on the responsibility of offering () telephony to everyone all over the country at equal

prices. It only gives us disadvantages and deficits. As a social economist I have a different view. There are solutions to the problem. By raising the question of how universal services shall be financed, there are for instance possibilities to find transfer mechanisms from the state budget. The form of the financing can give new possibilities for Telenor, too. Considering the market, we have thought that it can be useful to run a more offensive strategy. By being early in offering services for market segments like handicapped persons, or Lapps, etc., we can be an interesting company. One can take on more societal responsibility than strictly speaking necessary, this can be smart in a competitive market, too. So we thought about speculating a little about things like that, in order to change attitudes. USO is not necessarily a negative issue for the dominating actor. Very little is done on these things, and we have got great support ..."

Question: "So this is about image at the market, or ...?"

Participant: "Yes, that can be one element. I have not thought so much about this, yet. There can be economies of scale, too ... We are curious about the opportunity approach, you see."

Participant, social economist researcher, in interview, USO

"The objectives include work along three dimensions:

Identify the services included in the present obligations. This is e.g., to identify the content of "basic telephony services" and any obligations to deliver services to disadvantaged groups, e.g. the poor, the elderly, the disabled, the low volume users etc.

Discuss the likely future definition of USO, taking the above mentioned technological and market convergence and general market dynamics into account. Relevant Questions are: Will USO expand to include access to new multimedia services? Will foreign operators and new multimedia players be bound by USO? Should USO be solved by the market?

Identify present and likely future constraints on the pricing of these services. The aim of such constraints is to encourage people to join the network at affordable prices. The pricing constraints are linked, and might include:

National/universal geographical coverage

Geographical (de)averaging tariffs

Low access charges (installation and periodical rental charges) for residential customers.

A common theme is to investigate the impact on the PTO's competitiveness from having USO regulations on both the national and European level."

TR-Eurescom project proposal, USO

One of the contested issues was if the introduction of cost based rather than average prices should include the possibility of geographical price differentiation. In residential and more scarcely populated areas, the costs of developing the net were much larger, and geographical differentiation would lead to higher prices. This development was most heavily opposed by society oriented people in the case of basic services, but also in other service areas. An unequal access, with inferior technological quality, less advanced services, and higher prices, would impede societal and industrial development in the districts (Skogerbø, 2002).

"The demand analyses that exist conclude that the prices for access and local traffic can be relatively increased without affecting the telephone density or telephone use to any significant degree. In particular, this applies in countries with high income and a well developed infrastructure. The conclusion is strengthened by the fact that the real costs within telecommunication decrease across time as a consequence of the technological development. The expenses for teleservices will thus be relatively low, even in areas which get higher prices than the average. In other words, it is not very probable that a price differentiation based on the underlying costs will hinder the service provision all over the country ... District political considerations can be used to argue against such a development. Teleservices contribute strongly to reducing the disadvantages of geographical distance, and are thus an important factor for developing population and

industry in the districts. In practice the transfer to the districts through subsidised teleservices will probably be an effective method of district politics, in comparison with general money transfers, too."

SNF research report, USO

Manager 1: "You were unfortunate with one of your formulations, for Telenor this is a vital formulation. You said "equal prices", but in the [parliament publication] the wording is "equal terms". Telenor management has interpreted this to indicate that there is some room for bargaining as regards price differentiation. There was a long discussion about this formulation, and there is a common understanding in this company that this is a political concessions that at least after some time will give political opportunities."

Manager 2: "In my view the proposition about cost based prices is the same as dropping the whole obligation. A price based on average costs will also attract new customers, is this included in the considerations?"

External researcher: "I do not propose to drop the obligation, but to put less emphasis on equal prices, so that more of the costs are covered in the market. The most important justification is that this does not reduce coverage all over the country. One has to considerate what is realistic and possible. In a competitive market a more flexible price policy is unavoidable."

Observation from seminar discussion, USO

"... the regulations are all right, they say that there shall be cost oriented prices, but what does cost oriented mean? We are on the way to adapt ourselves, by introducing a model in which we distinguish between the costs in densely populated and other areas."

Participant, advisory staff, in interview, Internal competition

For the business oriented managers price differentiation may have been a necessary means for achieving competitiveness and profit, and thus a prerequisite for being able to offer services all over the country. Further, the issue of price differentiation probably referred to the very concept of competition: if you have a competitive market you can differentiate prices, if you have a monopoly market you can not.

"Much energy has been used within the telecom world to calculate how much the USO costs the telemonopolies, which calculation methods are the most appropriate, and to find sophisticated compensation plans for the future, liberalised market. Telenor has chosen to walk another course: We are convinced that this debate is to a far too great extent static and associated with past conditions. We have chosen to say that we will carry the costs of USO, defined as telephony, if we are allowed to choose appropriate technology, and are allowed to practice a reasonable price differentiation. We are convinced that with new rules of the play - based on price differentiation and competition - it will be far more important to create tariffs and payment plans which leads to the fact that marginal telephone users become interesting customers, instead of seeing them as a burden and a cost."

CEO external speech, USO

5.1.2 Monopoly :: competition

The absence of competitive restrictions would make it easier for the earlier monopolist to keep its dominant position. Thus the "most liberal" view of competition, i.e., in a competitive market you must be allowed to use the same competitive measures as competitors, might lead to greater problems in removing real monopoly conditions. A favourable market position might also be justified by a society orientation which pointed out that with more competition

comes greedy and cream-skimming competitors who operate in directly profitable areas only and do not have universal service obligations. Shouldn't the serious and responsible incumbent be compensated for social responsibilities, and perhaps get protection against too much competition? While the business orientation rendered monopoly self interest to be associated with the past, and the society orientation favoured responsible and effective competition, both may in fact have functioned in a way which reduced competition.

"I think there is a very low understanding of societal economics in Telenor. People are very naive, I think, and very spoilt because we have not faced any regulation authorities in practice. We have been thick with them, and people don't understand that it can be a matter of hard encroachments into our desires in future. People in Telenor get offended if one says that there is a real conflict between business economical interests and social economical interests. One thinks that one is the number one social company, at the same time as one wants to be very dynamic and cut down and such. And one gets offended with facing particular demands if Netcom does not. It is a matter of not knowing that the purpose of regulating authorities is to reduce the market power of the dominating actor. People are offended by this. So this interest conflict triggers me in a way, I can see that there is a great need for social economical competence in this company. But another matter is that I feel that we are not allowed to use this competence in the way we want to. It is clear that social economical analyses are not prioritised in a profit maximising company. It is in the nature of things ..."

Participant, social economist, in interview, USO/Electronic market

Different parts of the organisation and its services were differently exposed to competition. In some strategic issues dealing with traditional monopoly areas with strong market position, the access charges of the basic services of the infrastructure were a concern. The access charges were important costs for competitors, and they might also contribute to competitive conditions by financing investments in upgrading the quality of both the transport net and the access net all over the country. The consequences of the regulatory introduction of cost based prices might include higher prices of access, in particular to the access net where competition was low and absent. The complexity of the regulatory and strategic concerns was added to by technological intricacies such as the configuration of the accessinterface. As competitors and internal customers should be treated equally, the Internal Competition issue had consequences for external competition:

"The reason that we invited one participant from Accounting was mainly that the line rent that Mobile is dependent on, and as far as it goes Netcom, too, in order to offer their services, is beside being a technical matter, to a very great extent an economic difference. Concerning this line rent there are assertions which selfishly come from the Netcom side at least, that Televerket milks the monopoly. Even if Mobile, on natural grounds, do not come up with similar assertions, Mobile's results are to a large extent dependent on some line rent conditions which they negotiate with their parent company."

Participant, advisory strategy staff, in interview, Internal competition

"-Presupposes that Televerket is allowed to adapt the ONP-prices to the cost structure in the net. I.e., more emphasis on access prices and lower emphasis on the transport net.

-Disadvantages can be monopoly prising from net operator.

-The principles for such internal prices should thus be established based on a future lower price level ...

-In capital intensive companies such a price establishment will be appropriate because it takes time to change the cost structure of the company."

Final document, Internal competition

"... another discussion is where the division between traffic and access shall be. In UK BT would move the access interface so far into the net as possible, so that a larger part of the costs should be covered by Mercury. The danger for the established operator is that the prices becomes too high, so that other alternative providers start to offer access, but in some parts of the country there will be only one provider of access. Earlier the interface was in the product account in the switchboard, this is a convention, but now the access net becomes more complex, with digital concentrators and not only copper wires from the switchboard to ramification points where the subscriber termination lies. There will be a longer interface, subscriber termination lies in the digital concentrator, and the question is where the interface shall be when the competitor can connect farther out towards the customer."

Participant, Net division technologist, in interview, Access net

The technical side of the issues often required high technological competence to be understood. Seemingly simple technological solutions could have far reaching consequences for competition. While the interface between the public infrastructure and customer equipment seems to be straightforward in the remark below, it should be kept in mind that a dominant player would seek to maintain proprietary standards to keep competitors weak (Mansell, 1994). Another area of concern was the synergies between different parts of the organisation and their networks. The argument was that such synergy resources had to be taken advantage of; competitors were often able to do it, and severe negative consequences might result if this opportunity was not utilised. It would be difficult for an outsider, however, to distinguish instances where this might represent what competitors would label monopolist cross-subsidies.

"I am concerned with the net operator role. We have companies like Mobile, Avidi, and telephone companies, they have their own switchboards, like Netcom, but they do not have transmission, because infrastructure is monopoly. Our different companies are directed towards the same customers. Netcom and other competitors can combine their technologies in different ways. It is easy to connect the customer's equipment to different technologies, it is easy to combine GSM, DECT, and PABX, but with today's organisation Telenor can not do this. We have problems with being competitive in this area, where the customer is focused. We can do this within market segments, but not on the whole. We have to manage to get combinations so that the unit who has the customer can buy capacity from other companies with different infrastructure. Then we can also manage to get stronger customer ties ... Private want to compare itself with competitors. This is alright as long as one buys from the same supplier, but the day that Net is not competitive the competitor will solve this by using own infrastructure or buying from others, in order to get higher profit. How long will this tie to Net hold? What consequences will this have for Net? At the extreme one has to buy from the new net operator, and then Net will be even more unprofitable, and what would then have to be done? I think this is very interesting. To put the customer at the centre is important. One has to know the premises of the customer's customer, we are performing badly in this domain today. We have to know the driving forces of the customer. This was seen from the service provider's angle. From Net's angle we can integrate functions, make oneself attractive, and prevent flight from the platform. From the corporation it might be that one wants to loosen the tie in order to put pressure on Net. Net can just die. Net will sometimes be attractive, but on other occasions one buys from others. Then Net gets problems with covering, and risks to be left with unprofitable areas ... The question is if one shall have competition between ones own units, or if one shall compete in other ways."

Participant, Net division technologist, in interview, Access net

As the competitive landscape was transformed by technology and industry convergence, the initial standpoint was to further the already strong position in the distribution part of the businesses. One argument was the acquired experience, competence and ability to compete in markets where a dominant position could be maintained. In the new Multimedia area, to enter and grow in the content part of the business would also raise more serious questions about societal power relations. In order to develop competitive advantage, it was proposed to get control of content providers as well as end customers through the packaging of products. In particular, it was held to be important to get control of the relation to and thus secure the income stream from the end customers.

"In an international perspective some telematics companies break with the distribution philosophy and acquire companies in category C ... The basic strategic reason is that the acquisitions shall secure and/or increase the volume in the distribution activity. Such vertical integration can also get into conflict with the "neutrality" philosophy in the distribution function itself. In addition a different competence is required to develop/create products, services, and information ... This strategic proposal on Multi Media focuses around activities in category A and B where we can be dominant in the market. That is, acquisitions of newspapers, television stations, film producers, radio/TV-producers etc. require a change of Telenor's main business idea. This does not preclude, however, that a media effort engage in a limited form in category C activities, if this contributes to gaining significant competitive advantages in the business areas A and B."

Final document, Multimedia

"In order to take care of a good distribution it will be strategically important to get control of selected parts of the packaging function. In particular if one wants to create an offer for business, distribution rights for some international databases will be central ... Transmission of information from databases in sound/image format will increase in future ... When the legal framework gives the opportunity, the distributors will move into the packaging role ... Within Audio Visual Services the distribution role is primarily associated with the transmission of an offer to many at the same time. The need for interactivity will increase successively and on the long view be dominated by individual transmission of Audio Visual Services. This requires an upgrading of the distributor role for taking care of switching and storage of audio visual information in addition to transmission. The distributor role will thus increase in importance and be the most important tool for securing the income stream from the end customer.

Audio Visual information is very demanding as regards storage capacity ... This implies that an intermediate storage function between the producer and the customer will be necessary until the cost of storage at home or in the office is significantly reduced. The distributor will in other words be able to sell this function in order to offer transmission of film, product information, other items of information etc. The distributor will be able to do some strategic investments which organise conditions for binding together the end customer and the producer."

Final document, Multimedia

In this emerging new industry, it was also clearly argued that the regulatory authorities had to be influenced in order to strengthen Telenor's market position:

"The development of the regulations shall to the greatest possible degree be influenced so that they contribute to strengthening Telenor's market position within Audio Visual Services... How do we have to influence the regulatory framework in order to get future room for action?"

Final document, Multimedia

"The EU is in the process of establishing the guidelines for the regulation of multimedia. This is a very complex undertaking (...) will not be ready for some time. European PTOs have a lot at stake in multimedia and have great opportunity to influence this emerging regime.

A Project on the unfinished aspects of multimedia regulation within the Work Area Strategic Studies could therefore strengthen the ability of European PTOs to argue their cause in the policy debates."

TR-Eurescom project proposal, Multimedia

Actions which might maintain the already dominant position where existing regulation faced difficulties were more ambiguous. In the E-market process, the development obviously went in the direction of separation of public infrastructure from competitive services, but some unregulated intermediate space for action might remain within which competitive advantage could be built from superior technological competencies. The platform for realising value added services might thus do more than accelerate the use of new services, it might be used to maintain the dominant position by restrictions on the availability of the new intelligent functions (Mansell, 1994). It remained ambiguous if this opportunity should be exploited, perhaps awaiting the actual intensity of competition in this area (exploit if intense competition makes it necessary/respectable).

"A problem area which is not mentioned in the directives, is the definition of closed networks and interconnection of such nets and public (reserved) networks. Practice and policy is very different inside EU. It is for example very liberal in Great Britain and very restrictive in Germany. However, one can expect that the ONP-directives will develop in the direction of pure netfunctions (transmission, switching and operation and maintenance) or infrastructure functions (i.e., netfunctions without switching) for reserved services will be required to be divided from service management by clear functional, technical and economical interfaces. Thus there may be far more possibilities for private service providers for establishing their services on a common public network-/infrastructure-platform. Televerket will in such a situation be both operator of reserved net-/infrastructure services and service provider of competitive services. This would then involve that we can not integrate our existing and future competitive services (including simple additional services) in our future reserved net/infrastructure without offering other service providers similar possibilities. In our assessment and possible realisation of services in an electronic marketplace, we should therefore consider this fact."

Preliminary project report, E-market

"At the start of the e-market project we were concerned with the development of new services, now we are concerned with developing a platform for new services. Value added services are the ones who count as times goes by. In our project we are concerned with this platform that makes the services connected to our net infrastructure rather than others. It is a matter of functions, not physical services, though physical elements may also be included. We work with coming to grips with some central services, and try to find what functions are needed to realise them."

Participant, technological research manager, in interview, E-market

The possibilities for investigating such social economical problems of competition seemed to become more limited. In the more business oriented R&D culture, the user-government had made it difficult to get internal financing of projects not directly directed toward company profitability. The cross-disciplinary way of working may also have reduced the attention invested in social economy disciplinary problems. The remark below further suggests that the transmission way of communication may have contributed to reducing the influence of minority disciplines in cross-disciplinary work situations.

Question: "Not allowed to use your social economist competence in your way ..."

Participant: "Well, I am not so sure that this is about social economist competence, but we have often emphasised the need for taking an holistic view of corporate policy, and the culture is now very much directed at optimisation in each division. When we shall study price policy, for instance, and this has been pointed out in the E-market project, too, it is argued that no one will pay for such tasks because the divisions sub-optimize, or have to stay within their budget. From corporate management we get some support, but not from the divisions ... Therefore the projects often get fragmented and totally different from what we want to do as social economists. Thus we have worked a lot to get allowance to work for the Corporate Deliberations unit. In the E-market project it has been a matter of pointing out problem statements around vertical integration, for instance ... There are a lot of problem statements that could be analysed here."

Question: "We have five minutes left, approximately ..."

Participant: "I want to comment on one issue, at least, this cross-disciplinary way of working. I support it, it is important and I have learned a lot, but it is important to be disciplinary before you can be cross-disciplinary. We have not come to grips with this problem at TR, yet. It is in a way a sin to work too much with the social economists. Cross-disciplinary work takes a lot of time, because you have to use a lot of time to communicate. You talk totally different languages, so these synergy effects in cross-disciplinary contexts are assertions that needs some study. Now the atmosphere seems to be very good at this program, we are safe and have very good disciplinary discussions, but now we are going to be split up again ..."

Participant, social economist, in interview, Electronic market

5.1.3 Technology :: market orientation

As increasing competition made the financing of technological investments uncertain, the diffusion of new technology was expected to slow down. In the emerging economical and political climate, net development would increasingly depend on market demand. Since customer needs develop slowly, depending on the gradual building of experience from already available services, the gap between the technologically possible and the economically or socially feasible was only expected to increase. Participants in strategic issue diagnoses thus tried to balance this basic opposition between technology and market interests. In the Access net investment issue, flexibility seemed to be essential for accommodating different emphases on cost effectiveness, future-proof quality for various new services with different bandwidth requirements, and a complex set of user needs and demands (Ims et al., 1995). In new service development, there was a central tension between adaptation to existing behaviours versus investment in the stimulation of more advanced needs.

"With today's analyses and prognoses as a starting point, the development in the private market does not seem to raise particular demands to the net as regards increased bandwidth ... Great uncertainty is pointed out around the demand for new services which the market is not familiar with.

The dynamic of the private market is pointed out, the danger of underestimating the needs are large. The development seems to go in the direction of some users developing new and special needs, while the majority does not follow the same trend."

Informal end report, preliminary Net division project, Access net

"... the cost difference between very modest access network upgrading strategies and considerably more aggressive solutions are marginal compared to the overall investments associated with any upgrading alternative. As a consequence, the most difficult decision

for the network operator is not so much how to upgrade but to find the degree and timing for upgrading. The cost of bandwidth is high for all technical solutions favouring more future-proof technological solutions."

Scientific article (Ims et al., 1995), Access net

"The access net represents a unique, but vulnerable resource for Telenor. In a future competitive situation, the access net will have great strategic significance. We have to reduce the costs of development and operation of the access net. This is among other things done by an as good as possible exploitation of existing investments, at the same time as more effective technologies are introduced as user needs, cost development, or competitive conditions say so."

Corporate strategy document, Access net

"In order to achieve success with Audio Visual Services of larger scale, it will be required that the introduction takes place towards existing behaviours. For instance, the video rent market in Norway turns over about 550 Mkr. a year. There is in other words an existing need, of which there is an opportunity of offering an alternative way of solution. The introduction of totally new behaviours takes longer time. The timing of the introduction of a larger offer will in these cases be very crucial."

Final document, Multimedia

Business :: society arguments

Technologists increasingly made use of the business logic in order to fund technology investments. For instance, TR research managers paid attention to large business customers with more advanced needs, and they tried to find and introduce services that could give the necessary income. The business awareness thus brought in more emphasis on short term projects as complements to the long term technology development (Judge & Spitzfaden, 1995).

"On the long view, one of the big issues we work on is the development of a high capacity net for the household market. This has at least about a ten year time horizon, and the decisions do not come during the first half year ... There will not come any clear decisions, that is obvious, but we work with trying to survey this ... We work with a short term strategy, I think, and this is the more businesslike part of it, for how we can get a part of cable TV, because cable TV is what can pay for this. It is the service which first and foremost can give income. Telephony can not pay for this, because there we already have an infrastructure which is so new that it cannot pay, it does not need this upgrading. So this is obvious, it has to be an application which people want. Cable TV is safe, but within cable TV we compete with ourselves and with others. The problem statement is to find the different variants and what they will cost, I think."

Participant, technological research manager, in interview, Access net

The presumed situation in 1998 ... "Subscriber net (access net) with fibre forward to larger business customers, some based on [technical terms]. Combined fibre- and copper solutions to ordinary household subscribers. Use of simple optical functions ... Optical technology will be widespread in private nets (LAN etc.). These nets will perhaps be in the front of the development of the telenet elsewhere and will thus be a driving factor ... Traditionally cost optimisation has been in focus, because of large investments and little variation in demand. In future competition a many-sided, varied demand will characterise the development, so that income maximisation will be central, too."

Input to the research plan, Access net

"Optical nets ... The role of optics in today's telenet is limited to transmission between nodes. The processing within nodes occurs by electronics. I future nets with a need for high capacity such electronic nodes will easily become bottlenecks. In such a perspective it would thus be probable that optics will be used not only for transmission, but also for routing multiplexing, and branching in the nodes ... The real role of optics in future transport- and subscriber nets has to be made clear ... How sophisticated the net should be as regards packaging of traffic or more effective utilisation should thus be assessed in light of new optical net functions. Optics, electronics, or software do not need to be mutually exclusionary in future nets. The situation will rather be characterised by a dense interplay where a significant research effort will consist of defining this interplay between the different "technologies"."

Input to the research plan, Access net

The socially oriented researchers, on the other hand, tried to draw on the social utility of technology in order to facilitate technology development together with user needs all over the country. The slow net development should thus be met by political solutions similar to the building of airports and highways. For instance, the USO definition should be updated to include new services and intelligent network resources, in order to serve all users rather than just dominant business interests (Mansell, 1994). The businesslike market orientation was often perceived as supporting industry interests in limiting any extension of USO in order to increase profit.

"In the USA, Al Gore has stated clearly that universal service should be extended to include "advanced communication services"". In Europe, and in Norway, there are even vaguer definitions of the present and future content of universal services."

TR research document, USO

"The same USO obligation as today, service fund most probable form of financing. The content of the obligation will be common for the whole EØS-area, while national governments will decide the form of financing. Much point to the fact that the EU will be careful as regards any extension of the content of the obligations. In addition, the large economic and geographical differences between the 15 member countries make it difficult to agree about an enlarged definition. The signals from the EU and the Norwegian tele law indicate that the idea of a service-fund is a probable form of financing."

Business economist researcher input to corporate strategy work, USO

A similar pattern occurred in the new R&D unit issue. The basic research and technology proponents wanted to further long term and socially beneficial development, while business interests apparently wanted to reduce these efforts if they were not financed outside the corporation.

Question: "The estimates of the relative size of the different kinds of R&D, are they approximately as today at TR?"

Participant: "It is difficult to answer that question as long as one has not put in numbers how large that R&D unit shall be, but I do not see any dramatic in those numbers. Broadly speaking it looks like it will be like today, I do not see any change of the course ..."

Question: "The title and the proposal says restructuring of the development activities, does this indicate that the research part of TR will continue as it is today?"

Participant: "No, I do not think that anything will continue as it is today. I think the whole R&D activity has to be managed into an activity which support the business activity in the corporation. But I think it is important to get a volume, and organisation, of the research, too, which is different from what is today, and which is more in accordance with the challenges that the corporation will face in future."

Question: "The development versus research discussion, in the rest of Telenor ..."

Participant: "Most of the business units are naturally very little concerned with what is research. Most of them associate research with something that dusty professors do at the universities, in other words they associate it with something that is not very useful ... Thus the business units will normally be concerned with reducing research and arguing that we should operate development, and considering what they put into these terms, I think they are very right. What is important to me is that we should pursue what we call research, because it gives large profits ..."

Question: "And you had to fight for not reducing research in this process, too?"

Participant: "This seems to be an idle discussion, because people put different content into this word research ..."

Question: "In the governing committee, too?"

Participant: "Yes, because several label as research only what we call basic research. And my answer to them is that this is something we have never pursued. We pursue applied research."

Participant, research manager in interview, Research

"A part of the research is so general that it does not concern only Telenor, it should thus be financed by others, too. The society should pay, not only the one dominating actor. This problem statement will emerge when monopoly disappears: to what degree shall Telenor pay for research which many other actors in society benefits from?"

