

CRANFIELD UNIVERSITY

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**MANAGEMENT PROCESSES
IN PROJECTS OF ORGANIZATIONAL CHANGE:
CASE STUDIES FROM FOUR INDUSTRIES**

SCHOOL OF MANAGEMENT

PhD THESIS

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Academic Year 1996/97

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Management processes in projects of organizational change:
case studies from four industries

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June 1997

This thesis is submitted in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

ABSTRACT

Recent decades have seen a sustained growth of interest from academics and practicing managers in structural change in the contemporary workplace. Some of this attention has been directed at the implementation of initiatives of planned organizational change, often involving newer information and communications technologies, and often conceived and labelled by managers as *projects*. Most empirical studies of projects of organizational change have been concerned with the promotion of universal guides to management success and, by implication, to organizational prosperity. The bias towards generalized prescriptions for performance and management 'best practice' has been accompanied by a relative shortage of context-bound studies intended to reveal the reality of the nature and role of the project concept in relation to organizational change. The purpose of this study is to contribute to understanding of what change project management processes are adopted and, further, how they are determined by the characteristics of an organization.

In pursuit of this broad aim the research takes a grounded, theory-generating approach. The foundation of the research design is a series of case studies of projects of change in four UK organizations in contrasting sectors. The main source of data is unstructured audio-taped interviews with 'change drivers' - those managers responsible for the conception and implementation of the projects. The constant comparative method of qualitative analysis is used to compare and contrast instances of expressions of managerial action or intent which arise from managers' attention to contextual considerations. Data reduction is carried out in three stages, each representing a progressively higher level of theoretical abstraction.

The findings of the research are expressed as an integrated theory and a series of propositions, generalized within the boundaries of the study, relating management process to context via a set of intermediate variables representing the extent to which the change drivers feel in control of the change. The conclusions may be summarized in three statements. First, drivers of projects of organizational change apply a general repertoire of six common management processes, each of which is employed to a greater or lesser extent at any time. Second, the extent of enaction of each process element may be considered as an expression of the change drivers' possession or pursuit of personal control over the change. Third, feelings of personal control are partly determined by managers' attention to selected issues which arise from key characteristics of the organization and its sector.

Acknowledgements

Doing a PhD isn't a solo endeavour. There's much more to it than sitting alone for four thousand hours in front of the blurred page and the fizzing screen. Of course, the solitary bit has to be done, but not much can be achieved without a little help from one's friends. Looking back I acknowledge the influence of some important people who have mattered along the way. I want to take this opportunity to thank them.

Top billing goes to my wife Jane. Her understanding and support made the whole thing possible. If the regulations allowed it, her name would be in lights, *above the title*.

My two supervisors deserve my sincerest thanks. Keith Goffin's knack of providing encouragement and positive criticism, at the same time keeping an outlook on wider implications, makes him a valued mentor. Sue Vinnicombe has an enviable talent for making people feel confident and understood even while encouraging them to ask themselves searching questions. Special thanks are due to Ralph Levene, whose enthusiasm helped get the whole thing started.

I would like to thank three other colleagues whom I am fortunate to have had on my doctoral review panel. Try getting a confused idea past Cliff Bowman, Jo Hatch and Colin New. On the other hand, try finding a more generous, helpful set of critics.

I am grateful for the support and contribution of two colleagues with whom I formed an enduring self-help group in our first week as doctoral students. The no-nonsense style of James Aitken and Alan Harrison have helped to ensure that responding to blunt critical questioning has been a humbling feature of the PhD journey since its earliest days.

Numerous others have generously given their time and energy to discuss my work, to offer me the insight of their knowledge, or to enable me to gain research access to their employing organization. They include but are by no means limited to Chris Dawson, David Downham, Anne Fletcher, Keith Hamilton, Lindsey Holbrook, Phyl Johnson, Michael Jones, Pat Lord, Janet Meacham, Peter Morris, Julian Nettell, David Norburn, Sergio Pellegrinelli, Hilary Philbin, Karl Quentel, Georgina Seery, Jane Sturges, Peter Thompson and Peter Wood.

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1 INTRODUCTION

The purpose of this introductory chapter is to outline the shape and boundaries of this doctoral research project. The chapter is presented in two sections. Section 1.1 describes the rationale and overall aim of the study. Section 1.2 describes the main features of the research design and methods, and summarizes the principal research findings. The chapter concludes with a brief summary of the nine chapters of the thesis.

1.1 Research rationale and aim

This section describes the origins of interest in the concept of the management of projects of organizational change in different industries, and its potential as an important research topic. The concept is distinguished from two overlapping, but subtly different aspects of the contemporary project phenomenon.

The combined effect of the preference for a rational perspective in project management and the predominance of quantitative research methods is discussed. The theory-building aim of the research, using qualitative methods, is outlined.

1.1.1 Origins of interest

This study has its origins in an accumulation of ideas arising from informal conversations with senior managers in various organizations. These managers clearly perceived that they devote much of their time to conceiving and implementing initiatives of structural and cultural organizational change, often linked to the application of advances in information and communications technologies. It was evident that these drivers of change conceptualized and defined the initiatives as *programmes* or *projects*, with objectives, titles, scopes and envisaged end-points.

In the overlapping literatures on project management, strategic management and the management of change in general, practitioner and academic advocates of a project approach to organizational change were found to have a significant presence. The management of projects of organizational change was clearly an important issue. It had the twin qualities of being endemic and difficult to achieve. But what did we know about projects of organizational change and their contemporary role or function in organizations?

A review of popular change management literature (Partington, 1996) confirmed the breadth of interest in the 'projects of change' phenomenon. The

financial consequences of getting it wrong have ensured that there is no shortage of prescriptive advice, both on what to change and how to do it. However, there appear to be few empirically-based accounts in the literature of the actual management processes that are employed by drivers of planned change, how those processes are determined by the context of change and how they might change over time in response to changes in that context.

Acknowledgment of the scarcity of empirical studies of actual change management processes is itself a feature of the literature. In strategic management literature, for example, Pettigrew observes that:

There are remarkably few studies of change that actually allow the change process to reveal itself in any kind of substantially temporal or contextual manner. (Pettigrew, 1987b: 655)

In literature on the management of projects Morris identifies a need for more comparative empirical studies:

There is a shortage of case studies [of projects]; there are even fewer studies comparing the project management practice between industries... (Morris, 1994: vii)

As the pace of change quickens the gap in knowledge between theory and practice is, if anything, widening. The rapidly changing circumstances of organizations and societies suggest that the need for new theories, generated from the rigorous study of practice in context, will, at least for now, continue to be insatiable.

1.1.2 Three concepts of project management

The discipline of project management is well established as the controlled response to managing the complexity of major technical projects in such industries as construction and aerospace. Now, some writers on the implementation of organizational change are recommending a 'project management approach' (for example Cleland, 1987; Lord, 1993; Pellegrinelli and Bowman, 1994). The logic behind this argument is that since the objective of an organizational change initiative is to change the status quo it should be managed separately, as a project, outside the existing structure.

Despite the practical appeal of this idea, its rational, linear, life-cycle implications may be at odds with the objectives of many large scale organizational change interventions. This is particularly so when the change is concerned with allowing a bottom-up, participative culture of continuous learning and organizational regeneration to emerge, as many are.

In addition to the traditional use of project management in major projects, and its newer application in organizational change, the literature shows that the contemporary role of projects has a third dimension. There is a general call for the abandonment of cumbersome, inward-looking bureaucracies and for the adoption of a flexible, customer-focused 'project team' approach to organization. Experience shows that, for some, the project team approach has become entangled and confused with traditional notions of project management.

Thus there are the three overlapping concepts of managing traditional major projects, managing projects of planned organizational change, and managing scarce resources in a flattened project team-based organization. Their relationship is represented in Figure 1.1:

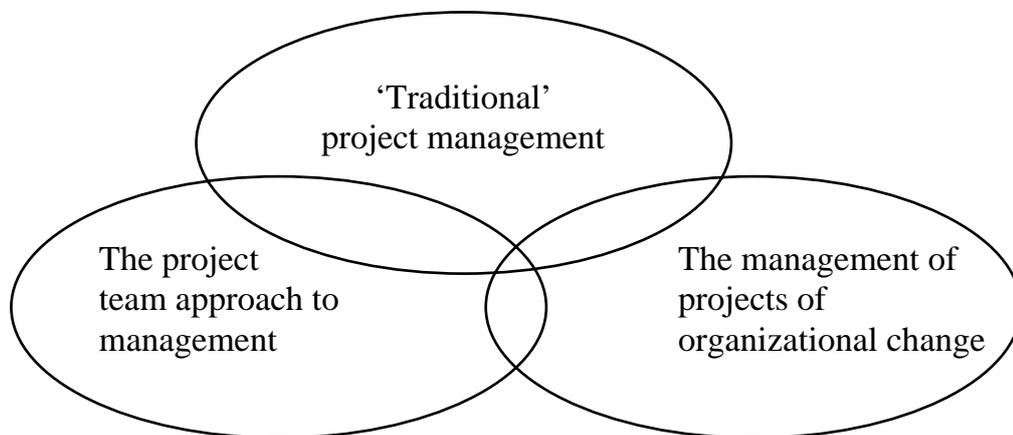


Figure 1.1: Three concepts of project management

There is no shortage of evidence that all three are characterized by complexity and great practical difficulty, often challenging and stretching management expertise to the limit and beyond. However, the seductive association of *projects* tends to disguise the fact that, as management processes, they may otherwise have little in common.

This research examines one of the three processes, the management of projects of organizational change, in four different contexts. The importance of context, both internal and external, in studying *strategic* change is well established. As a result much research effort is directed at understanding how the context, content and process of longer-term strategic change relate to one another and to the emergent, unfolding performance and survival of organizations.

But what about shorter-term management processes? At a level lower than grand, performance-related theories of strategic management there remain

largely unstudied and unanswered some important questions. Senior managers in most large organizations are involved in conscious attempts to plan and implement projects of change. The projects' objectives are broadly the same. They reflect the reality of what Kanter (1989: 33) has labelled the 'post-entrepreneurial revolution', in which organizations aim to become at once creative, disciplined and agile. The projects' aims may be defined in the new managerial vocabulary of downsizing, delayering, outsourcing, forming alliances, organizational learning, innovation and empowerment. What is the management approach to such a project, and how is it affected by, for example, the fact that the organization is a manufacturing operation, or a police force, or a bank, or a public hospital, or a construction company?

1.1.3 A qualitative, theory building approach

In project management literature and in project management training and education there is a concentration on so-called 'hard', technical aspects of projects and their management. The emphasis on rationality tends to play down the importance of 'soft' social and political management processes, which are generally acknowledged to be the main source of problems for managers of change (see for example Ghoshal and Bartlett, 1996).

A parallel exists between this emphasis on hard aspects of projects and project management and the high proportion of quantitative studies of management which follow the well-established traditions of research into the natural sciences. The growing application of project management techniques has been reinforced and supported by a proliferation of attractive, powerful and accessible software tools for scheduling and resource control¹. At the same time, in management research, eagerness to apply hard methodological approaches to soft behavioural variables has been intensified by the rapid introduction of sophisticated statistical tools of analysis (Blalock, 1984; Parkhe, 1993).

Approaches to project management research are influenced by the dominance of the rational perspective in the discipline of project management, and by the prevalence of quantitative research methods in management research generally. Perhaps as a result, qualitative studies of project management are comparatively rare. Nevertheless there is evidence in the literature of a growing tradition of acceptance that the phenomenon of planned change is too complex to be understood from a purely rationalist viewpoint, and too ill-understood for the unquestioning application of quantitative, theory-testing research methods. Some writers and researchers in the field of organizational change have turned

¹ Baker (1997) identifies 240 'project management' software packages commercially available in the UK.

to other perspectives, such as political, cultural and network. Some have shown that qualitative research designs have the potential to contribute a great deal to our understanding. Many further opportunities exist for developing new insights from exploratory interdisciplinary research in a new and changing field.

The aim of this research project is to improve understanding of actual approaches to the management of projects of organizational change, in particular to learn from comparing practice in different industries. Building on the observations and sentiments expressed in this rationale, the intent is to justify, develop and successfully apply a theory-building methodological approach. In Chapter 3 it is explained in detail why the study's research design and methods were chosen for their potential to make a contribution to organizational knowledge in the substantive area of project management, more specifically in the field of planned organizational change.

It should be emphasized that the central concern of the research is *not* whether the projects studied were a good idea, or were 'successful'. Setting aside that consideration, the concern is to explore, describe and understand the projects' management processes, thereby generating new perspectives, propositions and ideas for further study.

1.2 Research outline

This section provides an overview of the principal features of the study, including the methodological stance, the methods used, the research design, and the principal findings. The section ends with a summary of the nine chapters of the thesis.

1.2.1 Outline of research design and methods

The central feature of the research design is a sequence of case studies of projects of organizational change in four organizations, each in a different industry sector. In two of the four organizations two separate projects were studied, making a total of six case studies. The unit of analysis in each case is the set of individual managers identified within the organization as having been responsible for conceiving and implementing the project - collectively referred to as the *change drivers*. The boundaries of each case, including the identification of the 'set' of change drivers, were determined from the change drivers' own observations.

The approach known as *theoretical sampling* (Glaser and Strauss, 1967) was followed, whereby the findings of the earlier cases were allowed progressively to guide selection and analysis of the later cases. Theoretical sampling was used jointly with the method of *constant comparison* (Glaser and Strauss, 1967) as a way of building theory from case data. The principal characteristic of constant comparison in this study is the coding into categories of instances of management processes and related phenomena, while constantly comparing them with previous instances in the same and different cases coded in the same category. Through this process theoretical properties of the category are generated, as:

the analyst starts thinking in terms of the full range of types or continua of the category, its dimensions, the conditions under which it is pronounced or minimized, its major consequences, its relation to other categories, and its other properties. (Glaser and Strauss, 1967: 106)

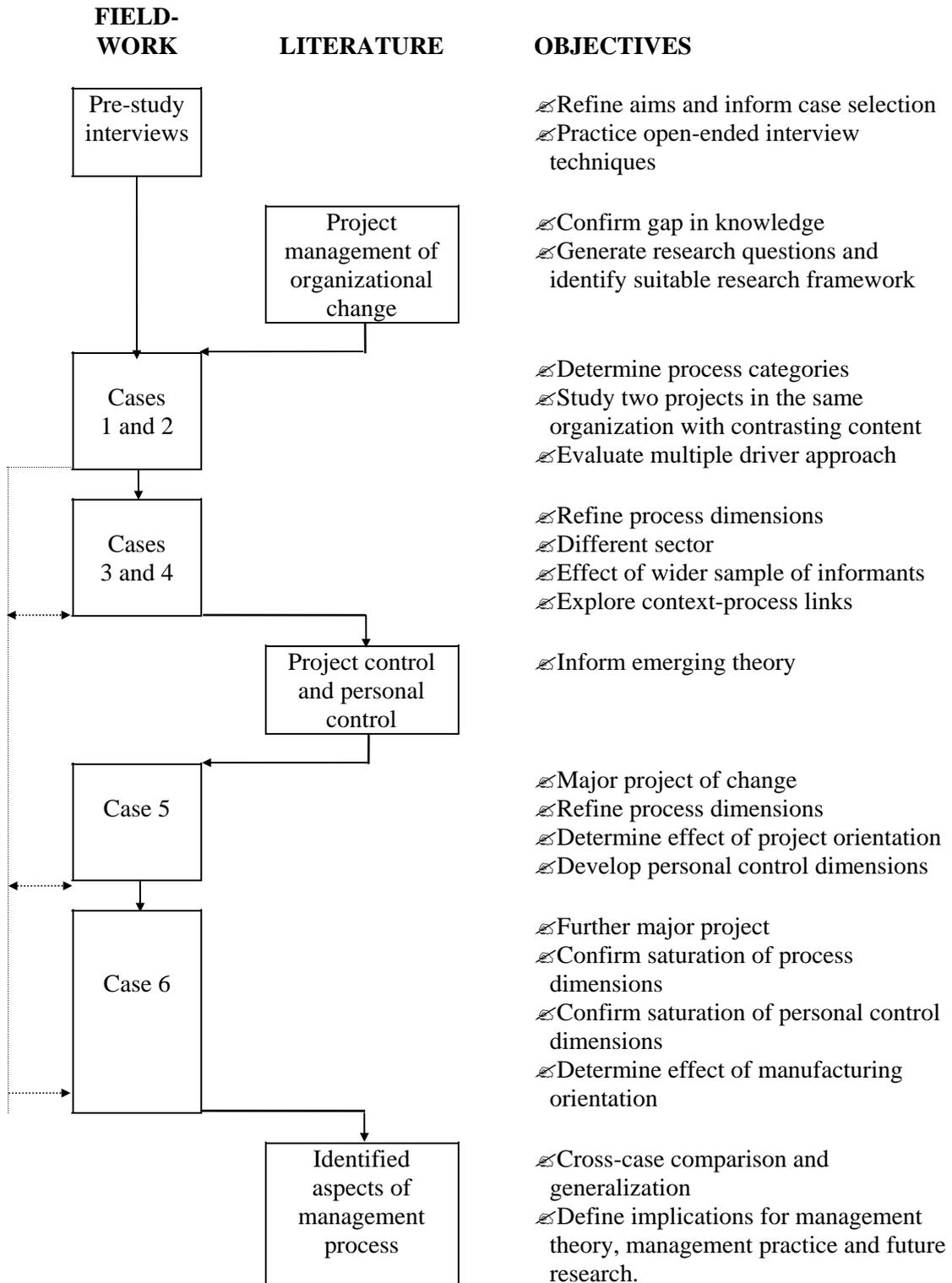
Chapter 3 clarifies the position of the constant comparison method in social scientific research in relation to other approaches to qualitative analysis, including the method known as analytic induction, the aim of which is to establish causal relationships between variables. An important characteristic of constant comparison is that it stops short of claims to universality or absolute causal proof. The method is specifically designed to discover, not to test, theoretical propositions.

Bhaskar's (1975) 'Realist' ontology is used in Chapter 3 as the basis for an argument for the utility of the constant comparison approach for answering open ended research questions about management processes in organizations using interviews with managers as data. The main assumptions underlying the argument are that reality exists at various levels, and that neither a purely objectivist nor a purely subjectivist ontology is appropriate for the purposes of this study. The argument concludes that managers' accounts of their response to their perceptions of reality are a potential source of researcher access to plausible mechanisms or underlying *tendencies* which, if they existed, would explain connections between context and management process.

The six case studies are presented individually in sequence in Chapters 4 to 7. The cases are linked by theoretical sampling and emerging theoretical issues, with earlier cases being revisited at intermediate stages in the sequence. An overall cross-case comparison is then made, bringing together and summarizing data and analysis from all six cases.

The whole research process, including the different stages of field work and literature reviews, and the driving objectives at each stage, is detailed in Figure 1.2.

Figure 1.2: Schematic diagram of the research process



1.2.2 Outline of research findings

The contribution to knowledge made by this study is described in Section 9.1, where it is explained how the contribution builds on existing knowledge. For the purpose of setting out the overall shape of the study in this introductory chapter the principal findings are simplified and summarized as follows:

1 Managers who conceive and drive projects of organizational change employ a bounded repertoire of management processes. These processes may be described as a set of six categories, each with properties and dimensions, which are employed variably, to a greater or lesser extent, over the life of a project. The six categories are:

- (a) Use of *external agents* of change.
- (b) Planning and control *formality*.
- (c) Control of the *pace* of change.
- (d) Staff *participation* in decisions.
- (e) *Justification* of actions.
- (f) *Definition* of individuals' *roles*.

2 The extent of each of the six categories at any time is an expression of the change drivers' perceived possession or pursuit of *personal control* over their environment. The personal control construct represents an intermediate set of variables between the context of change and the management process. Personal control is a balance of individual and collective perceptions in five categories:

- (a) *autonomy*
- (b) *resources*
- (c) *competence*
- (d) *opportunity*
- (e) the expected *co-operation* of staff

Conjectured links between each category of management process and each category of personal control are expressed as a series of propositions.

3 Personal control is partly determined by managers' attention to selected characteristics of the organization and its sector. These characteristics include, for example, extent of private ownership, traditional self-image, independence, product-tangibility and project-orientation.

The relationship between context and management process, and the intermediate role of personal control, have potentially important

consequences for managers. There is support in the literature for the notion that higher feelings of personal control are associated with more effective decision making. If managers are able to understand the positive and negative aspects of their organization, which give rise to higher or lower feelings of control they may be able to enhance the positive and reduce the negative.

1.2.3 Chapter summaries

The thesis follows a theory-building structure, in which successive chapters ‘unravel a new part of the theoretical argument being made’ (Yin, 1989: 139). It is presented in nine chapters, as follows:

Chapter 1 (this chapter) sets out the background and aims of the research. The methodological position is outlined, the fieldwork settings are described. The research design, principal findings and thesis structure are summarized.

Chapter 2 is a review of literature on the management of projects of organizational change. The review seeks to capture what is known about the ways in which organizations are changing, and about the role of projects and project management in implementing planned change. The review finds a bias in the literature towards a concern with the outcomes of organizational change initiatives and with general prescriptions for their successful achievement. It is argued that this performance bias has diverted research attention from the actual processes which are adopted by drivers of change projects, and from the ways in which those processes are determined by the context of change.

The review leads to the formulation of two open-ended research questions which provide a guiding foundation to the design of the empirical study. The questions ask *what* processes are adopted by managers of projects of change and *how* those processes are determined by their context. The chapter ends with a clarification of terminology and a listing of the aims of the thesis.

Chapter 3 is concerned with research methodology. The chapter builds on the research aims and the conclusions from the literature by considering a number of philosophical issues which together form the basis for a set of guiding assumptions which underpin and justify the research design. Further theoretical and practical considerations are explored, which help determine the parameters of the research design. A simple theoretical framework is selected to give a broad outline structure to the data analysis. General details and guiding principles of case selection, data collection and data analysis procedures are described.

Chapter 4, the first of four ‘results’ chapters, contains Cases 1 and 2. The cases are concerned with two distinct projects of change in Ealing Hospital NHS Trust, a public general hospital in west London which had recently acquired trust status. The subject of Case 1 is a realignment of the trust’s management structure to suit its new commercial environment. Case 2 examines a project of updating the hospital’s information systems. The pair of projects were chosen for being dissimilar in character.

Specific details of case selection and data collection are described. Each of the two cases is presented at a primary analytical level, in narrative form supported by quotes, structured around the elements of the theoretical framework, followed by a secondary level of analysis which summarizes and tabulates emerging categories of management process. Six categories are defined, and their dimensions identified.

Chapter 5, which contains Cases 3 and 4, follows the same ‘paired projects’ approach. Cases 3 and 4 are set in the editorial office of Associated Newspapers Ltd., a dynamic and profitable private sector company. Case 3 is a project of amalgamating two photographic services support departments. The change involved physical work, structural reorganization and redundancies. Case 4 is centred on the reorganization of an innovative software development project which had got out of hand.

Chapter 5 builds on and refines the findings of Chapter 4 to achieve the definition of a set of management process categories which is generalizable to all four cases studied up to this point.

At this intermediate stage in the study, speculation about possible links between context and process leads to the idea that the actions of managers may be considered as an expression of their possession of, or pursuit of, *control*. Three theoretical perspectives of the concept of managerial control in the literature are considered. The construct known as *personal control* is found to be a useful conceptual intermediary between context and project management process.

Chapter 6 contains Case 5, concerning a major project of ‘business process re-engineering’ in the London offices of US-based multinational construction firm Bechtel. Although the reorganization consisted of two nominally separate projects the two were so closely related that they were found to be more appropriately presented as one. At this point the paired projects approach adopted in Cases 1 to 4 was dropped. It became clear that other considerations, in particular project size and significance, were more important at this stage in the study.

The same format of case presentation and two-stage analytical process is followed, with the addition that the personal control concept is introduced into the analysis.

Chapter 7 contains Case 6, the final case. The setting is the Luton-based domestic appliance manufacturing operation of Swedish-owned group Electrolux. The case is concerned with the factory's locally-driven efforts to become a 'world class' organization through a wide-reaching project of internal change.

The same format as Case 5 is followed. Saturation of data is achieved.

Chapter 8 brings together the findings from the six cases in a cross-case summary. The output of the research is presented as a series of propositions, linking the six management process categories positively or negatively with the five categories of personal control. The central issues in each of the six cases, to which managers directed their attention, and which gave rise to greater or lesser feelings of control are identified. The central issues from all six cases are aggregated into a set of seven generic 'key organizational characteristics' which were possessed to a greater or lesser extent by each organization.

Chapter 9 draws conclusions from the whole study. These are presented in the form of a summary of the study's contribution to knowledge followed by a discussion of implications for management practice, including practical advice for managers. The chapter concludes with an acknowledgment of the shortcomings of the research, and a consideration of opportunities for further study which have arisen from this work.

2 PROJECTS OF ORGANIZATIONAL CHANGE

The purpose of this chapter is to build a picture of contemporary understanding of the management of projects of organizational change. It is argued that there is a need for comparative empirical studies of the processes by which such projects are managed, and that studies should take greater account of the contexts within which those processes occur.

Section 2.1 asks the questions: why and in what ways are organizations changing? The section examines the shifting environmental forces which have accompanied a surge of academic and practical interest in the organizational change phenomenon in recent decades.

Section 2.2 is concerned with the processes by which organizations change, focusing on the role of managers in the conception and implementation of change. With reference to the 'strategic choice' debate the position of projects of change in relation to the wider phenomenon of organizational change is examined. It is argued that a disproportionate concern with organizational and project performance and prescription for success has limited the attention paid by researchers to the role of projects and to actual project management processes.

Section 2.3 examines the relationship in the literature between the process of change project management and its context. The acknowledged shortage of context-bound studies of management process is considered, and opportunities to extend existing knowledge are discussed.

The conclusions and implications of this literature review are summarized in Section 2.4. The chapter ends with two open-ended research questions which are used as the foundation from which to conduct exploratory enquiry into the topic. The aims of the thesis are listed.

2.1 The content of change

This section sets the scene by examining from a general perspective the phenomenon of organizational change. The section describes how the increasing forces for change which have resulted in calls for flexible forms of organization have been accompanied by a growth in the ‘management industry’, exemplified by a proliferation of best-selling books on organizational change. The themes of the popular ‘change gurus’ are explored and summarized as the ways in which organizations are changing. These are the ‘what’, or content of change.

2.1.1 Forces of change and new wave themes

In recent decades, and in particular since the early 1980s, empirical and anecdotal studies of organizations have formed the basis of a flow of best-selling management books. These works present a close-knit blend of ideas and strategies for organizational change and survival. Their themes are those of post-industrial corporate fashion. Their subject matter shows that they have achieved their success by capitalizing on the need for corporations and individuals to change in order to survive.

An overview of the fads and fashions of organizational change sums up the phenomenon. Typical examples of the themes of the best-sellers are: organizational deconstruction and reshaping (Peters, 1992; Hammer and Champy, 1993); synergy, partnership and individual empowerment (Kanter, 1989); the changing nature of work and careers (Kanter, 1989; Handy, 1989); the gaining of strategic advantage (Ohmae, 1982; Pascale, 1990; Porter, 1985); quality and customer focus (Deming, 1986; Peters, 1992; Davidow and Malone, 1992); innovation (Peters, 1992; Kanter, 1984); learning and the learning organization (Drucker, 1989; Senge, 1990; Pascale, 1990); Japanese management (Ouchi, 1981; Pascale and Athos, 1981).

The aggregate of advice offered by these ‘change gurus’ is described in favourable terms by Kreiner (1992: 41) as ‘a pastiche of ideas, metaphors, perspectives and fragments of models’. The gurus are not without their critics, who claim that their ideas are fads or not new (Grint, 1993; Nohria and Berkley, 1994; Thomas, 1994), or even bad advice (Solomon, 1993). Huczynski (1993: 244) is disparaging about the vain managerial quest for universal rules of success, which he labels the ‘fast food approach to learning’. He claims that the approach removes the need for managers to expend effort to discover the ‘relevance, application or practicability of the general propositions offered [by the gurus] to their personal situation or problems’.

Nevertheless, Kreiner notes the critical status accorded in management literature to such popular studies of organization as Peters and Waterman's (1982) much cited *In Search of Excellence* and to autobiographies of well-known industrialists. He refers to this status as an indication of the growing rejection of 'scientific' organization theory in the postmodern epoch which is characterized by:

... a watering down of the 'rules of the game' for the discourse because all 'truths' compete in a market where power, fashion and adventure may be just as important as the 'scientific odour'.
(Kreiner, 1992: 41)

In addition to the change gurus' infiltration of management scholarship, there is evidence that management practice has succumbed to their influence. In a recent call for a return to managerial pragmatism Nohria and Berkley (1994) report a massive growth of the 'management industry' in the USA between 1982 and 1992. Condemning 'flavour of the month' management, they attribute the rise in management schools, consultants, media and gurus to management insecurity brought about by foreign competition and industrial decline.

The extent to which the prescriptions of the gurus actually influence corporations is impossible to tell. It may be that fashionable writers on organizations are simply providing a global service of popular corporate journalism, reporting on the latest fads and trends. However, the amount of interest which is shown in these writers' ideas and which is reflected in their books' sales suggests a desire on the part of managers to keep up with the pack and to heed popular advice on individual and corporate survival.

The forces for organizational change which have accompanied the growth in the management industry arise from a complex and powerful brew of technological, economic and social factors. These are summed up by Mohrman et. al. (1989) in four categories:

- 1 *Increasing competition and globalization* (accompanied by stagnant domestic markets).
- 2 *Changing expectations of stakeholders* (including the desire by employees for meaningful work; the ruthlessness of shareholders and financial markets; the sophistication of customers).
- 3 *Technological developments* (four major trends are identified by Boddy and Gunson (1996): availability of hardware, software, databases and communications technology).
- 4 *Changes in legal context* (including deregulation and employee rights).

In addition to environmental factors, managerial fashion has become a force for change in its own right, and a topic worthy of academic attention (see Abrahamson, 1996). The importance of the activities and styles of other firms is reflected in the idea that to copy the competition is desirable. Peters (1987: 229) calls this 'creative swiping'. Mintzberg (1979a) lists fashion as a contingency factor for the 'adhocracy' structure. There has been a trend towards the practice of 'benchmarking', (see Karlof and Ostblom, 1993). Some writers claim that much of the growth in popularity of the new management ideas has its origins in a desire by managers of declining western corporations to emulate the success of the Japanese, for whom coveted values such as team working are more natural to their national culture (see Ouchi, 1981; Pascale and Athos, 1981; Drucker, 1989).

A recent study of reasons behind the adoption of matrix structures in UK hospitals finds a variety of influences including not only technical rationality but also the 'normative pressure of interorganizational networks' (Burns and Wholey, 1993: 108). A further suggestion of the power of the desire that organizations should conform to social norms is found by the research of DiMaggio and Powell (1983), who propose that a combination of three kinds of isomorphism operate to bring about the paradoxical phenomenon whereby people trying to change their organizations make them increasingly similar. Conscious attempts to copy successful companies may fail, however, due to contextual differences. Hassard and Sharifi (1989) point out the inherent difficulty of emulating 'cultural styles'.

The spreading need to abandon bureaucratic structures and ideas of 'rational' management, and to adopt popular or fashionable 'new wave' ideas is widely perceived. Surveys of corporate transformation in large organizations were conducted in the UK in 1989, 1990 and 1991 (Coulson-Thomas, 1992). The research showed that, in each of the three years, managers claimed that the primary issue facing them was the need to make organizations more flexible and responsive. Kanter cites a review of studies covering thousands of workplaces. The review found that the most commonly reported changes were towards 'flat, lean structures, multiskilled employees, and team configurations.' (Kanter, 1989: 273)

Ezzamel, Lilley and Willmott (1996) report a survey of UK corporate sector managers' perceptions of various aspects of change. The study finds strong evidence of gradually increasing pressure for results, stronger customer orientation and greater use of technology. In a corporate climate distinguished by the ever-present threat of redundancy there is increasing individual accountability accompanied by a growing emphasis on team work and collaboration. These researchers find little indication of radical 'sea-changes' in management practices, but a more gradual, incremental shift. Their summing up of the overall picture

encapsulates the essence of the forces and the directions of organizational change in the literature:

The overall impression is one of an *intensification* and *individualization* of work, facilitated by new technologies and promoted by new management ideas. (Ezzamel, Lilley and Willmott, 1996: 167, emphasis in original)

2.1.2 Summary

The themes of popular management writers are taken as a reflection of the broad aggregate of change. A summary of their work, broadly confirmed by surveys of change, suggests that organizations are reflecting demands for change in the following ways:

Downsizing. Organizations are getting smaller. In the new climate of technical and administrative innovation, new businesses outpace the growth of established businesses (Kanter, 1989). Businesses have fewer, better-qualified people (Handy, 1989). Drucker comments on the 'decline in the advantage of being big' and observes that medium sized firms are replacing bigger corporations as 'the engine driving the US economy' (Drucker, 1989: 205).

Co-operation. The boundaries of organizations are becoming less distinct. Overall performance is improved by moving work between an organization, its customers and suppliers (Hammer and Champy, 1993). Distributors and retailers are 'surrogate employees' (Davidow and Malone, 1992). 'International alliances and partnerships are associated with competitive strength' (Kanter, 1989: 120).

Delaying. Organizations are moving towards flatter structures with fewer layers of management, made possible by the new information technologies. The response to complexity and the need for faster action is organizational fluidity and flexibility (Peters and Waterman, 1982; Kanter, 1989). The new information-based firm needs fewer levels of management (Drucker, 1989). Middle managers are a dying breed (Davidow and Malone, 1992).

Learning. There is a growing emphasis on knowledge and learning, at individual and corporate level. The idea represents a shift away from the notion of training (how) towards education (why) (Hammer and Champy, 1993). Senge (1990) claims that learning may be the only sustainable source of competitive advantage. At the individual level, learning is the new form of security (Drucker, 1989).

Innovation. There is a perceived need to encourage innovation and creativity, and to foster a climate where mistakes which are made in the pursuit of innovation may be tolerated. Rational management punishes mistakes thereby discouraging

innovation (Peters and Waterman, 1982). It is important to reward the generation of ideas, not just the right answer (Kanter, 1989).

Empowerment. Closely related to the encouragement of innovation is the concept of empowerment of the individual in the form of worker participation in schemes for quality and productivity. Employee participation in the management of change is more likely to lead to its success (Peters, 1987). Allowing employees to seize information, resources and support allows their potential to be released (Kanter, 1984).

Cross-functional teams. There is a trend towards the use of cross-functional task forces and teams and new explicit managerial roles such as task force leader and change agent. Drucker describes how, in the organization of the future:

Business is conducted in a decentralized, networked organizational structure where the basic structural elements are projects. Work is done in task-focused teams. (Drucker, 1989: 134)

These 'new wave' management themes are closely entwined with one another and to the changing goals that they help organizations to pursue. They are made possible by advances in information technology, and are often accompanied by the introduction of new systems of communication. Structural changes which are reflected in the new managerial vocabulary of downsizing, outsourcing, decentralizing and delayering are linked to the fashionable behavioural ideas exemplified by visionary leadership and cultural change, individual creativity and empowerment. Accompanying the decline in the perceived appropriateness of the bureaucratic hierarchy, these themes represent the ways in which organizations are changing. It will be seen that their prevalence is borne out by the content of the organizational change projects in this study.

2.2 The process of change

Interpretations of how organizational change is produced or managed are necessarily shaped by assumptions about how change works. Adopting a project perspective of organizational change implies a certain set of assumptions and thus raises questions about the consequences for researchers and managers of thinking about change in this way. This section considers the implications of conceiving organizational change in terms of projects.

Section 2.1 describes the ways that organizations are said to be changing. These ways may be considered as the *content* of change. This section addresses the question: what is the *process* by which organizations change? Some theorists have argued that to draw a distinction between content and process is artificial (Schendel, 1992) or unhelpful (Pettigrew, 1992), at least for the purpose of strategy process research, where the two are claimed to be analytically inseparable. In this study it is argued that, in the context of project management, the theoretical distinction between content and process is helpful, since it is a well-established and convenient way of distinguishing the objectives and scope of a project from the processes and techniques which are used to achieve them.

The current nature of projects and project management is first reviewed and related to literature on organizational change. Issues arising from assumptions associated with the project conceptualization are then discussed. The issues are concerned with the idea, commonly expressed in the literature, that the project perspective implies a voluntarist, rational-linear process. It is argued that there is a need for an improved understanding of the extent to which managers make this assumption, and that the project perspective offers rich potential for empirical research into change management processes.

2.2.1 Projects and project management

The Concise Oxford Dictionary defines the noun *project* as 'a planned undertaking'. In the context of management the word has taken on a narrower, more precise meaning which captures a level of complexity. Management textbook definitions suggest that projects are characterized by some or all of a set of distinguishing characteristics. Projects are complex multi-task, multi-function undertakings with defined objectives, schedules and budgets (Archibald, 1976). Projects are unique endeavours which create change (Turner, 1993a). Projects have life cycles (Morris, 1994).

The term *project management* is used in several ways. A brief exploration of three of its meanings will help to illuminate the current theoretical and professional focus of the discipline.

Firstly and fundamentally, project management is a *deceptively simple idea* (Morris, 1994: viii). which has at its core the notion of the project manager as the single point of integrative responsibility (Archibald, 1976) pursuing defined objectives over a finite project life cycle. Morris defines the generic concept in concise terms.

[Project management] is the process of *integrating* everything that needs to be done (typically utilizing a number of special project management tools and techniques) as the project evolves through its *life cycle* (from concept definition through implementation to handover) in order to ensure that its objectives are achieved. (Morris, 1994: viii, emphasis in original)

From a second perspective, project management is an *industry*, providing products and services to a growing market of private and public-sector organizations which have projects to manage and whose members perceive value in a professional approach to project management. In the UK, biannual national trade exhibitions provide evidence that a widening range of project management software, packaged procedures, training and consultancy is available to satisfy the demand for the approach.

The third sense of project management is a professional discipline with its own *body of knowledge*. In several countries, notably the UK and the USA, official associations of project management academics and practitioners have attempted to formalize and define the realm of their discipline for the purposes of member accreditation and certification. An example is the Body of Knowledge (BoK) published by the UK's Association for Project Management (1996). The document contains outlines of 40 'topics' against which candidates for certification may assess their level of experience and knowledge. The range of the topics is wide, and reflects the gamut of skills, know-how and personal characteristics that the modern project manager is expected to possess.

The BoK divides the topics into four sections:

- 1 **Project management:** systems management, programme management, project management, project life cycle, project environment, project strategy, project appraisal, project success/failure criteria, integration, systems and procedures, close-out.
- 2 **Organization and people:** organization design, control and co-ordination, communication, leadership, delegation, team

building, conflict management, negotiation, management development.

- 3 **Techniques and procedures:** work definition, planning, scheduling, estimating, cost control, performance measurement, risk management, value management, change control, mobilisation.
- 4 **General management:** operational/technical management, marketing and sales, finance, information technology, law, procurement, quality, safety, industrial relations.
(Association for Project Management, 1996)

The USA's Project Management Institute (PMI) has developed a marked caution about its own claims to being able to produce a definitive documentary encapsulation of the Project Management Body of Knowledge (PMBOK). The 1987 edition of the PMBOK is superseded in 1996 by a document which:

... is not the PMBOK. The 1987 document defined the PMBOK as 'all those topics, subject areas and intellectual processes which are involved in the application of sound management principles to... projects.' Clearly, one document will never contain the entire PMBOK. (Project Management Institute, 1996: vii, emphasis in original)

The 1996 document, which is titled *A Guide to the Project Management Body of Knowledge*, distinguishes project management context from process before setting out the process as nine 'knowledge areas'. Each knowledge area is described as a 'subset of project management', with defined processes. One of the nine, for example, is Project Scope Management, summarized as follows:

A subset of project management that includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. It consists of:

- Initiation - committing the organization to begin the next phase of the project.
- Scope planning - developing a written scope statement as the basis for future project decisions.
- Scope definition - subdividing the major project deliverables into smaller, more manageable components.
- Scope verification - formalizing acceptance of the project scope.
- Scope change control - controlling changes to project scope.
(Project Management Institute, 1996)

The UK APM's broad range of topics, and the USA PMI's reluctance to pin down the discipline reflect an emerging issue. As the project approach to management becomes the normal way for organizations to deal with the growing demands for

change, its contexts and processes, of necessity, spread into broader domains of management.

The Bodies of Knowledge thus include topics which are applicable not only to project management but to all of management, reflecting the widening application and convergence of project management with the management of change generally. Observing this trend, an editorial in the *International Journal of Project Management* contemplates the identity of the discipline:

.... as project-based management becomes all of general management, it ceases to have any identity of its own; as it takes over everything, it becomes nothing. (Turner, 1993b: 195)

It is possible to trace project management's short life from its more specialized origins to its present day orientation. The modern form of project management arose in recent decades from a practical need to find new systems and techniques for managing projects with unprecedented organizational and technological complexity. Morris (1994) describes how, in the 1950s, parallel developments in the military and civilian sectors in the USA gave rise to the scheduling techniques, for example PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method), which became synonymous with project management.

At the same time, it was recognised by those responsible for the new military projects of extraordinary technological and organizational complexity that there was a need for a holistic, systems approach to the management of such projects, using a prime contractor as integrator throughout a three-phase life cycle (concept, creation, operation). Fragmented approaches to managing the new complexity were grossly deficient (Morris, 1994).

Perhaps due to the inadequacies of early computer hardware and software, PERT did not deliver its promised expectations (Fleming and Fleming, 1991). However, by the end of the 1950s the project management idea was beginning to spread from its origins on major aerospace, defence and construction projects into mainstream management thinking, particularly in the manufacturing context.

Evidence of this spread may be found in articles in contemporary issues of the Harvard Business Review. Management writers were starting to formulate ideas about the newly-perceived potential of using the concept of projects and project management as a device for integrating complexity and managing change in a more general sense. For example, Gaddis (1959) was one of the first to ask, and attempt to answer, questions like: What does a project manager do? What kind of man [sic] must he be? What training is prerequisite for project management success? Wickesberg and Cronin (1962) saw how the increasing rate of change in organizations where shorter product lives, lower profits and shorter production

runs was giving rise to a new need for a project approach to management. Middleton (1967) expressed the trend:

Generally, the project approach can be effectively applied to a one-time undertaking that is definable in terms of a specific goal; infrequent, unique or unfamiliar to the present organization; complex with respect to interdependence of detail task accomplishment. (Middleton, 1967: 73)

The 'project approach' described by Middleton involves the adoption of a project/functional *matrix* organizational structure, supposedly combining the benefits of a temporary, flexible task-focused project team with the organizational stability of a hierarchy. Other writers, rather than taking a structural perspective of project management, sought applications of project management's *techniques* in new sectors and new project types. An example is the 1967 British Civil Service paper entitled 'Network analysis in forming a new organization' (Ryan, 1967). Entirely mechanistic in approach, the paper purports to 'bring out the value of network analysis in the control and management of administrative operations, as well as at the planning stage'.

These examples reflect a dawning recognition of the general benefits of an adaptable approach to managing unfamiliar, complex organizational tasks. Now, as we approach the end of the 20th century, the project approach to management is more generally accepted and understood. It is becoming part of the staple fare of business education. Text book writers such as Lock (1996) stress that project management is widely practised in many sectors of industry and commerce. Understandably, much project management activity takes place in the predominantly project-based industries such as aerospace, construction, defence, energy, and utilities and resource industries. Other sectors, although not primarily project-based, also make routine use of projects to a greater or lesser extent. These include banking, computer systems, education, public health, government and civil service, pharmaceuticals, sport and telecommunications (see Morris, 1994; Stuckenbruck, 1986).

The perceived need for integration through projects has spread not only to new sectors, but also to new kinds of projects. In addition to the growing use of projects for product innovation, organizational change initiatives are increasingly being managed as projects, particularly when they involve the introduction or updating of information technologies. In Section 2.1 it was shown how organizational innovations such as flatter structures, new information and communication strategies, customer focus and quality initiatives - and the resulting call for the use of project teams - are effectively spreading ever-wider the use of project management. Lord (1993) describes how the growing adoption of project-based methods for the management of organizational change is giving rise

to new approaches to project management, both in sectors which are anyway primarily project-based and in sectors where projects are less central to the main business of organizations.

A review of the recent contents of the two more prominent academically-oriented project management journals illustrates the present focus of the discipline and the importance of organizational change projects in relation to other project classes. In the UK-based *International Journal of Project Management* and in the US-based *Project Management Journal* the percentage of the broadly-categorized subject matter of articles published during three years in the mid-1990s is shown in Table 2.1:

Table 2.1: Project management articles categorized by subject matter

	UK	US
Tools and techniques for project planning and decision making:	45	48
Individual project strategies and success/failure factors:	25	29
Organizational strategies and structures for multi-projects:	19	11
Behavioural and human resource issues:	11	12
	100	100

These figures show that the focus of the discipline is heavily biased towards the technical aspects of project management and the successful management of individual projects.

Categorizing the same articles on the basis of *project content* illustrates further the orientation of the discipline:

Table 2.2: Project management articles categorized by project content

	UK	US
General - unrelated to project content:	42	43
Major projects (construction, power, defence, aerospace etc.):	38	33
Organizational change including information systems:	11	13
Manufacturing, R&D, new product/service development:		9 11
	100	100

Table 2.2 highlights two features of the orientation of project management in the UK and in the USA. First, the fact that nearly half the articles are unrelated to a particular sector or project type suggests that, despite the acknowledged problems

of defining the scope of the body of knowledge in general terms, much of project management is considered generic, or independent of a project's content.¹

Second, the table shows that, whilst articles concerning internal projects of organizational change are less prevalent than those relating to major external projects, they nevertheless have a significant presence. The predominance of interest in major projects reflects the origins of the discipline in construction, defence and aerospace. However, the general increase in the use of project-based management for the management of all kinds of organizational change has been keenly observed by project management academics and other project management professionals, who have looked forward with enthusiasm to the application of their discipline in new fields where change is to be managed.

This is shown by the widespread belief within the project management profession, suggested by Table 2.2, that the principles of project management are generic and applicable to the management of all kinds of change. Sharad (1986: 61) is typical of those who claim that the principles of project management are universal. Stating that the project approach is an 'ideological breakthrough' he attempts to explain why the approach may be applied to 'virtually any business activity'. Cleland (1991: 20) sees 'unlimited domains' for project management. Turner (1993a: 4) observes that 'project-based management has become the new general management through which organizations respond to change'.

The universal applicability of project management has been widely explored. Both the 1990 and 1993 annual conferences of Internet, the international project management organization, took as their central theme the notion of project-based management as a central management strategy in 'new' project-oriented companies. At the 1990 conference, titled 'Management by Projects', the issue was given a prominent airing in the international arena. The 1993 conference, titled 'Management by Projects in Practice' was set up ostensibly to review the progress achieved over the intervening three years.

The content of the two conferences is typical and internationally representative of project management literature on the subject. In the keynote paper of the 1990 conference, Gareis (1990a) assesses the new forces for change facing companies and individuals, making a logically-derived case for project-based management strategies which are both structurally (multi-project) and methodologically (multi-method) integrative. He acknowledges, however, the considerable organizational challenges and problems of introducing project-based management into an organization. Turner, Clark and Lord (1990) reinforce this note of caution by assessing the negative effects of increased project orientation on an organization's

¹ One explanation for this phenomenon might be that individual writers on generic project management are 'sectorally introspected' to the extent that they do not feel it necessary to make explicit the context of their writings.

structure (less efficient, lower cultural identity), on its systems (less permanent expertise, fewer new systems), and on its people (less fulfilment of personal development and career needs).

The aim of the 1990 conference was ‘the development, application and dissemination of new, future-oriented project management know-how’ (Gareis, 1990b). As a source of empirical or theoretical developments of models of project management practice for general organizational change the conference proceedings have the undeveloped feel of an emerging discipline. They reflect the combination of novelty and complexity which characterizes the topic. The conference papers consist largely of single case studies of organizational change and opinion-based views of the ‘new-age’ organization. The 1993 conference proceedings are similar in style and content to the 1990 ones.

One overall conclusion which can be drawn from the proceedings of the two conferences is that the growing general strategic use of projects for organizational change is considered important but is theoretically undeveloped. Its perceived value is borne out by the appearance of the topic in newer project management text books (see Turner, 1993a), and by the repeated voicing of the theme in the principal project management journals and at project management conferences (see Cooper, 1993; Fangel, 1993; McElroy, 1993; Skerritt, 1993). Yet there has been a notable lack of progress in developing a greater understanding of models of organizational change project management practice, and a notable lack of comparative empirical research into the subject, despite published anecdotal evidence of the adoption of project-based change management in many individual organizations (see for example Bronner and Moberg, 1990; Des Rosiers and Pinard, 1990; Fetters and Tuman, 1990; Briner, 1993; Roux-Kiener, 1993).

2.2.2 A conceptual assumption

This review of the contemporary orientation of project management has shown how the subject has developed as an idea, as an industry and as a spreading body of knowledge, and how at the same time its application to organizational change has grown. This growth has accompanied increasing incidence and awareness of the organizational change phenomenon.

The review has shown that traditional conceptions of project management emphasize predefined objectives, scopes and plans developed and executed within a defined organizational structure and working towards an envisaged end point. These characteristics illustrate that a fundamental assumption may legitimately underlie a project management perspective of organizational change: change project management is a rational-linear process arising from the voluntary, pre-planned actions of managers.

A long-running central debate in management literature on the process of change concerns the extent to which organizational change is environmentally determined or the result of managerial choice (see Astley and Van de Ven, 1983). Mohrman et. al. (1989) summarize the debate, contrasting the deterministic, Darwinian ‘population ecology’ theory of organizations (often attributed to Hannan and Freeman, 1977), with a number of other theories which admit various degrees of managerial choice, including the ‘strategic choice’ theory described by Child (1972). The conceptualization, by managers or researchers, of organizational change in terms of *projects* clearly assumes a position towards the voluntarist end of this ‘choice’ spectrum. The implications of this assumption, that organizational change may be planned and implemented as a project, are embodied in the definitions and descriptions of project management described in Section 2.2.1. They assume that the project manager of change is, to some extent at least, capable of controlling the project environment.