Advisory staff manager in interview, Research

Discipline :: action

The disciplinary orientation of technologists also got into conflict with the action orientation of the market philosophy. While business managers feared that researchers and engineers would identify more with their technologies and disciplines rather than their businesses, the disciplinary people feared the disturbances of arbitrary and short term initiatives and distractions. Controlling the chief input to essentially creative and non-routine processes where solutions to complex problems can be found, R&D people represents particularly acute problems for traditional bureaucratic controls, and the business managers had indirectly attempted to control them through the market mechanism of user-government (Whittington, 1990). But as market-driven demands for improved financial performance would focus on short-term, incremental and applied development (ibid.), researchers argued that the development of future strategic valuable knowledge would be severely hampered (Garud & Nayyar, 1994). In particular, the case was made that they needed to explore technological opportunities that might not fit well with the narrow concerns of any of the corporation's existing divisions, but which might be vital to its long-term future (Whittington, 1990). One of the conflict issues was the organisational structure of the new R&D unit:

New manager presents thoughts about the new R&D organisation opposed to bureaucracy
Research manager 1: "Simple and flexible, you said, and project organisation. Then it is going to be a small core of managers who shall govern a lot of projects. Do you expect them to be such superhuman people who are able to survey everything?"

Research manager 2: "The whole TR is based on the fact that there are many experts here. You don't mean to say that this is going to be removed?"

New manager: "No. This is principles that organisations have been governed by previously. I have not said that this applies to TR, but Televerket is often characterised by this."

Research manager 2: "You have to be very clear about this."

Research manager 3: "If one shall put up a model of what TR shall move away from, this ought to be a university model ..."

Research manager 4: "I do not agree. TR people often come from Televerket. His model shows the unconscious model they use."

Observation from TR management meeting, Research

The disciplinary and social market orientation at TR did not carry the urgent action implications of business managers. At the start of the E-market effort, people from both the market side and the heavy technological side got together in order to better understand the complexity and uncertainty of the development of this new business domain. The potential for interpretive flexibility (Dougherty, Borrelli, Munir, & O'Sullivan, 1998) was high, and disciplinary priorities ranged from deep understanding of business processes and market development related to different customer groups, to emphasis on the technological development of strategic services, service packages, and integrated solutions. In fact, it seems that the technologists were more concerned with the action - of building the market place - than some social scientist concerned with understanding the new market phenomenon and its implications:

Question: "Do you remember some of the different definitions held by different groupings?"

Participant: "Well, I remember one issue, as an example. We had a long discussion on if there were a distinction between the electronic market as such and electronic market places. There was disagreement between those who wanted to approach the wild beast more in ways like producing an electronic market place for Telenor and analysing the problems that arose on the way, and others who wanted to analyse the electronic market as such. Afterwards it has turned out that both the two totally different approaches were very important, and we have learned a lot in this process. Then there was another disagreement about which services should be put into an electronic market. Should we deal with all electronic services, is this a matter about telephony, telefax, that is basic telecom services, is it a matter about video on demand, shopping, data services, and multimedia services, is it a matter of distance education, telemedicine, and so on. Thus we disagreed about limits, some wanted to include everything, from telemedicine to telephony, in this concept, while others were concerned with the other extreme, having the market place starting point and building up one market place that should offer let us say three set of services in a starting phase, a news service and ... you see?"

Question: "Did these distinctions follow some () disciplinary dimensions?"

Participant: "Both yes and no. I think that the technologists were those who were most concerned with the market place dimension, and with finding solutions, they are very occupied with such things. We social scientists were more concerned with the phenomenon, or how companies behave in such markets, will they take decisions in different ways in electronic than in physical markets, and how will the customers react. But among us there was much disagreement, for instance we economists were very concerned with the market place definition, because we were concerned with commercial aspects, who shall own this market place, who gets the profit, what name shall we give it, shall it carry the Telenor brand, etc."

Participant in interview, E-market

The resulting service orientation was combined with understandings of how the technological solutions would fit into and influence market developments. In particular, it was argued that the e-market would create income as customer needs were served and user conditions well arranged. Emphasis was put on the user friendliness of advanced technological services.

"service vs. technology orientation ... the service oriented research seeks to uncover similarities and common denominators of service concepts, above the unique of technical

solutions ... We must in future focus on similarities between different technologies, in order to put together saleable services."

Input to the research plan, E-market

"... the numbers indicate that Televerket risks not getting an adequate share of the total growth of the telesector. To counter this, Telenor must to a far greater extent take its share of the value creation in the establishment of value adding functionality beyond traditional basis services. Value creation, income, and customer contact to an increasing extent go to those who provide the most superior service in the service chain, and not to those who bear the expenses of development and operation of the net."

Report from preliminary project, E-market

"In the coming ten year period the customers will to an increasing extent demand information- and communication solutions in the form of tailor-made service packages. What we today see as special services and applications in dedicated nets and with dedicated terminals, will be developed into integrated solutions ... One key word in this context is "one stop shopping"."

Project plan preliminary project, E-market

Control :: uncertainty

The technology world view often emphasises the "hard" empirical facts, the more quantifiable and logical, while the marketing view stresses "soft" issues of people, values and emotion, and the qualitative side of phenomena (Berthon, Leyland, & Morris, 1998). Technologists would therefore perceive their decision making environment as more structured and certain (ibid.), and/or tend to prefer a less ambiguous strategic environment of which they have control (Hofstede, 1983; Schneider, 1989). While the present technologists were concerned with the risk aversion among business managers in the context of long term net investments, they may possibly have come to put too much emphasis on the importance of the more secure cost and technology parts of the issues:

Question: "How about this uncertainty of the technological domain, is it so large? The research plan says that the technological development is rather predictable ..."

Participant: "I think there is some truth in that statement. The technology, or the technology development, is somewhat predictable, but it takes time before things come, for instance fiberoptical systems. Regarding services and things like that, what is above the technology, one can get a more explosive development ... Technology is more long term, and even if it is predictable, this does not mean that it is so easy to say what direction it goes, what is reasonable to go for, and what is too conservative. One is often too optimistic. This is difficult, it requires analysis and judgement, otherwise one can easily be deceived by headlines in American newspapers. It often happens that people who work with basic research exaggerate as regards this time factor, "this is right around the corner", and we can often see it in market analysis, too ... The costs are very important when we invest in new technologies, but there are also possibilities for income, possibilities for new services ... The income side is very uncertain. It is pure speculations, we do not know which services, their diffusion, and what the tariffs will be ... The costs and density of subscribers do not give you the whole picture, you have to consider technology and more strategic arguments, too."

Participant, technological research manager, in interview, Access net

At least, the strategic action alternatives favoured were of greater magnitude in terms of risk and investment of resources (Schneider & De Meyer, 1991), and the possibility of getting influence and control of the outside market was emphasised (ibid.), by strategic action which

was both 'intrapreneurial' and largely within the established technology based strategy (Geletkanycz, 1997).

"In particular it is important to identify services or service elements which can have a locomotive function ... Nobody else has got any further, so our plans may to a large degree influence the development."

Preliminary project minutes, E-market

"... we shall try to find strategic important areas for Televerket as regards an electronic market place. It would be stupid for Televerket for instance to enter those areas where there is little to gain because there are established dominant actors, and where we can risk being ousted ... The solutions have to be based on standards for communication within the users activity areas, and where there are no standards Telenor must see to that solutions are developed in cooperation with affected user groups."

Report from preliminary project, E-market

"lose market share ... possibilities for winning market shares in new areas. This must take place through services which give as large control as possible with the end users (property relationship). Without such control Televerket will become a sub-supplier of teleservices."

Early program meeting minutes, E-market

However, the environmental control orientation was a conscious strategy, and seemed to permeate the whole organisation. In other strategic issue processes, too, the possibilities of using technological solutions for serving customer needs were emphasised with a view to securing customer relations and getting control of customers.

Question: "How about this development towards content?"

Participant: "This is becoming more and more important. We have to take care of crosswise synergies in order to benefit customer needs. To benefit customer needs we have to offer something more. Today we have something on the info-channel, for instance. If you are interested in sports, or music, you can get a survey of what is happening. This can be developed; we can for instance develop a preference profile. The question is how adapted to the customer we can make the grocery store. We have to learn about the customer, in order to adapt, and in order to get an interesting dialogue with those who produce television programs. I don't think the TV-companies want this, but we shall do some packaging. Not much own production, I do not think that we will enter production, but we approach this by organising, for instance, which films shall be in this database. We know that demand is directed towards ..."

Participant, business unit top manager, in interview, Multimedia

"It is easy to connect the customer's equipment to different technologies, it is easy to combine GSM, DECT, and PABX, but with today's organisation Telenor can not do this. We have problems with being competitive in this area, where the customer is focused. We can do this within market segments, but not on the whole. We have to manage to get combinations so that the unit who has the customer can buy capacity from other companies with different infrastructure. Then we can also manage to get stronger customer ties."

Participant, Net division technologist, in interview, Access net

Centralised synergy :: decentralised competition

In several strategic issues, the importance of combining different technologies and networks in order to exploit synergy and achieve competitive advantage was emphasised, together with some kind of centralisation of this coordination responsibility. Contrary to the technology

focus, the market orientated people tended to emphasise the advantages of the freedom and initiative of individual units to compete in the way they wanted in order to serve their customers. The resulting tension was the central one in the Internal competition issue, and also referred to in other issues. In Access net development, the more market oriented approach started with the identification of service needs and demands, in opposition to technology and capital in the monopolistic model. While the various service requirements to different net domains might result in a complex network, the opposite simplification strategy was associated with more centralisation (Informal end report preliminary net division project). Centralised simplification and coordination also seemed to be the technologist response to the segmentation of customers and adaptation to (the more valuable) customer segments.

Participant: "[The issue] was about internal relations. Synergies, should they be exploited, or should there be as much autonomy as possible? How much freedom should each unit have in the relation to the others? I was more concerned with the possibilities for synergy, others were more concerned with as much freedom as possible ... We have to find some compromise, but we lack somebody who can see the synergies. Shall we use our powers internally, or shall we use them towards external competitors? Someone think that we should compete internally, and then those who survive shall compete externally, while others think that we shall compete externally. This varies from business to business. Which business you belong to, which products and value chains you have, is of great significance."

Participant, Net division technologist in interview, Internal competition

"... co-ordinate Telenor's resources, including the technical platform and administrative support, so that economic and technological synergies are taken care of. This shall occur without destroying the market opportunities for single Audio Visual Service initiatives."

Final document, Multimedia

"One angle will be to analyse within each net domain which services there will be need for. The service need (...) will thus tell something about the capacity need, kinds of users etc. When this picture is mapped, one may decide if one has to establish new solutions or may base oneself on the existing ... Another angle would be to start with a simplifying strategy where it is presupposed that one does not know which services and in which form one would provide them. The strategy in this kind of situation will be to reduce the complexity in the net from the philosophy of less nodes - greater service flexibility across time. These two approaches are not necessarily opposites, but may complement each other"

Informal end report preliminary net division project, Access net

"A division of the market seems to be necessary, both concerning the choice of technical solutions, but also as a basis for service spectre, tariff, quality, accessibility, strategic judgements, competitors' behaviours, etc.

Many operators in Europe have implemented such segmentation of the market. This involves a division into characteristic areas based on among other things customer type, geographic conditions, subscriber density, functionality (e.g., mobility) and service spectre. A division of this kind may form the basis for further strategies for all actors in Televerket and should be coordinated at the corporate level in cooperation with all participants in Telenor."

Informal end report preliminary net division project, Access net

The compromise arrived at in the Internal competition case distinguished between alternatives with different degrees of centralised coordination versus autonomous competition, and said that centralised coordination should occur downwards in the lower technology parts of the value chain. The reason was the large investments and strategic importance of technological

infrastructure, and the need to reduce financial uncertainty. Closer to the customers, competition and voluntary coordination should be the case, with exceptions for products of strategic importance. Thus internal trade might contribute to improved market orientation in supply chains among market units exposed to external competition where the attitudes to internal trade were most positive (Colbjørnsen, 1995), and internal transaction costs perhaps higher than between internal and external firms (Altenborg, 1997). At the same time, the strong willingness to co-operate and take out synergy effects - often in spite of individual interests that are created by the incentive systems and result measurements (Altenborg, 1998), might be made use of in the heavy technological parts of the organisation.

"Coordination needs

- The higher up in the value chain - the lower the need for coordination - relation to financial risk*
- The higher investments - the higher the need for coordination (financial risk)*
- the closer to the customer interface a business unit is - the larger is the need for coordination based on information sharing among business units who works towards similar/same market segment (Douglas, 1992)*
- the less information sharing among business units closest to the market - the larger is the danger of fragmentation (Douglas, 1992)*

Forced buying downwards the value chain

- The large investments lie in the lower part of the value chain*

Conclusion:

- forced buying backwards in the value chain should be a bearing principle in order to reduce the risk of investments in infrastructure and net ...*

Free selling upwards in the value chain

- At the higher layers of the value chain there are put increasingly higher demands on market adaptation through creativity and product development with short lead times."*

Final document, Internal Competition

The really hard question was what would happen if external suppliers became available and competition effective in the basic network area (Colbjørnsen, 1995). In the current context, could Mobile go to external suppliers of transport infrastructure, or establish their own in competition with other companies in Telenor? Would the unrestricted market competition then leave Net with just the unprofitable areas, as the Net division representative argued? The Mobile participant and process manager was concerned with the prices of transport services, but preferred to beg the question of Net division cost effectiveness. His perspective instead emphasised their own efforts at technological improvements and cost reductions, and blamed the government restrictions on the price differentiation possibilities:

"We were concerned with making the net able to "digest" high growth. The competitor had some problems, they work hard towards the regulator in order to get new frequencies at the expense of NMT. We are of the opinion that it is in the net structure and not in the frequencies that there is something wrong ... We have worked with reducing the cost of the net structure, we started early, one third of our costs came from here. If we had the same structure today, we would be approaching one milliard, instead of the about 500 millions that we have today. We have drawn together some boxes here, and compressed data as much as possible, so that we lease less lines out to the base stations. We need to reduce the costs even more. Televerket takes high prices out to the base station. We do not want to become any provider of line services, but we have a strong motivation to reduce costs. And if we could use this to the best of the whole Telenor, it might have been all right to be a provider for the others, but we do not have any business idea about selling leased lines. In general, companies work with a basis product, and thereby develop competence that then

can be used in new areas ... At present, we do not have the permission to build own infrastructure. Mobile operators shall rent from Telenor. At the moment that this is permitted, I do not see any reason that we should not build our own net, in parts of the network at least. But the starting point is that there is no point doing this. It is better to buy from Telenor, and focus on the basis product. It is clear that this will be permitted. One can build own nets, but I hope that there will be solutions which get us out of this. To expand beyond the primary basis product is not fortunate. It removes the focus of management from what they should work with. We want to buy from external suppliers. But the problem is that Telenor has to sell its services based on an equalisation policy, while the competitors are let off and can deliver at lower prices in the cities and the eastern part of the country. Telenor could not provide services at the same prices as the competitors were able to. The price structure was not flexible enough, with the same prices all over the country. We hope that Telenor will get this freedom ... From Net's side it was clearly asserted that one should not invest in parallel infrastructure. But if Telenor was not allowed to set prices in a flexible way, this might become a possible situation for Mobile."

Participant, Mobile manager and group leader in interview, Internal competition

What would happen to the Net division if they did not prove to be cost effective and competitive? The conclusion was wanted, and top management was blamed for avoiding to take a decision. While increased investments in new technology would do much to reduce costs per capacity, the market demand for new services did not indicate that huge increases in capacity were legitimate. In the meantime, cost reductions of the present perhaps too high capacity net and organisation had to be emphasised.

Participant: "If Net shall survive they have to become cost effective. There is a strong pressure on Net today. The conclusion was that if there are alternatives which are cheaper, Mobile has to be allowed to go externally, at least to put pressure on them."

Question: "But does this apply downwards, too, the document says ..."

Participant: "There is a limit. Forced buying downwards involves a cost based price model, and cost effectiveness is implied in this. It is the foundation for the strategy that Net shall be cost effective. It is a presupposition."

Participant, advisory staff in interview, Internal competition

Manager1: " ... Do you have any viewpoints on our position as internal supplier of [business unit name] and internal customer of Regulated Net Services?"

CEO: "You are in the midst of a really important strategic discussion, the rules of the play in transactions between units or levels. We must hold on to that we can not organise away real problems, interest conflicts or real economical. We do not find any ideal organisation, and have to find rules of the play and organisation from what we want to achieve. We can take the competitive market as our starting point. We have to go from the market to own unit in order to find what are the right margins. The margin shall be quite small. You have to go to Regulated Net Services and say that this is the price that I get, then Regulated Net services gets a cost effectiveness pressure. This is an absolutely necessary mechanism. Net has to be made cost effective, and they have ambitious plans. How shall we make effective and reduce costs? We have chosen a technique in which the deficit is kept backwards to Net, but we can not for several years let Net take the deficit. We have to find what service level we want, and then Net has to adapt. This is the opposite of what has been the management principle."

Manager2: "Another approach to the problem, shall [bu] be allowed to sell to others?"

CEO: "Let us keep other things outside the discussion. The question is if [bu] shall be allowed to go to others if Net is not able to perform at the price that [bu] wants. I do not want to dismiss that you go to others, if you face an important customer. In general I am of the opinion that Net's decision has to be reconsidered. There has to be established a price

level, as in normal business activity, but we have to be careful with ad hoc reconsiderations. Net might have managed this by establishing a new network, but we work hard with the fact that this is a large and heavy machine in which it takes time before things are put in place."

Observation from Leadership course for new managers, Internal competition

5.1.4 Cost reductions :: human considerations

Cost effectiveness of the organisation was also underscored. As explained earlier, the need to reduce the costs was sometimes perceived as the main driving force behind the change process, and it permeated the whole corporate strategy. In the OD strategic issue, it was an important premise that the redundancy of personnel had to be managed and planned. In general, the union did not deny that there was a need for reduced employment some places. Instead their strategy highlighted that some groups were subject to too high workloads and stress, and that the way change management was conducted contributed to such human costs.

"We see in front of us a development for several years ahead which will be characterised by two main tendencies:

-a significant need for change and introduction of new ways of working which will affect the employees within many areas in the corporation

-significant reduction of need for personnel which will develop smoothly for several years.

Both processes are heavy in themselves and will demand great attention from management at all levels and have to be managed simultaneously. It will be an important management task to shield the change process so that it is not obstructed by the reduction of the work force. The work group is of the opinion that corporate management has to work out a clear strategy which takes care of this consideration and hopefully can be accepted by the trade unions."

Final document, OD

"... the statistics work in an obscure way. Average calculations say nothing about the workload and the stress which some employees are exposed to. They say nothing about overtime which are registered as flexitime, nor about flexitime which is struck out because employees are too busy to take time off, pure and simple ... Neither do we think this is a very wise company policy. The reckless drive will sooner or later hit back, for instance as increased number of days off sick ... To us it seems almost comical when the personnel director in issue 18 of the corporate magazine, use the keywords "motivation and joy of work" about the goals of Telenor's new personnel strategy."

Editorial in union magazine, Enthusiasm

Further, the employees were concerned that the cost orientation would lead to the negative view of themselves as a burden rather than something valuable. In particular, they often argued that the possibility was not exploited for education for new and more long time missions in financially hard times. The OD report lets us know that slack employment was perceived as a threat to the ability to change.

"What is unique in a company, and what is their affair alone, is the personnel. This is human beings who think and work totally on their own, no programming. And it is they who create the corporate culture, the milieu, and they take care of the service. It is the people in a company who meet the customer, too ... we most often experience that the personnel is perceived as a burden, in particular in periods of depression. With short-term goals come the notices to quit ... To have a bit of slack in the labour force can give the company an opportunity for educating the employees for new missions ... my wish is that

the companies shall perceive the personnel as a resource, not a burden. That the conditions are organised so that the employees can do a good job, and that they have time to do so, too."

Union magazine, OD

"By experience it turns out that being weakly short-staffed yields a continual pressure for becoming effective on a market exposed organisation, at the same time as the ability to change is sharpened. Likewise over-staffing works in an inhibiting way as regards becoming effective and able to change.

Redundancy is a threat to organisational development and change by reducing the pressure on the identification of not-value-creating activities and easily leads to over-staffing in value-creating activities. In addition it can involve easier reduction of competence requirements of functions and thus the effect disappears.

The work group wants to emphasise that despite the redundancy, competent external persons have to be incorporated when important functions demand so. This is particularly important for management functions as these mark and control the milieu within their areas of responsibility."

Final document, OD

As employee or union representatives did not participate in the process, the counter-arguments to the managerial were not included. In some other issues, the cost effectiveness implications were also treated in some at least temporarily separate way from background lurking fears that they might hurt employment and other important human concerns (the downsizing of employment was not itself included in my sample of observed strategic issues, however, as it was an extensive issue which already got a lot of attention).

"Net will sometimes be attractive, but on other occasions one buys from others. Then Net gets problems with covering, and risks to be left with unprofitable areas ... What consequences will this have for Net?"

Net division technologist, in interview, Internal Competition

Participant: "The regions implement the plans. They make implementation plans, and they have the fitters, about 3000 persons. The effectiveness of the access net has not been focused up until now, there are large gains."

Question: "Because of large employment ...?"

Participant: "No, I don't think so. It is because this has not been the task of central units. We have not had the competence on the access net."

Participant, Net division technologist, in interview, Access net

"If we become a large unit, there will be room for cut-backs in employment. But perhaps [senior researcher] is right: there will be a core of researchers with a protective shield around."

Researcher in interview, Research

"Most of the teleoperators are afraid that the costs are too large. They estimate their own costs to be about 10 - 15% of the trade. But it turns out, when you go into this and check these numbers, that the costs are not larger than perhaps 3 -5% of the trade ... But what is uncertain is, if you make up another definition, in order to enlarge coverage ... [Our CEO] can just mobilise all his power and tell [the minister] that we want a minimum definition, because anything else would influence competition unfairly, and then the problem would vanish. Then the cost would not be so large ..."

Participant researcher in interview, USO

5.1.5 Distribution of information :: lack of information

Turning toward the process, we may first note that the transmission view of information often seemed to pervade the strategic issue diagnoses. As a starting point, participants sought to build the basis for afterward authoritative transmission. The way this basis was built differed between headquarter and TR groups. While the needs for dealing successfully with uncertainty and conflict were shared, the headquarter groups seemed to place more emphasis on resolving conflict in order to come up with a clear common view. The need to argue persuasively with non-participant groups led to pressure to arrive at such common views.

"Our starting point is that we have to be able to put a price tag on universal services, and be able to argument persuasively with the government. I heard that you said that corporate management has said that the costs are not so large as the net is depreciated, but it remains to argue convincingly with the politicians."

Advisory strategy staff in public discussion of research report, USO

Question: "The last signals were about a widened definition from the EU, and then leaving the financing to the individual countries?"

Participant: "A common definition from the EU, and leaving the financing to the individual countries. Beyond that a work group has been established in the ministries, and an internal work group that shall be in front of this one, composed of people from different departments in Telenor. There is a need for coordination, I think, a need for centralisation."

Participant, business economist researcher, in interview, USO

"Telenor has already through its comment to the public inquiry of the EU commission, taken a provisionally standpoint in this question and thus wants the US limited to the basic telephone service The task for Telenor seems to be limited to obtain the best possible argumentation and justification for limiting US to what is at any time the basic telephone service."

Call for corporate work group establishment meeting, USO

The position of the group participants in the organisation seemed to point to the power resources they were able to draw on in order to resolve conflict. Although they sometimes experienced ambiguity as regards the purpose of the work group (if it was to exploit creativity or to develop a joint compromise), the organisational unit they came from was often held to be the important reference point for assessing the strength of their position in a process of finding some compromise.

"Net went for this model (points at one of the not chosen alternatives), and wanted to bring it to [the boss of the Net department] and ask if it was all right. Thus we entered a discussion about what kind of process this was. If we participated as individuals or as representatives of our departments. We agreed that we were there as individuals, otherwise we might ask why other departments were not present, for instance the Private market division. Net had some problems with the final result, but I think they accepted it gradually. The pressure on Net came from several departments, not just from Mobile."

Advisory staff participant in interview, Internal competition

Question: "So you were representatives for your unit?"

Participant: "Yes, I think we were ... We were meant to be autonomous individuals, but it was not so simple in practice. You are dependent on the unit that you belong to, and the situation of this unit."

Net division participant in interview, Internal competition

Diversity seemed to be regarded as a prerequisite for the sought for good authoritative solution, given that it was dealt with in an adequate way. At the same time, it was regarded as a basic problem that had to be managed, i.e., as the source of a lack of mutual knowledge of each other's understanding. Parallel to the general cultural problem of the employees' lack of familiarity with each other's understanding and difficulties with getting a holistic view of the situation, participants often emphasised that fragmentation existed and made it difficult to understand the strategic challenges from all relevant angles. Good information input was needed in order to overcome specialisation and remedy the lack of mutual knowledge. In order to secure that the relevant understandings were included in the process, and thus that the solutions were suitable for and preferably favoured by the whole organisation, the groups were composed of participants from different organisational units.