The literature suggests that the validity of this assumption depends on the nature of the change. Much research into processes of organizational change has concerned *strategic* change, characterized by long-term perspective and organization-wide impact (Johnson and Scholes, 1989). Mintzberg’s (1978) description of strategy as ‘a pattern in a stream of decisions’ conveys the essence of two salient issues relating to strategy and its implementation. First, if strategy is the relatively long-term *pattern* then the discrete *decisions* which make up that pattern are not, in themselves, strategy. Second, the pattern is not necessarily planned in advance, but may be at least partly unintended or emergent.

Whether the distinction between strategic change and non-strategic change is relevant in the context of managerial intervention in change initiatives is questionable, since, as a result of its emergent nature, strategic change may only be identified as such after it has happened (Mintzberg, 1989). Nevertheless, the impact of a planned managerial intervention in the face of external, environmental forces for change is related to the scale and nature of intended change (Adler and Shenhar, 1990). Mohrman et. al. (1989) identify three dimensions determining difficulty: the depth of change, the size of the organization and the pervasiveness of change. There is an intuitive logic in the notion that outcomes of major programmes of long-term organizational change are more likely to be distorted over time to a greater extent by unintended or unpredictable influences than those of minor, short-term projects of change.

Quinn’s (1980) notion of the process of organizational change as *logical incrementalism* provides a helpful perspective from which to delimit intended projects of change within their broader context of longer-term, emergent strategic change. Quinn’s studies of the reality of strategic change found that,

contrary to widely held beliefs, large scale strategy formulation and implementation was not a formal, rational process, but necessarily arose from the integration of 'strategic subsystems' whose change patterns were incremental and opportunistic. His research confirms that the question is one of the scale or extent of change, the boundaries of rationality being set by the cognitive and process limits of strategic organizational subsystems. Thus the strategy of an organization is the cumulative result of many discrete steps, or incremental decisions or relatively minor projects of change, over time.

2.2.3 Prescriptive models

Following the large scale, emergent nature of strategic change, much attention to organizational change in the literature is not directed at management process. Rather, it is concerned with analyzing external conditions under which certain types or directions of large scale change occur, and how they may lead to survival or extinction, and economic success or failure, at both firm and sector level (Pettigrew, 1987a). This focus is summed up by Ketchen, Thomas and McDaniel's (1996) view that strategic management as a field of study is fundamentally concerned with performance. Pettigrew (1987a) observes the bias in attention in the literature towards prescription and strategy formulation rather than description and implementation that has accompanied this deterministic preoccupation with relating change content and organizational performance to external conditions.

In common with performance-based perspectives of longer-term, environmentally-determined strategic change, many voluntaristic theoretical or empirically-based models of organizational change are focused on universal or contingent prescriptions for the achievement of success. The majority of research into strategic change and into short-term, small scale, incremental change initiatives, where the domain of managerial choice is arguably less illusory or constrained, has been concerned with performance.

Ghoshal and Bartlett (1996), for example, adopt a voluntarist, performance-oriented position, offering a 'blueprint for corporate renewal' based on five years of research into organizational transformation. They found that two important features are evident in successful transformations, and absent in unsuccessful ones. These 'success factors' are, first, there must be a carefully phased approach rather than 'flitting from one fad to another', and second, there must be a focus on behaviour, not just strategies, systems and structures.

Barczac, Smith and Wilemon (1987) also recommend a phased, linear approach, that managers of organizational change understand and follow in sequence four 'key processes': pattern breaking, experimenting, visioning, and bonding and attunement. Dean and Sharfman's (1996) concern for performance

is at the level of the decision. They conducted a longitudinal study of 24 participating firms to discover the effects of procedural rationality and political behaviour on decision making effectiveness. They found that effective decisions - those which had the desired outcomes - were more likely to have been based on a rational process of information collection and analysis, and less likely to have been based on the 'political' self-interest of individuals or groups.

In addition to such *general* models as these some theorists recommend a contingency approach. Further examples of voluntaristic performance-based models include Dunphy and Stace's (1993) behavioural contingency grid, which relates recommended management style to scale of change (see Figure 2.1 below).

Figure 2.1: Dunphy and Stace's (1993) contingency model of corporate change

Style of change management	Collaborative	Type 1: Participative evolution	Type 2: Charismatic transformation		
	Consultative				
	Directive	Type 3: Forced evolution	Type 4: Dictatorial transformation		
	Coercive				
		Fine tune	Incre- mental	Modular	Corporate transform - ation
		Scale of change			

Dunphy and Stace's study, based on interviews with 450 managers in 13 service sector organizations, found that the traditional *universal* Organizational Development (OD) model of change, involving incremental change and a participative approach, was inadequate to describe the diverse reality of approaches. Their contingency model, shown in Figure 2.1, is offered as a way of achieving effective organizational performance. The basis of the model is that managers should adopt a style appropriate to the scale of change rather than being guided solely by personal preferences.

A different contingency approach is taken by Nutt (1987; 1989), who develops a framework for selecting tactics for implementing strategic plans. Nutt's framework focuses on surveyed links between tactics and implementation success rate. A series of questions, presented in decision tree format, include

‘Does implementation exceed the manager’s authority to act?’ and ‘Does a technically sound plan exist?’ The model’s user is thus directed towards one of four tactics, labelled Persuasion, Intervention, Participation and Edict.

Such models are attempts to encapsulate the lessons of success and failure. Boddy and Gunson (1996) observe that the pace of change has become so fast that it becomes increasingly difficult to learn from past successes or failures. Nevertheless, much research in the field of project management continues to be performance-based, relating to the identification of factors leading to project success or failure. Empirically-based enquiries include Morris and Hough’s (1987) case studies of major projects, Katz and Allen’s (1985) survey of perspectives of project performance in relation to organizational structure in research and development projects, and Couillard’s (1995) investigation of the contingent effect of project risk profile on management approach.

Increasingly studies of factors leading to success and failure have been concerned with generalizable aspects of project management in technological organizational innovations. Examples of attempts to crystallize the universal rules of successful project management are seen in the work of Belassi and Tukel (1996), Deutsch (1991), McComb and Smith (1991) and Slevin and Pinto (1987). A typical list of determinants is the latter’s generalized empirically-based ten ‘critical factors in successful project implementation’. The factors, listed in Table 2.3 below, reflect the general emphasis on identifying experts’ perceptions of desired resources and skills, which characterizes the success and failure literature.

Table 2.3: Slevin and Pinto’s (1987) critical success factors

- 1 *Project Mission.* Initial clarity of goals and general directions.
- 2 *Top management support.* Willingness of top management to provide the necessary resources and authority/power for project success.
- 3 *Project Schedule/Plan.* A detailed specification of the individual action steps required for project implementation.
- 4 *Client Consultation.* Communication, consultation and action listening to all impacted parties.
- 5 *Personnel.* Recruitment, selection and training of the necessary personnel for the project team.
- 6 *Technical Tasks.* Availability of the required technology and expertise to accomplish the specific technical action steps.
- 7 *Client Acceptance.* The act of selling the final project to its ultimate intended users.
- 8 *Monitoring and Feedback.* Timely provision of comprehensive control information at each stage in the implementation process.
- 9 *Communication.* The provision of an appropriate network and necessary data to all key actors in the project implementation.

10 *Trouble-Shooting*. Ability to handle unexpected crises and deviations from plan.

Pinto and Prescott (1988) took the investigation a stage further, adding a dynamic dimension. They conducted a further expert survey examining changes in the perceived importance of the ten factors over four stages in the project's life cycle (conceptualization, planning, execution and termination). The survey found significant variations, many of which were predicted and hypothesized by the researchers, for example the importance of mission, top management support and client acceptance at the planning stage.

Some general prescriptive models of change management have also emphasized attention to a sequential, phased approach. Kilmann's (1989) model, for example, has clear links with the traditional project management cycle. The model defines five 'critical stages' in implementing planned change:

- 1 Initiating the programme
 - 2 Diagnosing the problem
 - 3 Scheduling the 'tracks' (culture, management skills, team-building, strategy/structure, reward system)
 - 4 Implementing the tracks
 - 5 Evaluating the results
- (Kilmann, 1989: 7)

Some texts go further than hinting at project life cycle approaches. Explicit acknowledgement that project management may be used for the management of organizational change, strategic or otherwise, appears in some texts on the implementation of strategy and organizational change. Bowman and Asch (1987) present an illustration of project management techniques applied to strategy implementation which includes a brief selection of simple project management ideas. These include allocating responsibility and accountability for success, identifying specific actions and milestones, and monitoring progress. Grundy (1993) acknowledges the advantages of the project management approach to the implementation of organizational change. He states that:

project management provides powerful infrastructure to the change process which enables teams to mobilize for change far more effectively and efficiently than is feasible purely within functional and hierarchical structures. (Grundy, 1993: 96)

He lists the benefits of using a project management approach for organizational change, asserting that 'not to have access to a well-bedded-in project management process is a major competitive handicap'. He also identifies three pitfalls to be avoided:

The specific change is seen in isolation and unlinked to other activities or areas of change.

The process becomes weighed down with too much control bureaucracy.

Project management is not seen as fitting the organizational paradigm and may be resisted. (Grundy, 1993: 95)

A further structural argument for project management relates to the linking of the objectives of organizational innovations with the post-bureaucratic ideals described in Section 2.1. Romme (1996), for example, argues that both hierarchy and teamwork are necessary for large organizations in which project teams are the key learning unit. In the team novel information is absorbed and produced; in the hierarchy the learning results are processed and stored. Pellegrinelli and Bowman (1994: 125) recognize the potential problems of achieving de-bureaucratization by using 'the organization's existing systems and structures, its 'status quo' to change the status quo'. They assert that, because project management works outside the existing organizational norms, it is superior to conventional functionally-based approaches to managing change.

Theories of change management have of course been developed from many other perspectives than the rationalistic approach implied by survey-based generalizations and embodied in linear life cycles. Some perspectives offer contrasting alternatives to the rational-linear view. Morgan (1986) describes the advantages and disadvantages of studying organizations from each of a variety of contrasting conceptual metaphors including machines, organisms, brains, cultures, political systems and instruments of domination.

Other multiple conceptions are aimed at building on or complementing the rational-linear model. Borum and Christiansen (1993), for example, analyzed the implementation of a formal project management system from three perspectives derived from the literature, each of which was able to throw light on possible reasons for failure. The rational *administrative* perspective, derived from project management literature, explained failure through unclear goals or inappropriate formal structure. The *political process* perspective, based on stakeholder analysis, explained failure through resistance to change. The *network process* perspective, based on relations between organizational actors, explained failure through lack of cognitive and behavioural coupling.

Others, including Buchanan and Boddy (1992), whose work will be explored in the next section, have built on the use of simultaneous multiple perspectives to understand the complexities of project management process.

Whether one adopts contrasting single perspectives or combined multiple perspectives there is widespread appreciation of the inadequacy of purely rational

models to describe organizational change, whether linked to project management or not. A decade ago Johnson (1987) expressed the view that it was no longer necessary for researchers to concentrate on questions concerned with demonstrating the inadequacy of rational models as descriptions of process. The naive view of the management of projects as the simple application of a set of techniques has long disappeared from all but the most rudimentary project management texts. Views of project management have matured, such that it may be reasonable to assume that both advocates and applicants of a project approach to the implementation of organizational change do not simply mean rational-linearity.

In the face of all these models and formulae for success what, then, is the practical perception and function of *projects* of organizational change? Although longer term strategic change may be the result of an uncertain, emergent, iterative process (Pettigrew and Whipp, 1991), managers nevertheless plan and attempt to implement change initiatives - even those intended to change what Gersick (1991) describes as the organization's 'deep structure' - as if they were projects (Lundin, 1990). They are encouraged to use a project approach by some branches of a literature that is driven largely by the desire to develop prescriptive models for success. Because of the focus on performance, at industry, organization and project level, there is an inadequate understanding of the ways in which managers actually conceive projects of change and their management.

The extent to which managers adhere to a rational-linear conceptualization of change management based on managerial choice and control is not clearly understood. It is reasonable to suppose that the meanings and interpretations attached by managers of change to projects and project management include subtleties derived from their individual experiences and from other ways of describing the process of change. The study of managers' perspectives of projects of change offers opportunities to clarify and understand the function of projects and project management in relation to organizational change.

2.3 The context of change

In Section 2.2 a conceptual distinction was made between the *content*, or scope, of a project of organizational change and the management *process* by which a project is conceived and implemented. It was argued that an exploration of the meanings attached by change project managers to such projects and their voluntaristic management offers opportunities for improved understanding of actual processes. The literature on the management of change suggests that contemporary meanings attached by managers of change to projects may not be limited to simple linear interpretations of project management based on rationality and choice. They are likely to include the complexities of other perspectives.

In this section the concept of project *context* is discussed. It is first argued that the management process of any project will be determined by a complex set of contextual factors. Several areas of potential mismatch are identified between traditional project management approaches and the context of their application in projects of organizational change. This reinforces the need for studies of the complex reality of change project management process which take account of context. The established orthodoxy of a contextual perspective of strategic change, developed in Pettigrew's work, is outlined. Shortcomings of Pettigrew's analysis when applied to the management of projects of change, identified and pursued in the work of Buchanan and Boddy (1992), are described.

It is concluded that the nature of project context in the literature is unclear, and that studies of change management should take account not only of contextual variations arising from the nature of a project and its immediate organizational circumstances, but also of the longer term characteristics of the organization in its environment. Building on previous work, research opportunities allowing as full a range of contextual influences as possible to enter the domain of the study are identified.

2.3.1 Organizational change project management

Section 2.2 demonstrated how project management literature shows a belief in the generic, transferable nature of the fundamental principles of project management, reinforced by generalized studies of 'success factors'. At a certain level, by definition, this belief must be justified. If projects are to be managed, that means project management. However, there can be no single generic model of project management process. Many different models are possible, with widely varying degrees of rationality. Even for a single project the level of definition and control which is applied at each stage in the project's life-cycle presents delicate choices. The project management processes which are most appropriate in any given situation will depend on many factors, including the characteristics of the project,

the individuals involved, the organization in which the project is performed and the environment within which the organization is operating.

At a basic level, the very concept of *managing projects* implies some degree of embodiment of the key tenets of the discipline, such as the concept of the project having a finite life cycle, and that of the project manager as the single point of integrative responsibility. Immediately beyond these most fundamental concepts lie complex dependencies on context. An examination of the basic principles and techniques of project management in relation to popular beliefs, explored in Sections 2.1 and 2.2, about the use of projects for achieving and sustaining organizational flexibility, reveals a number of basic incongruities between the two doctrines. In the literature there is little acknowledgement of this mismatch, an exception being Cooke-Davies. Having identified over-expectations of 'project management' by business leaders he blames the project management community for inadvertently making the problem worse by making 'exaggerated or imprecise claims for what project management has to offer in the field of organizational change' (Cooke-Davies, 1994: 165).

Five examples of major disparity may be identified:

- 1 **Procedures:** Some of the most powerful techniques to have been developed in the name of project management have been procedures for maintaining quality standards and for ensuring that, as far as possible, the common causes of project failure, such as poor definition or inadequate sponsorship, are avoided. The formalization of project management processes has become an important part of the discipline of project management. It has resulted in the publication of many structured project management models or 'methodologies'. Perhaps the best known of these in the UK is PRINCE (PProjects In a Controlled Environment), which was originally developed as an administrative framework for public sector management information systems development projects. PRINCE and its rivals are now enjoying considerable success in a growing number of public and private sector project domains, and are big business for the growing army of project management consultants who are employed installing them in companies and training staff in their use.

It is not surprising that procedures and project management go together. Project management started life as a branch of management science or operations research (OR). The basis of OR is that different *forms* of management problem exist (queueing problems, inventory problems, decision problems, scheduling problems) and that in practice any difference from the general form is merely a matter of detail. This is the underlying philosophy of project management's 'methodologies'. Arguing that OR is irrelevant, Checkland observes that:

The problem is usually perceived as such because of the content detail which makes it unique rather than because of the form that makes it general. (Checkland, 1981: 74)

This reasoning could be extended to the idea that attempts to proceduralize projects, using PRINCE and the like, are futile, since projects are characterized by uniqueness and uncertainty. A more balanced view would be that, if a company's projects are similar, then general procedures are more likely to be of value than if the projects are widely different, with uncertain goals and methods, as organizational change projects are likely to be (Turner and Cochrane, 1993).

The idea of the undesirability and worthlessness of administrative procedures in general has been expressed by others, who argue that 'prescribed systems of management are seldom transferable' (Harvey-Jones, 1988: 27). Formal systems and procedures which are designed in all good faith to avoid the repetition of past mistakes are stifling and anyway a waste of time because the old problems will be replaced by new problems (Peters and Waterman, 1982). In over-structured organizations, when new problems arise there can be a tendency to ignore them because there are no procedures to deal with them (Morgan, 1986). In these ways project management's 'methodologies' sit uncomfortably with the new creed.

- 2 **Planning:** Planning is central to project management, the aim of which is to achieve a defined objective within defined temporal and financial constraints. The sophisticated computer-based multi-resource scheduling systems which are synonymous with the modern conception and practice of project management have evolved from this ideal. Yet Kanter (1989: 205) stresses that, in the new flexible organization which allows technical and organizational innovation, 'project teams need to work unencumbered by formal plans'. Peters (1987: 196) states that one of the root causes of the failure of large firms to keep up with their smaller counterparts is over-dependence on 'ponderous planning systems and Big Projects'.
- 3 **Multi-project resource allocation:** Most projects in organizations are interdependent. They have related objectives and share resources with other projects (Turner and Speiser, 1992). The need for project management systems solutions for monitoring and controlling the allocation of resources in a multi-project or programme environment has long been a concern of the project management profession. The design of such systems has often been based on the over-simplified concept that top management prioritize projects and scarce resources are allocated accordingly. Again in the context of innovation, Peters and Waterman

(1982) condemn this doctrine as bureaucratic. They argue in favour an internal 'market forces' system, whereby projects are encouraged to compete for resources. In this way resources are attracted to success, thereby reinforcing it. Kanter (1989: 74-82) opposes this idea of 'in-house competition'. Citing research by social psychologists into the effects of competition on performance and productivity, she argues that internal competition is destructive and undermines goal achievement. Platje and Seidel (1993) describe how the multi-project resource allocation process forces management into a vicious circle of increasing bureaucracy, rigidity and demotivation which is reinforced, not solved, by large information systems. Morgan (1986) supports the view that, in general, information processing systems reinforce bureaucratic principles.

- 4 **Control:** Central to project management is the planning/execution/control cycle. The role of the project manager is often defined in terms of 'classical' definitions of the role of the manager to 'plan, organize, staff, evaluate, direct, control and lead the project from point of inception to final completion' (Archibald, 1976: 35). Mintzberg (1973) contends that the 'classical' school of thought which emphasises planning and control, has little use in practice. Senge (1990) states that the role of managers is changing. He asserts that they should give up the old dogma of planning, organizing and controlling, and should concentrate instead on creating the conditions in which people can lead enriching lives. Kanter (1989: 158) points out the inappropriateness of a 'brisk, no-nonsense, task-oriented' management style in a team environment which should emphasise the importance of trust.

There is evidence that achieving the balance between excessive control and insufficient control in a multi-project innovation environment is problematic. Benghozi (1990) researched new product innovation projects in French Telecom. He found that the 'administrative adhocracy' characterized by an organic, decentralised structure with automated control, as envisaged by Mintzberg (1979a), works with one-off innovations but is too unstructured for controlling multiple projects for new ranges of products.

- 5 **Focus on events:** The central project management scheduling techniques, PERT and CPM, evolved from a need for the systematic evaluation of the relationship between activities and *events* (Morris, 1994). For this reason earliest and latest event times and milestone events are central to project scheduling, and events provide natural focal points for people involved in projects. For Senge (1990: 21), however, a 'fixation on events' is one of the 'seven learning disabilities' which prevent the existence of the 'learning organization'. Senge argues that if people's thinking is dominated

by short-term events, generative learning cannot be sustained and reactive management will prevail.

Further examples of the problems of projects and the mismatch between formal aspects of project management and the creed of flexibility and teamwork can be drawn from the literature. They include: project teams should set their own performance criteria (Meyer, 1994); resistance to change is caused by commitment to a project (Grieco and Whipp, 1991); task-oriented organizations focus on individual parts at the expense of the whole (Critchley and Casey, 1989). These examples suggest that management processes in projects of organizational change are likely to differ significantly from the management processes of conventional major projects.

2.3.2 Contextual studies of project management process

The potential areas of disparity between conventional approaches to project management and their application to projects of organizational change identified in Section 2.3.1 emphasize the importance of an awareness of context and its effect on management process. In the field of strategic management the rich potential for understanding offered by a perspective which is able to focus on the content, process and context of change has been established in the influential work of Pettigrew (see for example Pettigrew, 1987a; 1987b; Pettigrew and Whipp, 1991).

Pettigrew's perspective distinguishes external from internal context. External, or outer, context refers to the economic, competitive, political, social and technological environment within which an organization operates. Internal, or inner, context refers to the structural, cultural and political environment inside the organization. Pettigrew (1987b) argues that a broad analytical approach to the study of change, which takes account of both these components of context, as well as content and process, has important benefits. These include the possibility of answering questions about the why, how and what of change at different levels of analysis, including sector as well as firm, and in relation to other agencies.

The perspective is described by Laughlin (1991) as 'the new orthodoxy' in change literature. Pettigrew's argument for the need to focus simultaneously on the what (content), why (context) and how (process) of strategic change has been expressed as follows:

Change processes can only be studied against a background of structure or relative constancy, and... a crucial feature of contextualist analysis is that processes are constrained by structures and at the same time shape structures. (Pettigrew, 1987b: 656)

The content/process/context framework is thus able to emphasize the historical and dynamic interrelationship between the three constructs. It is able to take account of the inevitable analytical complication, identified in Section 2.2, that projects of organizational change are intended to change the structural context within which they are enacted.

For researchers of projects of organizational change the potential theoretical richness of Pettigrew's analytical approach has been observed by Buchanan and Boddy (1992). Buchanan and Boddy also point out the weaknesses of the approach which arise from its inherent complexity and emphasis on long term, large scale strategic change and which lead to Pettigrew's analysis necessarily stopping short of offering practical advice to managers of change.

Buchanan and Boddy's own research addresses this shortfall by exploring the relationship between the role of the organizational change project manager and the context of the change (Buchanan, 1991; Buchanan and Boddy, 1992). They identify from the literature three 'agendas' which place demands on the project manager.

- 1 The content agenda (demanding technical expertise);
- 2 The control agenda (demanding planning and control expertise);
- 3 The process agenda (demanding expertise in handling political and cultural issues).

Buchanan and Boddy's research explores how the context of a project affects the project managers' attention to the three agendas. A two-stage design is used, with audio-diaries and a national questionnaire survey. The study identifies three key dimensions of context as follows:

- 1 Interlocking (interdependencies on other departments and organizations)
- 2 Shifting sands (changes in context)
- 3 Ownership (unclear responsibility for project management.)

Two extreme contexts, representing high and low project manager vulnerability, gave rise to different priorities. The characteristics of the two extremes are shown in Table 2.4.

Table 2.4: Two extreme contexts (Buchanan, 1991: 130)

High vulnerability context	Low vulnerability context
Strategic changes	Operational changes
Rapid change, quick results	Slow change, slow results
Significant resource commitment	Few extra resources needed
Disinterested top management	Supportive top managers
Unrealistic top management expectations	Realistic top management expectations
Fickle support	Solid support
Uncertain means	Certainty of means
Complex interdependencies	Few interdependencies
Dependent on third parties	Independent
Multiple ‘ripples’	Self-contained
Conflicting perceptions	Shared views
Multipurpose changes	Single-function systems
Unstable goals	Stable goals
Confused responsibilities for process and outcomes	Clear ownership of process and outcomes

In low vulnerability contexts the typical order of project managers’ priorities for the three agendas was found to be (1) content, (2) control and (3) process. In high vulnerability contexts the three were reversed. By highlighting the difference in demands placed on the project manager in different settings the research was thus able to extend the contextualist approach to provide a comprehensible model and practical advice about the selection and required expertise of project managers in different contexts.

In a doctoral project exploring change project management processes three significant opportunities to build on Buchanan and Boddy’s work may be identified. First, Table 2.4 confirms the importance of the concerns, expectations and actions of senior managers. The critical role of senior management in corporate transformation has been established and emphasized by others (see for example Fitzgerald, 1988; Vogt and Griffith, 1988). It is often assumed in the literature that the role of the project manager in relation to that of the project sponsor and other senior managers is clear cut. The project manager is there to manage the project on a day-to-day basis while the sponsor provides resources, guidance and support (see for example Spühler and Biagini, 1990). Experience shows that this is not necessarily the case, particularly when the project has a low technical content in relation to the level of structural or cultural change being pursued. In practice there is likely to be considerable overlap between the two roles, and of those of other organizational members who have significant project responsibilities. Spühler and Biagini (1990) define the sponsor’s role as nine ‘duties’, including project definition and prioritization, resource commitment

approval and project manager support. Spühler and Biagini's observations confirm that sponsors frequently conform badly to their theoretical stereotypes, either overstepping their assumed role by intervening in project details or not fulfilling their duties. Buchanan and Boddy's research bears out the importance and the complexity of the sponsor's actual role, with definition of ownership of project outcomes being one of the elements of Table 2.4. For this reason the range of key informants in change management research should include not only the project manager but also others with significant project management responsibilities.

The second way in which the perspectives developed in Buchanan and Boddy's study may be extended for the benefit of greater understanding of change management processes is to explore further the characteristics of the wider organizational and environmental context within which the project is being managed, and to examine the effect of those characteristics on management process. Following Pettigrew's broad notion of external and internal context, potentially important and interesting contextual variations may be direct determinants of management processes. These include both sector-level and organization-level characteristics such as public/private sector, service/manufacturing sector, the organization's ownership and funding, its membership of an international group of companies, and the extent to which it undertakes projects as part of its mainstream business.

Third, in Buchanan and Boddy's work the control agenda is separated, at the theoretical level, from the process agenda. In Section 2.2 it was suggested that the meanings attached to projects and project management by managers of organizational change are likely to include elements from both agendas. Perceptions of the traditional, rational-linear control agenda are likely to be subtly augmented by the political and cultural perspectives associated with the process agenda rather than being held as distinct. By adopting an approach which allows exploration of managers' meanings of the totality of project management the complexity of the relationships between the two agendas may be explored.

2.4 Conclusions

The purpose of this chapter has been to explore contemporary meanings of the management of projects of organizational change. A review of literature has shown that the phenomenon is important but that its processes are not well-understood. Potentially fruitful opportunities for exploratory research were identified. This final section summarizes the argument developed in the chapter and concludes with two open-ended research questions.

2.4.1 Summary of literature review

The main points which can be drawn from this review of literature are:

- 1 **Organizational change is endemic and of increasing concern to managers.** Organizations are subject to increasing pressure for change. Intensifying competition, globalization, the changing expectations of stakeholders, technological developments, changes in legal context and managerial fashion combine to shape the increasingly inauspicious environment in which managers must operate. The aggregate of organizational reactions to these forces is reflected in the topics of the best-selling management writers, whose popularity is an indication of heightened managerial concern. Popular themes, including downsizing, co-operation, delayering, organizational learning, innovation, empowerment and the use of cross-functional teams, represent a closely related blend of aspirations, solutions and directions of change.
- 2 **The application of ‘project management’ is spreading to new settings and new project types, including organizational change initiatives.** Traditional conceptions of projects and project management emphasized the rational application of principles and techniques for managing technically and organizationally complex change through a planned life cycle. Since the start of development of the modern discipline in the 1950s application of the project approach to managing complex change has spread to a broad base of industrial and commercial sectors and a growing range of project types, including technical and administrative organizational change. There is widespread interest in the literature in the broadening conception of project management but so far little empirical research into the forms of the phenomenon in its newer applications.
- 3 **Much research into organizational change emphasizes large-scale deterministic strategic change and organizational performance.** Strategic management literature shows that the extent to which managerial choice plays a part in organizational change depends partly

on the scale of contemplated change. Generally, smaller increments of intended managerial response to environmental forces make up the long-term emergent aggregate of strategy. There is an acknowledged emphasis of research attention to environmental rather than managerial determinants of strategic processes, and to the relationships of longer term processes with organizational performance and survival.

- 4 **Research on the voluntaristic management of projects of organizational change focuses on performance and prescriptions for success.** Encouraged by performance-based literature and by arguments emphasizing the structural compatibility of the project approach with the non-bureaucratic aims of many change initiatives there is a broad acceptance that such initiatives should be conceived and managed as projects. The project management literature shows that, although the trends towards the use of a project approach to the management of organizational change is recognized as important, it is ill-understood and is receiving comparatively little attention in the form of empirical research into the practice of the management of organizational change projects. In project management literature and in literature on the management of change there is a similar focus on performance. Much empirical research is aimed at the generalization of determinants of performance and the production of universal or contingent prescriptive models for managerial success.
- 5 **Traditional conceptions of projects and project management are broadening, but their newer meanings are not understood.** Despite the predominant emphasis in prescriptive literature of sequential, phased approaches to the management of change it has long been accepted that so-called rational-linear models are inadequate either to describe or to prescribe managerial processes. There is widespread adoption of multiple theoretical conceptions which emphasize not only linear approaches but also political and cultural perspectives. This suggests that managers' understanding of project management in the context of organizational change is likely to have outpaced the literature on this novel and complex topic, a literature rooted in its recent traditional past. There is a need for research into the ways in which managers understand and use projects and project management as a process of change.
- 6 **It may be argued that some of the established principles and techniques of project management are unsuitable in the context of organizational change.** At a fundamental level the principles and concepts of project management are considered generic, and this is borne out by project management literature. Immediately beyond the simple idea of the project approach, however, there is acceptance that each

specific model of project management will be strongly dependent on context, including not only the changing characteristics of the project but also other features of the organization's internal and external environment. There are many ways in which traditional project management approaches match poorly the needs of projects of organizational change, but there is little understanding of how managers of such projects perceive or deal with these anomalies.

- 7 **There are several ways in which a contextual perspective of organizational change project management could be further explored.** Some empirical research has combined the content/process/context analytical perspective, which has been applied so widely in the field of strategic change, with the project management approach. One such enquiry has resulted in a model of the project management of organizational change which is accessible to managers and which allows the identification of the competencies likely to be required by change agents in different contexts. Three opportunities to build on the tradition of context-bound project management research are identified. First, managerial interpretations could be extended to include the perspectives not only of project managers but also of other important organizational actors including project sponsors. Second, the possibility of overlap and inter-relationship between control and political agendas could be explored. Third, comparative analysis which is able to take account of differences in industry context could be undertaken.

2.4.2 Research questions, terminology and aims of thesis

The final section of this chapter sets out the research questions, defines the key terms, and makes explicit the aims of the thesis.

Research questions

Building on the findings and assumptions discussed in this chapter two research questions are adopted for the study.

- 1 *What processes are employed by drivers of projects of organizational change?*
- 2 *How are those processes determined by a project's context?*

The questions are deliberately open-ended, and are selected for their potential for maximizing opportunities for the study to release potential new research directions.

Terminology

At this point it is appropriate to clarify certain aspects of terminology expressed by the questions.

Process. In strategy process literature a common meaning of process is ‘a sequence of events which describes how things change over time’ (Pettigrew, 1992: 7). In the field of operations management, and in the growing body of literature on ‘business process re-engineering’, process is generally viewed in terms of the transformation of inputs into outputs. The processual approach adopted in this research uses a meaning which differs from both these views. The perspective of process which underlies the analysis in this study is *management process*, conceived as the actions and intentions of managers who drive planned organizational change.

Projects of organizational change and project management process. Because the central concern of this study is management process rather than the content of change or its success or failure there has been an implicit need to separate the content of the projects studied from the processes by which they were managed. The following definitions, refined over the course of the study, make the distinction:

A *project of organizational change* is a series of actions legitimated and implemented by or on behalf of one or more members of the top management team with the purpose of bringing about a preconceived and pre-articulated structural and cultural change. This is the ‘what’.

Having decided to proceed with the implementation of the project, and having planned, to a greater or lesser extent, the series of actions, the *management process* is the adopted approach to the implementation of its scope. This is the ‘how’.

The need to make such a distinction between projects and their management is central to the study, and to the conceptual framework for the analytical process which will be explained in Chapter 3. The problematic nature of making a clear-cut conceptual distinction, and its partial resolution in this study by appealing to the dimension of *level*, is discussed in Chapter 9.

Change drivers. Ottaway (1983) presents a historical review of the term *change agent*, tracing the use of the term from its original conceptualization as ‘outside agent’ by Lewin (1952) to its more recent uses in behavioural science literature which make less of the insider/outsider distinction. Concluding his review of ‘35 reports of defining and research on change agents’, Ottaway presents a taxonomy of change agents which addresses their order of appearance in the change life cycle, their tasks and their characteristics. The taxonomy consists of:

- 1 Change generators
 - (a) Key change agents
 - (b) Generators
 - (c) Patrons
 - (d) Defenders
 - 2 Change Implementors
 - (e) External Implementors
 - (f) External/Internal Implementors
 - (g) Internal Implementors
 - 3 Change Adopters
 - (h) Early Adopters
 - (i) Maintainers
 - (j) Users
- (Ottaway, 1983: 375-376)

Here, the unit of analysis in a case study of a project is the set of change drivers. Borrowing from Ottaway’s taxonomy, and adopting notions of project management and sponsorship described in Section 2.3.2, the meaning of change driver specifically excludes External Implementors (typically consultants, whose use is viewed as a key management process) and all three classes of change Adopters (seen as the subjects or recipients of change). It also excludes patrons

and defenders, unless they are active drivers of change. The term *change drivers* was defined in Section 1.2.1 as ‘the set of individual managers identified within the organization as having been responsible for conceiving and implementing the project’, with the members of a ‘set’ being determined from the change drivers’ own observations. The obvious potentially problematic aspect of this definition arises from the possibility that different sets of individuals may be named by different members of the set. It will be seen in the presentation of the case studies that this phenomenon does indeed arise, and that its occurrence is itself an important component of management process. The development of one of the key elements of management process as *role definition*, defined as ‘the clarity of definition of the respective project management roles and responsibilities of the change drivers and their delegates’, reflects this issue.

Context. The final concept appearing in the research questions and requiring clarification is context. The lack of clarity surrounding the term in the literature provides an opportunity to extend more general theories of context in change literature. Apart from Pettigrew’s (1987a) appealing, if broad, separation of context into inner and outer, other more or less vague conceptualizations of context exist. These include Burns and Stalker’s (1961) distinction between the conditions giving rise to mechanistically and organismically structured organizations, and Buchanan and Boddy’s (1992) conception of context as high or low ‘vulnerability’. By orienting the lens of the researcher towards specific organizational characteristics this study aims to bring into focus the fuzzy contextual backdrop typified in change management and organizational development literature by, for example, Carnall’s (1995) studies of managerial power and organizational politics, in which the context is simply ‘change’.

Aims of the thesis

Up to this point the aims of the thesis have been to provide, in Chapter 1, an overview of the origins, scope, approach and findings of the study, and to review, in Chapter 2, relevant areas of literature in order to establish the research questions and to clarify their terminology in relation to published work. The aims of the rest of the thesis may be expressed in terms of what it is hoped the reader will learn. The specific objectives of the thesis are to provide answers to the following questions.

- 1 How can a researcher build theories of management process in context from qualitative data using the constant comparison approach and a simple conceptual framework?
- 2 What forces and directions of change are prominent in an NHS Trust hospital, in a newspaper group, in a multi-national construction contractor, and in a low-technology manufacturing environment?

- 3 What case-specific and general choices are faced by change drivers in the way they approach the implementation of planned change?
- 4 How could the concept of personal control be dimensionalized and used to analyze and understand the cognitive processes which mediate between environmental stimulus and managerial response?
- 5 What specific features of organizations and their sectors attract the scarce attention of change drivers, and how can these be expressed as a set of generic contextual characteristics?
- 6 What is the general relationship between the three core constructs of context, personal control and management process?
- 7 How can an integrated model of context/personal control/management process be applied as an analytical tool by practicing change drivers to enhance their personal control over their changing environment?

3 RESEARCH METHODOLOGY

This chapter has three purposes. First, it puts forward an argument for a methodological approach which fits the overall research aim, expressed in Chapter 1, and the research questions, set out at the end of Chapter 2. The second purpose is to build on that methodological approach to develop a suitable research design. The third is to explain the data collection, coding and analysis procedures.

The chapter is presented in three sections. Section 3.1 explains how the research questions developed in Chapter 2 are a methodological starting point. Section 3.2 builds on the nature and role of the research questions by addressing a number of methodological issues. These form the basis for a network of choices and assumptions from which conclusions about the foundations of the research design follow. The research design outline is presented in Section 3.3, with general details of the case selection, data collection and data analysis procedures. The section concludes with a discussion of issues of research quality and rigour in relation to the study.

3.1 Introduction

The two overwhelming conclusions of the literature review of the project management of organizational change presented in Chapter 2 were, first, that the management of projects of organizational change is an important and under-researched topic, and second, that approaches to change management are strongly context-dependent.

One of the issues which will be discussed in this chapter is the respective roles of lay language and researcher-defined constructs. It is clear that managers' perceptions of projects and their management are relevant in attempts to understand management processes of projects of change, but to what extent, if at all, should concepts and variables be pre-defined by researchers? Silverman (1985) warns that *prior* definition by researchers of concepts and hypotheses may divert attention away from participants' meanings. However, Silverman (1993) also warns:

The attempt to define things 'as they are' is doomed to failure. Without *some* perspective, or, at the very least, a set of animating questions, there is nothing to report. Contrary to crude empiricists, the facts *never* speak for themselves. (Silverman, 1993: 36, emphasis in original)

Eisenhardt supports the need for an initial perspective, pointing out the importance of the initial definition, at least in broad terms, of research

questions, without which the researcher would become ‘overwhelmed with data’ (Eisenhardt, 1989: 536). The methodological starting point for this research is that the research will benefit from the articulation of questions. The need for questions, which were posed at the end of Chapter 2, is the first step in a methodological argument which will be further developed in Section 3.2.

3.2 Methodological choices

This section considers a number of further methodological issues which provide the foundations from which the research design may be developed. The need for the researcher to address certain philosophical issues is first outlined in Section 3.2.1. Five central issues are discussed, and conclusions relating to the research design drawn. The appropriateness of a ‘transcendental realist’ perspective is argued in Section 3.2.2, and reinforced in Section 3.2.3 by considering the position in relation to the purpose of the research. In Section 3.2.4 the potential advantages of a theory-building approach are considered. The role of lay language is identified in Section 3.2.5, with the desired relationship between the researcher and the researched clarified in Section 3.2.6. The conclusions of the literature review presented in Chapter 2 and of this discussion of methodological choices are combined and summarized in Section 3.2.7.

3.2.1 The need for choices

Writers on management research, and on social enquiry in general, draw attention to the need for researchers to address certain philosophical choices. Easterby-Smith, Thorpe and Lowe (1991), for example, suggest three reasons why an understanding of philosophical issues is beneficial. First, it helps clarify the research design - what data to collect from where, and how that data can be interpreted to provide good answers to the research questions. Second, it leads to an understanding of the practical limitations of particular approaches. Third, it can enable researchers to develop designs which are outside their experience. Blaikie (1993) describes how the pragmatic matching of research strategies to the nature of a particular research project may be tempered by unconscious preferences arising from ontological assumptions and ideological and religious beliefs and values. Similarly, epistemological assumptions may result from personality factors such as a preference for linearity over flexibility and the attendant possibility of ambiguity. Further, approaches may be directed or constrained by professional norms imposed by the researcher’s discipline or academic institution. Nevertheless, although choice may effectively be reduced in these ways, Blaikie (1993) agrees that, in order to justify a particular research strategy, attention must be given to a range of issues which underlie the researcher’s position on methodology, including notions of how theories are generated and tested.

3.2.2 Ontology and epistemology

Ontological choice has been variously represented as a dichotomy between positivism and phenomenology (Easterby-Smith, Thorpe and Lowe, 1991),

between external reality and the product of individual consciousness (Burrell and Morgan, 1979), between objectivism and subjectivism (Morgan and Smircich, 1980), and between realism and constructivism (Blaikie, 1993).

The polar extremes of each pair are essentially the same:

- (1) Reality exists externally and independently of the observer, and knowledge of reality is obtained by the measurement of its properties using objective methods. The researcher's task is to 'identify causal explanations and fundamental laws' (Easterby-Smith, Thorpe and Lowe, 1991: 23).
- (2) Reality is socially constructed, and consists of individuals' interpretation of their circumstances. Knowledge comes from the penetration by the researcher of the meanings that make up the individuals' views of reality. The researcher's role is to reinterpret and reconstruct those meanings.

For social enquirers, the purely positivist (objectivist, realist) ontology has its origins in the empirical methods of the natural sciences. For positivists, access to reality is via the senses, as opposed to reflective or intuitive processes. Research is conducted in a way which is theory-neutral, objective and without bias. Thus, in the positivist epistemology, knowledge may only be based on observation, which either confirms or falsifies theories.

In its pure form this position is ill-suited for studying the complexity of organizational change projects, their management processes and the relationships of the latter with context. It is inappropriate because neither of these constructs - management process and context - is necessarily observable in an objective way. It is true that some elements of management process or context may be sufficiently predefinable, measurable and accessible by the researcher in the form of objective observation of events and activities, and may be capable of corroboration by archival data. However, quite apart from the obvious incursion of researcher bias in such predefinitions and the fact that managers' own ideas about the processes in which they engage are excluded from the account, this position ignores the possibility that not all organizational processes or contexts are directly observable.

Bhaskar (1975) argues that reality exists in three overlapping domains: the *empirical* - experiences or observed events, the *actual* - events whether observed or not, and the *real* - the underlying tendencies or mechanisms which may in a given situation give rise to events or may lie dormant, being cancelled out by other forces. For this study, adopting a multi-level ontological perspective allows the assumption that processes and contexts are real, and that

while some of their elements are revealed as observable events, some may be accessible only through the subjective accounts of managers and other organizational actors, and still others may only be uncovered through researcher speculation over observed tendencies, demanding further enquiry and verification.

Thus researcher interpretations are ‘hypotheses, in the sense that they are potentially corrigible by further discoveries’ (Outhwaite, 1987: 20). Bhaskar (1975) sums up this ‘transcendental realist’ philosophy of science as follows:

Roughly the theory advanced here is that statements of laws are tendency statements. Tendencies may be possessed unexercised, exercised unrealized, and realized unperceived by men [sic]; they may also be transformed (Bhaskar, 1975:18).

The three domains may be represented as follows (Bhaskar, 1975:13):

	Domain of real	Domain of actual	Domain of empirical
Mechanisms	✓		
Events	✓	✓	
Experiences	✓	✓	✓

Outhwaite provides a simple example of the three domains and the distinctions between them:

My watch has a mechanism in virtue of which it has the power to, as we say, tell the time. But for this to happen there are three main conditions. First, the mechanism must have its causal powers intact: It must not be, for example, ‘broken’. Second, the mechanism must be activated: I must remember to keep my watch wound up and set to the correct time zone. And third, although the watch will, if these conditions are satisfied, ‘tell the time’ 24 hours a day whether or not I observe it, it will only tell *me* the time if I *observe* the *event* of the hands pointing to 11:15, an event produced by a latent structure or *mechanism* (Outhwaite, 1983: 322, emphasis in original).

In this example the *mechanism* is there, whether or not it is activated to produce the *event* of the watch indicating the time, whether or not this is *experienced*. This logic may be extended to the context of research into processes of purposeful, intended projects of organizational change management. The *mechanism* is the existence of external and internal forces or stimuli which, provided they or their effects are attended to, may lead to a purposeful response. Without such attention the mechanism lies dormant. With it, a process is enacted in the form of a series of *events*, whether or not these are

experienced by the researcher. Tsoukas (1989) suggests that, through repeated speculation and enquiry, the researcher's job is to merge the real and the actual domains.

At the other extreme from the purely positivist perspective, the purely phenomenologist (subjectivist, constructivist) ontology takes the position that the reality to be investigated is internal to the individual actors in the research setting. All reality is therefore hidden, requiring a correspondingly subjectivist epistemology which emphasizes the importance of understanding how people construct their relationship with the world. At its extreme, the constructivist position denies or ignores the realist view that 'people and organizations exist as relatively concrete entities', which, as Pugh (1983: 46) has asserted, is a 'necessary assumption for the advancement of knowledge of the functioning of organizations'. However, by relaxing the ontological assumption that the world is a concrete structure which may only be objectively observed, and accepting the relevance of human subjectivity, the researcher effectively accepts the role of human consciousness as a mediator between stimuli (social reality) and responses (human action) (Gill and Johnson, 1991). The philosophical position implied by acceptance of this cognitive view underlies the very existence of management as an academic discipline. The consciousness of managers mediates between the reality they perceive (the mechanisms) and the actions they take (the events), or do not take.

To summarize, the view taken here is that (a) reality exists externally, both to the researcher and to organizational actors, whether or not it is directly observable or realized in the form of experiences or events, and (b) the consciousness of managers determines their response to that reality. This combination implies that neither the purely subjective nor the purely objective extreme is likely to lead to a satisfactory methodological basis for dealing with the subtlety and complexity of change management processes and their relationships with change content and context. The approach will be to use the accounts of managers to access the actual domain and to enable the generation of speculative propositions about possible underlying structures and mechanisms that give rise to phenomena.

3.2.3 Purpose of research

Whether the aim of a research endeavour is described as technical, practical or emancipatory (Stablein, 1996) it could be argued that the ultimate purpose of all formal enquiry into the functioning of organizations is to benefit society. Taking this view implies the notion that improved understanding of organizations will in some way lead to some form of progress other than the purely academic. In turn, this latter premise presupposes the possibility of

‘progress’, or at the very least of limiting decline by updating existing knowledge to meet changed historical circumstances.

Much management research is clearly driven by the often unstated aim of progress through the provision of prescriptive solutions intended to lead to improved managerial effectiveness and increased efficiency or prosperity of organizations and societies. There is often a tacit assumption that the desired output of research is, to borrow Gouldner’s (1970: 491) phrase, ‘knowledge conceived as information’, where what is ‘useful’ is what makes money. This is particularly true in relation to contributions from within the functionalist paradigm, where the emphasis is on prediction and control (Morgan, 1990).

Despite the essentially practical, applied nature of this underlying purpose, Daft and Lewin ponder the apparent practical uselessness of much organization theory, and ask whether the field of organization studies is not irrelevant. They report the lack of relationship in theories of organization between usefulness and validity, observing that ‘the body of knowledge published in [organizational] academic journals has practically no audience in business or government’ (Daft and Lewin, 1990: 1). They suggest that, if progress is to be made, the needs of practitioners must not be ignored.

Silverman (1993) argues that uncritical belief in ‘progress’ in society is dangerous, because even obvious examples of the phenomenon may, on closer examination, reveal themselves to be paradoxical. Further, he asserts:

We should not determine our research topics in accordance with administrative or managerial interests. (Silverman, 1993: 7)

This statement implies a purity of intent which is at odds with the practical needs of managers. Even if it were desirable, however, it may not be so easy for a researcher to stand aloof of managerial interests. Kuhn (1970) has shown that both the choice of research questions and the methods which are used to answer them are heavily influenced by notions of what constitutes ‘acceptable science’. Given that most management research is conducted in a business school context, acceptance of the influence of managerial interests is perhaps inevitable, and should, arguably, be embraced.

Working, then, from the premise that improved knowledge of processes of change in organizations is desirable, one may consider the purpose of a particular piece of research at another level. Blaikie (1993) places research purposes on a continuum which relates broadly to the existing level of understanding of the topic and the pre-existence of theories. From the most basic level of *exploration* of a phenomenon which is not at all well understood, purposes range through *description*, *understanding*, *explanation* and *change* to

evaluation of change. The positivist view is that through description of observed regularities the researcher can make *explanatory* generalizations, within certain defined limits, of relationships between variables. The purpose of the generalizations then becomes prediction. The position taken in this research aligns with that of Bhaskar (1975), for whom the social world cannot be experimentally closed and does not operate according to a set of scientific laws, and therefore predictive certainty is not possible. In the social world, observed regularities can do no more than to express *tendencies* caused by *underlying* generative mechanisms which may or may not be brought into play in a given situation. It is argued that the management processes which are adopted for a particular project in a particular context are generated by tendencies which link those management processes to their context. The exploration and description of processes, and the discovery of those tendencies or underlying mechanisms are the aims of this research.

3.2.4 Theory construction

One of the fundamental methodological issues concerns the respective roles of theory and data. Which comes first? Should data be used to test theories or build them? Should a-priori constructs be used or should a 'clean slate' approach be adopted to allow theoretical flexibility in emerging research areas? Parkhe makes a case that, in organizational research, there is too much emphasis on testing existing theories. He describes the dominant approach in management research as 'theory testing-deductive-objective-nomothetic-quantitative-outsider' (Parkhe, 1993: 236). He asserts that research into organizational processes is 'pre-paradigmatic', that there is no well established research tradition which should claim dominance, and that it is therefore appropriate to build new theories from empirical data, to break out of current conceptual boxes and build new logic. Criticizing the tendency for social enquirers to adopt too readily the dominant research paradigm of natural science, Gouldner (1954) warns that sociology 'may miss a good deal if it tries to be too quantitative too soon'. Daft and Lewin (1990: 2) echo the idea that there is a danger of trivialization 'when convergent thinking overtakes a field before it has matured'. Burrell mocks the very idea that the field of organization theory will ever 'mature' in this sense. He asserts that the pre-paradigmatic status of the field does not mean that it is 'awaiting its normal science phase with bated breath' (Burrell, 1996: 648). This view is implied by Morgan (1986) who argues that the efforts of managers are attempts to meet particular historical circumstances, not the ultimate or most highly developed form.

Eisenhardt (1989) too observes that most empirical studies are of a deductive, hypothesis-testing nature, and lead from theory to data. She calls for greater use of theory-building, inductive case study research in situations where research is

in early stages and existing theories seem inadequate. Mintzberg states that the complexity of organizations calls for exploratory methodologies, adding that researchers have 'paid dearly for an obsession with rigour - too many results have been significant only in the statistical sense of the word' (Mintzberg, 1979b: 583). Swamidass (1991) comments on the unbalanced research emphasis in the field of operations management, with too much deductive research, the aim of which is prescription, and too little descriptive, empirical investigation. He too argues in favour of theory-generating research, both in under-researched topics and in providing new perspectives in over-researched topics.