"The situation ...

- Many employees perform their own work task - without seeing ones role/responsibility in the total value chain.

- It is still perceived that executed reorganisation and planned new reorganisations break up well-established and good routines - the production chain coherently viewed."

Final document, Enthusiasm

"At present the mutual knowledge of the different business units' plans on Audio Visual Services is low. This makes it difficult to exchange experiences and put together areas of effort in future. In addition different arguments and goals are emphasised for future efforts."

Final document, Multimedia

Participant: "There were different kinds of information. One should be responsible for theory, the manager from Private market unit should bring something from their personal quality work, then it was ... And this was input to the meetings, in order to find which world the different units lived in. TBK had a different world view than the others ..."

Question: "What did these differences involve?"

Participant: "The organisational culture of TBK is more oriented toward competition. TBK is more used to changes, there is a totally different rate of change. It is also easier to see the reason for changes. It is the ambiguous market that () is a good alibi when changes shall be made. The organisational culture of Televerket is more firmly established. It has been operative in people across time. And there are different workloads. TBK was very squeezed. It was a small organisation, and very dependent on the customers at the outside. And there were different incentives. TBK had incentives and incentive systems that were more flexible."

Marketing unit manager participant in interview, Enthusiasm

The differences may obviously have made it difficult to arrive at a common understanding and solution of the situation. In this context, the use of power differences reduced the time and resources that had to be used to resolve conflict. On the other side, it may also easily have led to just surface agreements which would later be criticised because of lack of information: lack of understanding of each other and lack of knowledge.

Participant: "It was about internal relations ... Synergies, should they be exploited, or should there be as much autonomy as possible? How much freedom should each unit have in the relation to the others? There were different standpoints from the start. Mobile wanted as much freedom as possible, they are in a competitive situation, and interested in autonomy. They are able to operate at their own. I was more concerned with the

possibilities for synergy, others were more concerned with as much freedom as possible, so there were a large scope in the discussions."

Question: "So you were alone in prioritising synergies?"

Participant: "Well ... There was lack of theoretical knowledge, I think. The discussion was to a large extent based on individual experiences. Experiences from the old Televerket, where everything apparently should be coordinated. This was not any good, thus one wants as much freedom as possible ... I do not think the conclusions were particularly valuable. We did not get far enough, I think, had too different starting points, and remained each on each own side, instead of succeeding in getting a real discussion ..."

Question: "Was there any winner of these discussions?"

Participant: "Those heavy with power were those who favoured as much autonomy as possible. They dominated the discussion. The conclusion was not much synergies and mostly towards autonomy, I did not participate in accepting the conclusion. It will always be watered down. There was no clear conclusion. We did not get forward to the problem statement, did not get into the material. There was too large distance from the start, too firmly taken points of view. This came in addition to everything else. We were all very busy. We did not get far enough, I think. More studies are required, not just "fancying"."

Technological unit participant in interview, Internal competition

At TR more emphasis was put on the disciplinary basis of the knowledge that was developed. The reason that the understandings that were developed should carry an authoritative weight in the following organisational information and decision processes was disciplinary knowledge and judgement. As a result the emphasis on formal position or aggressive persuasion was lower, and expert competence and authority got important in order to have influence.

"We have developed and made use of techno-economical software that can be used for making judgements about different technologies and solutions. We put this together in scenarios, where one has given frame conditions and looks at what happens on a ten years view. We have among other things done a large Delphi investigation in ten European countries, where we asked about 100 experts about their views on future service development as regards prices and timing. Then we make prognoses and get price elasticities etc. which are transformed in some way into carrier services which represent several services, and this is used as basic inputs when we build the scenarios. We calculate costs and present value of different technologies and solutions. We have developed software, using quantitative methods, that can be used for finding the cost and value of nets and net developments in strategic planning. We have done so for both greenfield and not-greenfield situations, in cooperation with other teleoperators and industry in Europe."

Technological participant in interview, Access net

Question: "You mentioned that people working with basic technology often "exaggerate as regards the time factor ..."

Participant: "What? There are certain milieus who brag, I thought. Researchers within certain areas want to sell their technology, and then it is easy to exaggerate the possibilities of the technology. One has to be sober, and cross disciplinary. Broad technological competence is needed."

Technological participant in interview, Access net

"The decision process is unplanned. At TR we have an OK process, but one works hard to get a better process at the centre. The regions, in particular Oslo, have the best practical knowledge. At the centre I feel work is airy-fairy, they have problems with getting up premises and plans. This is so because they do not do things themselves, they just have the overall responsibility. Those who implement often make the decisions themselves. Formally the decisions shall come from the top, but in practice it is region Oslo who makes

them. They write reports and deliberations for central units ... The question is if one shall make fine-graded calculations in order to find optimal solutions, or if one shall go ahead and then get a strategic choice without having done cost calculations ... We have to get a better information flow. R&D has to be a central element in a process where links are not so loose and unplanned."

Technological participant in interview, Access net

The diversity of input to the expert analysis and judgement seemed to be broader than the organisational unit representation at the headquarters. While participants' earlier experience and external network may have broadened the information and viewpoints actually drawn upon at the headquarters, the emphasis on exploring the issue to understand it well enough, and the lower need for compromises and solutions, seems to have led to a relatively higher valuation of diversity at TR. Researchers expressed frustrations with the headquarter managers emphasis on fast and clear solutions.

"I have used a lot of time on going into what people discuss, both in Europe and USA and other places. What kinds of regulations are proposed as solutions to what problems, and what consequences do the regulations have, if it is possible to say anything about the latter. I can survey different discussions, what is this about and who think what, but regarding the consequences I do not know more than many others. The consequences are ambiguous ... You have some experiences from USA, a little from Australia, and from UK, and so on, but nothing is directly transferable to the Norwegian context, of course. It is more like scenarios ... I got the advice before the seminar that there was not much to talk about if I was not able to come up with clear solutions. They were on the whole satisfied with the seminar, but there were very clear signals in advance, they thought that they were reasonable up to date on the discussions, so I should come up with something new, put forth clear proposals about how the regulations should be, and how this might solve the problems for Televerket ... At the seminar it was obvious that the CEO wanted to hear about the discussions. I felt that the communication was very bad between the advisor and the boss ... The problem is that they want very, very clear answers, and I can not give them that."

Social researcher participant in interview, USO

"Project participants with experience from economist and political science and policy makers will be preferable. Without formal membership in the project, it will be necessary to interact with researchers and research institutions working on the same or related issues. This will help balance the project focus from becoming too "introvert". The USO debate is an important political debate that should involve many different participants."

TR - Eurescom project proposal, USO

"The members of the governing committee have different interests, and the committee is composed, not necessarily in order to find compromises or agreements, but in order to view from different angles an extremely complex and difficult issue, an issue you have to approach from different angles in order to see the right dimensions and the volume. A governing committee that is not composed for illuminating the mandate of the projects from different points of view is impotent. A governing committee who is in agreement, and view the world in a totally uniform way, is either wrongly composed or has a simple mandate ... The research and development unit project was composed of people from all three units, and it has been a meeting place for three different kinds of viewpoints. There has been some conflict, as far as I know, but enthusiasm and effort. They have had what I perceive as constructive work within the intentions of that R&D unit. The other project was almost exclusively composed of people from the Net division, and I perceive it as a kind of resistance movement. At least, the strongest signals that I get is that they do not see any point, they think things are good enough as they are, and they generate counter

arguments ... We had a common seminar where we got people aroused enough to get explicated the differences of opinion. There is a time for finding compromises and a time for really pushing the issue to extremes in order to find what the problem is about, and they really managed to do so well."

Group manager participant in interview, Research

There were different kinds of ambiguity, which were managed in different ways, though. Technologists often seemed to work with more structured and familiar problems than social scientists. However, they did not necessarily conform to the most usual technological view of communication as standardised and tensions free, as one of the technological metaphors below bear witness to. It appeared that managers from technological milieus were well aware of the potential advantages of diversity, perhaps because most technologists worked within very specialised domains.

Participant: "We approach the problem by using techno-economical analysis. We make technological judgements and relate them to economical judgements. Specialised tools are utilised, computer programs ... We do some kind of scenario analysis, too ... It is necessary to keep as up to date as possible as regards the technological development and new solutions. We do so through our international colleagues. Also through cooperation or contact with the industry, they give us information on concepts they work with. The uncertainty is great, both the technological and economical."

Question: "How do you deal with this uncertainty?"

Participant: "Through the models. Distributions functions are implemented, price developments, needs ... and the models are run. The technological judgements are heavy. We need background from technology, and a good sense of the international technology development ... The presentation of the output from the models is a good basis for communication with planners and decision makers. It is easy to understand and suitable for upward communication. Several think that there are some universal answers here. We are concerned with the necessity of working with such things throughout time, it is so complex ... We have contacts with the Net division, both technology and plan, we also work directly together with people from Net in the projects in order to improve communication ... At the corporate level, someone has used our results, I have been told. But there is no structure, no orderly flow. They just come here and ask and they get a little information."

Technological researcher in interview, Access net

"What is uncertain is, if you make up another definition, in order to enlarge coverage, more broadband, more visual images, more advanced services, more data, and so on, there are not much experiences from these kinds of things. Then it is very difficult to find what kind of costs should be included and how much it will cost, what will the demand be like and how much income will it create, what kinds of groups of people will fall inside and outside such a system. It is very ambiguous, how this is going to be provided is ambiguous, and there is nobody who has done it, thus there is nowhere to get the data from ..."

Social researcher participant in interview, USO

Question: "Consequences of different definitions of USO should be studied, how is that possible, isn't this so unclear that ...?"

Participant: "It is very unclear, and very challenging. Our point is that since there is convergence between telecom, IT, finance, and media, the definition of USO will change as time goes by. Telenor has to deal with this matter, thus one should be prepared and do some model building, for instance in order to calculate the costs of USO. One should be aware of emerging variables or sectors or cost elements, or the fact that one can get societal responsibility for entirely new kinds of things that one has not thought of before. So USO is by nature something dynamic, and it will be interesting if regulatory authorities

or we can grasp this. To calculate something so dynamic is totally insane, we do not have ambitions to do that, but this is about asking questions and coming to grips with problems concerning this dynamic nature."

Social researcher participant in interview, USO

"The contrasts, the tensions, which have existed in the governing committee, they have been like a generator, a magnetic field that has been forced around and thus generated electricity. So there has been nothing wrong with this, at the contrary. The climate of the governing committee has been good. There has been no aggression or war, there has been a verbal exchange of meanings ... What we talk about as compromises in such committees, or such contexts, does not necessarily have to be like one giving in and the other taking something. Rather, it can pure and simple be like finding a cogwheel that fit into all the other cogs."

Group manager participant in interview, Research

When the disciplinary basis was important for communication authority, the source of the communication problem of lack of information and mutual understanding became lack of disciplinary basis in the issue domains in question. Further, communication problems as well as conflicts may have emerged as the customer-principals' pressure for fast solutions on less than well understood problems was perceived to lessen the disciplinary basis and authority of researchers. Conflicts between different disciplines may also have played their part. In addition to the need for developing good enough knowledge, the development of entirely new knowledge may have increased the time needed before good communication could follow from strategic projects. The TR ambition and need for systemic knowledge may also have increased the time needed for reactivating and integrating information pertaining to different knowledge domains (Garud & Nayyar, 1994).

"The regions have had the responsibility for this previously. The regions have had the competence on the access net, and in practice they have taken the decisions themselves. The regions have had large departments, built competence, and made plans. At the centre there was not so much knowledge on the access net. The Oslo region has had a central role, and will have in future, too. But many regions have their own approaches to the problem. They are eager, and they do good things. They have installed the old access net, and they have dealt with its problems. There are many communication problems between us at the centre and the regions ... The problem is that the boundary between the access and transport net is becoming less clear. The access net is not one technology today, and there are many complex situations. Thus deliberations or something like that are necessary. There are many borders to be drawn, between Net and division Private, for instance, and this creates problems. Private underinvests in comparison with what Net plans. They get resources, but use them for other purposes, and this increases cost over time."

Net division participant in interview, Access net

"We economists were very afraid that we should be used for everything in this project. That we should be those who did commercial analyses on every technological problem statement, while the technologists were those who were able to go deep into payment solutions, security, etc. Therefore, we were very opposed to any broad definition, we would rather work with pricing in electronic market, and use theory and methods. But instead we were ordered to state our opinion on prices, costs, market potentials, income, and so on. We shall be such omniscient people, and most of us dislike it ... It is a matter of expectations about what you are able to do. It is not expected that one outside my disciplinary field shall have insight into those kinds of method tools that I have command of. But if I shall work on problems within my field, I would not be content with working two days on pricing, for instance, because I feel that I have so much knowledge about this."

But if someone asked me to do some work within sociology, on user needs or something, I would be satisfied with just a little effort in that area, because it is not my field anyway. Thus there is a culture collision. This is a general problem in teamwork, isn't it? You have to have some ability to communicate; the ability to convey a message about both what you want to do and what you are competent to do. It requires a lot."

Social economist researcher participant in interview, E-market

The secrecy of information was one particular reason that it might have been difficult to explore issues and arrive at common understanding. While the use of secrecy obviously led to lack of mutual understanding, information might also have been selectively used to strengthen one's own position and power base. Opponents were certainly weakened if they displayed obvious lack of knowledge of central aspects of issues. In addition, the very possession of secret information seemed to signal authority.

"The decisions can be different from what is in this document, and significantly different as regards some points, and that is why [the technological vice CEO] has asked us to keep it confidential."

Group manager participant in interview, Research

Research director: "This document was confidential until yesterday, when the board made it public. It is not meant to be distributed at random. I shall now go through the decisions that are taken, and what will happen in future. It is what will happen in the future that is most interesting, I think."

Researcher: "I want to criticise the way the project is done. The information distribution is very bad. In phase zero we got the mandate in September. In phase one a significant document is prepared, and we have not seen it. Today we should have seen the document yesterday, so that we could prepare and give criticism. This is the criticism from one at the bottom, I feel that I am there ..."

Research director: "I acknowledge that the criticism is justified, and I am sorry for this. This is drawn up to form the basis for corporate management, and it has been difficult to get out any information. The information from phase one has been of varying quality, and there are some things that we did not want to stick because of process considerations. I am sorry, but the reason this meeting is today rather than delayed even more is"

Observation from public meeting, Research

Researcher: "They came with a limited mandate. I will criticise that they did not question the mandate. I know from experience that such mandates can be bad, they would not be accepted by research management as projects ..."

Research director: "We shouldn't be occupied with history, rather with how things can turn out in future."

Researcher: "I disagree. The history is important. I will even go so back to the radio line conflict on this issue. You can all read about it in TR's history book. It shows that fighting is necessary. It was research against Televerket. This demonstrates that research is important, and what structural framework it exists within ... Management, with the exception of [the technological vice CEO] has no basis in telecommunication. I am sorry that we have not participated in this process."

Research director: "The process begins in many ways today."

Researcher: "No!"

Researcher, member of expert group: "I will go against the criticism as regards one point. I participated in phase zero, and can assure you that questions were raised about the mandate. We worked out five alternatives before this mandate was chosen."

Researcher: "How could we at the bottom know about this?"

Expert group member: "That is a different discussion."

Observation from public meeting, Research

The information paradox was dealt with explicitly in some of the strategic issue diagnoses in order to find a solution. The need for good information before taking important decisions seemed to be met by some open communication :: centralised authority paradox. In the open information solution, the transmission view's wide distribution of information :: lack of information was central. The threat of conflict and the secrecy or withhold of information were recognised as the important barriers for the wide distribution of relevant information. In the centralised location of responsibility for authoritative communication, time and energy consuming conflicts were reduced and the value of secrecy maintained, but it seems to have involved a centralisation :: decentralisation compromise which would have to give in to demands for more room for uniqueness and autonomous action. The communication paradox was thus closely related to the opposition between large and low power distance.

"Possible solutions;

-stronger central control in order to control the economy (instructions)

-develop governing systems with motivating mechanisms

-access to common information across business units ...

By establishing an open information system within the limits of the ONP, where one has access to "all information in Telenor" the individual will have to relate actively to products and solutions that are developed and offered by other units ... The starting point for the individual manager should be to meet the challenges and assess possible synergies rather than stopping others' initiative ...

We must not underestimate the human dimensions in the establishment of rules for internal trade ... To which degree do we risk that information is retained? ... When is it more profitable for the business units (managers or departments) to play against the system rather than play with it? When will it be more profitable to try to change the playing rules rather than following them in order to achieve results?"

Final document, Internal competition

"... this will require a unified location of government and responsibility for these activities. The concept of government does not mean a unified organisation or a limitation of the single units' business autonomy. It is decisive, however, that the current units have a common goal for which main goals and priorities Telenor as a whole wants to achieve. It is therefore proposed that [] is formally given a responsibility and authority for the development of Audio Visual Services in Telenor."

Final document, Multimedia

5.1.6 Centralised hierarchy :: decentralised participation

The opposition between large and low power distance was not only central in information :: communication. It was also directly evident in the content of some of the strategic issue diagnoses. In the just referred Internal Competition issue, the possibility of increased competition between internal companies was framed as whether its opposite - cooperation - ought to be based on voluntary business unit action or instructions from corporate management. This freedom of action :: centralised instruction obviously reflected several competitive and social organisational realities, but it also expressed some of the cultural power distance tensions. It appears that top management as a starting point favoured relative more freedom of action, while the business unit managers and experts of the work group concluded with a more centralised view.

"Competing product platforms / companies

Different units in Telenor may get into competition with each other in several service domains ... It is easy to argue for coordination towards the market/customer. Such coordination can involve gains. Coordination also involves costs - directly and indirectly. Coordination based on voluntary action from both parties is uncomplicated and makes possible to get out advantages the companies have by being a member of a larger and more diversified group. This makes possible among other things the opportunity for combining different product platforms - an opportunity the competitors will often lack. Coordination based on instructions from corporate management based on considerations for what one think will be beneficial for the whole and the customers, takes freedom of action from the units and can give handicaps in comparison with competitors. In dynamic markets it seems to be a recognition that it is only the external market that works and that internal regulation of the relationships between competing technologies/companies leads to loss of competitive ability. "Organise for all flowers to bloom from own qualifications", seems to be the recipe. This should be the main rule in Telenor, but it should be judged concretely with regard to the situation of the individual companies. At present the problem statement is acute for Mobile, who possibly in a short time may get the opportunity to build own infrastructure in competition with Telenor's remaining line infrastructure. To desist from this may in the present situation give Mobile a serious drawback in comparison with competitors."

Mandate, Internal competition

"Coordination based on instructions from top management

Advantages and disadvantages:

- can give synergy gains for the corporation (IT, procurement, R&D, strategic important common areas, high investment costs)*
- can stimulate negative behaviour in the organisation*
- can lead to resources used on changing the rules of the play and trying to explain why "I perform badly" with background in internal conditions*
- can involve that we lose focus on the market and the connected building of an effective competitive culture*

It is possible to define "working rules" by the support of internal market mechanisms which works in a motivating way and put focus on businesslike operation

...

Coordination based on voluntarism

Advantages:

- inspires creativity as regards product- and market development and building of competitive culture*
- puts focus on effectiveness throughout the value chain - units closest to the end customer set the premises for the internal trade and buy externally if internal unit is not competitive*
- force the organisation to take more line responsibility out towards the market*

Disadvantages:

- everybody can "get or feel" a customer responsibility and shall serve the internal market following businesslike principles. Increments throughout the whole value chain can be the result - with the associated artificially high price out towards the market*
- sub-optimisation based on lack of holistic perspective - both financial and market risk (e.g., the customer perceives the provider as fragmented with many channels towards the same market with products that serve the same need)*
- does not seem to be implemented among large technology companies in Norway. The risk of losing by lack of coordination seems to be high in Norwegian companies.*
- Managers in Norwegian companies judge possible losses following from lack of coordination, as larger than the gains free competition can yield."*

Final document, Internal Competition

As mentioned in centralised synergy :: decentralised competition, the more detailed proposal from the work group, which was based on available information from other telecom and

technological corporations, tipped the balance of centralised instruction :: freedom of action toward each side depending on whether trade was upward or downward the value chain and on the strategic importance of the service area in question. There may thus in practice have been very real limits to the decentralised market liberalism that top management sometimes advocated. The clear public messages of freedom of action probably ought to be interpreted as signals of the direction rather than the actual content of changes. Compromises were required in real world and complex strategic decisions. The different parties might interpret such compromises both as problems with getting rid of the economic bureaucracy of the old public administration, and as problems that arise because of the arbitrary actions of the new business managers. In both instances, there seemed to be a tendency to refer to top management for solutions. Increased power distance may thus not have been held to be the favoured value, but the way in which problems of the change process were solved seemed to involve its realisation. However, it could be that authority only needed to be centralised on a situational basis, given an in general more decentralised organisation (Dutton, 1986).

"Someone in corporate management must, or will as far as I know, come up with some rule of the play, or some holistic framework of thought about who shall do what and who shall not, and how the single units and business areas shall function together ... There are several examples that one has been far off in some direction, for instance someone in the corporation can well buy telephone subscriptions or computer equipment from competitors."

Participant in interview, Research

"The access net is going to be important in future, I think. There are large costs in the access net, about two thirds of the development costs. The access net is the property of the regions. But the income structure is arranged in such a way that income comes from the traffic machine higher up. The regions have the responsibility for the access net, but they do not get the income, and they are in an investment squeeze. I have heard it from people in the regions that they feel the squeeze as regards investments. The investments are reduced. Thus it is important to find optimal solutions. There are two challenges here, to get a development towards a broadband network, and to arrive at a cost effective net ... I think the regions need to get the support at the top level, otherwise there is little they can do."

Participant in interview, Access net

The provisional conclusion that power distance had increased because of the experienced need to influence the direction of change processes, is supported by the Organisational Development report. Here it was held to be very important to strike a good balance between central control and decentralised freedom of action in order to improve the organisational ability to change. Since the business and operative units knew their local customer needs best, the main part of the organisational development should take place here, and they had to have the appropriate freedom of action. However, corporate management had to define basic frameworks and goals within which local development should take place, and they had to stimulate and follow up local initiatives for organisational development in order to secure a goal directed development.

"The business units have direct contact with the customers within their market segment and know their needs best. The business units also most often have the operative resources which have knowledge about how to organise in order to satisfy their customer needs. The impulses and knowledge in the operative units have to be "pulled up" and become inputs to the work at business unit and corporate levels."

It is decisive that the operative units have freedom of action and enough force for implementing organisational development actions which satisfy own local needs. They do not have to sit and wait for central clarifications. Experience shows that central detail instructions influence local creativity and ability to act in a negative way. Corporate management must therefore in addition to giving clear central frameworks, also follow up the local making of priorities and allocation of resources to own organisational development. Corporate management has to quickly give clarifications when the operating units need them."

Final document, OD

The balance of central control and decentralised freedom of action seemed to involve top management responsibility for larger changes, while subordinate units were responsible for smaller continual improvements.

"Continual improvement and need for powerful rearrangements

By experience it takes time to build an organisational culture which continually learns from experience based on measurements and implements corrective actions which improves existing value creating processes. The TQM process can be the start of such a development, but so far it is too little oriented toward action.

The work group is of the opinion that it has to be a prioritised goal to intensify the development of such a culture in the telecorporation and that the responsibility for this work has to lie decentralised within wide limits given by corporate management. If the frames are too detailed they can sooner obstruct than stimulate the development.

Systematic improvement work nevertheless does not solve all development challenges. There will regularly arise needs for more basic rearrangements of crosswise work processes and/or units.

By experience this initiative will seldom come from decentralised units. It should therefore be an important corporate responsibility to follow up decentralised work and development through defined main parameters so that need for reengineering is discovered and initiated quickly. The parameters have to be defined in such a way that they catch flow problems in the value chains."

Final document, OD

Clear support for the increased power distance can be found when this report departs from the discussion of the relation between corporate and SBU/divisional management. Further, the importance of control increased as the productivity of the organisation was brought into the picture. Not only the continual improvement actions had to be controlled in order to avoid losses in production, also the larger and more ambiguous cross-area changes had to be more thoroughly and intensively planned. Uncertainty had to be reduced and controlled, and good information was again emphasised. The trade unions should be informed, too, and if possible given the opportunity to participate also in the planning phase, in order to secure support in the implementation. It is not clear, however, to what degree this report and the process through which it was created was accepted or considered legitimate.

"How to tackle the balance between change and stability as regards productivity ...

Continual improvements or re-arrangement of production lines can be implemented with controlled losses in production if they are well planned and controlled. Usually these problems are surveyable and it is easier to manage information and motivation associated with the reorganisation.

In instances where there is need for large rearrangement of several work processes which interlock and which cross existing responsibility areas or larger reorganisations of units or mergers of units, the picture is less surveyable and risk of losses in production is larger. Such rearrangements demand a longer phase of planning and person games of patience become an element of the problem statement.

Larger rearrangements and reorganisations require thorough and intensive planning and have to be controlled strongly in order to hinder that the organisation relaxes at ongoing production and development waiting for clarifications

Key persons who are projected important roles in the future solution should be identified and informed as early as possible in order to create security. Alternatively resource persons who are insecure as regards their future role easily spread uncertainty in the organisation. It must also be put weight on informing the organisation well and often both in the planning and implementation phase.

The trade unions have to be well informed and given the opportunity to forward their views. If it is possible, participation in the whole process should be organised, in order to secure support in the implementation.

To identify educational needs associated with functions and technological solutions as early as possible should be emphasised, so that these can be quickly started in order to prevent losses of production associated with rearrangements. Likewise it is important to describe responsibility relations and work processes so that these can be quickly implemented."

Final document, OD

5.1.7 The Process Variables

Power distance implies process dominance

A large power distance would involve strategic issue processes characterised by dominance, i.e., a few powerful parties control the process while less powerful parties are not able to exert influence. The strategy advisor responsible described the start of the headquarter strategic issue diagnoses as relatively dominant. While corporate management may to some degree have allowed less powerful parties to influence the choice of themes and initial formulations from outside the empirically studied strategic issue diagnosis, it seems reasonable to conclude that the early part of the headquarter processes was characterised by a relatively large degree of dominance.

"In the original meeting with our CEO, which he called, he had clear opinions about what some of the themes should be. At the same time he encouraged me to start a process for uncovering which other questions would be relevant to illuminate. He laid down clear premises about three or four themes which he thought should be covered, which meant that I got the mandate to develop four or five other themes. He laid down some premises, at the same time as he gave me, as responsible for the case, and the other managers as influential participants, significant room for action for having influence on what we should work with. He encouraged me to "have a chat with" (nice wording) the other members of corporate management, and as far as it goes other persons who I thought might contribute something valuable, in order to put forward a final proposal. And I did. I had in fact to excess two meetings with each of the present vice CEOs, in which we discussed the whole process, how to organise it, and the choice of themes. My task then became to condense this into a good expression of the central challenges of the corporation. So the list that you have got was the final product that I reported back to the CEO, and got accept for ... The proposals for mandates were formulated by me, and accepted by corporate management with relatively small modifications. I can not remember that we had any firm discussions about the mandates. It was also the case, I think, that the mandates were considered to be guiding for the groups. Not that they could disregard the mandates, but in such a way that we understood that these groups were to a considerable extent composed of people who were experts in these areas, who might have the need for a little flexible interpretation of mandates, and who also might touch on things that were not presupposed, or anticipated, by those who formulated the mandates. I think it is adequate to say that the mandates were

guiding. They said something about the challenge, but not necessarily something about the solution part."

Participant, advisory strategy staff, in interview

Question: "These problem statements have been discussed earlier, through the years?"

Participant: "Yes, I would say () it is in the nature of these things. It is obvious that most of these questions are so central that they can not have arisen from nothing. It is obvious that in different shades this has been lying in Telenor's operations. At this point in time the problems were formulated in this way." ...

Question: "So, when the CEO, and you and corporate management laid hold of this things, they emerged from organisational processes?"

Participant: "No, I have certainly answered that question already. It was first and foremost what the CEO himself considered to be important, then what the rest of corporate management with me as facilitator considered as important. It is not to be made a secret of, it is in the nature of the distribution of responsibility between members of corporate management, that here might be a little variation in points of view and priorities. But in sum I think that we found an OK common denominator."

Participant, advisory strategy staff, in interview

The selection of participants was also to a large degree done by corporate management and the advisory staff facilitator.

"... then the job was the manning of these groups, and the requirements were, of course, that the quality of group members had to be emphasised; heterogeneity so that they complemented each other, not least with a view to their position in the corporation. Then the CEO put in this parameter that it should have the characteristic of a talent show, which we flippantly called it then. If we could find some new resilient persons who had been lying below the surface in some of the units he would like it, as we were actually agreeing that there was a tendency of repetitive participation in this kind of work ... It was a typical process, like so many other such jobs. Something was obvious, as someone had the line responsibility for the areas in question. Something was obviously influenced, or controlled, by the other members of corporate management. We touched the question of participants a little at the same time as we discussed themes. And to a certain degree I influenced the choice myself. To a certain degree, as I take a look at the names in these documents, I recognise that some of these names were drawn into the process by myself, or proposed for the CEO and company. So there was no crystal clear line of development, but we agreed, and I got acceptance at the end, for groups composed after these criteria. It was my responsibility to talk to those involved, too, to get the groups mobilised. It started by me talking to the one who was appointed group leader, and giving him or her the possibility to comment on the other proposals for group members, and I can not at the moment remember that any of the group leaders, or group members, had any objections to the proposals. In some cases they had a supplement. So this followed a beautiful consensus model, you see."

Participant, advisory strategy staff, in interview

In the resulting group work phase, less dominance was observed. It seems to me that participants experienced themselves as tolerably equal in influence, and that they were not particularly concerned with objections to mandate premises. In one of the groups the group manager became dominant, however, according to the egalitarian minded participant below. He perceived the question of dominance to be of less importance, though, as the purpose of group work was to come up with creative and good quality proposals rather than to develop commitment to some issue description or solution.

Participant: "Yes, I was a member of that group. But I do not take any responsibility for the conclusions. I didn't have any substantial input to that. It was [the group manager] who formulated this ... It was the idea of [advisory strategy staff], he organised this, composed groups coincidentally with different people across business units. Something good came out of it, interesting and stimulating results. But my group was composed by chance, by people without the time necessary for the job, they reeled off their obsessions, and then [the group manager] formulated what he had meant all the time." ...

Question: "The task group was a bit accidentally composed, people did not have enough time, they pursued their own consuming interests, and ... [the group manager] won support?"

Participant: "Fair enough, I think. The task group was not created for anchoring or winning support, but in order to produce and put forward good proposals."

Participant in interview, OD

In other groups, members appeared to experience themselves as fairly empowered. They had an opportunity to exert positive influence on the organisation. The mandates already encompassed any conflicts, so they did not have to give in to mandate premises from their supervisors. Sometimes hierarchy :: participation tensions might be expressed in such a way that premises were perceived to come from above opponents so they behaved according to the egalitarian participation value. For instance, in the Internal Competition issue the actual premises might well depart from the written mandate and come from the traditionally powerful technological vice CEO. When participants assessed the organisational dynamics and decided to behave accordingly to the increased pressure on Net, they thus challenged authority.

Question: "Were there any premises for the work of the group ... some mandate?"

Participant: "Yes, there was a mandate. Written by [the technological vice CEO]. We discussed the mandate quite a lot. And interpreted it in such a way that we wanted a fairly autonomous process without too much premises."

Participant market manager in interview, Internal competition

After the process, participant reflections seemed to be characterised by some variation and ambiguity. All wanted corporate management to give feedback on group work, or inform more on what was decided or discussed by top management. But while the most typical attitude seemed to be acceptance of relatively large power differences, there were some who appeared to criticise top management and in the face of lack of information challenge their superiority.

"I don't think that you should put emphasis on what happened in this group. A summary was sent, but it is not reflected in the strategy documents. In the strategy process a lot of ad-hoc groups are used in order to illuminate things and get commitment to the strategy. There was nothing special with our group ... In the strategy work there are many work groups, and then it is the principal who decides if anything shall be included."

Participant in interview, Enthusiasm

"We have continued this work on our own initiative. There is no discussion at corporate management, we do not get any feedback on our conclusions. Is one able to take corporate decisions? We shall coordinate, but in which way?"

Participant in interview, Multimedia

Differences in dominance were expected between a relative power distant headquarter culture and a researcher culture not accustomed to outside manager dominance. The issue of the establishment of a new R&D unit might illuminate such differences, as it occurred at the

interface between TR and other parts of the organisation. It appears that one corporate manager did dominate this process.

"In a way it is the decision, or the mandate, from the beginning of September that is the substance of the process, rather than the propositions one month before the decision ... [The technological vice CEO] has some image of the future, which is created partly from strategic thinking at corporate management, and that gradually will be crystallised in a corporate model, I suppose ... It is [the technological vice CEO] who primarily knows the premises. His image, together with the technological development which he is well able to survey ... He established a committee this summer composed of experts in order to go into and check the argumentation. No arguments that he didn't know in advance contrary to his plan surfaced, thus he made a mandate saying that two new units should be established, one for research and development and one for net operation, and that one should prepare the basis of this establishment."

Participant in interview, Research

"The unit shall be established. The conclusion is clear ... I am not sure that this is the right thing to do ... Presuming that the unit shall be established, the task of this project is to make this idea more concrete. The essence is to deliberate on this distinction between development and operations in the three units ... We are just doing some thought work for others. My experience is that there is no use in winning discussions or quarrel at the level that we work, for instance about the interface between Research and Net. Here competent disciplinary people participate, who are familiar with a lot of details and shall develop alternatives. A political decision has to be taken, and later parts of the process is more important for you."

Participant in interview, Research

A relative large power distance - although it has been reduced in recent years - was also indicated by one of the most central participant's reflections on the process and on the changing authority relations in Telenor.

"This attitude of many of the participants, that one cannot decide something else than what the project results in, and that they do not want to join in the proposition if they do not win, is part of an old public administration role. The principal can then either do as the committee said, or do otherwise and have to justify this for the participants. This attitude has been difficult to change. That is, strategic deliberations are left to the captains of the army. And I don't think this is right. But there has been a maturing process, here. Signals about these changes have started to spread around the organisation. The consequences of the focus changes that corporate management wants have begun to be grasped by people. Thus it might be that the value of these subprojects has been lying in the preparation work, the maturing process, the anchoring you can say, that things are going to happen. And this is the traditional Televerket way of doing things turned a bit on its head. That is, corporate management decides something, and asks for a more detailed deliberation on how things shall be implemented ... Even though the process has brought elements which makes the framework for the decisions more rich and safe, in a way, it is not necessarily the case that this is the solutions that will be chosen. And this is a way of working that I think is right. Because what we discuss are strategic structural decisions that corporate management anyhow has to have a conscious opinion about and belief in ... what we have put together through this project is several elements. We have flushed out the objections, and we have put in place the governing committee's thought world and its premises, and we have made richer, or perhaps made stronger or more visible, the framework for [the technological vice CEO's] decision, as seen from below."

Participant in interview, Research

The researchers who participated seem to have accepted dominance as far as it suited themselves and their allies. Otherwise it would have been challenged. Researchers outside the process often criticised the lack of information and participation. As already mentioned, in the general cultural analysis, many saw it as another instance of dominance by business managers intervening in matters of which they did not have the necessary competence. Some may thus paradoxically have come to undermine the authority of the technological vice CEO who they sought to support.

Question: "... the problem definition phase of the project. You participated in the expert committee of the early phase ..."

Participant: "That issue is bit problematic, you see. I do not know if I know so much about it, I did not participate from the very beginning, and I am not familiar with what happened before I came in. This is something that came directly from [the technological vice CEO]. I do not think this case is suitable for your investigation ... There were much conflict in the expert group. And things have been difficult afterwards, too. You can possibly study this later, when things have been implemented. Now there are a lot of accusations and search for scapegoats. That report is defined as a non-existent document. The Net division has requested that it is kept confidential ... [The technological vice CEO] has been accused of something. Many have perceived this process as a directive from him. Strong premises were laid in the mandate for the expert group. He has thought something, I don't know what, but it suited me well, and it suited others well, too, so ... This is about power battles, [the technological vice CEO] wants to forestall other processes."

Participant, technological research manager, in interview, Research

Question: "The market units were not included in a subproject of their own ..."

Participant: "No, and this was never the intention. The intention was to gather the units who work with research and development in the present organisation, and there is very little of that in the market units ... [Market manager] was included to take care of the overall perspective, both the relation to the market units and the relation to the corporation."

Participant, research manager, in interview, Research

The other TR processes did not seem to be characterised by much dominance from upper management. Expert dominance by those with most competence and experience and thus best judgement seemed to occur, however, although all researchers were allowed the possibility to participate. In addition, projects had increasingly to be accepted by business unit or corporate management. But dominance seemed on the whole to be lower than at the headquarters. This is also reflected in the diversity of process participants. A diversity of experts was often included in the formulation of TR strategic issues, but on the other hand the participation of ordinary people, organisational members, and external customers was often restricted to the role of research informants.

Diversity is reduced by dominance

As mentioned in the information :: communication section, diversity of input information was both regarded as a precondition for an authoritative solution and as a problem which had to be managed adequately. Here we are concerned with diversity as the range of persons who participated in the processes. At the headquarters, corporate management composed the work groups by members from the perceived relevant organisational units. Dominance was used in order to secure both that persons with the relevant differences in viewpoints were included, and that such diversity was kept within manageable limits. Although both heterogeneity and new members were sought, in comparison with TR processes with less dominance diversity

was reduced. At least in some instances, diversity was reduced in order to avoid larger conflicts. Informal background information indicates that one reason may have been that manager - trade union relations held the potential for negative emotional conflict (Jackson, 1992). During group work there may also have been a tendency of conflict avoidance among some of the participants, which reduced the ambiguity and paradox brought into the process for consideration.

Question: "Earlier you said "beautiful consensus at the start", did you hear of any conflicts surfacing during the process?"

Participant: "No conflicts came to the surface in such a way that I registered that any waves were made, or () that influenced the group work negatively. It seemed to me, and I feel sure about it, that this was experienced as approval, recognition, praise; they were selected for a special mission."

Participant, advisory strategy staff, in interview

Question: "Any conflicts in the group?"

Participant: "In that work group. No, it was no direct conflicts. But everyone of the participants is characterised by the culture at their home ground, by the market they operate in. But this did in no way create conflict."

Question: "Would you say that absence of conflict was positive?"

Participant: "Some themes can contain much conflict, of course. But with this diffuse mandate, the work was open for creative thoughts, but not so much themes of conflict. I don't actually have any opinion on whether it was positive or not, there is no natural arena for conflict ..."

Question: "No place for conflict in comparison with other processes?"

Participant: "It was not much of a process ... it was certainly a simple process."

Participant, advisory staff manager, in interview, Enthusiasm

Question: "How would you describe the process?"

Participant: "The mandate came () already specified. The first thing was to have a look for relevant persons. It was specified who should participate. Themes like that, they seem very simple, at the same time they are difficult when you start to work. The work went on without problems. There was not much disagreement in this process, but it was characterised by cultural differences. We had many nice discussions."

Participant, marketing manager, in interview, Enthusiasm

The diversity differences between TR and headquarter processes may partly be explained by the different kinds of diversity needed and their perceived advantages and disadvantages for accomplishing the task purpose. When acceptable action commitment was the primary purpose, managers and specialists with different responsibilities within the corporation had to be included. Expert diversity from the international arena resulted when the purpose was to develop some consensus expert judgements, and even more different people seemed to participate when the purpose was to explore complex social issues.

"... heterogeneity so that they complemented each other, not least with a view to their position in the corporation."

Participant, advisory strategy staff, in interview

"... we asked about 100 experts about their views on future service development as regards prices and timing ... One has to be sober, and cross disciplinary. Broad technological competence is needed."

Participant in interview, Access net

"Project participants with experience from economic and political science and policy makers will be preferable. Without formal membership in the project, it will be necessary to interact with researchers and research institutions working on the same or related issues. This will help balance the project focus from becoming too "introvert". The USO debate is an important political debate that should involve many different participants."

TR - Eurescom project proposal, USO

The perceived disadvantages of the different types of diversity also imposed their limits. When acceptable action commitments was the purpose of group work, the threat of irrelevant or inappropriate conflict seemed to exclude some participants with opposing interests and values. In expert groups, the limits seemed more often to come from lack of some acknowledged knowledge of the issue domain. While more specialist diversity was tolerated for developing improved expert judgement, a limitation may have been that conflicts easily became more intensified in situations requiring more immediate action commitments. Researchers may have been enthusiastic about the advantages of maintaining and increasing broad and diverse research activity at TR, but less agreement was evident about the advantages of contact with less knowledgeable customer-principals in product development.

"The R&D project was characterised by more enthusiasm and joy of work as regards the mandate. But they felt that they had to fight against people that apparently wanted to reduce the research part to nothing. People who at any moment, also in the governing committee, in fact, emphasised that research had to be brought to an end. Development had to be the main thing. To protect the research part of the activity was apparently the primary mission () or conflict issue. Internally in that group there were also strong exchanges of opinions as regards this tension between net and research, that is, how much of the net division shall be transferred to the research unit."

Participant, process manager in interview, Research

Research manager: "There have been discussions about making TR a research institute autonomous from Telenor. This has been much discussed among top research management, too, after the report came. I think that course is over. There have been two arguments against it. First, we would have been a smaller institute, with less employees. Second, I think it carries great value to be in contact with a living operative organisation. I think this has been the decisive argument."

Observation from afterward group meeting, Research

In some groups, there seemed to be growing recognition that time was needed in order to realise the advantages of diversity. In particular among specialists, it might take time to build the good communication necessary to gain any advantages of inter-group contact. The more specialised the knowledge areas in question, and the more separated the specialities had been, the more time it might take to realise good communication. Also in other situations with lack of mutual understanding and recognition time may be needed for overcoming such limitations, and an emerging need for empathy and dialogue may be felt.

"We were keen to establish a large program ... But there were, then, a long phase with much disagreement about for instance the definition of an electronic market. Everyone had a different view on this, and it made it very difficult for us to establish a project description. Obviously it was then very difficult to find what you should work with, because everyone wanted to work with totally different things. Some said "this does not belong to an electronic market place, you know, while others said "this is clearly very central in an electronic marketplace.""

Participant in interview, E-market

Participant: "The user government of R&D is implemented at the expense of more long term research. Not just because we are not allowed to define the tasks ourselves. We still make proposals for the customer-principals about what to do. But they want results very quickly, and some of them also express strong desires about fire fighting tasks they want us to take on ... The customer-principals are different, though. Some of them are more willing to accept long term goals. I think we have got some peace to work in the E-market project."

Question: "Things have improved as time went by ...?"

Participant: "I think it is partly a function of the fact that the customer-principals have to get to know us better, and we have to get to know better their way of thinking."

Participant in interview, E-market

Time / efficiency

At the headquarter, strong time limitations were set on the work of the strategic issue processing groups. While the dynamics for arriving at a compromise were accelerated, this made it difficult to realise the advantages of the diverse perspectives of participants, and impeded the collection of information in order to improve understanding of the situations and/or find better solutions. It made it difficult to contact the larger social and knowledge network outside the group, which can provide a broader range of information, possible solutions, and facilitate the generation of new and creative ideas (Jackson, 1992), together with support of other resources and suggestions about the acceptance of solutions (Milliken & Martins, 1996). The clear time pressures probably intensified the use of authority, negotiation, and compromise in order to reach some consensus, while creativity and genuine consensus-building suffered (Jackson, 1992).

"It was not much of a process. I put in twelve to fourteen hours, [the group leader] about the same, and the others about half of that."

Participant, market manager, in interview, Internal competition

Question: "What about the information you used, what kind of information did you use?"

Participant: "As regards factual information, it was referred to a climate survey in TBK, supplemented by a climate survey from region south at that time. As I said, that kind of climate surveys confirms a few things, but there is nothing new, if one doesn't have "radar" in everyday life, though."

Question: "You used experiences, too?"

Participant: "In this kind of work groups everyone has their own references, but this is not factual information. It was no serious work, it is based on impressions."

Participant, advisory staff manager, in interview, Enthusiasm

Participant: "I was travelling, and was absent from a few meetings. There were between five and ten meetings, I think. They were to a large extent based on our discussion of problem statements, and we made some documentation. [The group leader] made this final documentation. All of us had a lot to do in this period."

Question: "So your work suffered from everyone being occupied with other responsibilities?"

Participant: "We arrived at a result we agreed about. The process suffered a bit, I think, but I don't think that the result did. We would have arrived at the same conclusions. But as an afterthought I wish that I had more time to go into all of the problems, and participate at all meetings. It was interesting."

Participant, advisory staff, in interview, Internal competition

In one of the processes, where the issue was in an early phase of its development and more ambiguous, without clear internal conflict lines and with less need for some compromise or change-improving action, it was explicitly recognised that the SID episode was only one part of a larger strategy and issue diagnosis process.

"There are different views on the urgency of these issues, and it is very difficult to distinguish between realities and fantasies. Nevertheless we have to begin to structure a process now."

Mandate, Multimedia

At TR the purpose of exploring and analysing issues in depth, often without the same need to agree on an understanding of the situation or an action alternative, made it possible to use more time and other resources in order to develop insight and judgement before strategic issues were formulated. While net development was an established and familiar research area, most integration of different knowledge streams had previously often been the responsibility of research managers. In the new cross-disciplinary organisation this integration had become part of the work of many participants, and more time was necessary in order to become familiar with previously unknown persons and background knowledge.

Different backgrounds of participants created a need for getting to know each other. This took time and created frustrations.

Program meeting minutes, E-market

"There was both this large, I almost said deep, organisational change, as we were placed in research programs, at the same time as we should bring out a new strategic domain, or contribute to competence development in a new strategic domain, the electronic market. Afterwards, you can say that some of the reason that we used a lot of time in the starting phase must be attributed to the fact that we were totally unknown to each other. We were put together from different programs, and did not know each other. Earlier we were organised along disciplinary lines. For instance, as an economist I was in a program with other social scientists, psychologists, sociologists, and economists. Now the program was built on totally different principles. The cross disciplinary program named "market and service development" was composed of people who were interested in the whole field: technology, economy, sociology, and so on."

Participant in interview, E-market

At the same time, some of the present strategic issues were closer to product development with time pressure from customer-principals. In addition to scarcer time resources available, internal disagreements and diffuse environmental information intensified the frustration of participants, and increased the time needed for the development of plans.

"It has taken significantly more time than anticipated to develop plans. The main reason was that time had not come for the development of such plans. There were disagreements internally, and the environment gave very diffuse and opposing signals ... Lack of strategy in Telenor, unclear work- and responsibility relations, and many opposing signals from the environment, has led to the fact that the level of frustration among some project participants has been very high."

End report preliminary project, E-market

5.1.8 Ability to change :: lack of ability to change

The strategic issue diagnoses confirmed the new management's emphasis on an improved business orientation in order to improve the ability to change. They were concerned with the low ability to change resulting from a long period of public bureaucracy and monopoly, and stressed the necessity of an improved business orientation to meet increased competition. While few would contest the fact that improvement in business capabilities was necessary, other participant groups often emphasised additional measures for improving the ability to change. All behaved according to the transmission logic in using the change orientation to frame the situation so that one appeared willing and able to change oneself while opponents did not, in order to convince opponents of one's own view about how to change, and thus influence change in the desirable direction.

In the USO debate, for instance, top management clearly wanted to identify their own position with a future changed and liberalised telecom market, in which the whole USO question was of less importance because it was largely solved. On the other side, TR researchers criticised top management for being too conservative. They argued for a more long term and dynamic view, where new services were included in an enlarged definition of what should be regarded as basic and social services. Top management's opinion easily became associated with traditional concerns with limiting instructions from government and reducing costs rather than also consider income possibilities.

"Much energy has been used within the telecom world to calculate how much the USO costs the telemonopolies, which calculation methods are the most appropriate, and to find sophisticated compensation plans for the future, liberalised market. Telenor has chosen to walk another course: We are convinced that this debate is to a far too great extent static and associated with past conditions. We have chosen to say that we will carry the costs of USO, defined as telephony, if we are allowed to choose appropriate technology, and are allowed to practice a reasonable price differentiation. We are convinced that with new rules of the play - based on price differentiation and competition - it will be far more important to create tariffs and payment plans which leads to the fact that marginal telephone users become interesting customers, instead of seeing them as a burden and a cost."

CEO external speech, USO

Participant, research manager: "In Norway the definition of USO is closely related to telephony, and one talks about instructions and duties and wants to limit the obligations. In USA one has a different starting point, government says that the user has certain rights to universal services. Al Gore has said that USO should be extended to include "advanced communication services". Have you seen the definitions used in other countries? The definition is dynamic, I think it is just a question of time before Internet is included."