The general argument expressed by these writers is that too much of management research is deductive and theory-testing, characterized by the premature application of quantitative methods, and not enough is inductive and theory-building, using more qualitative approaches. The literature review described in Chapter 2 confirms the relevance of this view to the subject matter of this research. A theory building approach is adopted, with the integrated processes of data collection, coding and analysis described in Section 3.3 guided by the methods of Glaser and Strauss (1967). The *constant comparative method* of these researchers is adopted, whereby concepts generated in one setting can be progressively explored and evaluated in other settings, enabling a level of generality to be established.

This research takes the stance that even in theory-building mode a researcher must have a starting framework. As Easterby-Smith, Thorpe and Lowe (1991) have argued, 'there is no such thing as presuppositionless research.' Apart from the obvious impossibility of complete theory-neutrality organizational researchers attempting to operate from a 'clean slate' would be 'confronted with a potentially-infinite number of attributes to operationalize' (Downey and Ireland, 1979). Thus it is important to start with a framework (Miles, 1979), with broad constructs specified a-priori (Eisenhardt, 1989), and without regard for discipline boundaries (Pugh, 1983). Following this reasoning a simple conceptual framework was found to be vital in giving direction and rapid advancement to the analytical process. The framework is presented in Section 3.3.

3.2.5 Lay language

Another basic methodological issue is the role of lay language. In a theory building study, what managers have to say about how they manage change is clearly an important source of data, if for no other reason than it allows the possibility of access to domains of reality beyond the immediately observable. However, even among those who do accept that lay language has a role, views differ in three important ways.

First, to what extent should the researcher's 'foreign' concepts be allowed to be imported into the manager's account before it loses its integrity and ceases to be authentic and useful (Blaikie, 1993)? The common answer to this question is that, by gaining the agreement of the organizational actors, the researcher's account is, for this purpose, validated (Gill and Johnson, 1991). Mintzberg (1979b) takes a more 'researcher as expert' view, pointing out that it is the researcher's job to measure or categorize things that are really happening in organizations, and that the researcher should not expect the manager to do the abstracting. This view aligns with the approach of Glaser and Strauss (1967) for whom concepts are not necessarily strictly derived from lay language, but are simply labels constructed by the researcher to organize the data. Thus theories are both acceptable and desirable provided they are plausible and understandable to the managers from whose words they have been developed.

Second, generalization means decontextualization. To what extent is it permissible to go beyond the organizational actor's account to some form of generalization (Blaikie, 1993)? Pugh puts forward the positivist view, stressing that 'generalizable knowledge is based on systematic, comparable and replicative observation and measurement' (Pugh, 1983: 48). For Pugh, therefore, as long as generalization meets these criteria it is permissible. This common ideal, that to generalize beyond one's data is an 'intellectual immorality', is scorned by Mintzberg, who claims that, on the contrary, '*not* generalizing beyond one's data is an intellectual immorality' (Mintzberg, 1979a: 584), since only by doing so can the 'creative leap' be made. This research is not, at least at present, concerned with the discovery of statistically-significant relationships between variables. It cannot therefore depend on adherence to the highly developed rules of the scientific tradition for any claims to generalizability. It is concerned with the generation of theories, within the limits of generalizability defined by the contexts of the study. Following Bryman (1988), cases are generalizable to theoretical propositions rather than to populations or universes.

Third, are lay accounts open to interpretation or correction? Views on this issue range from a straight denial (the position of ethnomethodology) to a claim that social enquirers should be able to give a different account of reality than that presented by social actors (Blaikie, 1993). The approach of this research may be described by Giddens' (1987) notion of 'double hermeneutic', whereby informants' concepts and meanings must first be translated into descriptions, with those descriptions then being further translated into theories.

3.2.6 The researcher and the researched

Views on the desired relationship between the researcher and the researched range from fully detached observer to fully engaged participant. Questions of whether it is possible or desirable for researchers to remain independent of events have ethical and political, as well as methodological aspects (Blaikie, 1993), all of which may affect the choice of research strategy. Easterby-Smith, Thorpe and Lowe (1991) explain how the *action research* strategy has developed as a way of avoiding the problem of whether complete independence can be maintained in organizational research. If the researcher's involvement in a process of organizational change is seen as the best way of learning about the organization the question of independence is irrelevant. Given the nature of this study complete detachment is clearly impossible, but also control over events is limited. Although this is not an action research intervention, it is acknowledged that most managers do not freely give their time to talk to researchers unless they feel they have something to learn from the experience or its outcome. The 'involved' position of Feminism, described by Blaikie (1993) provides a useful position from which partial-involvement studies of organizations such as this may be considered. In this view:

Social scientists should not be detached and impersonal but should use their thoughts, feelings and intuitions as part of the research process. Social research should mediate the experiences of the researcher and the researched; it should facilitate understanding and change in their lives and situations. (Blaikie, 1993: 210-211)

If the aim is progress through improved understanding, therefore, opportunities for researcher and researched to learn at all stages in the research process, not just on the publication of finished findings, should not be denied.

3.2.7 Summary

The theory of organizations, which includes the field of this study, is in an evolutionary stage, and therefore advancement of theory will benefit from research which moves from exploration through description to understanding.

The strategic choices and assumptions which have derived from a review of literature on project management and the management of projects of organizational change (Chapter 2) and from a review of methodological issues (Chapter 3) are listed below.

The literature shows that:

- 1 There is a lack of *empirical case studies* of *projects of organizational change* which allow for the *comparative analysis of processes between industries*.
- 2 There is a need for more studies to be *theory-building* and *interdisciplinary*.

This research is based on the following assumptions:

- 3 Reality exists externally in three overlapping domains, each of which is accessible via different processes: the recording of observable events (the empirical domain), archival data and the subjective accounts of organizational actors' conscious responses to their reality (the actual domain), and creative speculation about underlying tendencies or mechanisms (the real domain) which must be supported by data from the empirical and actual domains or otherwise modified or discarded;
- 4 Improved knowledge of organizational change management processes will ultimately be of potential benefit to society;
- 5 Managerial influence in the selection of the research topic and in the identification of cases is both necessary and desirable;
- 6 A degree of researcher involvement in the change process is inevitable and should be welcomed as an opportunity to facilitate the understanding of both researcher and researched;
- 7 The starting point of theory-building research is a set of research questions. It should be supported by the a-priori specification of broad constructs in a preliminary conceptual framework, but not researcher-imposed detailed variables or connections.

In the next section it will be explained how these conclusions were developed into an operationalizable research design.

3.3 Research design and methods

This section builds on the choices and assumptions of Section 3.2 to develop details of the research design and methods. In Section 3.3.1 it is argued that, for the purposes of this research, the case study approach offers advantages over other strategies. The broad parameters of the research design and considerations of case selection are presented in Section 3.3.2. Issues of data collection are discussed in Section 3.3.3. Details of the data analysis procedures which were developed and refined over the course of the study are described in Section 3.3.4. Finally, in Section 3.3.5 there is a discussion of issues of quality and rigour.

3.3.1 The case study approach

Accepted ways of doing research into organizational processes include experiments, action research, surveys, histories, the analysis of archival information, case studies, and ethnographies (Easterby-Smith, Thorpe and Lowe, 1991; Yin, 1989). Within each approach are various ways of collecting and analysing data. Each strategy has its own inherent strengths and weaknesses. The choice of an appropriate strategy and its development into an operationalized research design will depend on variety of inter-related technical and practical issues.

The research strategy selection process is far from clear cut. Attempts by writers to classify and arrange strategies show that there is considerable overlap between the different approaches and their purposes. Phillips and Pugh's (1987) categorization of approaches into exploratory research, testing-out research or problem-solving research, for example, tends to overlook the possibility that some research designs will contain elements of all three of these types. Yin (1989) points out the common misconception that case studies should be used for exploration, surveys and histories for description and experiments for explanation. He argues that it is wrong to arrange strategies hierarchically according to their purpose in this way, since each approach has been used for all three purposes. Other social enquirers warn that it is not simply a question of selecting and applying a prescribed method. Weick (1989: 519) asserts that theory development is not a mechanistic process, but is 'intuitive, blind, wasteful, serendipitous and creative'. Mills (1959: 20) warns against conceptions of social science 'as a set of bureaucratic techniques which inhibit social enquiry by 'methodological' pretensions'. Morgan (1983) suggests a similar attitude when he points out the danger that excessive preoccupation with labelling and classifying the various research methods can have the effect of constraining or diverting the imagination away from the actual research territory and from 'the logics of engagement that link researcher and researched'.

Nevertheless, a broad classification of approaches is helpful to the extent that it enables the early elimination of unsuitable strategies. In Section 3.2 it was argued that the research questions are concerned with exploration, description and understanding. This implies that a survey approach using researcher-defined constructs would, at least initially, be inappropriate. There is little or no control over events, which rules out experimental and action research strategies. There is a need to focus as far as possible on contemporary events. This would tend to rule out histories, although given the time constraints and the long durations of many projects of change the inevitability of at least partial retrospection and the need to attempt to reconstruct the past must be acknowledged. This broad elimination leaves a narrower selection of defined methods or approaches, including the analysis of archival information, ethnographies and case studies. The problem of classification is further illustrated by the lack of a clear distinction between each of the first two of these approaches and the third, since both archival and ethnographic data may be used in case studies.

Miles and Huberman define a case as ‘a phenomenon occurring in a bounded context’ (1994: 25). Consideration of Yin’s more specific definition tends to confirm the potential suitability of the case study approach for this study:

A case study is an empirical enquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. (Yin, 1989: 23)

The contemporary phenomenon is the process by which a project of organizational change is managed. Its real life context is the project, which is part of the organization, which in turn is part of the organization’s sector or external environment. The boundaries between a project and its organizational setting (which together form the context) and its management process (the phenomenon of interest) will be particularly indistinct in cases of organizational change. Taking the last part of Yin’s definition it may be argued that a case study could include diaries, interviews, archival data and ethnographies.

Other researchers into context-bound processes of organizational change claim that an interdisciplinary case study approach offers attractive advantages over other research strategies. Child and Smith (1987), for example, reason that the dynamic complexity of organizational change and the plurality of possible perspectives from which to study the phenomenon make the case study approach suitable, since:

Other types of investigation are unlikely to furnish sufficient insight into the complex interrelationships between factors

identified by the various contributory theoretical perspectives or to deal with the dynamics involved. (Child and Smith, 1987: 565)

Further support for the case study approach to research into change processes, this time in the context of project management, is provided by Morris and Hough (1987). In a study of factors affecting performance on eight major projects, they chose the case study approach for two reasons. First, it allows a longitudinal perspective, which, as others have argued, is the best way to study change (see for example Pettigrew, 1987b; Van de Ven and Poole, 1990; Pettigrew, Ferlie and McKee, 1992). Second, it does not confine the researchers' attention to a narrow, single-discipline perspective but enables the full complexity of organizational, managerial, political and other dynamics to be appreciated and compared across cases.

3.3.2 Research design

Having selected the case study approach as appropriate to this study it is necessary to define certain broad parameters of the study's design. Yin (1989) lists five important components of a case study research design, considered below.

- 1 **The study's questions.** The research questions, developed in Chapter 2, are concerned with exploring, describing and understanding *what* management processes are enacted and *how* they arise. The *what* question implied by this statement is not concerned with 'how much' or 'how many', but with exploration and the development of theories and propositions for further enquiry. The *how* question is similarly exploratory. These types of question confirm the suitability of the case study approach (see Yin, 1989: 17). The questions themselves form the first important component of the study's design.
- 2 **The study's propositions, if any.** Exploratory studies have a legitimate reason for not having initial propositions, since the development of propositions is the aim of the research. Yin argues, however, that even propositionless exploratory studies should have a purpose, and that instead of propositions the research design should be clear about the study's purpose. Here, the purpose is to develop a plausible classification of the categories of organizational change project management process which is sufficiently robust to be applicable in a variety of contexts, in the sense that extent of employment of each category of process in a particular instance can be understood in relation to its circumstances.

- 3 **The study's unit(s) of analysis.** Yin observes that failure adequately to define exactly what is 'the case' is a problem which has plagued many investigators. Is the primary unit of analysis the individual manager? Is it the decision, or the management process, or the project, or the organization? In a multiple case design, where the aim is cross-case comparability, defining the boundaries of the case is particularly important. Lofland and Lofland (1971) offer a comprehensive list of possible units of sociological analysis including meanings, practices, episodes, encounters, roles, relationships, groups, organizations, settlements, worlds and lifestyles. Given the study's focus on change driver perspectives the unit of analysis is the **group of managers** who were responsible for initiating and driving the project of change (the change drivers). Clearly it is possible that the composition of the group will change over time. There is a further issue that some individuals will perceive a different group of change drivers from others. These considerations need to be taken into account in defining, for the purposes of data collection, which individuals in an organization are the change drivers of a particular project.

The approach taken here is to allow the change drivers themselves to identify the members of their group, with any anomalies or disagreements among them investigated as a phenomenon of interest which is relevant to the study. In addition, in two earlier cases a wider selection of organizational actors is allowed to contribute to the data, in order to see whether this makes possible any substantial additions to the understanding of the management process.

- 4 **The logic linking the data to the propositions.** This component of the research design is concerned with what is to be done after the data have been collected. In the absence of pre-existing propositions (see point 2 above) the component may be considered as the relationship between the research aims, the data and the emerging propositions which will be the output of the research and which will offer the possibility of further investigation. The theory building approach and the use of the constant comparison method is described in detail in Section 3.3.4.
- 5 **The criteria for interpreting the findings.** In quantitative studies the criteria for interpreting findings are highly developed, and are based on well established tests of statistical significance. Such tests are able to conclude, for example, that a particular coincidence of occurrence of two or more variables in a particular sample is unlikely to have happened purely by chance and is likely to have arisen as a result of an inherent correlational relationship between the variables. In qualitative studies such as this, where quantification of variables is not an aim, there

can be no such precise way of setting criteria for interpreting findings. Nevertheless, Yin reasons that an exploratory research design should be clear about the criteria by which the exploration will be judged successful. These criteria are as follows:

- (a) The classification of management processes should as far as possible be mutually exclusive, complete and parsimonious.
- (b) The classification should be capable of describing the management process in a variety of organizational contexts.
- (c) The extent of employment of each component of process at any time should be capable of comparative description (as opposed to absolute measurement).
- (d) The extent of employment of each component of process at any time should be capable of a descriptive relationship with context.
- (e) Each written case study should be understandable, plausible and, ideally, informative, to the organizational actors from whose accounts it was taken.

Having defined the underlying components of the research design, including the unit of analysis, it is necessary to consider a number of technical and practical issues of case selection before beginning the process of data collection. These issues are posed as four questions, discussed below.

- 1 **How many case studies should there be?** Yin (1989) describes how single case designs are appropriate when the case represents a critical opportunity to test a well formulated theory, or when the case is unique or extreme, or when it presents an extraordinary opportunity to study a phenomenon. Multiple case designs, on the other hand, are used for comparing different instances of the same phenomenon, the aim of this study. Yin (1989) distinguishes between the *sampling logic* which is applied to survey designs, wherein statistical significance is related to sample size, and the *replication logic* of multiple case study designs, which is analogous to a series of experiments. With multiple case studies *cross-experiment*, rather than *within-experiment* design and logic is called for.

The question of the ideal number of cases is complex. At the practical level it relates to the time and other resources of the researcher which must be used in a trade off between the depth of analysis made possible by studying fewer cases and the possibility for replication and

theoretical saturation offered by more cases. Yin (1989: 58) describes how researchers should be guided by their 'sense of the complexity of the realm of external validity'. In other words, in relation to this study the less likely it is that the context of a project will affect its management process the more explicitly the relevant conditions of context should be articulated and the more cases should be needed to confirm or disconfirm propositions. In Chapter 2 it was seen that such cross-industry comparisons as exist in the literature suggest that the opposite should be the case. Context-bound variation between cases is expected, and therefore only a few cases should be needed to make explicit the presence or absence of processes, their dimensions, and their links with context.

Another issue which must be addressed as part of the overall question of number of cases is whether the design should be multiple-case *holistic* or multiple case *embedded* (Yin 1989: 46). For the purposes of this study the latter implies studying more than one case in the same organization. To the extent that this is possible it would clearly be a desirable feature of the study, since it allows the researcher to take account of the effect of variations in process arising from the nature of the *project* as well as from the nature of the organization. It is therefore argued that the ideal design should be of the embedded kind.

Taking into account these considerations the initial conception of the research design was to conduct eight case studies in all, with two studies in each of four widely different organizations. Thus contextual considerations from the literature such as private/public sector, service/manufacturing sector could be explored, with the possibility of taking into account variations within an organization arising from differences between specific projects.

- 2 **To what extent should the cases be preselected at the start of the study?** The case selection choice facing a researcher in a multiple case design is, at one extreme, to define in advance every specific organization and every project of change to be studied and to conduct the studies either simultaneously or sequentially. At the other extreme is the alternative of selecting only the first case, which is completed before selecting the second, and so on. This second option has the advantage that important but unforeseen features of each successive case are allowed to steer the course of the study. The data collection is thus controlled by the emerging theory. Miles and Huberman (1994) acknowledge the advantage of such flexibility, but point out that research designs which are too 'loose' can be unfocused and unmanageable. Designs which are too unstructured run the risk of

leading nowhere, particularly when there is no clear conceptual framework. Miles and Huberman suggest that both extremes should be avoided. The approach of this study has been to provide the binding structure of clearly defined questions and a common analytical framework, and to allow the theoretical sampling process to operate within that structure. As will be shown in Chapters 4 to 7 the approach was successful in that, in practice, findings from earlier cases had important consequences for selection of later ones.

There are two practical considerations which anyway limit case preselection. First, the limited resources of a lone researcher are likely to restrict the feasibility of conducting simultaneous multiple case studies. Second, over the course of a two-year programme of fieldwork it would be difficult to negotiate and plan access to organizations more than a few months in advance. The longer term instability of personnel and business plans in any organization is unlikely to allow such a strategy.

- 3 **How should the first case be selected?** During the first year of the research pre-study interviews were conducted with six individual managers at different levels in a variety of organizations with diverse functions and sizes, ranging from 100 to more than 10,000 employees in an organizational unit. Each manager was in some way concerned with the project management of current or proposed organizational change initiatives. The interviewees included a project manager in Midland Bank plc's information systems department, the deputy CEO of Computervision (CAD/CAM software developers), the general manager of BA Engineering, a project manager in National Rivers Authority, the human resources director of Glaxo UK, and a senior officer in Thames Valley Police.

The intended purpose of these interviews was, first, to practice the skill of open-ended interviewing, second, to clarify the aims of the study by directing attention to managers' perceptions of issues of managing projects of change, and third, to help identify the kind of organization which might be suitable for the main part of the study.

As far as case selection issues were concerned the conclusions of the pre-study interviews were:

- (a) There appeared to be no shortage of suitable opportunities for research access. This suggested a degree of flexibility of choice in the selection of research sites without the need to rely purely on opportunistic considerations.

- (b) The change projects in the larger organizations were clearly far more complex and wide-ranging and would require a proportional increase in the number of informants to be interviewed, and in the overall time required for the study, than the smaller organizations, where the projects were relatively straightforward and self-contained.
- (c) The higher up the organizational hierarchy the informants the more information about the change processes they seemed to possess¹.

It was therefore decided to aim the main part of the study at medium-sized organizations or sub-organizations (around 1000 employees) which were involved in projects of organizational change and where access at or near the top level was available. This choice of organization size was intended to ensure that the projects would be neither unmanageably large nor insignificant. These were some of the guiding principles behind the selection of Ealing Hospital NHS Trust as the site for the first studies (see Chapter 4 for further details of how it was selected).

- 4 **How should further cases be selected?** From the outset of the study it was decided that the second and subsequent organizations would be selected for their dissimilarity from the previous cases, guided by the emerging theoretical considerations arising from previous cases, and for their overall similarity of size. The extent to which this policy was successful is explored in the results chapters, Chapters 4 to 7.

3.3.3 Data collection

Case data could include diaries, interviews, archival data and ethnographies, involving either overt or covert observation over time. A longitudinal ethnographic approach is, in theory, particularly attractive, offering depth in an established way of accessing 'the meanings that give form and content to social processes' (Hammersley and Atkinson, 1983: 2). However, because of the need to study multiple cases of change projects, each one of which could span many months and involve several individuals the ethnographic approach was ruled out as infeasible early in the research process.

Diaries offer the significant advantage of a longitudinal approach to participants' perceptions without the need for the researcher's prolonged

¹ Research by Ashburner et. al. (1996) and by Ketchen et. al. (1996) supports this observation.

presence. However, their use was discounted for similar practical reasons. It was felt that it would be unreasonable to expect several groups of senior managers independently or collectively to record their thoughts, either in writing or on audio tape, over a period of months for a doctoral student project.

The main source of data was therefore interviews, supplemented by archival data. Interviews were held in each of the six cases with the individual members of the identified group of change drivers over the course of part of the project. This allowed a certain degree of longitudinality, although it should be made clear that this was not a longitudinal study in the true sense of allowing the data collection period to extend over the full course of each project. The form of the interviews was designed as far as possible to avoid what Gill and Johnson (1991) describe as the constraining of the respondent by the prompts of the interviewer. Prompts were kept to a minimum, and were used simply to probe interesting avenues of thought and to steer the course of the interview if it strayed too far from the subject. To this extent, therefore, the interviewees were allowed to influence the course of the research. Their words not only provided the data of each particular case but also influenced the theoretical sampling process which shaped the choice of later cases.

Detailed information about the processes of gaining research access, selecting respondents and conducting interviews is provided in the introduction to each case study. Generally, however, a preliminary interview was first held with the most senior manager possible in each of the four organizations. In three of the four this was the chief executive. The purpose of the preliminary interviews was to explain the broad purposes of the study, to establish the existence of current or recently completed projects of change as perceived by the informant, to make a preliminary identification of the projects' boundaries and the list of individuals comprising the group of change drivers, and to confirm the possibility of access to interview them. Each change driver was subsequently interviewed one or more times, with the researcher remaining open to the possibility that the identities of further key informants would emerge from the interviews.

All interviews were recorded on audio tape and fully transcribed by the researcher. The tapes were kept for repeated listening to verbal clues such as voice tone and emphasis. There was no reluctance on the part of any of the interviewees to be recorded. It was apparent that, for many managers, being the subject of an open-ended interview was a new and enjoyable experience. Some even expressed thanks at the end of the interview. The tape recorder was not produced immediately at the beginning of the interview, but after the respondent had been responding for one or two minutes to a preliminary 'warm up' question about their background. With this approach, developed in the pre-

study interviews, the tape recorder's introduction and use seemed scarcely noticed.

Further details of the interviewees and the interview process, and of archival data, are given in each of the case studies, presented in Chapters 4 to 7.

3.3.4 Data analysis

Building on the argument developed in Section 3.2.4 (Theory construction) the starting point for data analysis was a simple theoretical framework. Following Pettigrew's (1987a) influential work on strategic change processes the framework consisted of four broad constructs - external and internal context, content and process - which could be used to provide an initial structure for the purpose of data coding. The four constructs have been represented both as the axes of a three-dimensional grid (Pettigrew and Whipp, 1991) or arranged around a triangle, as in Figure 3.1 below (Pettigrew, 1987a; 1987b).

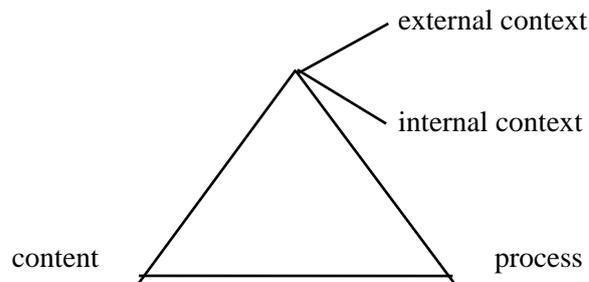


Figure 3.1: Pettigrew's (1987a; 1987b) conceptual framework for analyzing organizational change

A further possible inter-relationship between these underlying constructs was developed which provided an intuitively-appealing initial conceptual framework for development of data. The framework (Figure 3.2) shows a conceptual juxtaposition of the elements as four overlapping domains.

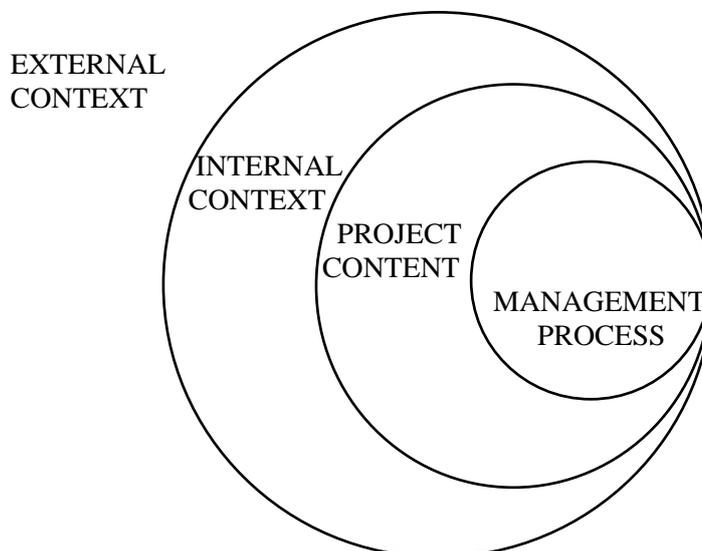


Figure 3.2: An alternative representation of the constructs in Pettigrew's (1987a; 1987b) conceptual framework for analyzing organizational change

In this alternative representation the inner context (the organization) exists within and is part of the outer context (the organization's environment). The change content (the project), exists within and is part of the organization. The management process is part of the project.