Observation from public discussion of research report, USO

"USO is perhaps an important issue, if the definition becomes more than a minimum definition. But the minimum definition is the one most probable, because it is the industry that wins the support in EU, and EU will most probably just be able to agree on such a compromise. At the meeting with the ministry, [the head of office] was not very happy when the question about some fund was raised. Everyone in EU, too, say that the task of the government is to see to that there is effective competition and not any financing ... [Our CEO] can just mobilise all his power and tell [the minister] that we want a minimum definition, because anything else would influence competition unfairly, and then the problem would vanish. Then the cost would not be so large ..."

Participant researcher in interview, USO

In the new R&D-unit case, the same pattern arose when the business orientation's emphasis on the increased need for profitable product development met the research orientation's emphasis on longer term technological and societal change. TR management had to consider both, and argued that an improved business orientation would be able to encompass both kinds of change:

Question: "Some premises should be clarified in this phase ...?"

Participant: "Well, it is more a question of concepts than premises. We have to improve the thinking about R&D in Televerket. There are some concepts I want to get a better understanding of. First, a higher level of analysis would be desirable, that is, the innovation concept must be introduced. I think the different kinds of innovation are a fruitful theoretical starting point for discussions. Second, we need an organisational mechanism which thinks of R&D as a method to develop future investment possibilities. At present, R&D is viewed as a cost, for instance travel costs. R&D is something qualitatively different. It is about what one wants to do in the future. I define innovation as something new which involves economical gains. We have to think more in terms of future business strategy, and I want a decisions process that leads to R&D activities as a portfolio, so that one become better at judging risk, income, payment streams, etc. ... The third premise is to achieve an understanding of professional product development: What is required to create new products. We must be better at putting in resources which are needed to achieve innovation, for example the subject disciplines of [examples]. So it is more a question of ambitions, rather than premises."

Participant research manager in interview, Research

Another example come from the Internal Competition issue, where the business and market oriented participants argued that the importance of the technologists' synergies and economies of scale was reduced in the new competitive situation. In dynamic markets, internal competition would nurture the ability to change and give competitive advantage through creativity, flexibility, and adaptation to the customers. The technological participant meant that their position was based on bad individual experiences from the old culture, rather than disciplinary and conceivably more long term knowledge and visions. Coordination in order to achieve synergies would be much improved in the future competitive situation because of the need to achieve profitability.

"Willingness to change and competitive ability is a presupposition for mastering the strategic challenges.

In the corporate strategy a range of strategic challenges are emphasised. Most of them are in the balance between developing:

- competitive ability*
- business orientation*
- the customer as a partner*
- synergies and economies of scale among the companies in Telenor*

Traditionally management and personnel in Televerket has been characterised by the idea of economics of scale, synergies, competence development, and specialist units. Which partly has reflected the organisation. These are approaches to the problem which are of interest also for the future, but from Telenor's corporate strategy it is evident that the primary mission of the group is to develop willingness to change and competitive ability."

Final document, Internal competition

Question: "So you were alone in prioritising synergies?"

Participant (technologist): "Well ... There was lack of theoretical knowledge, I think. The discussion was to a large extent based on individual experiences. Experiences from the old

Televerket, where everything apparently should be coordinated. This was not any good, thus one wants as much freedom as possible ..."

Participant, Net division technologist, in interview, Internal competition

Two of the strategic issue diagnoses dealt explicitly with the organisational ability to change. Composed of managers and advisory staff they clearly embraced the business orientation and management attitudes. While the transition and the new situation involved challenges for both managers and employees, it was easily the personnel and the problems in making them willing and able to change that was the cause of trouble. Further, the most business oriented were described as those best able to meet increased change.

"Televerket can not succeed if dissatisfaction and fear characterise the personnel. We have to acknowledge that this is the situation in considerable parts of Televerket itself today. We need people at all levels who are willing to "go into the war" and fight for Televerket. How shall we create enthusiasm, pride, and joy?"

Mandate, Enthusiasm

"The situation ... In general

- Difference between companies and Televerket. Higher pride, joy, and enthusiasm in the companies (main tendency).

- Experiences of different level of pressure for results and/or work load

- In Televerket one-sided experience of cost reduction

- Still uncertainty about the transformation into a Ltd. What will this involve for me?

- Among companies there is a sceptic attitude to being drawn "back" to the heavy Televerket

- Many employees lack understanding and insight into what the deregulated telemarket will involve. Real understanding of the reality - including consequences - one does not manage to establish/understand ...

Further, cut downs are very well known. Uncertainty about where and who cut downs will hit. Colleagues perceives each other as competitors ... In Televerket one is easily occupied with negative conditions like; problems, obstacles, frameworks. To a certain degree there exist "sadness" and undervaluing of own opportunities and strengths."

Final document, Enthusiasm

In order to make change a positive experience, the personnel's need for safety was considered to be basic. Their concept of safety therefore needed to be changed to fit the current situation. Then the managers would be able to create enthusiasm, pride, and joy through the creation of successes and praise, in combination with improved cooperation, information, and career opportunities. The description of common present reactions to change tends to portray resistance to management initiated changes as irrational and negative.

"For people in general a sense of safety is important, and earlier Televerket has been a safe company ... This is no easy way of stating the problem. One knows that competition is coming, but one does not know in what way, so there is going to be a period of uncertainty. It is like being sick and waiting for a diagnosis. This is the worst thing, when one gets to know the diagnosis things are better. Thus the safety part is the most important one. When people feel that it is not in place, one does not manage to establish these other factors, they are not experienced as so important ... The farther away from Oslo one is, and the lower education one has, the larger is the uncertainty. In the old TBK there is some uncertainty, too, I think, if one takes a closer look, but there one is better at maintaining the facade, more macho ..."

Participant in interview, Enthusiasm

"In advance - reaction to the change

1 Diffuse unrest

2 Concrete fear (will changes hit me?)

3 Rumours - rumours are often emphasised, because one does not trust the "official" version

4 Belief that managers know more than they say - mistrust

5 Reactions to change bind much energy at the expense of work ...

The experience ...

Positive owner: I agree to and support changes.

Neutral owner: I do not know what the result is, but I will make the best of it.

Negative owner: Disagree, but goes on and makes the best of the situation.

Victim: See what they have done to me ...

Afterward reactions

Reorganisation is not finished even if the boxes are in place. People can be

1 Confused: Does not find their place in the new system - can not survey the situation.

Needs control and clarification of goals in own work situation.

2 Carelessness/disillusionment: Do what one has to do, and not any more. Feel that the bond in the organisation has been broken.

3 Aggression/sabotage: Active opposition. Individual actions: Go through experience, point out behaviour arrangements, stimulate interests for the future + follow up the present."

Final document, Enthusiasm

"A certain sense of security is a necessary basis for achieving enthusiasm, pride, and joy for working in Telenor. Traditionally the safety concept in Televerket has been a secure and stable job. The "traditional" safety concept / opinion has to be transformed to:

- security for salary (as long as Telenor has an economic backbone)

- security that Telenor takes care of its co-workers and puts in resources in order to qualify / re-educate for tasks within and outside Telenor, if the work tasks disappear

- security that Telenor has the ability, willingness, and muscles to assert itself in the future competition - and thus the potential for being among the safest places of work in Norway.

It is also important to stress that the individual bear responsibility for own future."

Final document, Enthusiasm

There was a need for improved management, too. In particular, a need for managers who were able to inspire and inform. The present experiences of keen competition and fighting should be replaced by cooperation for common success. The concept of "honest management" was introduced to ameliorate the lack of familiarity with each other's understanding of the situation and the lack of participation and information about opportunities. Good management should also represent important business culture values, such as positive experience from strong market competition and ability to take action.

"As regards creating Cooperation

Experiences of lack of interplay in Telenor - internally. Keen competition and positioning instead of unifying powers towards customers and competitors.

New companies and units easily get focus on own success and not wholeness for Telenor.

As regards Honest management

Management is not perceived as visible, and distant from and unfamiliar with the everyday work situation. Management on their side thinks that very many employees have an insufficient understanding of reality.

No owner relation among managers to unpleasant decisions - "they have decided".

"The management" gets low "score" in co-worker satisfaction surveys.

As regards Career opportunities

Televerket gives unique instruction and education opportunities without any special "valuation" and communication.

Systematic career planning occurs to a very little extent."

Final document, Enthusiasm

"Honest management

This concept involves that employees feel that manager - management - contributes with that information which is relevant for the employees' future, and management has accordance of speech and action. Co-workers are given the opportunity to influence own future."

Final document, Enthusiasm

"Corporate culture and attitudes

Corporate culture and attitudes are to a large extent formed as a result of the managers' way of managing across time. Managers who are willing to change and have the experiential foundation and security for implementing necessary changes create a changeable culture.

The same applies for managers who have positive experience from strong market competition.

General organisational development actions which facilitate ability to change and ability to compete can contribute to influencing the culture, but get small real effects if they do not reflect the managers' way of managing. Recruitment and development of managers thus become a key area for managing the development of the corporate culture. Further it is important to give freedom for action to managers who represent objectives from corporate culture values."

Final document, OD

In addition to good management, an improved organisational change ability would involve improved planning. In particular, corporate management authority seemed to be strengthened by this move, as the balance between larger long term changes and short term actions would be improved. While the emergence of new customer and operative needs might necessitate actions which more directly satisfied short term results, the lack of accordance and clear priorities between projects, and the lack of adequately specified plans had been the reason for not following their long term direction. Planning had to be strengthened, ambiguity had to be reduced and controlled, and the necessity of good information was again emphasised.

"Integration in the strategy-, plan-, and budget process ...

Corporate management has to define requirements, frameworks, and general strategic challenges for the organisational development area early in the process so that all levels have a good foundation for their work. Common corporate requirements associated with decided key values are included here. At the same time the business units and the operative units have to define own needs so that these can be pulled up and coordinated in the process and viewed in connection with requirements and challenges that corporate management has defined. Thus a good foundation for assessing and taking care of common and crosswise needs can be created."

Final document, OD

"Balance between long term strategic planning and short term operative considerations within the organisational development ... Imbalance often arise because:

- 1 The organisational development actions do not well enough take care of business and operative considerations. New analyses of needs from customers and operations uncover new demands that the actions do not satisfy. The priority of the actions are therefore reduced and the actions delayed to the benefit of actions which more directly*

satisfy short term operative actions which are used in the result measurement of the operative units.

- 2 The organisational development actions do not take care of problem statements associated with crosswise value chains and internal dependency relationships. The actions therefore do not solve the basic needs within the units and between the units.*
- 3 Long term organisational development actions are not well enough specified and get more characterised as general goals. Management is ambiguous and gives little direction in their demands. Following up of results by management fails to appear, is too accidental, and does not have any consequences.*
- 4 There are implemented too many organisational development actions without any harmonisation in accordance with each other or the priority between actions is ambiguous. The organisation does not manage to assemble around the most important actions and confusion about responsibility relations associated with the different projects easily arises.*
- 5 The organisational development actions are not well enough integrated in the strategy, plan, and budget work. In particular this applies to long term actions, but also short term actions.*
- 6 The effect of the actions is not measurable and can thus not be evaluated and adjusted.*
- 7 The actions are not organised as projects with responsibility, resources, progression plans, and following up."*

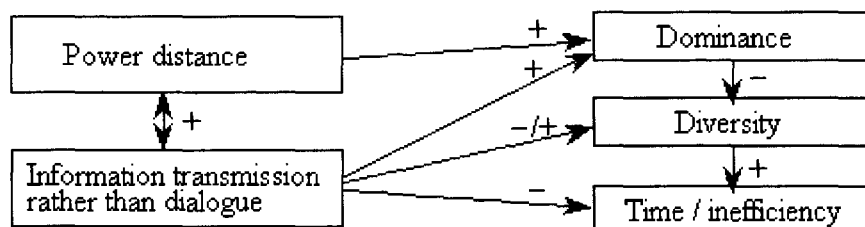
Final document, OD

5.2 Explanation of Strategic Issue Diagnoses

5.2.1 Summary of the descriptive analysis

The descriptive analysis maintained the emphasis on the transmission rather than the dialogue view of communication. It may even have illustrated that the emerging recognition of the need for some dialogue was repressed by the intensified differences and conflicts in strategic issue diagnosis. The diversity challenge seems above all to have been experienced as an increase in the need and the time necessary to acquire adequate information about each others' view of the world and the strategic issues, not to mention the need and time necessary to get accept for and convince others about ones own views. The analysis also confirmed a relative large power distance at the headquarters, to some extent as a result of the experienced need to influence the direction of the strategic issues diagnoses. The larger power distance resulted in processes characterised by more dominance, which reduced the range of persons participating in the process. The need for authority in afterward communication supported the inclusion of persons with relevant differences in viewpoints, but the use of power differences to resolve conflict created dominance and contributed to keeping the differences within "manageable" limits. In summary, the relative large power distance and the prominence of transmission rather than dialogue involved an emphasis on the efficiency of the process: get the job done, manage diversity, resolve conflict, and facilitate the kind of change favoured. At the research institute, lower power distance and domination led to more diverse inputs and more time and resources used in order to come up with what was regarded as a disciplinary quality solution.

Figure 10. Power distance and Information influences on SID process variables.



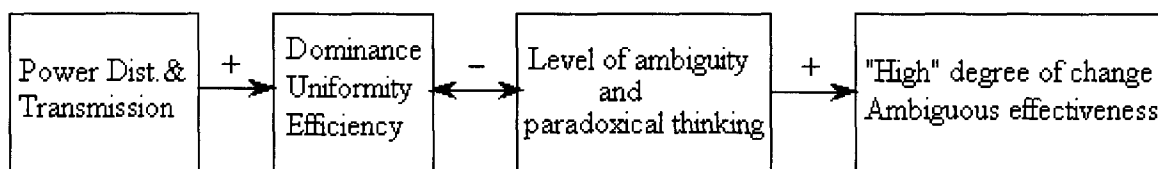
The pattern of actions following from higher power distance and transmission seemed to reduce the level of ambiguity and paradoxical thinking. This may reasonably be one of the reasons that the business :: society paradox seems to have been better managed at TR. The business implications often drove out the societal dimensions of strategic issues at the headquarters, e.g. the USO issue. As regards monopoly :: competition, one may discern a stronger tendency toward favouring understandings which might contribute to maintain a de facto monopoly. The general and legal dimensions were often explicitly considered, but the implications for and of more detailed aspects and marginal stakeholders were not so closely examined. While the business orientation emphasis on profitability may have influenced headquarter processes, technology and disciplinary concerns may have contributed to weakening the balancing of self interests and societal interests at TR.

The technology :: market orientation seems to have been fairly well managed in several processes, even though market considerations were often most pronounced at the headquarter and technology at TR. The reason was probably that participants were especially aware of and familiar with this paradox. For instance, in Internal competition it seems that the relevant

differences in viewpoints were included, participants experienced themselves as tolerably equal in influence, and the quick conflict resolution accommodated both sides by balancing the poles according to the separate organisational areas in question. The employee considerations seem to have been denied, however. This is particularly evident in OD and partly in Enthusiasm, where they should be very relevant. The business oriented managers probably judged their inclusion as not contributing to the good ability to change.

In general, it seems that the participants often perceived the increase of ambiguity and paradox beyond some optimal point to reduce the ability to change. This optimal level, which probably differed for TR and headquarter processes, obviously entailed the opportunity for support for their own position and supposedly a reasonably high degree of change. The base condition against which the degree of change was measured then involved the present along some dimensions of their opponent's position, e.g. the previous public government culture. However, participants did not seem to be confident about the accept of the resulting problem definition (and in some instances solution), and often wanted top management approval or confirmation. The effectiveness of the processes was also rendered ambiguous by the fact that some groups were not allowed to participate and their views and interests not included.

Figure 11. Summary description of strategic issue diagnoses.

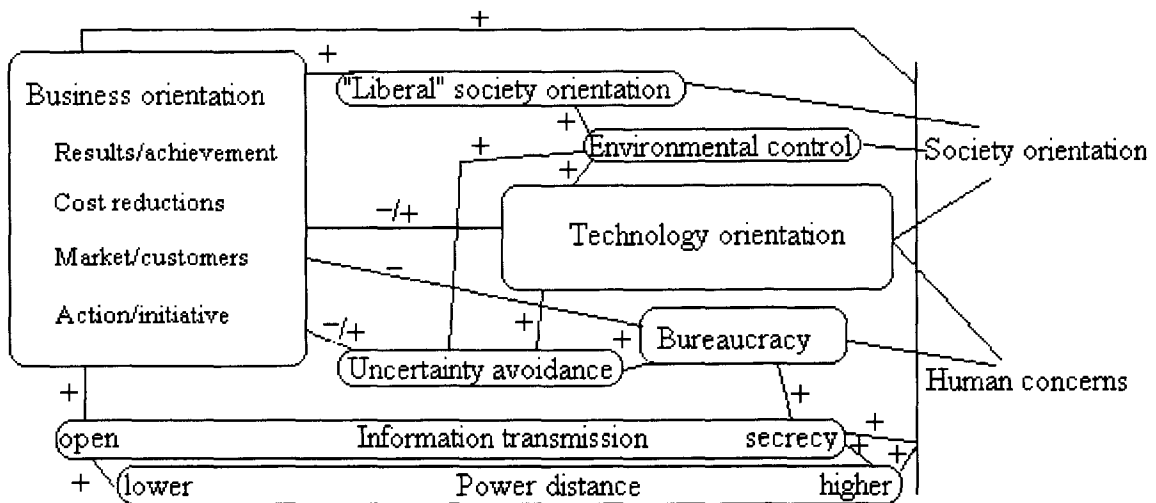


The question is, then, what lies behind and explains these empirical regularities. The following mappings of the activated cultural dynamics builds on the previous descriptions, and they are kept short in order to not tire the reader of reiterating much empirical material.

5.2.2 Business competition strategic issue diagnosis culture

A common cultural pattern seemed to be operative in the strategic issue diagnoses focused on corporate competitive ability (i.e., Internal competition and Multimedia, and partly Access net investment, the new R&D unit, and USO). Here the new and strengthened business orientation enjoyed a powerful influence (fig. 12). The focus on how to improve competitive advantage and better serve Telenor's business interests made the traditional society orientation more or less irrelevant. A "liberal" society orientation, in support of a continuing strong market position, provided backing for the business orientation. Competition should include the possibility of price and investment differentiation, also geographical because the competition which had to be faced was expected to be stronger in central areas. Restrictions on the room for competitive actions would reduce the competitive ability of the firm. Competitive strength and profit were regarded as preconditions for being able to carry any social obligations, which had to be compensated for in an adequate way. In the USO issue, one might ask if large societal obligations should be carried even if they were compensated for. This was one of the most serious problems following from the liberalisation according to the traditional society orientation, and the business orientation wish to limit universal services to the basic telephone service might be seen as a means to reduce its influence.

Figure 12. The business competition SID culture.



Sometimes the marketing oriented satisfaction of customer needs was a starting point for assessing how to build competitive strength, but it was to some extent opposed to the technology orientation's emphasis on new and more advanced technology. This led to a conflict between adaptation and the stimulation of new needs by means of the selling orientation. While technologists shared the recognition of the need for income, they did not like the market demand restrictions and reductions of technology investments. They also shared the stress on cost reductions and reduced prices to customers, but favoured the means of technology improvements and radically reduced price per capacity, while business people preferred the exploitation of existing infrastructure and more adaptation to existing needs in order to defend and build market share. In the adaptation to existing customer needs, the strong technology orientation supported the maintenance of a dominant market position, by technology and technological competence as means to secure strategic control of customers and income. The relation to the customers seemed time and again to be one of strategic control rather than adaptation.

As regards internal organisation principles for improving competitive ability, technologists preferred more centralisation and formalisation, while market people favoured initiative and freedom of individual units in order to serve customer needs and achieve profitability. In addition to substantial technological arguments, the higher uncertainty avoidance of technologists may have contributed to the preference for more centralisation and formalisation of the organisation and technology operation (Hofstede, 1983; Schneider & De Meyer, 1991). The market oriented proposal was based on an open information system for facilitating competition and voluntary cooperation. The lack of information available for making the system work, on premises from the organisational units closest to the customers, was projected the main difficulty. It was perceived as a consequence of human opportunism and resort to the old bureaucratic and political system. Another threat to business competitive advantage was the employee considerations, which might impede the cost reductions by minimising workforce downsizing and maintaining high quality infrastructure in the districts. The employee interests were therefore attempted kept outside the processes, but remained lurking in the background and beneath the surface.

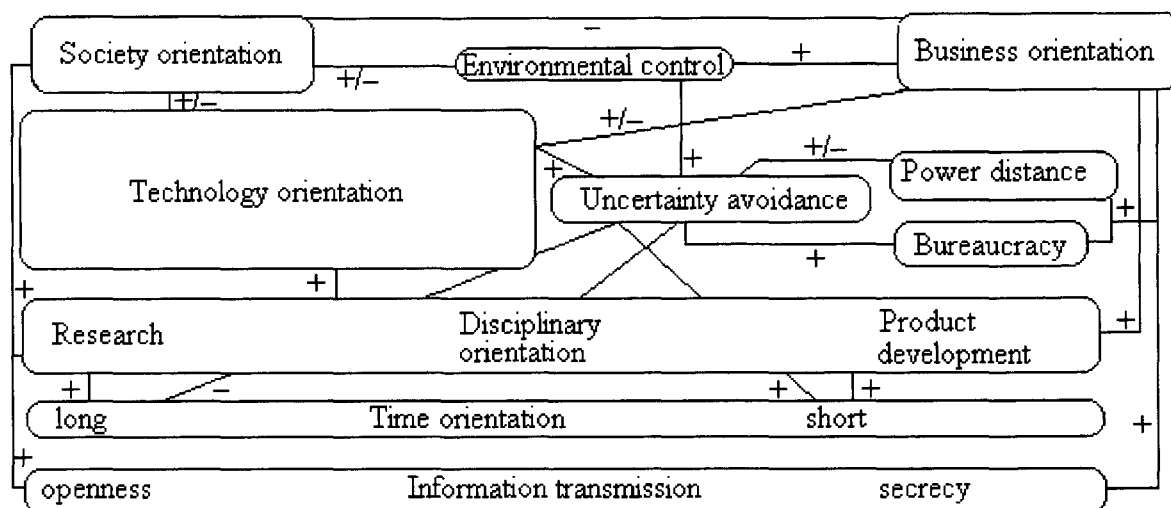
While the customer- and action orientations on the one side supported a lower power distance in stressing customer adaptation and individual autonomy, the centralisation of power seemed to be regarded as a pragmatic necessity in order to establish a more business oriented organisation, and sometimes to make the new business system work. Thus selective information and even bureaucracy were activated for weakening and de-activating the employee society orientation and human considerations. This cultural dynamics, perhaps supported by the cost orientation's emphasis on efficient processes, generated strategic issue diagnoses characterised by dominance, limited diversity, and time pressure. The time pressure may have led to less reflective diagnosis (Dutton, 1993a): quick categorisation of the issues based on past experience, and greater selectivity of information, in particular new information. The diversity and its limitation within certain boundaries may have countered this tendency, by adding different perspectives while keeping information load at an acceptable level (*ibid.*). But the personal responsibility of the action orientation and the positional protection of bureaucracy increased self relevance (*ibid.*), and together with the emphasis on resolving ambiguity and conflict in an efficient way between the most powerful views, learning something new in order to improve issue understandings may have been made more difficult.

The resulting higher power distance, and impression of control from top business managers, also fed into the emphasis on maintaining a dominant position in the relation to the environment. While regulations ought to be followed, the regulatory authorities should be influenced in order to secure advantageous competitive conditions. Parallel to the exploitation of secrecy of information as a source of internal power, technological competence was regarded as a source of market domination and customer tie up. Both the faith in large environmental control and control of internal change processes may have been supported by uncertainty avoidance. As Hofstede (1984) says, the fundamental issue addressed by uncertainty avoidance is how a society reacts on the fact that the future is unknown: whether it tries to control the future or to let it happen. As far as the power to control the environment was being reduced, a more uncertainty tolerant and adaptable action orientation may have been more rational. In the internal environment, the selective and powerful information transmission, e.g. in resorts to the safety of bureaucracy and instances of premature action, may also indicate attempts at high power distance control of an otherwise more uncertain competitive future.

5.2.3 R&D competition strategic issue diagnosis culture

A different cultural dynamics developed in the R&D milieu's focus on competitive issues (i.e. USO, partly Research and E-market). Here the society orientation seemed to balance the business orientation in the development and exploitation of technology. The long tradition of public support for technology development in the service of societal needs was not being sidelined by the recent growth of the business orientation. Thus the social utility of research and technology was emphasised, in combination with the view that R&D was very useful for competitiveness and long term profits. The new R&D unit was established in order to improve profitable product development, at the same time the long term technology development and research should continue. In USO the universal access to telecommunications at somewhat equal quality and terms was emphasised, and that such facilitation of societal and weak user needs might be favourable for business interests, too. While the business and technology orientations seemed to support a dominant market

Figure 13. The research competition strategic issue diagnosis culture.



position, the society orientation said that it might have to be reduced, but also that socially responsible companies should be protected against greedy and cream-skimming competitors.