The approach which was used to develop from this initial framework to the conclusions of the study was informed by the *constant comparison* approach to generating *grounded theory*. The basis of the method is joint coding and analysis, in four stages (Glaser and Strauss, 1967: 105-113):

- 1 *Comparing incidents applicable to each category.* By comparing each incident with previous incidents in the same category, theoretical properties of the category were generated. An example was the category labelled *formality*, concerned with the formal definition and communication of project plans and controls. Three properties of this category were generated by the constant comparative process. The dimensions of each property reflected the spectrum of formality.

Management process category: formality

<i>Property</i>	<i>Dimensions</i>
level of detail	broad ... detailed
flexibility	flexible ... rigid
pre-definition	emergent ... predetermined

By considering the range of properties and dimensions, the conditions under which they were pronounced or minimized, their major consequences and their relation to other categories, writing memos as thoughts occurred, theoretical properties were developed. It emerged, for example, that one of the reasons for high levels of predetermination was the desire to objectify the project.

- 2 *Integrating categories and their properties.* As the study progressed the focus developed 'from comparing incident with incident to comparing incident with properties of the category that resulted from initial comparisons of incidents' (Glaser and Strauss, 1967: 109). Continuing the *formality* example, later incidents were compared with the property that formality was avoided under certain circumstances, and that willful avoidance was a property which then became integrated into the

analysis. By the end of the study the properties themselves had become integrated. The properties for *formality* were combined into a single property relating simply to its extent of enaction, with avoidance being linked to dimensions of personal control.

- 3 *Delimiting the theory.* As the analysis progressed, what started as a seemingly overwhelming mass of qualitative data became reduced, familiar and manageable. This compaction occurred at both the levels of the theory and the categories.

The theory solidified, as modifications became fewer and fewer and the process of integration progressed. The cross-case analysis took this process to its conclusion as the task became one of accounting for exceptions and building these into the propositions, which were both close to the data and generalized to all cases. Thus two major requirements for theory, *parsimony* of variables and formulation and wide *scope* of applicability (Glaser and Strauss, 1967: 110) were approached.

As theoretical saturation occurred the list of categories and properties was reduced, allowing the analysis to become more focused and selective. Towards the end of the last case it was apparent that further incidents were only adding bulk to the coded data and little to the theory.

- 4 *Writing theory.* The coded data, memos and theory were written in the form of the six case studies, progressively refining the analytical focus. The major themes of the theory were expressed in the propositions.

The constant comparative method has been applied in a variety of research settings. One example, which follows closely their original conception, is Glaser and Strauss's own research on status passage (Glaser and Strauss, 1971). More recent organizational studies have used the approach in a more or less rigid or explicit fashion, including Rothschild-Whitt (1979), Kram and Isabella (1985), Gioia and Chittipeddi (1991), Gersick (1994) and Brown and Eisenhardt (1997). Each of these studies adapts the basic grounded theory constant comparative approach to the researchers' specific purposes, confirming Bogdan and Taylor's (1984) observation that all researchers develop their own ways of analyzing qualitative data.

The position of constant comparison as a general approach in relation to other qualitative methods is made explicit by Glaser and Strauss (1967), and may be summarized as follows:

- 1 Content analysis approaches (quantification of qualitative data).
- 2 No coding, merely inspect data for new properties of theoretical categories. This is the approach of phenomenology as described by Miles and Huberman (1994).
- 3 ***Constant comparison, which combines the explicit coding procedure of content analysis with the style of theory development of phenomenology.***
- 4 Analytic induction, which uses the approach of constant comparison but goes a step further by both generating and testing theories of causes by seeking to account for specific behaviour.

Turner (1981: 226) observes that published studies using the constant comparison approach tend to lack ‘detailed information on exactly *how* qualitative data should be processed in order to develop grounded theory’. This issue is addressed below, with an explicit description of the use of the conceptual framework and the process of data analysis, condensed into a series of eight steps, with examples. Although the process is presented linearly it should be remembered that the entire process was highly iterative and ‘messy’, both within and between cases.

- 1 Interview transcripts were done as soon as possible after each interview to allow the theoretical sampling process to operate within, as well as between, cases. Transcripts were reviewed and all examples of the four core codes of the conceptual framework were entered in the transcript word processor file². The four codes are listed below with examples of data from Case 1.

[EXCON] (External context) ‘... the concept of business planning is relatively new to the health service, but is now a vital and fundamental process in terms of managing in the market.’

[INCON] (Internal context) ‘The culture as it was before was very much a case of widespread delegation upwards of problems...’

[PROJ] (Project) ‘...we have formulated a new set of arrangements which came into place on the first of October...’

[MP] (Management process) ‘... so we brought in a couple of people who had a long track record of working with clinical directors...’

² Use of a proprietary qualitative data analysis software package ‘NUD.IST’, was tried in the early stages of analysis. It was found to place unwanted constrictions on the analytical process and was abandoned in favour of the comparative freedom and flexibility offered by conventional word processing software.

2 Each occurrence of a code was attributed a category which characterized its nature and which closely fitted the data. The coding and categorization scheme was developed and modified until all relevant data from all sources in the case and in previous cases were accounted for. Data categories, including the six core categories of *management process*, were developed as comprehensive and yet parsimonious expressions of each concept, using the following criteria:

- (a) centrality
- (b) frequent appearance in data
- (c) relate easily to other categories
- (d) clear implications for more general theory

An example of an early category from Case 1 was the hospital clinicians' possession of power of veto over management decisions. This internal context category, originally coded [INCON-SUBJECTS-EXISTING POWER] clearly met the criteria.

- 2 Each category was given an operational definition in the form of a specification for putting further instances in the category.
- 3 To aid the process of understanding the relationship between categories chronologies were developed for each project and key events shown on a time-scaled diagram.
- 4 Each specific instance of a category was numbered and summarized in the form of a freehand entry in the appropriate code section of the theoretical framework sketched on a large sheet of paper. Links were traced between instances in different codes. The inverses and opposites of categories were considered, with each instance of core categories (i.e. those related to management process) further coded (+) or (-).
- 5 'Memos' (see Glaser and Strauss, 1967; Miles and Huberman, 1994) were entered into the transcript as they occurred during the process of transcription, coding and categorizing data. Memos were developed supporting or refuting emerging propositions regarding connections or relationships between categories. An example of a passage from one of the final analytical iterations of an interview to which codes, categories, instances and memos have been added is as follows:

I'm married as well, and what happens is my wife starts to write down a list of things I should do, and, you know, there's plumbing, you know, perhaps the radiator's leaking or something... and in the end, the list becomes so long I get so

daunted by it that, you know, I almost lose heart, you know, I feel that she's adding things on the end of the list faster than I'm knocking things off the beginning of the list. I think that if we start to say to people that these are all the things that we're going to do, people will say it's... oh, forget it, you know [KH13 FEELING-COMPETENCE (-) MP-FORMAL (-) NOTE: REASON FOR LOW FORMALITY, PEOPLE WILL BE FRIGHTENED BY WHAT THE DRIVERS WANT TO ACHIEVE. ANOTHER REASON IS THAT IF YOU WRITE IT DOWN AND THEN DON'T ACHIEVE IT IT'S SOMEHOW A FORMALIZATION OF FAILURE.], KH14 we'll never do that. I think what we have to do is focus on each thing at a time [MP-FORMAL (-) PREDETERMINED SEQUENCE A DIMENSION OF FORMALITY]

- 6 Using the word processor's capacity to search, retrieve and change character strings, codes and categories were grouped together to verify their usefulness and to establish properties and dimensions of each one. In the early stages there was a great deal of change to the coding structure and to the emerging concepts and themes. Inadequate codes, categories, properties and dimensions were discarded or combined. Instances were accumulated to the point of saturation, at which it became clear which future instances would be located in a category.

A list of current codes and categories was maintained, with the operational definition of each one and a list of its properties and dimensions. The extent to which the coding structure evolved over the study may be seen by comparing an early version, made at the end of the first four cases (Appendix A) with a later version as it existed as the study approached its conclusion, but before the condensing of dimensions into a single 'extent' for each category (Appendix B).

- 7 Part of the iterative process involves the building of connections to existing theory. Lists of references relating to emerging core categories and their links with other categories were maintained. Part way through the process a literature review was undertaken in relation to managerial control, a key emerging construct (see Section 5.4). At the end of the process a further review was carried out of literature relating to each of the six elements of the core code: management process.
- 8 The method of constant comparison of categories and instances within and between cases (Glaser and Strauss, 1967) was used to stretch each emerging concept as far as possible in an effort to ensure the integration of concepts and theories and to test emerging links. The final cross-case analysis completed the process.

The results of the analytical process are described in full in Chapters 4 to 8, where the case studies are presented and compared.

3.3.5 Quality and rigour

The growth in application of qualitative research methods has been accompanied by a concern that reports based on such methods should be of good quality (Argyris, 1979; Van Maanen, 1979; Huber and Power, 1985). Miles and Huberman (1994: 277) state that the concern is not just that of convincing positivists that ‘naturalistic enquiry is no more biased or inaccurate or imprecise than their methods’, but that issues of quality in qualitative studies deserve attention on qualitative researchers’ own terms. Miles and Huberman (1994: 278-280) offer 50 helpful pointers, or ‘practical guidelines in the form of questions’ for judging the quality of qualitative research. These are grouped into four sets, listed below, with section references linking them to this thesis.

- 1 Issues of *objectivity/confirmability*, including the explicit description of methods and procedures (see descriptions and examples in 3.3.3 and 3.3.4), and of assumptions (see list of underlying assumptions in 3.2.7), as well as a clear linking of conclusions to condensed data displays (see condensed data displays in 4.2.2, 4.3.2, 5.2.2, 5.3.2, 6.2.2, 7.2.2, 8.1.2, 8.2.3, 8.1.4, 8.1.5, 8.1.6, and 8.1.7, each of which is summarized in the conclusions which follow).
- 2 Issues of *reliability/dependability/auditability*, including the clarity of research questions (see 2.4.2), of the researcher’s role (see 3.2.6), and the specification of basic paradigms and analytic constructs (see discussion of methodological issues in 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.2.6, and 3.2.7, and analytic framework in 3.3.4, as well as evolving definitions of constructs made explicit in 4.2.3, 4.3.3, 5.2.3, 5.3.3, 6.2.3, and 7.2.3).
- 3 Issues of *internal validity/credibility/authenticity*, including the comprehensiveness and plausibility of the account (see three stage analytical process in each case supported by specific quotes from first stage), the use of triangulation or the existence of a coherent explanation for not using it (see 9.4), the seeking of negative evidence and rival explanations (see explicit search for exceptions and their incorporation into propositions in 8.1.2, 8.2.3, 8.1.4, 8.1.5, 8.1.6, and 8.1.7), and the agreement by informants of essential facts and evidence (see 4.1, 5.1, 6.1, and 7.1).
- 4 Issues of *external validity/transferability/fittingness*, including the explicit identification of informants (see 4.1, 5.1, 6.1, and 7.1), the diversity of cases (see explicit application of theoretical sampling in 4.4, 5.4 and 6.3), the consistency with readers’ experiences, the

‘thickness’ of description, the generic nature of processes and outcomes described in conclusions (see propositions in Chapter 8).

4 RESULTS FROM EALING HOSPITAL NHS TRUST

This chapter contains the results of the first stage of the study, in the form of case studies of two projects of organizational change in Ealing Hospital NHS Trust. Section 4.1 begins by describing the overall climate of change in the UK National Health Service (NHS) at the time of the study. Some background details of the organizational setting are provided, with an explanation of how access was gained and how the two case studies were identified and their boundaries determined. Processes of data collection and analysis are outlined.

Section 4.2 contains Case 1, the first of the two projects of change. The case is presented in three sub-sections which progressively refine the analysis of the management processes enacted by the change drivers in their management of the project. These management processes represent the main focus of the study. The whole case is first presented in narrative form in Section 4.2.1. In Section 4.2.2 specific instances of management process are then drawn from the case, categorized and tabulated. Six categories of process are identified, each with one or more dimensions. The categorization is presented as a complete way of describing the variety of processes employed. Section 4.2.3 summarizes the conclusions of the case. Preliminary definitions of the six categories are given.

Section 4.3 deals with Case 2, the second of the two projects of change. It is presented in a format similar to that of Case 1. The Case 2 analysis results in a refinement of the categorization of management processes identified in Case 1. At the end of Section 4.3 the aggregate conclusions from both cases are summarized and implications for selection of the setting for the next stage of the study are discussed.

4.1 Introduction

With around 800,000 directly employed staff and a budget of around 5% of the UK's Gross Domestic Product (Appleby, 1995) the NHS is, by any standards, a major organization. At the time of the study the NHS was in the middle of a programme of reforms described by Ham (1991) as more fundamental than any experienced since its inception in 1948. The reforms¹, which took effect from April 1991, entailed fundamental changes to the organization of the NHS. Their aim was to move the NHS towards a free-market system of contractual funding, with separation of the responsibilities for the funding and provision of services. *Purchasers* of health care - mainly fund-holding General Practitioners (GPs) and health authorities - would negotiate contracts or service agreements with *providers* - hospitals and other units.

¹ Set out in 'Working for Patients' (Cm555) (1989) HMSO.

With the implementation of the reforms individual hospitals could, if they chose, apply to the Secretary of State to become *trusts*, each run by its own Board of Directors. Trust Boards would be directly accountable to the Secretary of State via the NHS Management Executive (NHSME) without intervention from District or Regional Health Authorities. Trusts would be free to determine their own management structure, and, within certain restrictions, the range and extent of services they offered. Trusts would own their assets (land, buildings and other property), on which they would be required to generate a specified financial return.

Ealing Hospital, a large general hospital in west London directly employing around 1200 staff, was among the first of the nation's hospitals to apply for, and, in 1991, be granted trust status. Its active response to its changing environment made the organization a likely candidate for the first case studies. Further, its public status meant that access was unlikely to be denied on the grounds of commercial sensitivity. As a potential research site the organization also had the advantage of being near the researcher's home. The first point of contact for access to the organization was a business graduate who had been taught by the researcher at Thames Valley University, and who was employed by Ealing Hospital NHS Trust (hereafter referred to as 'the trust') as a general manager. She arranged for the researcher to conduct a preliminary, exploratory interview with the trust's chief executive. At the interview the aims of the study were briefly outlined. The chief executive was then asked whether any internal organizational change projects were in progress in the trust at the time. Without further prompting he identified three such projects. He then proceeded to describe their origins, their aims and their scopes.

The chief executive named himself as 'sponsor' of all three projects and named three other individuals as their respective project managers. The chief executive and the project manager on each project were identified by the chief executive as the principal change drivers. The first project (Case 1) consisted of a restructuring of the trust's approach to business management through the adoption of 'clinical directorates'. The second project (Case 2) was the upgrading of the hospital's information systems. The third project was concerned with devising and implementing a radically new trust-wide staff performance appraisal system. The nominated project manager of the third project was the trust's director of human resources. Unfortunately she was not available for interview. She nominated a deputy, the trust's training manager, as a replacement interviewee. Although he proved to be a willing and knowledgeable contributor it became clear that, without the input of the project manager, the data were, for the purposes of this study, insufficiently complete. The new appraisal system was clearly controversial and its implementation was apparently highly problematic. The training manager was not sufficiently close to the full implementation process which was being driven by the project

manager with the close help and support of the chief executive. The first two projects were therefore selected for the study.

Some outline comparative characteristics of the two selected projects are summarized in Table 4.1:

Table 4.1: Comparison of the two Ealing Hospital NHS Trust project characteristics

	Case 1	Case 2
Title	Introduction of clinical directorates	Updating of hospital information systems
Origin	Response to threats to the trust's existence arising from structural deficiencies	The many routine opportunities for hospitals to take advantage of advances in information technology
Nature of scope	Cultural, structural, non-technical	Structural, technical
Drivers identified	Project sponsor and project manager	Project sponsor and project manager
Main driver	Project sponsor (chief executive)	Project manager (director of business development)
Status	8 months duration. Started February 1994, went live October 1994, on schedule.	4 years duration. Started December 1991, due for completion late 1995. Modular. Partially successful.
Budget	None	£2m, mainly for prime contractor (AT&T)

Interviews were conducted with the trust informants nominated as change drivers by the chief executive, including a further interview with the chief executive himself. The roles of the sponsor of the two selected projects and of the two project managers are shown in Table 4.2.

Table 4.2: Ealing Hospital NHS Trust interviewees

Title	Ref.	Role on first project (Introduction of clinical directorates)	Role on second project (Upgrading of hospital information systems)
Chief executive	CE	Initiator, sponsor, main driver	Sponsor
Change project manager	PM (in Case 1)	Project manager	User, interested party
Business Development Manager	PM (in Case 2)	Recipient of changes, interested party	Project manager, main driver

The interviews took place between November 1994 and January 1995, two months after the clinical directorate structure had been introduced (Case 1) and three years into the four-year programme for the systems upgrade (Case 2). Guided by the research questions (see Section 2.4) the interviews were highly open-ended and exploratory. Each interview was loosely structured around the informant's background and that of the organization, their perception of the objectives of the project, and of its scope and management process, including their role in that process and the role of the other change driver. Each interview lasted about one-and-a-half hours. Interviews were audio-taped and fully transcribed by the researcher. Follow-up questions to resolve queries which arose during transcription were made by telephone.

In both cases, wherever there was an overlap in content between data from the chief executive and data from the project manager there was agreement between the two managers' accounts. In Case 2 there was little such overlap, however, as the 'hands-on' involvement of the chief executive was significantly less than in Case 1, where he had been the main driving force throughout the project.

In addition to the interview tapes and transcripts, copies of the following relevant documents were provided and used as sources of data:

- * The trust's 1994/95 business plan.
- * The trust's management structure.
- * Milestone plans and action schedules for the clinical directorates project.
- * Workshop briefing for clinical directors.

Transcription of the interview tapes and the first stages of analysis took place immediately after each interview. The process of transcription on a word

processor, although slow, was found to be an effective way of achieving a high level of immersion in the data, and many valuable memos were generated during transcription. A data coding and analysis process, described in Chapter 3, was followed until all relevant data were accounted for. The trust cases were refined and twice rewritten over the course of the whole doctoral project, as different aspects of process emerged from later studies. The final versions of the trust cases, presented here, are unembellished by the new analytical directions which emerged in the later studies. In that sense they are close to the earlier versions of the cases, although the analytical focus is considerably more refined than that of the first attempts. The categories of management process developed in the first case changed subtly and progressively over the course of the study. For reasons of cross-case comparability they are presented throughout the thesis in a format close to their final development. Some minor examples of their gradual refinement as the study progressed are given in this and subsequent chapters, as the trust cases are revisited after the studies from each of the other three organizations.

An early version of each case narrative was sent to its respective change drivers for verification of their agreement with its content, and followed up a week later by telephone. The chief executive took the opportunity to make some factual corrections and embellishments.

4.2 Case 1: Introduction of clinical directorates

This case study is concerned with the first of the two projects of change in Ealing Hospital NHS Trust. The case study is presented in three sections.

Section 4.2.1 presents the results of the first stage of analysis. Salient case data are presented in narrative form, broadly structured around the elements of the simple analytical framework described in Section 3.3: change context, change content and change management process.

Section 4.2.2 takes the management process data to a second level of analysis, showing how each project management process described by the change drivers may be considered a response to specific considerations. The processes are condensed into six categories, each of which has one or more dimensions.

Section 4.2.3 summarizes the findings of the case and draws interim conclusions.

4.2.1 Case narrative

In this first stage of analysis the case data are presented in three sections. Using the data analysis processes described in Section 4.1 the data have been broadly synthesized into the context, content and management process of the project. The first section outlines events leading up to the decision by the chief executive and the other members of the trust board to implement the change, combining data categorized as external and internal context. The second section gives details of the scope, or content of the project. The third section contains data which were categorized as project management processes employed for the implementation of the project's scope. The project was partly complete at the time of the data collection, and the third section ends with the change drivers' views and concerns for the project's future course.

Interview quotes are labelled PM (project manager) or CE (chief executive). The predominance of quotes from the latter reflects his commitment to driving the project and, despite having a designated project manager, his day-to-day hands-on involvement.

Change context

In the 1993/94 financial year, under its former chief executive, the trust had experienced significant difficulties in adjusting to the new NHS Trust regime. These difficulties were attributed by both change drivers to its then executives' lack of experience of operating as a trust, and of adjusting to the new

administrative demands. Three problems in particular had shown senior trust staff that there was a need to adopt a new management structure which would be more appropriate to meeting the trust's emerging challenges and objectives.

The first difficulty was patient bed shortages brought about by the trust managers' attempts to generate income. The requirement for revenue had led to the trust actively marketing some of its services outside the region in an attempt to get 'ECRs'². The resulting shortage of available beds for local patients had strained relations with local purchasers.

'The waiting times for local patients grew very fast. This was a disastrous series of events. It in the end generated quite a lot of money for the trust, and to that extent it was successful, but my goodness, it alienated the local GPs.' (CE)

Because of bed shortages the trust was at the centre of the so-called 'trolley ward' scandal. Tabloid newspapers reported patients dying on trolleys in the hospital whilst waiting in corridors outside full wards. An independent report was commissioned³. It concluded that the root of the trust's problems was a failure to involve clinicians in crucial resource decisions. The 'catalytic' quality of the independent report was acknowledged by the project manager.

'that was number one I think, the Higgins report, and that really was the catalyst for saying something has to be done to address those recommendations.' (PM)

The second difficulty concerned the new government-imposed obligations on NHS Trusts to balance their financial books. The implications of these obligations for budgetary management were summed up by the chief executive:

'The financial (obligations) are very explicit and well understood, and that applies to every trust in the land. Meeting your six per-cent return on your assets, so in other words generating a surplus over and above your costs that meet that six per-cent return. You have to do that every year. That means you have to balance your income and your expenditure every year, and you have to keep within your basic cash limit.' (CE)

In the financial year to end-March 1994, through ineffectual business management, the trust had failed to operate within its new statutory financial

² Extra-Contractual Referrals. Patients from outside the region may be used as a source of income.

³ The Higgins Enquiry, conducted by the eponymous professor on behalf of the central National Health Service Management Executive.

constraints. In that year the trust had suffered a budget deficit of more than £1m on a turnover of £46m. Under the new rules governing the operation of NHS Trusts, the deficit had the consequence that contracts were lost to other hospitals and the trust's capacity to operate was reduced. Staff reductions through natural wastage were allowed to take place, relieving the immediate threat of redundancies.

The third difficulty which had arisen as a result of the trust's structural inadequacy was the dissatisfaction of purchasers of the trust's services due to the diffused contractual responsibilities within the trust's flat senior management hierarchy.

'The (former) chief executive had maybe twenty, thirty people directly reporting to him, and that wasn't a very satisfactory situation either... purchasers never felt that there was somebody that they could talk to about particular services, because there were so many disparate heads of department, different people involved. They wanted one contact person, they didn't want twenty of them.'
(PM)

Pre-trust hospital management structures were concerned with day-to-day management, with financial accountability resting with the District Health Authority. Hospitals were able to operate with a higher degree of separation of clinical responsibilities from business responsibilities. The new rules for trusts meant that this hierarchical duality was no longer as viable. At Ealing, the 'trolley ward' scandal, the dissatisfaction of purchasers and the budget deficit had combined to highlight a new and urgent need, summed up in the Higgins Report, for senior clinicians in the trust to be more involved in decisions concerning resources.

Change content

The trust's difficulties had called into question both its credibility as a self-managed unit and its viability as a business entity. The problems had helped the Trust Board to see that the status quo was unacceptable, and that change was needed in the structure of the trust's executive. In February 1994 the chief executive resigned and was replaced by a new man from a position as general manager at another NHS Trust hospital. The new chief executive saw his task as 'changing the culture from one of widespread delegation upwards of problems' to one in which a selection of the trust's leading clinicians accepted responsibility and accountability for defined areas of planning and development, including producing and delivering against business plans. The structural solution to the problems was initiated by the new chief executive immediately upon his appointment. The solution, which had already been adopted by some other NHS Trusts, was the introduction of 'clinical

directorates', consisting of a small number (in Ealing's case, six) of senior clinicians with clear commercial accountabilities reporting directly to the chief executive and working closely with a commercially-orientated business management team. Whilst the chief executive had no direct experience of personally managing the introduction of clinical directorates he claimed to have 'seen through massive change within an established clinical directorate structure'.

The chief executive's reasoning behind the decision to introduce and support clinical directorates was based on his perception that the problems of the recent past were directly attributable to two closely related structural deficiencies. First, a lack of management 'machinery' to demonstrate the trust's financial objectives and accountabilities and monitor their achievement.

'There was no machinery, no wherewithal to build up a picture of what the trust wanted to do, involving the people that were going to be responsible for delivering the business plan at the end of it. And that caused huge structural - operational problems of meeting the contract last year.' (CE)

The second deficiency was the possession by senior clinicians of power without formal business management responsibility.