As the funding of projects became more dependent on their utility for business competitiveness and profitability, some were concerned that the possibilities for using disciplinary competence and technology to serve the wider society would be reduced. People holding the society orientation had earlier often tried to dampen down the technology optimistic diffusion ambitions. Now both the society and the technology orientations shared the view that the liberalisation and the business result orientation would slow down the development too much, in particular in districts with small income possibilities. Thus the USO exploration emphasised a dynamic and long term view where new services like Internet might become included, in order to counter the businesslike limitation of the definition in order to increase profits. Throughout the processes, the society orientation generated a wish to make R&D publications and disciplinary knowledge public, and subject to social and political discussions. The stronger business considerations for competitive advantage, however, said that they often had to be kept secret and not available for competitors.

The technology orientation emphasised that a long term view had to be taken of strategic issues. The deep knowledge of high technology sustained by an international perspective led to the preference for radical change, where new and advanced technology should be used, preferably all over the country. Long term disciplinary work was required to realise such visions, and to build disciplinary authority for them in communication and decision making. In the establishment of a new R&D unit, it was thus emphasised that the new organisation had to support long term research and technology development in addition to the short term flexibility for business oriented product development. The E-market effort seemed to welcome the income potential of new value-adding services, but instead of focusing on single products whose income potential may have been difficult to pinpoint in disciplinary terms and easily exaggerated by business people, the development of a technological platform for new services became started. This platform would facilitate the diffusion of new services and create traffic in the net, but remained closer to technology competition than short term product development.

The need for a balance of business and society orientations, as well as technology and market orientations, and various disciplinary specialities, created a broader diversity of input to the strategic issue diagnoses. More time was also required, in order to understand issues well enough and come up with disciplinary quality solutions. Disciplinary expertise should constitute the basis for authority in communication and decision making, and thus had an equivocal effect on power distance. Business manager positional and personal power was challenged, but expert authority was accepted and even favoured. The business oriented emphasis on product development appeared to stress a lower power distance in order to encourage innovation (Shane, 1993); free communication across hierarchical levels and horizontal lines; trust in subordinates and flexibility rather than control. But the management used high power distance to control the new R&D unit process, and supported the secrecy of information and knowledge. The research orientation also maintained that top management should remain the authorities on R&D funding (*ibid.*), despite their recently more pragmatic rather than disciplinary based attitude, because of their broader and more long term perspective than divisional and business unit management.

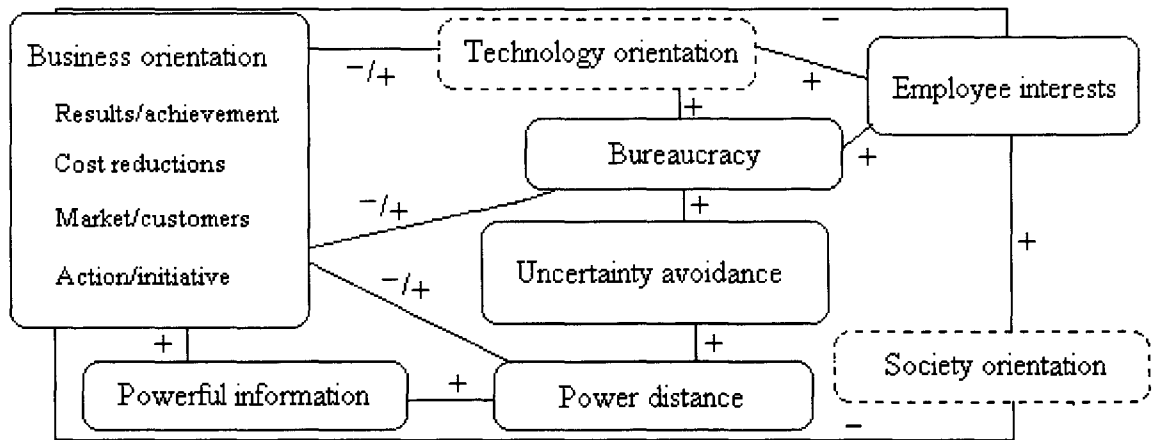
Uncertainty avoidance may again have supported a technologists preference for formalisation of the new organisation, rather than the removal of rules and procedures to encourage innovation (Hofstede, 1983; Shane, 1993). It clearly supported the belief in environmental control, required for both long term systematic technological innovation and for business competitive advantage. Some regarded reduced safety, resulting from cross-disciplinary development, as a threat to disciplinary quality. While the long time orientation appeared to require a greater tolerance of ambiguity, the perception of uncertainty seemed to increase among all as they were confronted with changes different from their own view of change (Shane, 1993), e.g., high-risk high-return investments versus flexible adaptation to customers (Song & Parry, 1997). Thus uncertainty avoidance hampered the requirement of technology - marketing integration, and the realisation of the emerging recognition of something like dialogue. While market unit partners may have had a greater overall tolerance for ambiguity, the established culture seemed to call for their acceptance of a longer time horizon, and of some bureaucratic institutionalisation similar to the long tradition of top management integration, in order to develop a high-integration R&D organisation (Song & Parry, 1997).

5.2.4 Corporate change strategic issue diagnosis culture

The Enthusiasm and OD strategic issues were initiated in order to improve the new business oriented organisation, and the cultural dynamics which developed were oriented towards strengthening the business orientation by enhancing its appeal and influence. It was considered necessary to improve the appeal of the new corporation, as many employees and perhaps managers, too, were frustrated with the change process and demotivated. An important reason was the increased uncertainty, and the fact that the cost orientation was related to downsizing of employment. In addition, many may have had problems with letting go of the previous times. They may have longed back to the public technological service identity and its security. The society and technology orientations were not actively articulated, however. They remained implicit and mostly opposites of the achievement and customer orientations which were sought strengthened by the change process.

The employee interests and human considerations were visible and recognised as a threat. The strong evaluation of employee concerns may have reduced the reflection of participants,

Figure 14. The organisation change strategic issue diagnosis culture.



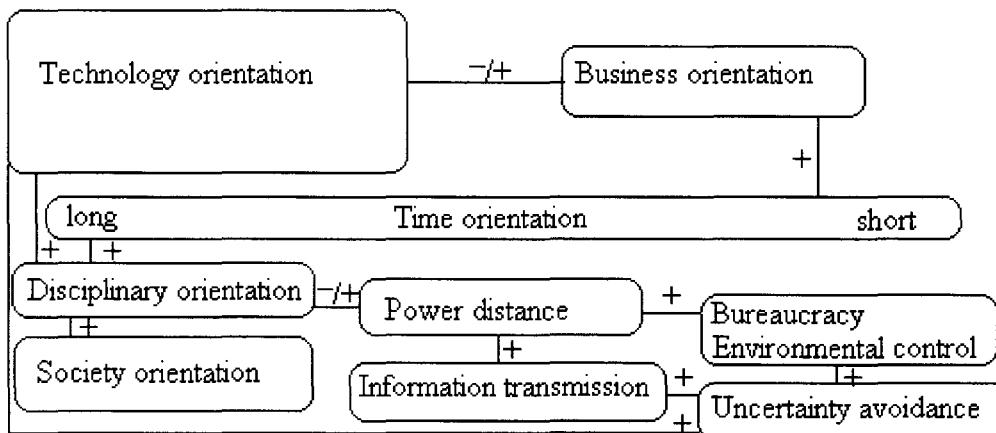
and it may have been difficult to change (Dutton, 1993a). The employee interests were in particular regarded as a threat to the cost orientation, which was sometimes perceived as the driving force behind the whole change process. Therefore it was perceived as a vital concern to redefine the characteristics of employee human considerations. In particular, the earlier understanding of security had to be changed to make it more consistent with the business values. Then powerful communication might be used in order to remedy the lack of a realistic understanding of reality, to create a common world view which included the upcoming competition, and to motivate for addressing the need for new skills and attitudes. The new skills and attitudes required were, in addition to the customer orientation which opposed the technology orientation, associated with the action and achievement orientations opposed to the centralised rules and procedure oriented bureaucracy. The previous too bureaucratic organisation, with functional and disciplinary divisions creating fragmentation and lack of mutual understanding, should be replaced by honest management and informed employees, who were more able to take initiative and act autonomously in order to serve customers and achieve results.

The relation to bureaucracy and its associated high power distance was ambivalent. Bureaucracy and high power distance seemed to be considered to be necessary for increasing the influence of the business orientation. In order to influence the course of change, high power distance was involved in the generation of strategic issue processes characterised by dominance, limited diversity, and scarce time resources. In the OD process, the strengthening of planning together with centralised and managerial information activities resulted. Not least because the uncertainty of employees and managers had to be reduced, and productivity maintained together with change and downsizing. This must also be seen as an expression of participant uncertainty avoidance, as it was argued that short- and medium-term planning should get more top management attention (Hofstede, 1984). Most pronounced was the notion that powerful communication had to be used in order to reduce ambiguity and conflicts with a positive business world view.

5.2.5 Technological change strategic issue diagnosis culture

In the Access net investment issue and the E-market issue, many participants were concerned with technological change and how it might best be facilitated. The technology and disciplinary orientations were central, as you would expect, together with their relation to the business and society orientations. The technology orientation emphasised the long term radical change perspective, informed by international developments, but the business need for income made necessary more short term strategies in order to finance the long term ambition. Thus there were increasing use of business arguments, such as emphasis on access net development in regions with large customers with more advanced needs, and the development of new e-market services with both income potential and high capacity requirements. The social orientation perhaps lost some of its attraction, but most likely remained the most preferred, as the liberalisation and the business result orientation was showed to reduce technology investments, in particular in districts with small income possibilities. Thus political and societal arguments were still used, e.g. the related national information highway effort, supported by the disciplinary orientation which clearly wanted to contribute to more than narrow business interests.

Figure 15. The technological change strategic issue diagnosis culture.



The technology orientation may have supported a somewhat higher uncertainty avoidance. More weight may have been put on technology and costs, than on the more uncertain market demand and income possibilities. But this may also have resulted from the belief that user needs develop slowly and that the diffusion of new services were exaggerated by business and less than disciplinary people. Uncertainty avoidance may have supported bureaucracy, and fed into the preference for large investments securing a dominant market position. The part of the strategic issues investigated seemed to involve relatively structured and familiar disciplinary problems, although participants emphasised that broad technological experience and inputs were required. They also were familiar with disciplinary conflicts. As usual, disciplinary expertise should constitute the basis for authority in communication, and ambivalence with power distance resulted. The transmission view of communication supplemented this usual ambivalence by a more than usually detached climate for information and decision making, in which the superior position power of even business managers tended towards being accepted given their accept of the best disciplinary facts and judgements as such.

5.3 Critique of Strategic Issue Diagnoses

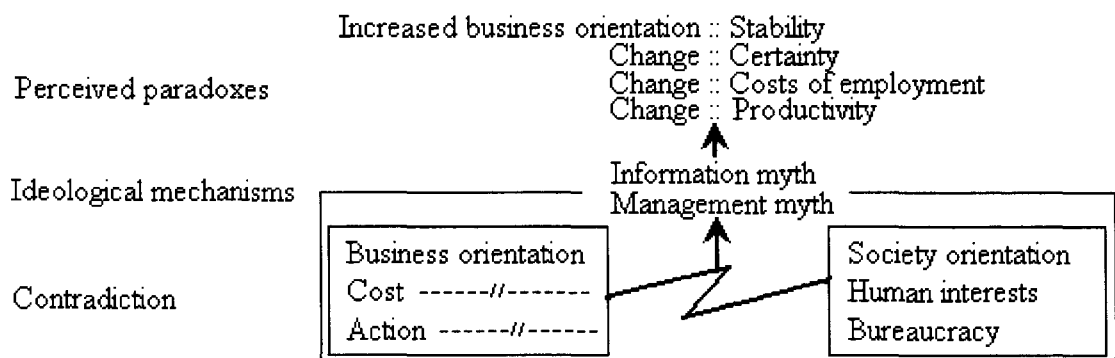
The purpose of this section is to explore the possibility that the non-manifestation of some cultural structures implied political suppression rather than genuine consensus (Whittington, 1989). In the context of this case organisation, with varying but relative large and probably growing power distance, and with profound change, diverse membership, and narrowing strategy, the oppressive interpretation seems reasonable in at least some strategic issue episodes. I.e., there were ideological power mechanisms which plausibly silenced voices that would have expressed the absent cultural structures. The possibility of more widespread organisational oppression was also present, but more observations would be needed to assess and verify this possibility. To some people, certain identified oppressive mechanisms might appear as positive instances of good management. Some would hold them to be legitimate in order to engineer change, but I hope that they are not found to be sacred and sheltered from critique.

The label "challenge" might in some instances have been used as a cover up word to smooth over what were really problems and conflicts (Smircich, 1983). But on the whole, I would say that management was more prone to "admit" their "strength" in managing and resolving such difficulties. Perhaps it suggested a need for action to overcome something or even someone troublesome, rather than the need to explore issue parameters and develop issue understanding (Dutton, Fahey, & Narayanan, 1983). As such the label might have consequences for who would get involved with the issues, even if participation was supported by the more positive frame than that of a problem (Dutton, 1993b).

5.3.1 Suppression in order to "improve the ability to change"

The wish to get accept for ones own view of what changes should be done obviously led to the suppression of others and their views. This was particularly the case in the corporate change cultural dynamics. The business oriented participants effectively failed to take into account, or failed to truly take into account, the employees' interests and society orientation. As the ideological mechanisms involved in the denial and transformation of such contradictions might be particularly transparent here, we shall start with focusing on how the good information and management myths led to the recognition and resolution of particular change paradoxes rather than the basic contradictions (figure 16).

Figure 16. Denial and transformation of employee interests and society orientation.



The opportunity to build a base for business oriented change obviously excluded parties with additional views from participation. Perhaps more subtly, the problem became framed as making employees willing and able to change, in particular employees in the less business-oriented parts of the organisation. By stating the problem in behavioural terms, the participants may thus have come to express disapproval of employees and made them opponents (Volkema, 1986; Maier, 1963). Examination or inquiry into the reality and background of such attributions, which may serve to maintain the superiority of the present and future business managers, may further have been avoided by the formulation of the problem as declarative statements rather than as "weaker communication" questions (Volkema, 1986).

"Telenor can not succeed if dissatisfaction and fear characterise the personnel. We have to acknowledge that this is the case in large parts of Televerket itself today. We need people at all levels who are willing to "go into the war" and fight for Telenor.

How are we going to create enthusiasm, pride, and joy?

- *Which company culture do we want? Which company culture do we need?*
- *What can management do? Which signals does it give in this context?*
- *Which incentives/encouragements can we put in when we are a Ltd. that we could not put in earlier - and what will this cost?*
- *Do we have the right internal/external information strategies considering the goal of strengthening the loyalty of the co-workers?*
- *Can we invite the trade unions for contributions?*
- *What do we do internally when we launch a new name and profile?"*

Mandate, Enthusiasm

"Reflections as regards the mandate ... The questions pointed out in the mandate are important elements/methods for realising the goal."

Final document, Enthusiasm

The contradiction of business related change and employees' need for safety was sure enough recognised, in particular as the anticipated downsizing created fear about losing jobs and control over the work situation. The resolution of this paradox involved changing employees' concept of safety, presumably by powerful communication and information, so that it was in accordance with the new competitive situation. Then managerial creation of successes and praise would be capable of creating enthusiasm, pride, and joy for working in an appropriately changed Telenor. Good management would be required for implementing such improvements. In particular, there would be a need for managers with good abilities to inform and motivate. Probably a good deal of new managers would be needed. They should be secure themselves and represent important business culture values, such as positive experience from strong market competition and ability to take action. They should contribute with information that the employees felt was relevant for their future, and equipped with information about their opportunities within a more business oriented corporation the subordinates should be given influence over own future. The risk of redundancy could thus be reduced by ensuring that they acquired the right attitudes (e.g., flexibility, mobility) and skills (continuous extension and retraining) (Willmott & Wray-Bliss, 1996). The strengthening of planning may also be interpreted as part of the good management and information myths, involving high power distance and information distribution, and thus reduce uncertainty.

The participants were in this way able to construct or reinforce beliefs that the reasons for problems lie within the employee and previous management categories, not among new business managers, not in the new business culture, and not in the larger new socio-economic

system (Bradshaw-Camball & Murray, 1991). By largely avoiding dialogue with organisational members holding the society orientation, they failed to take account of an important source of the dissatisfaction of fellow workers and managers. The rather one-sided business orientation may have been not only an important reason for what was considered to be resistance against change, but also for the experienced reduction of the meaning of work life. Few would doubt that an improved business orientation was necessary for securing a competitive Telenor and future employment. But the point is that the potential of some balance or integration with the employee society orientation, ensuing a positive employee self concept and more integrated orientations towards positive change, should also have been assessed.

The next oppositions between cost reductions and change ability were also partly resolved by the myths. For one thing, downsizing was an important part of the changes that were wanted, so in a way change was downsizing. But the strong cost orientated manager should also recognise that it was under-staffing which contributed to improve change ability, as repeated below, not the commonly recognised slack resources. In addition, the change :: productivity paradox was balanced and partly resolved by the good planning. Changes could be implemented with controlled losses in productivity if they were well planned and controlled.

"By experience it turns out that being weakly short-staffed yields a continual pressure for becoming effective on a market exposed organisation, at the same time as the ability to change is sharpened. Likewise over-staffing works in an inhibiting way as regards becoming effective and able to change.

Redundancy is a threat to organisational development and change by reducing the pressure on the identification of not-value-creating activities and easily leads to over-staffing in value-creating activities. In addition it can involve easier reduction of competence requirements of functions ..."

Final document, OD

"How to tackle the balance between change and stability as regards productivity ...

Continual improvements or re-arrangement of production lines can be implemented with controlled losses in production if they are well planned and controlled. Usually these problems are surveyable and it is easier to manage information and motivation associated with the reorganisation.

In instances where there is need for large rearrangement of several work processes which interlock and which cross existing responsibility areas or larger reorganisations of units or mergers of units, the picture is less surveyable and risk of losses in production is larger. Such rearrangements demand a longer phase of planning and person games of patience become an element of the problem statement.

Larger rearrangements and reorganisations require thorough and intensive planning and have to be controlled strongly in order to hinder that the organisation relaxes at ongoing production and development waiting for clarifications."

Final document, OD

Similar tendencies toward the denial and transformation of the basic contradiction may have occurred in other processes. In the USO issue, headquarter participants seemed to focus on finding how to best secure Telenor's business interests in a liberal environment in which the whole issue was of minor importance, but on the whole this seemed at present to have been balanced by the TR effort. The society orientation had a stronger standing at TR, but neglect can nevertheless be found as regards employee and district considerations. In the Access net issue, the focus was on technology investments in respectively densely populated urban areas with several large business customers versus sparsely populated and industrialised districts,

against the background of different possibilities in the previous system and the new competitive and conservative system. Although the social technology orientation of the previous system was generally favoured, in the new climate the emphasis on new and advanced technology led to the recognition of good development possibilities :: bad development possibilities, and the current research and development efforts indeed took place in the Oslo region at the expense of more peripheral districts. However, outside the approved strategic issue processes, particularly in the trade union and the Net division, the cost reduction :: employee interests and the income :: district considerations were more central.

Question: "The trade unions says that fibre creates employment ..."

Participant: "Yes, this is obvious. It has been one of the arguments. In England we can see, for instance, that BT got the opportunity to develop the cable-TV network, but refrained (they clung to the money) and was punished politically by not being allowed to develop cable TV at the moment, while the cable TV companies are allowed to compete on telephony. Thus this is one element, but this is superior judgements that I don't know so much about."

Participant technology research manager in interview, Access net

"- If the development of local networks with fibre-optical cables becomes of current interests, this will involve increased work and employment for several years, says [trade union manager]. He is uncertain, however, if this will be necessary. New technology makes it possible for ever increasing transmissions to occur in the already established net."

Union magazine article about the future telenet - a national responsibility

"The technical personnel organised in the [] union opposes the plans about a strong centralisation of technical operation and maintenance of the telenet ... - The technocrats view the world in black and white. They only ask about what is technically possible or impossible. And when they enter into an alliance with the economists, I really start to sweat ... - If competence is removed from the local milieus, this will gradually lead to a depreciation of the whole competence. Those who have the responsibility for implementation will be far away from the area they shall serve, and experience has shown that the quality of decisions get reduced when the local knowledge is lacking ... To start a so large project without any assessment of the consequences for the personnel's situation, is very dubious according to the conference participants."

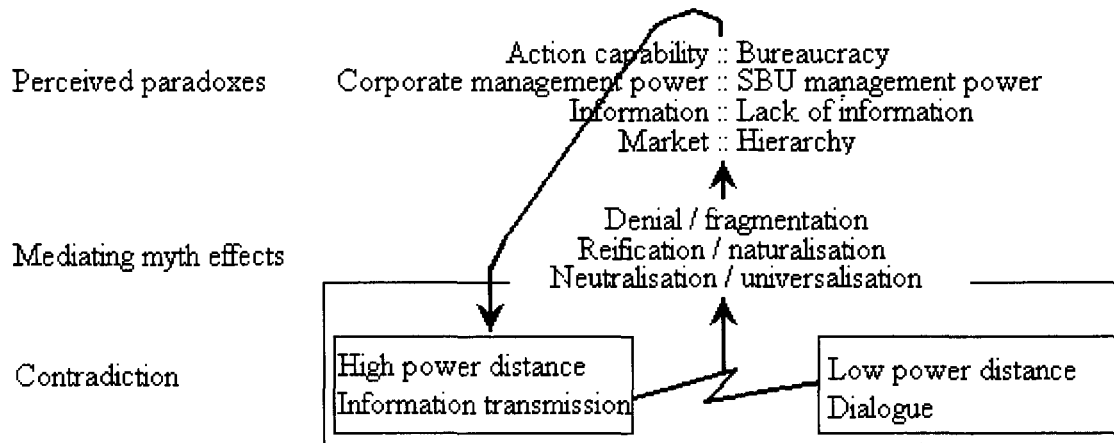
The union magazine

5.3.2 The good information and management myths

By contributing to resolving the change paradoxes, the good information and management ideals were operating as mediating myths within the business oriented ideology (Abravanel, 1983). They bridged the gap between the ideal business oriented change aspired to and the real situation achieved. The situation was a lot of dissatisfied organisational members not motivated for business oriented change. The information myth said that this situation would be changed by powerful communication which alleviated their assumedly bad general ability to change. Good information would create the necessary foundation of security, awareness of opportunities, and through the celebration of success even enthusiasm. The management myth said that good managers would be able to inform and motivate in this way. The empirical validation of the myths was not only found in their use (rather than belief), but also in their empirical absence. As change was demanding and challenging, and the employees really troublesome, the information and management had just not been good enough. If good enough and relevant information had been distributed, in the right way and by capable

managers, change would have been accepted and well implemented. The difficult change paradoxes would be handled and partly resolved by authoritative information and management. So it was no good to bring any opposites into the picture, like egalitarianism and dialogue with the subordinates. There was a mutually reinforcing circle between business related change and the good information and management myths. The perceived change paradoxes thus served to split the information/hierarchy :: dialogue/participation contradiction and strengthen the former, in a way parallel to the perceived information and management paradoxes (figure 17).

Figure 17. Mediating myth denial and transformation of low power distance leadership and dialogue.



Fragmentation and denial of equality and dialogue

At least four interrelated paradoxes may have contributed to the denial of the full information and power distance contradictions. First, the action orientation :: bureaucracy may have confused the contradiction between democratic/participative change and forced change from above. Within the business orientation, action orientation was understood as decentralisation and active participation, while bureaucracy was the opposite hierarchical orientation from the public administration period. The fact that bureaucracy for trade unions and employees meant participation and influence may to some extent have been kept out of view, together with the authoritative implications of more personal power to managers rather than part composed committees. In this way, the tension between two relative high power distance alternatives may have distracted attention away from low distance opportunities.