'... crucially the senior clinical staff had very limited responsibility. They still had quite a lot of power and influence, inevitably in a hospital such as this, but they have in formal terms very limited responsibility for some small budgets, and a very ill-defined set of responsibilities in relation to service planning and development. This historically led to major difficulties in the trust.' (CE)

By getting the clinical directors to accept their responsibilities, at the same time clarifying their understanding of the trust's corporate objectives, the clinical directorate structure would provide the foundation for harnessing the clinicians' power to those objectives.

'So there was really no sense of giving people the power and responsibility to make the difference to their working lives, and to contribute to the trust corporate objectives. At the same time there was remarkable lack of clarity about what the trust was at.' (CE)

The restructuring, identified by the chief executive as a project of change, was set in motion in February 1994 with a target 'go live' date of 1st October 1994. Its scope was simply to devise and implement the new management reporting structure. This involved establishing and gaining acceptance of the new structure in time for the clinical directors to produce their input to the 1995/96

business plan, and the adjustment of budgetary systems which would enable the trust's financial performance to be monitored.

The interviews with the chief executive and his project manager, which provided the bulk of the data for this study, were conducted between November 1994 and February 1995, not long after the October 1st target date for devolving budgets under the new structure had been officially met.

Change management process

On his arrival in February 1994 the chief executive wasted no time in formalizing and setting out his intentions for change in the trust's 1994/95 business plan, issued in March 1994. The plan stressed the trust's obligations to the National Health Service Management Executive for financial performance. It contained a detailed exposition of how the trust would redress the 1993/94 legacy of under-performance, including an analysis of financial risks. The plan's internal role as a legitimating device for management action was expressly stated:

‘... it is also the intention to use this document as a means of focusing management effort in achieving our overall goals. It can therefore be considered as a management manifesto for the trust for the coming year.’ (1994/95 Business Plan)

The empowering aims of the new structure were set out as one of the trust's 12 ‘overall corporate priorities’:

‘More closely integrating senior medical staff in the management of the Hospital and devolving more power and responsibility to front-line staff.’ (1994/95 Business Plan)

The chief executive was aware that attempting to bring about fundamental changes to the roles and responsibilities of senior hospital staff with a lot of power to resist unwanted change presented a considerable personal challenge. He cited recent events at another NHS Trust where the chief executive had lost both the confidence of his senior clinicians and his job.

‘The thing about hospitals that's endlessly fascinating is that you've got... it is a complex business, and you have actually a large number of people with the power of veto, particularly senior clinicians. I mean, the awkward squad is very large in potential... anybody in the senior management position, if they're seen to lose the confidence of senior people in the organization, their jobs are very rapidly untenable.’ (CE)

The chief executive was therefore concerned to proceed with caution.

‘So I can’t turn the place upside down just because I want to, even though there may be extremely good reasons for doing so, and at the same time lose the confidence of my colleagues... So it really is a question of judging the pace, and leading people through that change.’ (CE)

However, the recent difficulties encouraged the chief executive to take the view that an opportunity for change existed immediately on his arrival as a ‘new broom’, which enabled the clinical directorates project to go ahead.

‘In February this year, there was insight. Broadly speaking there was insight across the trust. This was an unsatisfactory state of affairs, which as you know is actually quite an important prerequisite for change. So there was dissatisfaction with that state of affairs, and as such it was simply a question of building on that and putting together an approach that would be acceptable in terms of making some changes.’ (CE)

This opportunity was echoed by the project manager:

‘Genuinely people realized that they weren’t in a very good situation and things had to move forward . You have to realize the benefits of it, and market those, and just get people aware of it.’ (PM)

The chief executive was quick to take advantage of centrally-funded NHS consulting resources. He enlisted the help of the local ‘change management team’, a mobile band of change facilitators with experience of NHS Trust-related change. One of the team was retained by the chief executive as his clinical directorates ‘project manager’, seconded from the change management team on a long-term basis and given a position as business manager of one of the clinical directorates. The chief executive appealed to industry norms to stress his austerity in the face of financial constraint:

‘... the first thing I did was to engage the support of the change management team from the region. The reason why I chose them was for a very simple reason, they were free. And I wasn’t in a position at that stage to institute or bring in an expensive management consultancy, which is in many respects the sort of normal thing to do.’ (CE)

In May 1994 the thinking behind the new structure was spelled out to the senior clinicians at a special ‘away day’ workshop, held off-site and facilitated by the project manager. Attendees were primed by a paper sent out in April 1994 by the chief executive. The paper set out his views on the trust’s

‘strategic environment and current weaknesses’ and his objectives for ‘moving forward’. The promise of power shifts was seen as an opportunity to get people interested in the change at the workshop.

‘We took them away and we thrashed out the criteria that we were going to use for determining the shape of the clinical directorates, because they, the subtext here - the issue that was getting people excited was what the clinical directorates would look like, who therefore would be working to whom, who previously had been peers, who would be reporting to whom as clinical directors.’ (CE)

At the workshop external experts with directly relevant experience were used to facilitate the event and promote the new agenda.

‘... we brought in a couple of people who had a long track record of working with clinical directors, and they were able to speak with some authority about that.’ (CE)

Paid organizational development consultants were brought in to hold further workshops with the clinical directors, to facilitate the change at certain key points. However, the chief executive pointed out that when consultants cost money they were used sparingly.

‘... this change is absolutely fundamental, and we’re not exactly throwing a fortune at it. We’ve employed consultants on very specific things, really on daily rates just to hold the workshops, just to get that bit right. And then we do something else ourselves and then we may bring someone else in to do one specific thing. We don’t have a standing resource there.’ (CE)

After the new structure had been defined one of the challenges still facing the change drivers was to convince the clinicians that with power and authority comes responsibility.

‘... one of the other key processes that took place with the introduction of the directorates was a fairly interesting headbanging session, for want of a better term, with the clinical directors, where I think for the first time it was spelt out in words of one syllable that they had the power and that they had the authority to get on and run the business. They also had a share of the problems.’ (CE)

The budget deficit and the implied threat of job losses were used as a way of focusing that discussion.

‘... nothing focuses the mind around that sort of discussion more than a juicy savings target, about £1.5m to £2.3m next year based on the money we think we’re going to lose from our purchasers.’
(CE)

The problems, including the budget deficit, caused by the old structure were both real and recently-experienced by the senior clinicians. Nevertheless the chief executive felt that talks of a merger with a neighbouring trust had encouraged some clinicians to believe that trusts were mere management devices and that their financial performance would not ultimately affect the existence of Ealing Hospital as a clinical entity. In order for the clinical directorates to have credibility the clinicians had to be convinced that this was not so.

‘... part of the process of managing this project was to get a basic acceptance among the key people that, no trust, no hospital.’ (CE)

The project manager saw the uncertain political environment surrounding the NHS at the national level as a reason for staff having not previously taken seriously the commercial reality of the hospital’s future, and for having failed in the past to see the need for formal business planning processes.

‘... which is probably why people haven’t taken it seriously before: what’s the point in doing all these business plans with projections and estimates and costings and resources if it’s just going to be completely turned on its head because there’s a general election? I think people probably don’t believe that services really are at risk...’
(PM)

The interview data show that political issues surrounding the NHS reforms formed an important part of the context of change. These included the ‘white coats versus grey suits’ issue which, since the mid-1980s, had been the subject of much impassioned public debate. The Tory government was trying to move the health service towards a ‘free market’ system based on providers competing for work. This had led to the imposition of new requirements for increased administrative controls. At the same time national funding for the NHS was being reduced. Opponents of the change drew attention to evidence that less money was being spent directly on health care, and that the proportion of spending on administrative systems and salaries was on the increase. Manning (1995) attributes the critical public scrutiny of NHS management partly to the ‘identification of management with change’ and partly to the view that, uniquely in service industries, management in health care is seen as ‘an expensive, unnecessary cost’.

The change drivers were highly sensitized to this issue. The chief executive, in particular, was anxious to portray his prudent intent not to waste scarce money. He was especially keen that his structural changes would not be seen as increasing management costs.

‘... the other great danger was that in delegating what was centralized power and responsibility you’d increase costs in management terms. This is always a problem when you move down this track. I was determined not to do that, for all sorts of reasons. I wanted to - well first of all couldn’t afford it, and secondly in terms of giving credibility to the process, in the eyes of the average clinician, it was important not to be seen to be increasing overall management costs.’ (CE)

He stressed the need to reconcile the issue by promoting the idea that he was in a supporting role and that the new structure would bring clinical benefits by protecting patient services:

‘There was also a very important process to go through, to make it clear that moving to a clinical directorate system brings with it a whole range of responsibilities, a lot of which are very difficult to reconcile in a modern hospital straddling the gap between working with colleagues and protecting - seen to be protecting - patient services in the face of financial stringencies, and at the same time supporting the trust in pursuing a corporate agenda, which inevitably involves doing the same thing cheaper.’ (CE)

The chief executive was at pains to point out that business management resources (as opposed to clinical resources) were spread thinly but effectively. He made repeated references to the way in which business managers’ jobs under the new structure were big and their responsibilities broad. Referring to a diagram of the new organizational hierarchy⁴ he described his own position:

‘ I mean it’s a fairly flat structure in the sense that I have got a very wide band of responsibility. My span of control is wide, and these aren’t small jobs, and these jobs are not very similar to each other, so it’s a serious responsibility of mine to hold all of these people accountable and give them support.’ (CE)

The broadness of the new role of one business manager was a source of mild humour:

‘Then again you see he’s got (laughs) in terms of spreading the overhead, he’s now got responsibility as business manager for three directorates. He’s

⁴ The diagram shows 12 positions reporting to the CEO.

responsible for A&E [Accident and Emergency], maternity and child health.’
(CE)

As well as spreading the overhead, however, the broadness of the new responsibilities of senior business managers were justified in terms of providing ‘meaningful’ jobs:

‘Deborah’s an interesting person because for instance under the new structure she has a dual responsibility. One as corporate head of HR, the other as General Manager for one of the directorates of medicine, and that’s again a symptom of my determination to keep management costs down. But also to try and give wide, meaningful jobs.’ (CE)

A good example of a new job was one which was broad and yet focused and meaningful:

‘So it was a question of refocusing people’s jobs, giving them meaning in the terms of the new delegated structure.’ (CE)

The project manager felt that, for some cynics, the new business planning and monitoring processes would be a waste of time. His own view was that, because of the complexity of the operation, planning and achieving a planning ethos were important.

‘Cynics would say [planning]’s a waste of time. I’m of the opinion that with all of these variables you really do need to do your planning so that if you are put off course you know exactly by how much. I think that’s why you need business planning processes. It’s very important that it’s embedded here. (PM)

The chief executive expressed his view that the new administrative systems and procedures which accompanied the introduction of the clinical directorates would help avoid further difficulties. He also pointed out their enriching and empowering qualities:

‘So we have a number of, if you like, new checks and balances. Not only to make sure we don’t boo-boo, but also to enrich the decision making and make sure that it takes account of people’s viewpoints.’
(CE)

The chief executive had experience of what he termed ‘classic project management’ on previous structural changes at other hospitals, where there were ‘steering groups, project managers and regular reports’. He was determined that planning and control formality on the clinical directorate project would be low-key. Nevertheless, the project manager was keen to

impose some sort of planned structure to the project, particularly since one of his concerns was cynicism and lack of understanding about the benefits of formal planning. The project manager had produced a schedule of milestone dates for 11 key activities leading up to the devolution of budgets to directorates on 1st October 1994. These included the agreement of various categories of job description and the writing of training needs analyses. In addition the project manager used a bullet-point one-page status report of key issues such as meetings planned and documents under review, structured around the McKinsey '7S' framework⁵. The purpose of the status report was simply to demonstrate the planning behind the project.

'I don't think it was particularly important the model we used, as long as we had some framework from which we could show people what it was we were trying to do, where it was we were coming from.' (PM)

For the chief executive one of the project manager's tasks was scheduling.

'... he was the project manager, and made sure that things happened in a relatively logical sequence.' (CE)

The milestones and key issues were monitored and reviewed at informal, unminuted, irregularly-timed progress meetings between the chief executive and the project manager.

At the time of the interviews the new structure had just been formally introduced. However, the chief executive recognized that the combination of ingrained ways of thinking and a wide-reaching agenda for change called for caution in claiming success.

'I'm not sure that it's a hundred and eighty degrees yet, I mean it's, this is an ingrained way of thinking, amongst a number of people; it's going to take some time.' (CE)

The chief executive was aware that the effectiveness of the new structure could not be judged simply by its implementation:

'You have to be very careful about diagnosing progress here. I think you can get carried away with looking at the new mechanisms you've created. But the underlying change, improvement in performance, takes a very long time to come through the system, and there are still huge gaps in what the hospital is doing. Huge gaps.' (CE)

⁵ A checklist of seven management domains beginning with the letter S, as originated by the McKinsey consulting group: Strategy, Structures, Systems, Staff, Skills, Style and Shared values.

He was sensitive to the fact that the project could not be taken in isolation from the overall affairs of the trust, and that there was still a lot to be done in the way of further changes which would have to accompany the new structure in order for it to work.:

‘I mean for instance we haven’t sorted out yet some vital policies of income, on moving money around, giving people real power to change the way they want to work, and allowing resources to be reflected in that. We haven’t agreed policies on that . We haven’t decided how we’re going to treat, in real terms, each of the directorates as cost centres... all of that is down the track.’ (CE)

The danger of trying to move too fast was acknowledged by the chief executive, who favoured a phased approach to change which would allow time for new management controls to be set up. He was wary of political pressure for NHS Trusts to introduce customer-driven quality initiatives.

‘There’s a huge danger that we take one step forward and two back by pushing things too fast... What we’ve discussed already represents a very significant set of change processes. People around here are working like billy-o and I’m very conscious of that. And to then say we’re going to move into a TQM approach⁶ across the trust is I think folly at this stage. I even worry about doing it next year.’ (CE)

It was felt that, for some, the new responsibilities would take some getting used to.

‘... all of a sudden someone who had only a very vague planning role, who could influence thinking and be listened to, sure, but not necessarily have any real power or responsibility to change things, are being asked to write a business plan which basically specifies their service next year. And furthermore are being expected to front up the discussions... to actually represent the trust in discussions with the purchasers about what that contract is going to look like in service next year. Now that is a whole new range of exposures and responsibilities that will feel very strange and new.’ (CE)

Also worrying was the possibility that others would fail to understand their new roles.

‘I think a number of them feel quite uncomfortable about that. It’s the ones that don’t feel uncomfortable I worry about, because

⁶ Total Quality Management approaches driven by ‘customer charters’ were popular with the government.

they're going to take slightly longer to appreciate how difficult their job is.' (CE)

The importance of an empowering approach to quality management was perceived.

'we need our own approach to quality, and we're taking a few steps to create a mechanism and a structure for doing that. But I'd like to see that emerge naturally from what people feel they want to do.'
(CE)

Nevertheless, if the success of the new approach were to be threatened by clinicians slowness to grasp issues the chief executive remained poised to step in and over-ride this empowering intent.

'We're learning as we go along, and in many respects, although I want to be careful as chief executive, I don't want to be seen to be spoon-feeding the organization. It's very important that people throw up these issues themselves, see them as important for themselves and then tackle them themselves. They can be prompted on one or two occasions, and on one or two occasions clearly gaps emerge that clearly I have a responsibility to ensure I fill quickly, and if nobody else sees it then I have to say... seize it.' (CE)

The planning cycle placed certain limits on the extent to which an evolutionary, participative approach could be tolerated. The production of a business plan was itself a statutory requirement. One of the responsibilities of the clinical directors would be producing the 1995/96 plan. This would force them to get involved with purchasers:

'We started (the new structure) on the first of October and within a month or two they've got to produce a business plan and get thrown into discussions with purchasers.' (CE)

The deadline imposed by the planning cycle and the need to balance the budget in the light of past failures were together seen as forcing the pace of the introduction of the new structure and reducing the 'settling in' period for the clinical directors:

'It would be nice perhaps to have had them into their roles a bit longer, but unfortunately the world isn't like that. We can't stand still, we have to keep up, and we have to plan for next year in the light of a very serious resource gap. So the heat is on and they don't have a chance to settle very long.' (CE)

Looking to the future, the chief executive was conscious of the continuing nature of the financial threat. There were signs that meeting the trust's financial and contractual obligations, as expressed in his own business plan, was outside his control:

'... we're in a precarious situation. Although we have a balanced budget this year, next year is going to be enormously difficult. Hence keeping the change processes going in a positive sense, whilst at the same time having to save quite unreasonable amounts of money, because our purchasers seem to require that of us at the moment.' (CE)

Both change drivers expressed the view that hospitals were being asked to do more with less, and both were acutely aware of the government's announced plans progressively to reduce central funding for the NHS in the coming years. They stressed the limits to their own resources. The project manager criticised change overload and management bureaucracy at national level.

'There's too much going on... limited resources. I mean the bureaucracy... You get piles of stuff through that you simply have to deal with.' (PM)

For the chief executive, one of the roles of the Executive Board of the trust was to act as project steering group, and full advantage would be taken in future of its over-riding authority over the trust's affairs.

'... the Executive Board could be seen as a natural project team for seeing through this change, and certainly we're going to use it... So as the organization develops and throws up issues of policy, we will use that as if you like the steering group, if necessary bounce it into the Board to get it approved at the highest level.' (CE)

Nevertheless, the chief executive recognized his own mandated authority, and saw the clinical directors' responsibilities as too important to allow them to accept with wantonness their responsibilities or to discharge them with incompetence. There were signs that one clinical director in particular was not performing in his new role, and his replacement was already anticipated as signal to others:

'I have concerns, and it's quite possible in the next few months, maybe we'll have to have a change, and in a sense I won't worry about that because that might be an important signal at that point that if people can't do the job they don't stay, we agree that they go back to doing what they did before and we get somebody else in who can, that it isn't the automatic right of the senior clinician to

assume responsibilities, they're {the responsibilities} too important.'
(CE)

The chief executive enjoyed a strong sense of his own power in his role as implementer of agreed policies.

'I have power. I have a very strong sense of power insofar as I am seen to implement a policy which is agreed on a corporate basis by the trust Board or the Executive Board, particularly the Executive Board. If the Executive Board agree that something should happen in terms of matter of policy, then I am... I am mandated, I am empowered to do that, and I can get very heavy about that.' (CE)

4.2.2 Further analysis of management process

The case narrative presented in the previous section shows that the data contain several specific, identifiable instances of change project management processes employed by the change drivers in response to specific considerations. The instances of considerations and processes are listed and the processes are categorized and dimensioned, as shown in Table 4.3.

Table 4.3: Case 1 considerations, processes, process categories and process dimensions

Ref.	Consideration	Process	Category	Dimension
1.01	1994/95 Business plan required to be issued March 1994	Use plan to stress difficulties, intent to change and mandate	Selling Pace Formality	more faster more
1.02	Need to maintain confidence of awkward squad	Caution not to turn the place upside down	Pace	slower
1.03	Trust staff dissatisfied with status quo	Build on dissatisfaction to make and market change	Selling Pace	more faster
1.04	Staff will be asked to take on more responsibility	Stress change for the better to the working lives of individuals	Selling	more
1.05	Regional change management team available and free	Use them, stressing that they are free	External agents Selling	more more
1.06	Need to differentiate project sponsor and project manager	Second project manager from change management team	Role definition	clearer
1.07	New clinical directors must be actively committed to change	Hold away-day to get people excited about establishing new roles	Participation	more
1.08	Need to secure commitment to change	Send out paper setting out agenda and	Selling Participation	more more

	and purpose for away-day	requesting preparatory work	Formality	more
1.09	Clinicians may doubt that clinical directorates is the right solution	Hold workshops using experts who can speak with authority	External agents Selling	more more

Table 4.3 cont./

1.10	Management will be seen to be spending excessive money on consultants	Use paid consultants as sparingly as possible, appealing to NHS norms	External agents Selling	less more
1.11	Merger talks undermining credibility of trust entity	Stress that no trust, no hospital	Selling	more
1.12	Need to compromise between PM's wish for structured project planning process and CE's desire to minimize bureaucracy	Use simple milestone schedule and 7S framework in an informal way	Formality	compro- mised
1.13	New structure might be seen by clinicians to increase management costs	Stress management resources spread thinly and clinical benefits of new structure	Selling	more
1.14	Managers' jobs might be seen by them as too big	Stress meaningfulness	Selling	more
1.15	People will lose sight of the seriousness and enormity of the task	Be cautious in claiming success; stress phased approach	Selling	more
1.16	Pressures for change will cause change overload	Resist simultaneous introduction of quality initiative	Pace	slower
1.17	Empowered clinicians might fail their responsibilities	Be ready to step in if things show signs of going wrong	Participation	cautious
1.18	Clinical directors must meet the deadlines of the annual planning cycle.	Officially introduce the new structure in good time	Pace	faster
1.19	Externally imposed financial requirements will be impossible to meet.	Emphasize continuing difficult circumstances imposed from without.	Sell	more
1.20	Change will be resisted internally.	Use the legitimating power of the executive board.	Participation Formality	less more

4.2.3 Summary

One way of summarizing, categorizing and dimensioning the management processes is that shown in Table 4.3. The grouping of processes into six categories has been derived from the data using an iterative 'grounded' data coding and mapping approach. It represents a categorization structure which is both concise and complete, in the sense that all identified processes are accounted for. The six categories are defined below, and a summary is given of the application of each category on the clinical directorates project.

1 EXTERNAL AGENTS

Definition: The use of change consultants and other 'experts' from outside the organization.

Dimensions: More...Less

External agents were used briefly at specific points in the project. Their role was to provide specific expertise (for example in organizational development facilitation and training) and to give credibility to the notion of clinical directorates. Full advantage was taken of the free services of the regional change management team. Paid consultants were used sparingly.

2 FORMALITY

Definition: The formal documentation and communication of project plans and controls.

Dimensions: More... Compromised... Less

The rationale, objectives and scope of the project were formally communicated and reinforced via the business plan and the away-day preparation paper. Formal project management plans and controls in the form of milestone plans and the application of the McKinsey '7S' framework provided a simple, non-bureaucratic structure to the project. There was a suggestion of compromise between the project manager's desire to promote the planning ethos and the chief executive's dislike of excessive bureaucracy based on his experiences in other trusts.

3 PACE

Definition: The pace of an aspect of the project at a particular time. (Relative to other aspects or to the same aspect at other times, rather than absolute).

Dimensions: Faster... Slower

The chief executive was wary of moving too quickly and losing credibility but wanted to take advantage of the dissatisfaction of the status quo and his own unblemished record. The project started quickly, helped by the timing of the 1994/95 business plan and the need to have the new structure in place in time for the 1995/96 plan. The overall result of the competing demands on pace was that the clinical directorate project was nominally completed on time, but parallel initiatives, such as TQM, were postponed.

4 PARTICIPATION

Definition: The involvement of staff other than change drivers in scope decisions.

Dimensions: More... Less
Bold... Cautious

Because of the empowering objectives of the project and the need to secure the clinicians' commitment to the change a tentative process of participation in determining the details of the new structure was followed. However, the chief executive was prepared to use his own authority, legitimated and supported by the Trust Board, if the newly empowered clinicians showed signs of threatening the success of the project.

5 SELLING

Definition: Educating and selling to staff the idea that the change was inevitable and that its organizational and individual benefits outweighed its costs.

Dimensions: More... Less

The change drivers took several opportunities to emphasize the problems that had arisen under the old structure and the threat of their recurrence. They sold the notion that not only were they empowered to make the change but that the organization as a whole and the individuals in it would benefit from a clinical directorate structure, which had been successfully implemented in other NHS Trusts. Their approach was to build on the widespread dissatisfaction within the trust, using the business plan and the away-day to reinforce that problems existed and that the trust had the ability and the power to put things right. They stressed the low cost, even by NHS standards, both of consulting resources for the change itself and of the sparse, economical management structure that would exist after the change. They used the idea that managers' jobs after the restructuring, though very broad, would be more meaningful, and that clinicians' empowered working lives would be better. Recognizing the need to maintain a momentum of change they emphasized the incomplete nature of the restructuring and the inadvisability of claiming success.

6 ROLE DEFINITION

Definition: The clarity of definition of the respective project management roles and responsibilities of the change drivers.

Dimensions: Clearer... Less clear

The chief executive named himself as project sponsor and named another man, seconded from the regional change management team, as project manager. The two worked closely together in an informal way. However, the strategic importance of the project, and the consequent overwhelming extent of the chief executive's day-to-day involvement was such that the role of the project manager was largely limited to scheduling tasks and milestones, and planning, organizing and facilitating development workshops. The chief executive was aware that he would need to maintain full involvement, making use of his mandated power. Both change drivers expressed a degree of fatalism given the wider context of change within the NHS as a whole.

4.3 Case 2: Updating of hospital information systems

The subject of this second case study is the project of updating hospital information systems in Ealing Hospital NHS Trust. The case study is presented in three sections.