Second, the decentralisation part of action :: bureaucracy may have been emphasised by focusing attention on instances of equal power between hierarchical levels, like the corporate management :: SBU management relationship. Power was indeed transferred from corporate to SBU management, and balanced in the OD report although the balance involved corporate long term strategic planning and coordination. The resulting decentralised freedom of action was real, but came with commitment to corporate culture values and frameworks (Abravanel, 1983; Willmott, 1993). Further down the hierarchy, the freedom of action may have been less real. Being informed about the "opportunities" within thoroughly prepared plans seems to have been the projected view of OD empowerment. The participation from trade unions was explicitly dissociated from real participation; they should be informed and get the opportunity to put forward their views - as a means to secure support in the implementation. Participation was thus proposed as a manipulative tool for mobilising bias in the favour of top business

management (Snell, 2000). One of the participants may have voiced critical views of the very strategy process and the use of the SID groups:

"... it is important to give freedom for action to managers who represent objectives from corporate culture values ...

Larger rearrangements and reorganisations require thorough and intensive planning and have to be controlled strongly ... It must also be put weight on informing the organisation well and often both in the planning and implementation phase.

The trade unions have to be well informed and given the opportunity to forward their views. If it is possible, participation in the whole process should be organised, in order to secure support in the implementation."

Final document, OD

"In the strategy process a lot of ad-hoc groups are used in order to illuminate things and get commitment to the strategy ... There was nothing special with our group. A summary was sent, but it is not reflected in the strategy documents. It is the principal who decides if anything shall be included. "

Participant in interview, Enthusiasm

Contrasting the ideal of giving and getting information with the actual lack of information (Barach & Eckhardt, 1998) was a third way of fragmenting the basic contradiction. A lot of attention and energy was paid to the tension between the value of open information and the reality of lack of information, and the opposite dialogue possibility was effectively kept out of view. The lack of fulfilment of the ideal was often explained by opponent behaviour, and the possibility to fulfil the ideal in practice was not questioned in other respects. The lack of trust which made people believe more in rumours than the official information, which might have been seen as resistance against the business oriented content of the changes, was interpreted as receiver failure, e.g., as a result of their anxiety and lack of a realistic understanding of reality. The old managers from the public bureaucracy period, and human opportunism working against the organisational information system, may also have contributed. To some managers, the withhold of information might have been a necessary power tactic in order to manage change. For instance, lack of information in the early phases of a process may sometimes have occurred in order to produce a greater hunger for information later, so that the transmission of corporate goals and conditions would be more convincing.

"... those who participate in the work groups do not at all know all the functions, and depend on consulting those who do – but with too short time allowed it is difficult to do so – is it to be wondered that one can become frustrated? One can hardly label this a democratic process, where everybody can make their voice heard ... the feeling that I am saddled with (and many together with me), is that it is almost impossible to be up to date with the changes actually occurring from one day to the next. And I can only repeat the question - no matter how good intentions we have - can we manage to treat this in a democratic way?"

(monthly remark from reader, about the OD process, in the union magazine)

"The Union South has withdrawn from the regional reorganisation project because they think they have not had any real influence on the decisions made. The Union North has thought about doing the same, and for the same reasons, but have decided to continue because participation gives access to important information."

(editorial in the union magazine)

The political manipulation and withhold of information led many to prefer cooperation based on instruction from corporate management rather than voluntary cooperation within a

competitive market system. The voluntary alternative recommended in those parts of the value chain closer to the external customers in the Internal competition issue, was based on sharing information on business opportunities and premises from the individual unit closest to the customer. While the open information would probably work in situations of equal power and mutual understanding, the authoritative instructions seemed to be preferred in order to reduce conflicts and exploitation because of arms length, unbalanced, and unduly competitive relationships. Anyhow, the case was put forward and intensively debated as market versus hierarchy, distracting attention away from the kind of collective cooperation that might emerge from building mutual understanding and trust in dialogue⁷.

Reification, universalisation of interests, and an emerging culture of powerlessness?

The information myth may in several ways have contributed to the reification of the existing social reality. We may note three such tendencies. Obviously, the emphasis on powerful information, and the wish to get accept for and commitment to the "common understanding of reality", may have led to the design of processes where less challenge could be raised towards the dominant business oriented views. Corporate management was largely alone in the selection and formulation of strategic issues, diversity may have been reduced by the selection of participants who supported the dominant views, and participation may have suffered because of the emphasis on efficiency (Deetz, 1986). The short time frame may have kept groups from developing from the early phases, where they easily became top management's conduit for sensemaking and influence, to later phases where they could become a source of sensemaking and influence for key stakeholders (Gioia, Thomas, Clark, & Chittipeddi, 1994).

Further, the emphasis on the efficiency of communication, where little time and other resources were used to identify and discuss strategic issues, may have involved little opportunity for in-depth involvement with the empirical reality. The contradiction between the present understandings of reality and the actual world may thus have been kept out of sight. The participants may have become more susceptible to influence from the existing information material, so large quantities of anecdotal information may have contributed to confidence and commitment to the expressed understanding of reality (Schwenk, 1986; Kuvaas, 2002). Less possibilities for gathering and processing information about the environment, and for communication with external actors, must have reduced the ability to redefine strategic issues or identify new strategic issues.

Finally, and perhaps most importantly, the emphasis on information about the environment, even information about others' world views, may have led to less reflection on the very reality of social construction of the corporate world (Benson, 1977). Such information had to be gathered and processed with minimal social negotiation, as any conflicts between dominant views were resolved by power differences. At the same time, the possibilities were small for questioning the power base of the participants and exploring how power relations were historically produced through more or less free choice. The existent understandings of social reality, and the existing deep power relations, may thus have come forward as more external and objective, and thus more unchangeable, than they actually were.

⁷ On a similar issue, a TR research notice argues that IT will often not lead to the movement from hierarchies towards markets. As IT increases social complexity and ambiguity of communication, it can not support the information requirements of the market, and the need for more hierarchical relations will increase - not the traditional hierarchy, but one based on mutual understanding, acceptance, and profitability (tight relations) (Hallingby, 1994).

The reification may have supported the universalisation of interests present in the preservation of status quo for business orientated participants and information for change elsewhere. Such universalisation of interests often occurs through claims to represent the whole. In this case, the centralised coordination and frameworks obviously contain claims that they should secure common and across interests. Perhaps more subtly, the "varying views and priorities" between top management and participants may have legitimised the strategic issue processes, at the same time as other potentially more basic and change producing conflicts were excluded. Further, the proposed powerful communication of management and business symbols, e.g. the stories of success (Boje, 1991), would be capable of inducing positive feelings which distort preferences and interests (Pfeffer, 1981), and thus facilitate identification with and justification of the particular business values promoted. This ideology may also have been made neutral by the current focus on organisational change through business process reengineering. BPR was put forward as apolitical, with a rationalistic focus on means, although it was fundamentally political in its top-down view of change (Grint, Case, & Willcocks, 1996).

The deceptive egalitarian and humanistic rhetoric of BPR may have contributed to the subordination and harmonisation of employee interests to what was defined as the needs of the market and the need of the organisation to be competitive (Willmott & Wray-Bliss, 1996). In addition, the present business orientation clearly attributed failures of the change process to employee inadequacies. Own weaknesses might perhaps have been justified with the inoculation's reference to a greater good: when the ideal business orientation was in place, open information and balance of large and less power distance should occur. The particular means for serving the human need for safety might have involved hegemonic tendencies, beyond treating safety like identity and autonomy as commodities which could be bought individually for work (*ibid.*). The strong need to reduce uncertainty and anxiety might have made people particularly vulnerable to the heavy use of information which promote perceptions of corporate and executive control (Kuvaas, 2002; Schwenk, 1986; Langer, 1983), and thus fostered identification with and justification of strong business management.

Such control illusions might further the feeling and perception that participation in strategic issue diagnosis was not necessary or useful. While top managers appeared competent and in control of issues, many would feel that they lacked the necessary experience and competence themselves. The neutralisation of business interests could also contribute, if all relevant interests were considered increased participation would not be necessary. The ability to take initiative and participate in strategic issue diagnosis may thus have been weakened. A psychological adaptation to powerlessness might take place, as people become less able to identify other conceptions of strategic issues, take initiative to get them on the strategy agenda, and to succeed in such initiatives (Gaventa, 1980). While those who were chosen for participation got more possibility for skill and consciousness development, they were also excluded from important information, viewpoints, conflict, and dialogue. Further, they may to a larger degree have internalised the powerful's understanding of reality, and therefore be less able to come up with alternative understandings of issues. While the totality of power mechanisms have not been investigated, it does seem that large power distance and information distribution may have interacted with uncertainty avoidance and the rest of the cultural paradigm to repress opposition to the dominant business orientation. Similar patterns certainly seems to have forced radical change earlier, but the capability of effective strategic change may not have been nurtured. In particular, there is the susceptibility to being misled

by surface paradoxes, to foster the feeling if not the reality, of a well developed ability to change.

However, the perceived paradoxes may also sensitise people to value- and interest based conflicts, and thus constitute a basis for reflection and growth of a critical consciousness. For instance, the reengineering tension between an espoused concern for the welfare of the individual and the unbridled and unapologetic use of hierarchical control may stimulate further reflection (Willmott & Wray-Bliss, 1996). Most people and the public opposition will undoubtedly perceive negative consequences of the change process, so the described pattern might enlarge the resistance towards purely business oriented change. However, one might suspect that the surface paradoxes, perhaps expressed in different contexts to appear particularly conflictual, would at least at the start contribute to the fragmented rather than the unified critical consciousness (Gaventa, 1980). Since the relative large power distance and the emphasis on information transmission seemed to be widespread, similar mechanisms may have been operative in other processes. For instance, customer and user interests might have been kept out or subordinated to technological interests in net development and long term research contexts. Insights into the myths and their ideological mechanisms might thus be a very valuable input to further reflection, and lead to the improvement of the capability of effective strategic change.

5.3.3 Restrictions on the possibility of more radical change

The established cultural dynamics, where everybody tried to strengthen their own view, supported by ideological mechanisms like fragmentation and reification, may undoubtedly have restricted the possibility and ability to take into account or socially construct entirely different world views. Sometimes the tensions between different paradoxical poles may have been intensified, contributing to tendencies toward creativity and transcendence, but the emphasis on efficiently balancing or resolving any conflicts by power differences probably offset this possibility most of the time. The established pattern may thus have reflected the power of entrenched interests in resisting more radical change which challenged existing frameworks, and in promoting more incremental change with smaller stakes which did not threaten existing relationships (Frost & Egri, 1991). The inherent assumptions of the present issue understandings may have been prevented from being re-examined (Sharfman & Dean, 1997).

In the OD issue, the business process reengineering rhetoric of the high degree of uncertainty and risk involved might have unhinged the nerves of participants so that they sought more conservative and instrumental approaches to change (Grint et al., 1996). Large changes became defined as rearrangements of several work processes and reorganisations or mergers of organisational units, and they required initiative and control from top management. Further, by identifying the need for productivity as an important part of the problem, perhaps targeting the high power distance planning as the solution (Volkema, 1986), the balance of change and stability would undoubtedly be bounded towards stability. Not only by the stability needed for the planning solution to be effective, but also by the maintenance of the status quo of power relationships.

"A corporation with high ambitions needs a proper balance between long term strategic planning and short term operative considerations in the organisational development. At the same time Telenor's organisational development has to be organised for managing reduced need for personnel and redundant employees.

How shall we achieve this balance?

- *Who shall be responsible?*
- *What kind of process do we need, e.g. in relation to the strategy process?*
- *What is the optimal balance between change and stability as regards productivity?"*
Mandate, OD

The need for safety may have amplified the tendency to invest resources in issues of which not only top decision makers but also the organisation had control (Dutton, Walton, & Abrahamson, 1989). When the issues dealt with engagement in new strategic areas, it was emphasised that the dominant position had to be continued. Several strategic investments were thus proposed in order to keep competitors out, bind customers to the firm, and secure the income stream. And the need for control of the environment may have restricted the search for new strategic opportunities to the more certain areas.

"This strategic proposal on Multi Media focuses around activities in category A and B where we can be dominant in the market ... In order to take care of a good distribution it will be strategically important to get control of selected parts of the packaging function."
Final document, Multimedia

"... we shall try to find strategic important areas for Televerket as regards an electronic market place. It would be stupid for Televerket for instance to enter those areas where there is little to gain because there are established dominant actors, and where we can risk being ousted ... This must take place through services which give as large control as possible with the end users (property relationship). Without such control Televerket will become a sub-supplier of teleservices."

Early program and project documents, E-market

The certainty of large organisational power over the environment may potentially become a long run liability, as it is likely to result in atrophy of necessary future capabilities to respond to change (Levinthal & March, 1993). In particular, when coupled with the business orientation's stress on competition as the model for change and learning, the emphasis on looking good may impede the acceptance of temporary incompetence in meeting new situations and learning in order to really be good (Kofman & Senge, 1993). Further, the emphasis on short-term measurable results may inhibit the discipline for steady practice and deeper learning, which often produces few manifest consequences for long periods of time (ibid.). However, instead of market-driven but surface adaptation to external forces, the internal and technologically inspired aspiration, imagination, and experimentation may as well be the well-spring of real learning (ibid.). The certainty of a dominant position may thus in some respects facilitate more fundamental change. As we have seen, TR and to some extent other technological milieus, have fought for the continued long term and radical technological change.

Such radical technological change might also lead to radical improvements for society. The society orientations have pointed out many benefits, also for disadvantaged and minority groups. However, it seems that the societal arguments have become subordinated to organisational self interest in cases of conflict, to technology and business considerations in the previous and present telecom systems respectively. To put it uncompromisingly, the monopoly self interest has just been transferred into the new business regime. The business oriented story of course accentuates that a dominant position is a requirement for being able to serve more marginal stakeholders. To begin with the really radical alternative would perhaps

involve some balancing and dialogue of business and technology oriented self interest with respectable user and society interests in cases where they are in conflict.

Chapter 6.

DISCUSSION AND CONCLUSIONS

6.1 Discussion of threats to validity

Much of what was said on the validity criteria in chapter 3 may have seemed to reduce the importance of empirical material, and to guard against any objections raised to the validity of the resulting findings. However, empirical material is still regarded as important, although it has a less clear-cut and robust character as an expression of negotiable, perspective-dependent interpretations conveyed in ambiguous language (Alvesson & Sköldbberg, 2000). Empirical material is still a central argument in the process of weighing up different ways of understanding social reality, in which the pragmatic value of egalitarianism pulls toward the proliferation of scientific approaches rather than some elitist and dogmatic consensus (Fabian, 2000). Even if my effort does not involve any significant challenge in light of the ongoing "paradigm war" of organisational culture research (Martin & Frost, 1996), it nevertheless remains a difficult and personally risky strategy. Not only can the whole approach take the chance of condemnation on foundational and political grounds, serious objections to the validity of findings can also come from within. To start with, the very time consuming ethnographic effort involves "the risk that the researcher "goes native", that is becomes caught in details and local understandings without being able to say something systematic of wider theoretical interest" (Alvesson & Deetz, 2000).

Interpretive validity

The interpretive moment is concerned with the representation of the perspectives of the people in the situations studied. The basic requirement is descriptive validity, and one threat to interpretive validity may thus come from less than accurate observation notes. Selecting observations and taking notes on the spot may have been hampered by the hurry and complexity of the situation, although care was paid to take good if not entirely accurate notes. Later repair may have been influenced by both faulty memory and reflection issues. However, since the study aimed at underlying symbolic themes (and not all aspects of more surface meanings), completely detailed and accurate observation notes were not required (Riley, 1983). A more serious threat is lack of access to deeper meanings and significant arenas of social meaning construction, because of security issues, power tactics, exclusivity, and less than satisfactory informant relationship development. Most interviews were shorter and fewer than the usual informant or depth interview. But managers have a busy work situation, and often the concentrated interview may be the only option available (Alvesson & Deetz, 2000; Easterby-Smith, Thorpe, & Lowe, 1991). Lack of access to dialogue arenas may have biased the findings. It may have led to attaching too much weight to the information dissemination and higher power distance in order to implement change. However, I find the authoritarian information interpretation more plausible, in light of the totality of all empirical material, historical circumstances, as well as the network of other cultural structures. Lack of access may also have hampered the observation of high level responses to ambiguity and

paradox. Rather than capturing local integration efforts, general responses which were meant for more public distribution could have been made the basis of analysis.

Descriptive validity was secured in several ways in this study, by triangulating data from multiple sources and organisational locations. Most notably, participant observation is regarded as suitable for getting close to member experiences, generating rich empirical observations, and developing the ability to evaluate the validity of various data sources. The resulting cultural description, however, never approaches any sense of completeness (more time in the field, more observations, and more detailed observational notes would always seem required) (Wolcott, 1995). More to the point, there seems to be much to gain in finding better ways to articulate soft data and dialogue about the more implicit and tacit experiences (Kriger & Malan, 1993). The concluding holistic interpretation offered necessarily becomes a tentative one, and one attributed to the organisation by using more or less personal insight and external perspectives (Wolcott, 1995). While the individual themes seem to me to be well grounded empirically, and a fair amount of empirical material is included to make possible readers' own judgement, the whole of thematic relationships clearly goes beyond the empirical material.

The introduction of an external perspective, including cultural and critical theories, guards against the threat of "going native". However, it highlights the influence of other factors, like personal values and the research orientation bias (identity as a beginning or would-be researcher, and closest relationships with the case research institute). The final text thus represents one particular way of looking at participant experiences, rather than definitive statements about "how things are" (Alvesson & Sköldbberg, 2000). Empirical material enable and support the interpretations (which should appear reasonable in light of observations and their contexts), rather than unequivocally leading up to them (ibid.).

A draft of the final empirical chapters (and this discussion chapter) was sent to my contact person, in order to get a check on the accuracy of observations and the acceptability of publication. Some good pieces of advice resulted, which were followed up. But more should obviously have been done in order to involve organisational members in the final write up and get more information about how they would interpret the data (Barnes, 1979). One objection was that more reference should have been made to the time and circumstances when various statements were made. As the interpretation was less reasonable as a representation of the current organisational culture, it had to be emphasised throughout the dissertation that what I had studied was a continually changing Telenor at the middle of the 1990s, who might have gone through considerable change since then. I also had to reflect on the extent to which participant statements were not sufficiently understood in their original action context, but rather taken as carriers of abstract truths (to be evaluated against "objective" reality) (Alvesson & Deetz, 2000). An intrinsic problem of my analysis method is that observations were taken out of their local situation and moved to the more general context of abstract themes and relationships, which unavoidably involves some change and the threat of violation of their original meaning. Of course, efforts had been made to critically evaluate all material in terms of situated meaning versus meaning that was stable enough to make possible transportation beyond the local context and thus comparison (ibid.), but more emphasis may have been put on the understanding of original contexts.

Theoretical validity

Theoretical validity is concerned with the appropriateness of using a theoretical concept or a map of relations between theoretical concepts to characterise empirical observations, rather than the accuracy of interpretations in light of participant experiences (Maxwell, 1992). It is based on interpretive validity, however, as the cultural themes were used as a starting point for developing theoretical concepts (and sometimes theoretical concepts were used in developing cultural themes). It is often suggested that case studies may afford greater construct validity than other methods, because one can easily use multiple sources of evidence (Numagami, 1998; Yin, 1989). The continual revision of emerging concepts in the theme analysis, in which one can say that any universal concepts were operationalised in a unique way (Triandis, 1994), adds to this advantage. Triangulation was not used to increase the accuracy of measurement, however. Different methods tap into different dimensions of phenomena, and adds rigor, breadth, and depth to the investigation (Taylor & Trujillo, 2001). Nevertheless, the emphasis on explaining ambiguous phenomena makes the study very vulnerable to the realist demand for conceptual precision (Marsden, 1993). While the interpretive emphasis favoured the representation of essential characteristics of the phenomenon and thus created a basis for conceptual precision, it also eventually made it more difficult to precisely define adequate concepts and specify their relationships (Kriger & Malan, 1993; Lampel & Shapira, 1995).

"Although Weick (...) defined theory building as disciplined imagination in the absence of concise measures", it is thus a valid question if sufficient discipline was exercised in the attempt to build theory about ambiguous phenomena (Kim & Mauborgne, 1998). Much time was used to relate observations according to specifically developed analysis models (figure 6), but the result of the analysis, or its form, is not reflected in the resulting report (contrary to more traditional genres). The representation of theory in an ethnographic case study focuses first on grounding the contradictory poles of concepts, then on issues related to the interrelationships of these contradictions and their historical and situational contexts with links to other cultural concepts, which provides for complex structure but sometimes does so at the expense of the well-developed logical format of any scientific report. In developing the empirical analysis, the core framework of responses to ambiguity and paradox should have been made more visible; which kinds of responses were experienced by the participants, and why were these responses favoured over others. Further, although the case study is known for its possibilities for eliminating alternative explanations (Numagami, 1998), the discussion of specific threats to internal validity is not included. The realist concept of cause may be more difficult to check out as one can not focus on isolated, linear event sequences (Yin, 1989), but the point is that some alternative causal explanations might have been implicitly excluded in a less than reflective way. However, the assumption of multiple causation makes it more probable that the suggested cultural explanations remain among the plausible ones.

The conceptual precision may also suffer from not having resolved or sufficiently integrated the differences between the three cultural paradigms. An integrated model is not developed from the empirical analyses, it is only sketched in advance in a theoretical way. But there are reasons why such rational integration should not always be a prominent goal (Fabian, 2000). This form of rationalism may be illegitimate from many viewpoints, and anyway the integrated model may oversimplify points and disregard problems better treated by traditional views (Scott Poole & Van de Ven, 1988). Metaparadigm theory building does not need to imply reconciling all differences, entertaining conflicting representations simultaneously may both accommodate organisational ambiguity and paradox and help respect the integrity of

different paradigms (Lewis & Kelemen, 2002). While my analyses did reveal interwoven dimensions of common phenomena and provided the possibility of reconcilable integration by using more abstract and complex concepts (Lewis & Grimes, 1999), critics would easily say that my 'home paradigm' from managerial functionalist education had contaminated the use of alternative perspectives so that they were reduced to preliminary or supplementary roles (Lewis & Kelemen, 2002; Deetz, 2001). Probably issues such as power and career circumstances had led to a temporary fix - only suppressing and delaying conflict (Fabian, 2000). I recognise the need for integration of complex and perhaps a bit fragmented conceptual pieces, but accept the critical insight that this need should be used to inspire other participants to develop their own interpretations, rather than to provide what could easily end up as just another closure. The degree of consistency is of less interest than how the tensions were handled, and whether the conceptual resources provided an interesting analysis or intervention possibility (Deetz, 2001).

Critical validity

Critical validity is most concerned with the effectiveness of theory, in particular for the most powerless stakeholders, rather than just its explanatory accuracy (Alvesson & Deetz, 2000; Robinson, 1994). While explanatory power may contribute, it is the use of an evaluative framework and the normative judgements which characterise critical validity. A qualitative critical study should reflect on the extent to which research potentially or actually contributes to changes in oppressive power relations and the emancipation of the powerless (Taylor & Trujillo, 2001). This would be facilitated by the analysis of different forms of power, ranging from outright coercion and active constraint to the deep structures which unobtrusively inhibit the very imagination of alternatives, by interpretations of the larger forces that shape both the researched and the researcher, and by self-criticism which exposes research itself as ideological practice and challenge the authority of the author of research texts (Taylor & Trujillo, 2001; Kincheloe & McLaren, 1994; Alvesson & Deetz, 2000).

This study explains different forms of power by focusing on the ideological and potentially problematic consequences of the case organisation's emphasis on information transmission and acceptance of relatively high power distance in order to successfully manage change. Both the outright coercion of powerful information dissemination, active constraint on participation in the selection of participants in strategic issue diagnoses, and unobtrusive power by specific perceived paradoxes and ideological myths which distorted or concealed basic contradictions, have been investigated. However, one important threat to critical validity may arise from the inclusion of too few strategic issue diagnoses (and some would perhaps object even not really strategic but more operational implementation issues) in the critical analysis. While there are good reasons to believe that similar mechanisms were operating elsewhere, given widespread emphasis on information transmission etc., doubts may be raised that only exceptions to more acceptable general cultural patterns have been criticised (which might perhaps be positive for the acceptance of the critique and the motivation of the present powerful actors). However, other organisational members might be more vulnerable to the portrayed mechanisms because of their presumed higher uncertainty avoidance. But a main threat is that little effort were made to examining such dominance by identifying specific power mechanisms 'from below', from the perspective of relatively powerless actors not participating in strategic issue diagnosis (Taylor & Trujillo, 2001; Gaventa, 1980).

As regards the treatment of larger forces which shape both the researcher and the researched, the study includes a description of relevant historical and social struggles. The wider context of liberalisation of the society and the telecommunications industry clearly affects the case organisation, its culture, and its strategy. Also the establishment of the research institute in an earlier technocratic area, creating an identity which in part opposes the recent liberal business management, is well recognisable. Further, the criticism of the theoretical and methodological context of earlier strategic issue diagnosis studies makes evident the conservative, authoritarian, and probably libertarian (atomistic), bias from Anglo-American capitalist ideology in management science (Nord & Jermier, 1992). While this makes visible the larger context and creates some material for reflection, it is in many instances not made explicit how the wider context actually influences specific parts of the theory building. There is also little explicit reflection on the way researcher identity and premises for thought might have been affected, also by both managerialist oriented education and the opposition to established studies, and how the resulting researcher ego may have affected theory building, beyond the obvious claim that broader and more marginal interests are now being served (Alvesson & Sköldbberg, 2000).

While research itself is to some extent exposed as ideological practice, the largely realist style of writing⁸ refuses much challenge to the authority of the author. The methodology section contains some clues towards important issues, e.g. the obvious research orientation bias and the broadly egalitarian and social liberal personal values, but the empirical chapters do not to any large degree show the presence of the author. Admittedly there are the assumptions of openness for different representations and of complex and ambiguous phenomena, resulting in a few explorations and judgmental conclusions evidently made by the author, and there is the reluctance to end up with a closed integrated model, but more could have been done in order to encourage the reader to actively consider various other ideas and interpretations (Alvesson & Deetz, 2000).

There may thus be doubts as regards the degree to which the study really contributes to the potential for emancipatory change. The overall purpose is to stimulate self- and social reflection, improved ability to understand strategic situations, and the development of the capability for effective strategic change. However, the focus on strategic issue diagnosis rather than more local problems may for the powerless involve too big issues, not within current capacities and creating too much risk, and thus contribute to new oppressive myths and pessimism (Robinson, 1994). Obviously, the relative one-sidedness of even strategic issue diagnoses can also, rather than just offer themselves as vehicles of managerial control, be framed as sources of critical resistance and liberation from above incompetence (Alvesson & Willmott, 1992). In many ways, the overall purpose which creates space for both pro-management and critical perspectives may hamper rather than further the emancipatory ideal.

While managers and other elite groups may more easily recognise the usefulness of some aspects of the critique, e.g. that dialogue may be beneficial in the pursuit of introducing

⁸ "According to Van Maanen (1988) realist tales are characterised by four conventions: (1) experiential author(ity), "the almost complete absence of the author from most segments of the finished text" (p. 46) focusing solely on the members of the culture who were studied; (2) a documentary style of writing "focused on minute, sometimes precarious, but thoroughly mundane details of everyday life among the people studied" (p. 48); (3) a focus on the native's point of view using "accounts and explanations by members of the culture of the events in their lives" (p. 49); and (4) interpretive omnipotence, whereby the researcher implies or directly asserts that his or her interpretations are the plausible ones with few questions about "whether they got it right, or whether there might be yet another, equally useful way to study, characterise, display, read, or otherwise understand the accumulated field materials" (p. 51)" (Taylor & Trujillo, 2001)

change successfully, the easier access to knowledge of oppressing mechanisms may also be misused to maintain and increase domination (Nord & Jermier, 1992) (such misuse is to some extent prevented, however, by not identifying power mechanisms from the perspectives of the powerless). Further, the contradiction to present knowledge about how to achieve productivity and solve problems of effective collective action may become very visible and undermine the emancipatory potential. But the potential problem that emancipated participants may become less committed to and less capable of acting as responsible members of the organisation should not be underestimated (Alvesson & Willmott, 1992). Rather, this paradox should be vital for improving critical management thinking. The critical questioning of beliefs and values might do more than undermining a short-term effective, authoritative, fast adaptation to stronger competition. Rather than contributing to an improved pool of interpretative capabilities for effective strategic change, the increased ambiguity might contribute to anxiety, loss of identity, estrangement and other severe problems (*ibid.*), in particular for the most vulnerable and powerless participants of the change process.

Generalisability / External validity

The issue of generalisability to universal structures and mechanisms of the real domain is the issue of theoretical validity. As regards the ambiguity rather than empirical precision of theory, this may be positive for the generalisability to other situations, populations, and contexts. Though the pieces of theory are not clear and directly operational, such knowledge can nevertheless provide a broad background and conceptual basis for enhancing preliminary knowledge of similar situations (Shrivastava & Schneider, 1984; Shrivastava & Mitroff, 1983). Interpretive and critical researchers have frequently criticised the emphasis on empirical precision and conceptual clarity because it reduces the range of real world phenomena theory applies to, as well as its relevance and accessibility for managers and other organisational members (Kriger & Malan, 1993; Worren, Moore, & Elliot, 2002; Snow & Anderson, 1991). Linguistically ambiguous theories may in particular involve high transferability if they deal with situations involving high uncertainty, equivocality, and paradox, such as the early stages of the strategy process (Worren et al., 2002). Here they can shape the tacit and interpretive frameworks that practitioners, usually regarded as senior level management, apply to the process of 'perspective negotiation' or framing that occurs in order to guide the more specific and tactical phases of problem solving (*ibid.*).

The difficulty of extracting exact lessons from the ambiguous narrative representation format (Worren et al., 2002) also makes it more difficult to judge if more detailed parts of theory can be generalised to any specific real world situation. They may at best represent one story of organisational life, which have to be confronted with other stories and political processes (*ibid.*). Even the question of generalisability within the case, to other, not to mention current, cultural locations and strategic issue diagnoses in Telenor, may be problematic. The basis of interpretive validity may be different, and the sample of strategic issue diagnoses may not have been representative. Some might say that the analysis is partly based on more operational than really strategic issues, and the delimitation of the beginning and end of the sampled headquarter episodes might also preclude much of the generalisation to the continual headquarter strategy issue processes. As regards the generalisation to external organisations and situations, the context of the theory building effort has been presented (the particular generative network of cultural structures, the specific contingencies of the case, and the prospective realistic theoretical background assumptions). It may nevertheless remain ambiguous to what extent theory may inform understanding, explanation, and criticism of unique social settings, and it may in particular be difficult to say that certain situations are

outside the limitations of the theory. But the practical interest in developing the interpretative capability, and the critical interest in changing situations, make widely different situations relevant for comparison and assessment of what might potentially have been. After all, relevance depends on what one wants to question of what the audience already know and/or take for granted, and ultimately on what value judgements and assumptions one wants to pursue (Hammersley, 1992).

6.2 Contribution and Implications

For strategic leadership

The practical contribution of this study revolves around the concept of improving strategic responses to ambiguity and paradox, in particular through an organisational culture which accepts and encourages diversity and novelty. The organisational culture perspective and the framework of responses to ambiguity and paradox may represent what is called 'strategic knowledge'. They can provide a broad background and conceptual basis for enhancing preliminary understanding of strategic problems and the process of diagnosing them, and thus inform the actors' frames of reference rather than provide explicit knowledge which inform more specific actions (Shrivastava & Schneider, 1984; Shrivastava & Mitroff, 1983). This broadened perspective is inspired by the need for a dialogue between a variety of stakeholders and interests, and in particular by the prospective integration of the sometimes contradictory critique of the present and collaboration for an improved future (Robinson, 1994).

In general, the capability of effective strategic change should benefit from more strategic problem formulators with high tolerance of ambiguity (Lyles & Thomas, 1988) and an ability of responses which include all levels of the suggested framework. Strategists should encourage novel and conflicting viewpoints to develop a better pool of frameworks and interpretations, rather than viewing ambiguity and paradox as communication problems to be overcome by more information (Smircich & Stubbart, 1985). They should engage in self-reflection and dialogue on their own assumptions and interpretation processes (Sharfman & Dean, 1997; Schweiger, Sandberg, & Rechner, 1989; Smircich & Stubbart, 1985), including the influence of deep images and power processes which impede new interpretations of the strategic environment (Alvesson & Willmott, 1992; Alvesson & Willmott, 1995; Nord & Jermier, 1992), and encourage real participation by new and potential strategists which may enable the recognition of new perspectives and creative and transcendental possibilities. Real participation includes but goes beyond mainstream empowerment practices where the fundamental assumptions, values, interpretations, and their legitimacy, remain with senior managers (Hardy & Leiba-O'Sullivan, 1998).

Although such attempts at integration of critical approaches with strategic management is not as one-sided as pure radical approaches (and pure technicist management science), talking about potentially dominant and oppressed groups may nevertheless sound uncompassionate and be difficult to communicate (Nord & Jermier, 1992). Real participation from presently powerful actors, who may have to give up some of their privileges and positive identities, may thus require some motivation. It may be important for them to realise that knowledge based on the critical perspective may give insights into mechanisms by which they are themselves potentially dominated (e.g. in struggles with other elite groups, and in their use of various bodies of knowledge which unobtrusively entail fundamental interests) (*ibid.*), and into meaning construction processes so that their own communication does not increase their long-term vulnerability because it is out of pace with social change. It may also be constructive to point out that critical views ought to be included in the high level of ambiguity and paradox that typically characterises the context for higher-level learning. Without committing the elitist sin, it could be argued that good problem finders should expose themselves to much ambiguity and develop high-level responses, while the social environment is framed and communicated in more simplified ways to others.

The real participation from less powerful actors might be even more difficult to sustain. The most vulnerable would easily have internalised values and assumptions of the establishment, not least because of intolerance of ambiguity. Others might easily develop cynicism about learning and change when promises of empowerment is confronted with actual power relations that blocks learning and change (Vince, 2001). Participation and learning would be made difficult by several conditions which undermine their sense of control and feasibility to gain from developing alternatives to the present strategic issue understandings (Jackson & Dutton, 1988; Dutton & Webster, 1988; Dutton, 1993; Dutton & Duncan, 1987; Ginsberg & Venkatraman, 1995).

A supportive organisational culture would thus be vitally important. Such a culture would accept and even facilitate a sense of uncertainty and confusion, while maintaining sufficient foundational security to enable members to explore and work through the tensions of opposing views. It would cultivate the ability to "read" strategic situations from multiple perspectives, and encourage the broadening of initial frames to embrace and integrate contradictions. Similar implications follow for managerial education and class-room culture (Lewis & Dehler, 2000; Dehler, Welsh, & Lewis, 2001). Dialogue would be fostered which early involves attempts to reflect on the power relations that limit learning and change (Vince, 2001). Emerging strategic leaders should learn to appreciate stakeholders' competing and divergent perspectives, and to be aware that any synthesis might turn out to be more an apparent consensus at the communicative level than real change to the deep structures of stakeholders, which are what persists over time and remain the main influence on what they say and do (Heracleous & Barrett, 2001). Strategists would also need to develop the ability to choose how much and what ambiguity to expose themselves to, as well as the appropriate kind of response, depending on their tolerance and the strategic situation in question.

To conclude with possible more concrete implications for Telenor, where more specific knowledge has been presented, it is important to notice that care must be taken to avoid premature interventions. While I am convinced myself that power distance should be reduced and information transmission balanced with dialogue, both in general and in particular in strategic issue diagnosis, and that this change should be supported by an organisational culture where a social marketing orientation gain a much stronger foothold. The organisation may legitimately want to secure its interests in other ways, and those responsible for allowing access may have had other expectations. My approach would perhaps represent an external perspective instead of local pressures towards the integration of relevant contradictions. Conflicts between intended and unintended applications of knowledge can become intensely emotional moral issues, and questions about the trustworthiness of those responsible for applying new knowledge might emerge (Kimmel, 1988). Even if agreement could be reached on beneficial objectives, many problems remain on the issue of how an intervention should be done to be effective. "Those who intervene in organisational cultures know that the consequences of their actions are unpredictable and never fully under their control" (Mirvis, 1985). Consideration of plausible consequences should thus be careful made, in order to minimise the risk of unintended consequences, and ensure that benefits outweigh any possible harms (Barnes, 1979; Mirvis, 1985). A most dangerous failure may nevertheless be the lack of awareness of potentially useful research (Kimmel, 1988).

In order to evaluate the application and potential problems of the study, whose field stay ended nearly a decade ago without much follow-up beyond the continual analysis work, I have to rely much on my contact person. He has of course got the opportunity to offer comments on drafts of the report, if useful and possible by the support of others, and to

suggest more effective and sensitive ways of feedback and dialogue with organisational participants (Forster, 1994). I found it vitally important to try to draw on a relationship in which feedback, ethical problems, and the complexity involved in change of problematic situations might be addressed (Robinson, 1994; Kimmel, 1988), but others might object that more efforts should have been made in order to include a broader set of stakeholders at the same time. The publication of findings involves other ethical issues, too. Researchers and socially oriented organisational members would often like to see as much published as possible, concerned as they are with the long-term benefits of open communication and informed criticism for the welfare of the organisation and the society, whereas the interests of others might be adversely affected by unrestricted publication (Barnes, 1979). Widespread reporting would normally reduce the possibility that resourceful groups will use knowledge for its own welfare at the expense of other groups (Kimmel, 1988), which is particularly problematic for ambiguous and complex ideas like critical management theory (Nord & Jermier, 1992).

The organisation has already given much by accepting the demand for key employee time and somewhat sensitive information. The reciprocity issue must thus be taken seriously: What do they receive back? Offering to reciprocate for access by running a research in action workshop at the completion of the research process has been found to be particularly valuable (Pettigrew, 1997), and the possibility of developing such an alternative through some kind of assignment at Telenor Corporate University has been discussed earlier. My cultural approach to managing ambiguity and paradox might be useful for some of the probably long-standing strategic issues, identified by several organisational members who have talked openly and honestly about their company (Forster, 1994; Robinson, 1994). In particular, the strategic themes of long-term research versus more flexible product development, new frameworks for long-term organisational and cultural development, not to mention the external competition and regulation tensions, seem to me to involve the constant emergence of new issues with potentially problematic lack of mutual understanding and tendencies towards the separation of interpretive horizons.

For strategic leadership research

The contribution to the field of strategic issue diagnosis studies may be shortly summarised as:

- the critique of earlier studies, in which managerial functionalism is demonstrated to reduce the ability to approach essential characteristics of the phenomenon, in particular, ambiguity, paradox, and unobtrusive power
- the prospective improved understanding, explanation, and critique of SID through the demonstrated import of the organisational culture concept and the interpretive, realist, and critical scientific paradigms
- the framework of responses to ambiguity and paradox
- the generation of new understanding, explanation, and critique of the consequences of power distance and communication assumptions for the critical management of ambiguity and paradox and for the capability of effective strategic change.

Some of these contributions might be valuable for more general fields of study, too. For instance, the use of the culture metaphor in mapping the frames process participants may draw on to make sense of strategic issues might be interesting for organisational culture studies, studies of sensemaking in ambiguous contexts, studies of strategy and change processes, and critical studies in general. The framework of responses to ambiguity and paradox in strategic

change might be useful to those who strive to come to grips with these intriguing phenomena. The study represents a response to the demands for more multiparadigm research in order to reflect on (Holland, 1999) and integrate disparate understandings (Lewis & Kelemen, 2002), in particular the need to "theorise both stability and change in similar terms, as different aspects of elemental structural processes" (Heracleous & Barrett, 2001). Finally, the study has demonstrated in practice one way the realist and structurationist research can be done empirically (Yeung, 1997; Barley & Tolbert, 1997).

The main contribution, however, is the urge to strategic issue diagnosis researchers to better take account of the ambiguity and paradox of this important process. Rather than continue to use simplifying assumptions, they should assume a complex and multifaceted social reality. The phenomenon of study could then be theoretically defined in a way which includes its ambiguous and paradoxical aspects (Alvesson, 1993; Frost, Moore, Louis, Lundeberg, & Martin, 1991). Instead of focusing on parts of SID which are clear, or removing ambiguity and paradox because of their analytical goals, they could, for instance, investigate how the dynamics of different interpretations might lead to phases of shared understanding (Isabella, 1990), attend to the deep context of multiple, interacting structures and incorporate opposing hypothesis in the design of research (Robey & Boudreau, 1999; Tsoukas, 1989), and assume some internal complexity of strategic actors which supports genuine strategic choice (Whittington, 1988).

Simplifying restrictions, including the management bias, could further be countered by methods which embrace the diversity of actors and viewpoints (Meyerson, 1991). The sampling of informants could include non-managers and dissenting organisational members (Frost et al., 1991). Identification of opposing forces at play may be facilitated by identifying interest groups and political coalitions, often opposing forces align with the old and new guard, and the privileged and the unprivileged (Robey & Boudreau, 1999). Meyersson (1991) recommends the use of methods like participant observation, where one can unobtrusively take part in informal settings, to uncover ambiguity in organisations that normatively suppress divergent viewpoints. An additional method is to pay attention to the ambiguity of a variety of symbols, e.g., central words and other language formations, the form as well as the content of some social practices, and people's sense of humour (Hatch & Ehrlich, 1993; Meyerson, 1991).

Rich and detailed observations could finally be subjected to multiple and opposing interpretations, yielding a more valid and holistic picture of complex phenomena (Jick, 1979; Weick, 1979), and reducing the tendency to privilege a few dominant explanations (Meyerson & Martin, 1987). The use of multiple and opposing paradigms and theories is one important strategy (Lewis & Grimes, 1999; Lewis & Kelemen, 2002; Morgan, 1983; Scott Poole & Van de Ven, 1989; Robey & Boudreau, 1999). SID researchers could look for deeper and deeper patterns of meaning, attending to different contexts, and create interpretations about how competing frames of reference people are not open about or even conscious of are applied to selecting and framing strategic issues (Altheide & Johnson, 1994; Neilsen & Rao, 1987).

The use of multiple interpretive frameworks includes the identification of underlying contradictions which illuminate radical change possibilities. Rather than affirming and reproducing the existing strategic reality as given and inevitable, researchers could confront it with institutions and structures of the larger society in addition to local (i.e. organisational and sectoral) dimensions, fundamentally different realities in other societies and historical periods, and with non-existent but imaginable social forms, events and conditions (Alvesson, 1993;

Alvesson & Willmott, 1995; Whittington, 1988). An example of the use of a non-existing event is the ideal speech situation to make visible and worthy of investigation a number of aspects of communication processes that normally would go unnoticed or unquestioned (Alvesson, 1993; Forester, 1983). How this might be done in practice is illustrated by Forester's (ibid.) preliminary analysis of an otherwise all too plain twelve-sentence fragment of a professional staff meeting, where, for instance, what is unsaid suggests the political framing of problems. Methodological and ideological critiques which challenge the authority of privileged scientific explanations, examinations of cultural and political assumptions, institutions and processes that explain how one set of interpretations get privileged, and representations of un- and under-represented groups' perspectives and interests, should also be used to generate and legitimate change conducive ambiguity and paradox (Meyerson, 1991).

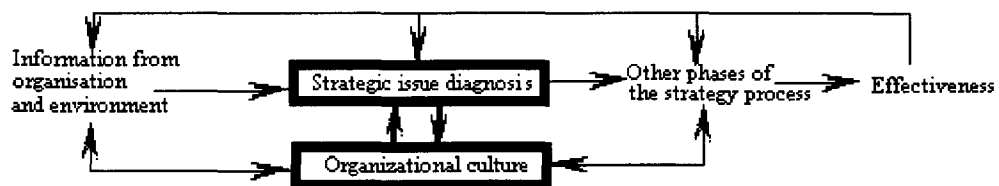
APPENDIX I

Presentation of the project: "Organisational Culture and Effective Strategic Issue Diagnosis"

The project is partly financed by Telenor through the Research Program on The Economics of Telecommunications at the Foundation for Research in Economics and Business Administration (SNF). Responsible for the project is Gunnar Birkelund, scholar at Bodø Graduate School of Business, and doctoral student at The Norwegian School of Economics and Business Administration.

The purpose of the project is to contribute to a more effective and profitable Telenor by giving insight into what happens in "strategic issue diagnosis" - an important, early phase of the strategy process. At the same time, my personal goal is to collect data for a doctoral dissertation within the disciplines of strategy, decision theory, and organisational culture.

Disciplinary problem statements. Strategic issue diagnosis is defined as the process of identification and exploration of external and internal events, developments and trends which can lead to changes in strategy, for one thing because they can influence organisational effectiveness in a significant way. In this process premises are laid down which are of vital importance for what is done in other phases of the strategy process - like development of action alternatives, choice of actions, and implementation. The organisational culture consists of knowledge, beliefs, values, and ideologies that from a deeper level provide the foundation for such premises. This early phase has a significant potential for the identification of barriers for learning and the development of better strategies. My main problem statement is to explore how the organisational culture influences and is influenced by what happens in strategic issue diagnosis, to gain insight into which barriers exists for the development of effective strategies, and how they may be overcome. My model can be illustrated in the following figure:



Method. Access to information. Within Telenor there exists a lot of valuable knowledge about strategic challenges and how they may be handled, not least because the organisation has been and is going through difficult change processes. Therefore, I shall stay in some parts of Telenor until next summer to learn from you through participant observation, interviews and document studies. I aim at insight into the corporate culture and how you yourself experience strategic issues and the process where they are identified and handled. This requires access to important information. I need to identify some important challenges - both problems and opportunities - which are important because they have, have had, or can/ought to have a significant influence on the organisation as a whole in the long term. In addition to the description of such challenges, I need descriptions of the situation out of which they arise, and the formal and informal processes where they have been, is, or can/ought to be handled. All information will of course be kept confidential (I have also signed a promise of secrecy (as regards Telenor Research)).

More effective Telenor-strategy.

Even though I don't know Telenor yet, I think I can say this approach is relevant and useful. It is well known that the organisational culture influences strategy in particular ways, though often unconsciously. For instance, the concept of "strategic myopia" points to the fact that existing knowledge, beliefs etc., may prevent the perception of new possibilities and threats. By giving insight into what happens in strategic issues diagnosis the project may contribute to Telenor's identification of both existing barriers and how they work, and thereby to overcome them. What happens in strategic issue diagnosis may influence the change process and determine whether it becomes successful or not. The change from a public administration body to a more competition oriented organisation involves new requirements for the premises providing the foundation of the strategy process. It is important that new premises, based on market orientation and cost efficiency, are being introduced already in strategic issue diagnoses. If not, traditional values and assumptions from the public administration period could be made the basis of later phases and prevent the realisation of the planned change. At the same time, it is not beyond all reasonable doubt that the more commercially oriented subcultures developed are the most appropriate. The project may also give insight into their effects.

Telenor also wants an offensive strategy enabling the organisation to engage in new areas of concern. This requires cultural assumptions fostering creativity and strategic learning. Organisational culture is often associated with forces impeding strategic learning, but it may also consist of encouraging forces. Different cultural assumptions and values can to different degrees be supposed to enable and disable learning and change, and independent of particular assumptions and values tensions and conflicts between subcultures may represent barriers or catalysts for strategic learning. The project in particular focuses on whether the forces of organisational culture disable or enable innovation and strategic learning in the early phases of strategic innovation and decision processes.

In its strategy processes Telenor faces different and partly contradictory demands, and my purpose is not to serve some interest groups at the expense of others. The project may, for instance, contribute insight into how to implement a planned change; how to gain acceptance of an innovation, an important decision, or a new strategy; or into how to develop future ability of innovation and change. My goal is that actors from different levels and groups will participate in this study, and that everyone will learn something about how to contribute to what they regard as a more effective organisation. The early phases of important innovation- and decision processes will to a large extent be decisive. In this way, divergent opinions can engage in open discussion where more is learned about how Telenor's strategy best can serve common interests.

APPENDIX II

Summary of data collection activities

During the study I made about 110 interviews and 130 observations (or more accurately: observation sequences saved in the same computer file). The interviews lasted from one quarter up to three and four hours (shorter verbal interactions worthy of being documented in writing were categorised as casual observations), only ten interviews took more than one hour, however, and about 50 about fifteen minutes. 15 interviews were tape recorded, and then transcribed in full within a few days. Most of the interviews and observations were from the R&D unit, about 75 and 110 respectively. The interviews at the headquarters were fewer, but at average somewhat longer.

A total of 55 persons were interviewed, most of them once or twice. Seven informants, plus my contact person who was interviewed about eight times, became regarded as key informants and subjected to 3 or 4 longer interviews. The informants from the R&D unit seldom came from top-management ranks, those from the headquarters were distributed evenly between "white collar workers", "middle managers" and "top managers or bordering on the top manager rank". The interviews with persons included in the top manager category often lasted about one hour, because they were busy and time arrangements for interviews mostly agreed on formally in advance. At the R&D unit, the middle managers interviewed often belonged to the technical staff, but from the other echelons more people from the social sciences were interviewed. At the headquarters, 13 of the persons interviewed came from corporate staff, 10 from divisions or business units, and 2 were representatives of the trade union.

As regards observations, about 20 % were made at formal meetings, courses or seminars; 35 - 40 % at lunch breaks; 14 % at coffee breaks (but just a few at the headquarters); 30 % came from casual meetings; and a few at other social arrangements (parties, leisure time activities, etc.).

APPENDIX III

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