In common with Case 1 the case data are first presented in Section 4.3.1 in narrative form, broadly structured around the three major elements of the initial framework: change context, content and management process. In Case 1 the clinical directorates structure was introduced as a response to specific problems. It therefore seemed right to describe the project's context before describing its content. In Case 2 a slightly different approach is taken. Despite its strategic objectives a significant part of the content of the project is of a more technical, routine nature than that of Case 1. It seemed more appropriate, in the interests of clarity, to summarize the content first. Important aspects of the context of change are then identified and illustrated by taking one part of the content and describing in detail the unfolding contextual circumstances under which it was developed and implemented. As with Case 1, different aspects of the management processes are then described.

In Section 4.3.2 the management process data are then further analyzed and presented in the same tabular format as Case 1, with specific considerations and responses synthesized into their categories and dimensions.

The final section, 4.3.3, summarizes the case around the different process categories and sets out the conclusions from Cases 1 and 2. Implications for the next stage of the study are discussed.

4.3.1 Case narrative

Change content

The project was concerned with the implementation of the trust's 'Information and Technology strategy'. The strategy's aims were stated in the 1994/95 business plan:

'The current Information and Technology strategy is a plan... that aims to meet the business needs of the trust whilst keeping in step with the national IM&T⁷ strategy. In essence it aims to:

- * Encourage better use of information to make efficient use of resources.
- * Make information available when and where it is required.

⁷ Information Management and Technology

- * Provide systems that allow timely and accurate communication with GPs.
 - * Collect 'event' data to facilitate costing at the patient level.'
- (1994/95 business plan).

The £2m initiative began in late 1991 and was scheduled for completion at the end of 1995. It was a staged programme of progressive upgrading or replacement of the trust's information systems, excluding finance systems. The new systems were intended to be up-to-date, fast, flexible and integrated. By providing on-line access to clinical information and by taking advantage of newer information technologies (for example bar-coding of patients) there were potential advantages for the hospital. Most of these advantages related to cost and time savings for clinical and administrative staff. The integrative aspect also reflected the change drivers' longer term desire to make the hospital more 'patient-focused' rather than function-focused.

The identified change drivers of the project were the chief executive as self-titled 'sponsor' and the director of business development as his nominated project manager. At the time of the interviews, in late 1994, the project had been progressing through the various departments and functions on an incremental, modular basis for the previous three years. The chief executive, who had only been in post for ten months, claimed a relatively minor involvement in the day-to-day management of the project. This is reflected in the prevalence of quotes in the case study from the project manager, who had held that role from the start.

The trust had a policy of contracting out systems development work rather than doing it 'in-house' using trust employees. AT&T were prime contractor for the project, much of which used standard Unix-based AT&T hospital systems written in a programming language⁸ specially designed for hospital applications. The language was relatively low-level and 'non-compiled', thus allowing rapid coding modifications. The AT&T standard software modules required extensive 'tailoring' by AT&T to cater for the evolved idiosyncrasies of the hospital.

The project's expected cost of around £2m consisted mainly of software and programming by AT&T, including five years maintenance of the systems. It also covered the purchase of a new Unix processor, rewiring the hospital and replacing its existing obsolete desk-top terminals with 'dumb' terminals or PCs.

⁸ 'MUMPS' (Massachusetts University Medical Programming System)

The status of the various modules was reported by the project manager as follows:

Central Master Patient Index (MPI). The new MPI was a core patient database to which all hospital patient-based systems would be linked. This would reduce the need for multiple entry of patient data and would improve its accuracy by allowing data entry at the point nearest the patient. Because of its centrality to other systems this was the first module to be implemented, starting in December 1991.

Radiology. The old McDonnell Douglas system (installed in 1988) was being replaced by an AT&T module linked to the MPI. Implementation started in mid-1994.

Pathology. The stand-alone patient index of the existing Cerner system would be upgraded and linked to other systems during 1995.

Maternity. Development of a new AT&T system was in progress and would go live in April 1995.

Case Note Tracking. A new system to allow tracking of the historical and current location of the 300,000 sets of patients' notes had been installed.

Theatre. A new system would be installed in mid-1995 which was intended to enable maximum patient throughput by effective forward resource booking and patient tracking.

Communication with GPs. The ability for GPs to access hospital systems directly would be extended during 1995 using electronic data interchange and the existing GP link system.

Executive Information Systems (EIS). EIS had been developed to provide business managers with information about inpatient and outpatient activity and contracts, waiting lists and other key indicators. These would be expanded during 1995 to allow wider access.

Nursing. A new McDonnell Douglas nursing system was intended to help rostering of nurses and day-to-day ward management. It had been piloted unsuccessfully on one ward early in 1994 and was to be the subject of an 'impact assessment' (a review of why it was unsuccessful).

Ward/Service Ordering. A new system would be installed in 1995 which would allow goods and services to be ordered for individual patients or for departments from any terminal.

Completion of the whole project was expected by November 1995. Thereafter the systems would be regularly updated as new software issues were made.

Change context

A significant feature of the data is the project manager's repeated stressing that, because of the financial constraints on the NHS and the consequent demands on people's time, the business process 'reengineering' side of IT projects in the NHS is difficult.

'... that is terribly difficult to change... If you just take the X-ray department, to go in there and actually do a bit of process reengineering is terribly hard work, partly because all these departments are terribly stretched...The ability to take an overview of the department, to say well look chaps, this is crackers, you should be doing it this way or that way because they haven't got the time to take that.' (PM)

Another aspect of the NHS which was perceived as making the project manager's job difficult was the calibre of low-paid clerical staff, and their lack of incentive or desire to change their way of working.

'... you get what you pay for. And a lot of the people in the NHS, especially the clerical end, they aren't paid much, they're currently paid - a lot of clerical staff on a salary which starts at about £8,000... You wonder how someone can live on that. And, you know, if they've been doing that job for the last ten years, training and rethinking about how you do your work is hard work.' (PM)

The project manager's candid description of the failed attempt to implement the new nursing system illustrates the difficulties themselves and his own admission of his project team's inability to foresee or surmount them. Because it provides a revealing insight into the problems of IT projects in the context of an NHS hospital, this particular part of the project is described in some detail.

The new nursing system required nurses to change the way that they worked to using a computer. The system was intended to bring benefits to three distinct aspects of ward operation. The first was in the area of care planning. When a patient was admitted to a ward, a nurse would systematically discuss with the patient their particular case. The nurse and patient would together develop and agree an individual care plan. This was traditionally written out by hand by the nurse. However, since care routines were heavily proceduralized and standardized there was thought to be scope for computerized synthesis of the

problems or features of each particular case, and the generation by the computer of detailed, itemized care routines.

The second area of intended benefit was working out how many nurses would be needed on a ward on the basis of the level of dependency of its patients. There were four recognized levels of dependency. These were described by the project manager as 'ranging from reasonably fit and well to requiring a full nursing service'. The expected patient occupancy on a ward could theoretically be computer-processed and used to decide whether more or less nurses of which grades would be needed over the foreseeable future.

The third area of intended benefit was rostering of nurses. This was done on a four-week block for each ward by a ward sister. Done manually, the task typically took a sister three or four hours of concentrated planning. It was a complex operation which required attention to nurse grades and levels of experience, including the right mix of mentors and students. It needed to take account of the days on which lots of patients were likely to be admitted, nurses' holiday entitlement and which nurses worked best together.

The project management team acquired the new nursing system from McDonnell Douglas. They then attempted to introduce it one ward at a time. On the first ward it was found to be a complete failure and was abandoned. The project failed to deliver the intended benefits on all three counts. First, the team failed to appreciate that nurses do care planning at the bedside. To expect them to then enter all the data into a terminal in the corner of the ward was a mistake.

'So what would have to have happened is, the nurse would have spent forty minutes or so assessing them and gone back to the computer, done it all again, and then taken it back and said this is all right isn't it. It is supposed to be agreed, you're supposed to understand what is going to happen to you. And on certain days of the week there may be ten or fifteen admissions to a ward, so all of a sudden you've got a terminal and fifteen nurses who want to use it.'

(PM)

Second, because numbers of nurses are predefined and fixed at a bare minimum level there would be no point in having a computer system which recommended more nurses, since no more were available. The computer system could only recommend reduction of the number, already at minimum level.

'... the realities are such that, at the beginning of the year, our income is set for the whole year, and therefore the nursing structure is effectively set for the whole year. So the only thing the nurses could end up demonstrating is that we could take nurses away. They

weren't getting any more. So there wasn't much of an incentive for them to do this.' (PM)

Third, they found that the expected benefits of the computerized rostering system would not be achieved since sisters did the rostering task at home, in their own time, not in the ward. To the project manager, this meant that when the sisters were required to use the computer system the hospital was effectively losing half a day of the sisters' time each month.

'... we thought that this would be a great benefit to the ward, and the sisters who do it, and what happened is they then spend half a day rostering their four weeks... they used to sit down and do it in our time. We found out afterwards in practice it was such a horrific task they actually took it home and did it, and so they ended up doing this task on our time rather than unpaid time at home.' (PM)

The project manager pointed out that, in addition to the three operational reasons why the project had not been a success, there was a further insurmountable implementation difficulty which meant that, even if the system had been a potential success, it could never have been implemented satisfactorily across the hospital. The problem was that the project team had assumed that nurses would be able to take time off to be trained in the use of the new system. Because wards were staffed at a minimum level, however, nurses were not able to take time off to be trained unless replacements could be provided. The prohibitive cost of this had not been considered.

'You staff the ward at the absolute minimum. If you take two nurses off, someone says, er, excuse me... someone has to pay for two extra shifts to put nurses back in, and the cost of that... it's an absolute direct cost, which hadn't been anticipated because we had assumed that if the department manager is reasonably keen for the project to proceed then normally, in a normal department, which they can facilitate letting people off for three hours to do some training, whereas in nursing we fell over; it really wasn't possible.' (PM)

Neither had the project team allowed for the fact that the hospital's central training resources would only allow training of one nurse at a time.

'... the numbers of nurses, the sheer numbers of them, I don't know how many nurses there are, let's say there are 500, that's a lot of nurses, an awful lot of people to train... the central resources don't spread around that much... if you could only release one nurse at a time, and there are let's say 30 or 40 nurses on a ward, by the time you've taken into account every possible shift, just releasing each one at a time in terms of the training period... horrifically long... so it was a complete cock up basically.' (PM)

The general scarcity of resources for training meant that business process improvements were sometimes sub-optimized at the departmental level, as well as at the level of the hospital as an integrated whole.

‘You still go on doing it the way that you know because the cost to you in retraining and rethinking is enormous, even though it might ultimately save you time and money, but if you haven’t got the time to take out to do that process, process reengineering is horrifically expensive, even if you do it department by department rather than considering how the radiology department should work in the light of how every other department should work.’ (PM)

Change management process

There is a requirement in the NHS for managers of capital projects to follow certain prescribed, formally documented project management processes. Such procedures are common on government information technology projects. Through a defined system of sanctions and controls by an official project steering committee, procedures such as PRINCE⁹ are intended to help avoid the kind of project mismanagement which has plagued many large-scale publicly visible IT projects in the past.

Nominally following such a procedure, the information systems project was being approached on an incremental basis. The project management process had followed a cyclical pattern:

‘We had to write an operational requirement. And then we had to procure against that operational requirement, negotiate the contract, effectively sign on the dotted line and then go through this implementation, project management, training, go live, go round again.’ (PM)

At the beginning of this cycle there was a formal requirement for a cost/benefit analysis. Throughout, because the project involved spending public money, it was subject to formal internal and external audit.

Much of the imposed formality was seen by the project manager as difficult and undesirable. The questionable value of predicting and measuring benefits was one example:

‘... actually putting a pound sign against that is incredibly difficult, and you can end up doing a vast amount of work on benefit analysis,

⁹ PRINCE (PROjects in a CONTROLLED Environment) is a project management procedure or ‘methodology’ which was developed especially for large scale government IT projects.

and actually at the end of the day it's difficult to know if the benefits outweigh the cost of measuring them.' (PM)

Because of the unquantifiable nature of the benefits of information systems in general the benefit analysis was seen as a waste of time. The project manager explained why benefits analyses were an aspect of project management to which little time was devoted.

'... we aren't terribly good at doing everything, for example the benefits analysis are a major pain in the ass because there aren't many (benefits). I've never yet seen a computer project that delivered much in terms of the cash-releasing benefits people always say they're going to deliver. Most of the benefits are qualitative, or they are... in terms of quality or... or they do release people's time, but there's no way you recover that, they just go on and do something that they should have been doing but haven't had time to do.' (PM)

In practice, the project manager was able to bypass much of the required formality, claiming that he had not got the time.

'... in theory we follow the PRINCE methodology... In practice we don't because we'd never get the project done if we did.' (PM)

'... we don't do all the quality assurance. We just haven't got the time. I mean we do have the formal structure in that we have an IT project board and we have a project team. But we don't do all the documentation. We don't follow all the quality assurance.' (PM)

The project manager had access to the kind of project management planning and control software 'tools' which are normally applied to projects of this kind. Like PRINCE, these were dismissed as a waste of time.

'Project Manager's Workbench¹⁰ is a wonderful tool... you know, who's got the time to use it ?' (PM)

The whole approach to project management formality was summed up by the project manager:

'It's exceedingly non-bureaucratic, and very little is committed to paper which drives the auditors scatty... we do the minimum necessary in that we produce project plans, we take notes of formal project meetings which take place every two weeks.' (PM)

¹⁰ A project scheduling and monitoring software tool.

The content of the notes taken at the formal project meetings reflected this non-bureaucratic approach. Issues with cost implications, such as changes in project scope, should in theory have been dealt with through the formal processes. In practice they were often dealt with in an informal way between the trust project manager and the AT&T project manager, who had established a mutual understanding over time. Thus the project manager tried to keep contentious issues away from the formally minuted meetings.

‘... although (AT&T) are the prime contractor, we’ve been working with them now for quite a long period of time, it’s almost as if we all work for the same people, so there is the common end. And whilst occasionally you do bump into conflicts, inevitably you will be saying, well we want this, and they say, I have a problem with that either it’s not in my agreed project, or they simply just can’t do it or it’ll cost you money then we would normally take those sort of issues outside of that meeting and that would be dealt with really just by sort of myself and AT&T’s project manager and if necessary the account manager, the salesman agreeing whose responsibility it was and a way forward. So, yes we try and keep anything contentious out of these project meetings.’ (PM)

Clearly the project manager was able to get away with interpreting the imposed formality with some licence. He was able to exclude certain significant internal project costs, such as training costs, from the reckoning.

‘One of the... we try not to count it because it’s so big, the cost of training people is very considerable. Internally there would be a cost... we shut our eyes and pretend we don’t know what that is.’ (PM)

In Ealing the compactness of the site and the all-embracing nature of the IT management structure were cited as enablers of management control and the informal ‘direct action’ approach.

‘... in a larger organization you wouldn’t have had direct control over some of the resources and therefore some of the controls that PRINCE builds in would have been more useful. But because it’s a relatively small community, if the project starts to run off track, fall apart, it’s easy to go in and take direct action.’ (PM)

Many of the internal human resources for the project had to come from people’s normal working day, and did not therefore involved additional costs to the project. Under such circumstances, it seemed appropriate to do the project management on a shoestring, with little documentation.

‘I think what’s important to say is that, as a result of this project we are actually only employed two people, we’ve employed a very junior person to help with the networking and we’ve employed somebody to help train. And all the rest of the resources come from people... part of their normal work, and as a result of that... we’ve tried to do it on a shoestring... because effectively I’ve had to do it on the back of an envelope, most of it is held in people’s brains rather than being documented.’ (PM)

Ironically, the contractor (AT&T) was allowed indirectly to impose formality on their client (the trust). The trust’s project manager could not fully stop AT&T from following the rules (thereby generating more work for themselves). AT&T had recently become accredited users of BS5750 quality standards. The resulting increased costs and erosion of the project manager’s informal relationship with AT&T were offered as an example of the expensive and undesirable consequences of quality assurance bureaucracy.

‘... what has been noticeable is that they take longer to do things than they used to, and there is no noticeable improvement in quality. I’m not saying that they’re bad, I’m just saying that they’re probably as good as they were before, but it just takes them longer because they’ve got to go through these extra quality assurance steps, which... and from my point of view it just pushes the cost up because, whereas before, they would do little jobs for me, they say ah, unfortunately I’ve now got to document that, produce a training guide, do all the internal documentation, have it QA’d, and this half-day job has turned into a week’s work, and so all that’s happened is, instead of costing me £250 it’s cost me two and a half grand. So it’s a major pain in the ass.’ (PM)

Examples cited have shown how the cost/benefit analysis which was part of the project manager’s formal procedures was considered by him to be a waste of time, and that attempting to quantify the benefits of IT projects was thought futile. Nevertheless, there are instances in the data which show that both change drivers were sensitive to the issue that the new IT systems were known to be costing millions of pounds of real money and were supposed to be delivering real, positive benefits to the trust, along the lines of the aims set out in the 1994/95 business plan.

The chief executive described how these benefits were realized or anticipated, not in terms of hard cash, but in softer, qualitative terms. He praised the Ealing approach to systems projects, and cited his own experience of two ‘complications’ which he had had in another hospital, and which he had not seen repeated at Ealing. These complications were, firstly, adopting a ‘big bang’ radical approach rather than a slow, incremental one, and, secondly, developing systems ‘in-house’ rather than using a contractor. He talked

positively about the undisruptive simplicity of the incremental strategy and about the success of the systems themselves. He stressed that the cost had been modest, and that the trust's own resources had been used. He drew attention to NHS expenditure norms.

'For a hospital of this size, we have invested a relatively modest amount of money. We have not at any stage been a pilot site for resource management or anything else. We've had the absolute minimum level of investment that any hospital of this size would expect within the health service.' (CE)

The project manager emphasized the project team's efforts to keep capital costs to a minimum.

'This is the National Health Service you know. It's not a lot of money, and wherever possible we keep the costs down to an absolute minimum. You know, we trawl the world for the cheapest terminals possible.' (PM)

The project manager perceived that his management control over the project was limited by the fact that he was dealing with medical professionals. There were difficulties in translating into systems the technical complexities of how these specialists worked.

'... radiology is a good example. Whilst I can put the wiring frame in, and I can provide them with terminals that work, I don't know anything at all about radiology... they have to come up with the expertise... we have to go and enlist people from that department to work with the central project team... then of course we have no direct management control.' (PM)

The same lack of control was not seen to apply to the installation of the master patient index, where all the necessary expertise was possessed by the project team.

'It was certainly noticeable that, where you're putting in a central hospital master patient index where I have virtually complete control over the whole process from top to bottom.' (PM)

The project manager had learned that when the project's success depended on technical input from outsiders to the project team he should be sceptical about their promises of completing tasks.

'... from bitter experience we've found that people won't do the things they'd say they are going to do when they are going to do them by. Probably quite oblivious to the effect it has on your project... and it is difficult to deal with that, and some of it only

comes from the school of hard knocks, you learn that - don't believe what anybody tells you.' (PM)

The project manager had also learned to question the experts' claims about the technical requirements of systems. In one department, for example, an entrenched practice was wrongly thought by the department to be a legal requirement, which caused the project manager a lot of frustration.

'... in blood transfusion they won't do anything at all without a signature on a piece of paper, because historically they never have done. Now, converting that into an electronic signature is terribly difficult and they say legally you've got to and you say well why, show me... these are crucial elements because the whole system won't bloody well work if you have to still sign a piece of paper, it's terribly terribly difficult.' (PM)

Apart from the necessary reliance on clinicians' technical know-how a second source of limitation to the change drivers perceived control over the project was the knowledge that dealing with autonomous medical staff was in itself difficult and highly sensitive. If the medical professionals saw no personal benefits from the systems they could flatly and finally refuse to use them, despite whatever hospital-wide benefits they might bring. The chief executive admitted his own powerlessness in this regard.

'... the chief executive is completely powerless to do anything about that really. If the doctor says I ain't gonna use it, they ain't gonna use it.' (CE)

For the project manager this knowledge was founded in experience. An example of the undesirable consequences of insensitive dealings with clinical staff was provided when an inexperienced AT&T analyst attempted to introduce a new system in the Accident and Emergency department.

'... this person managed in less than five minutes to get up the nose of the A&E staff... He went in there and told them the way it was going to be, which was just completely inappropriate... He just said this is the system, this is how you're going to use it, this is what you need to do. And they said fuck off basically.' (PM)

On that occasion, through a diplomatic intervention the project manager was able to retrieve the situation.

'... a quiet word in somebody's ear and he was changed, completely different attitude from them and it steamed ahead. But you do need people who are sensitive in their dealings with people's feelings and

expectations, that's the most important thing in any project manager.' (PM)

The experience reinforced the project manager's belief that IT professionals could cause difficulties through their general inability to communicate with users. Unlike AT&T's staff, many of the people in his own department were not necessarily IT professionals.

'In this department very few people have a solid IT background... we have found that genuine IT people are a major pain in the ass. They can't communicate.' (PM)

The difficulties of getting departments to accept new systems were not always directly caused by senior people. In one case a junior member of staff who was expected to change her way of working was perceived as possessing power over her clinical superiors. She could effectively have resisted the change.

'... for example in maternity you've got the director of obstetrics and you've got the director of midwifery. And you would have thought that between them they're the people who are going to decide about which maternity system to have. No. There's a little clerk called Eve who runs it, does all the paperwork. And if she doesn't want to use it she'll just tell the other two to piss off. And that will be the end of the project because the clinical director will then come up with some excuse for saying I'm sorry we can't use this.' (PM)

Junior staff were not always seen as having this kind of ability to make things difficult for the project manager.

'Sometimes you find the real users don't have any power. The medical records clerks really don't have very much power to... if the medical records manager says this is it, we're going to use it, you're going to have to get on with it, then that'll happen.' (PM)

However, the project manager saw a need to be aware of the importance of giving attention to people in situations where his power was limited. The fact that he had been prepared to make some last minute adjustments to the radiology system, removing one of its irritating features, had helped its smooth introduction.

'And magically, the attention, because you have been prepared sufficiently to help them, they are prepared to go the extra little bit to make sure the system works. And people definitely like to be stroked... that's incredibly important, especially in a hospital where, very often, you don't have much power over certain groups.' (PM)

One of the ways in which the project team tried to overcome resistance to change from professional experts was to be careful to consult widely and to try and find out who the real decision makers were.

‘... you do have to be very careful about making sure the right people are there to make a decision, you must find out who the decision makers really are. They’re not always the people you think they are.’ (CE)

Difficulties were experienced in training people in the use of new systems. Sometimes the problem was ‘technophobes’ who did not want to admit their ignorance of the technology. A more difficult situation could arise, however, when the clinicians themselves possessed computer programming skills. With such people the project manager had to go to a lot of trouble to stress the integrated nature of the systems.

‘... you get them who say this is a load of rubbish , let me rewrite it for you, and we’ve got several of those here, who know something about FoxPro or something, and who think that they can rewrite hospital systems in one afternoon, and they’re the most difficult to deal with...’ (PM)

Sometimes, because of the professional nature of the systems, specialist trainers were brought in to make sure that systems were explained in a way which was understandable and which took care not to offend professional sensitivities.

‘...whilst anybody can train a secretary or a clerical officer... if you want to train nurses if you talk to them in a way that they don’t understand, they don’t respond terribly well. The same is true of doctors. You have to be careful about their sensitivities and their professional issues. And it was effectively a professional system. It was always going to be better to have a nurse trainer.’ (PM)

The project manager felt that, as well as being sensitive to the needs of individuals and the real sources of decisions within departments, there was a need for systems implementers to understand how inter-departmental politics placed limitations on possibilities.

‘... you have to take into account the internal politics... a hospital is filled with people with their own professional niches, everyone from physiotherapists to consultants, and you have to be acutely aware of what is going to be possible and what isn’t... how you have to approach things.’ (PM)

Achieving the integrating aims of the project was made difficult by departmental sub-cultures.

‘Getting two departments to work with each other is often terribly difficult because they’ve got completely different cultures within the same organization. And increasingly we want to look at the hospital as effectively a factory... more patient focused rather than professionally focused.’ (PM)

4.3.2 Further analysis of management process

Examples in the data of change project management processes employed as responses to specific considerations are listed in Table 4.4, with the categories and dimensions of each process element.

Table 4.4: Case 2 Considerations, processes, process categories and process dimensions

Ref.	Consideration	Process	Category	Dimension
2.01	‘Big bang’ approaches to systems implementation are risky.	Use an incremental, modular approach.	Pace Justification	slower more
2.02	Hospitals are not in the business of developing computer systems.	Use AT&T as contractor.	External agents	more
2.03	The chief executive has an experienced, trusted, technically-competent project manager.	Distinct separation of the project sponsor and project manager roles.	Role definition	clearer
2.04	Need to fulfill legal requirements for public sector capital projects, even though approach is modular.	Adopt cyclical approach to definition, justification, and implementation.	Formality	more
2.05	Cost-benefit analysis is of dubious value, especially on IT projects	Put little effort into it. Do a perfunctory job.	Formality Justification	less more
2.06	Fulfilling all the requirements of PRINCE takes too much time.	Ignore the more time-consuming aspects such as quality assurance.	Formality Justification	less more
2.07	Using project management tools takes too much time.	Do not use them.	Formality Justification	less more
2.08	Committing yourself on paper makes it easier for the auditors to find faults.	Commit as little as possible to paper.	Formality	less

Table 4.4 cont./

2.09	Dealing with changes of scope in formal progress meetings creates undesirable bureaucracy.	Have informal agreements with AT&T and deal with contentious issues outside formal meetings.	Formality Justification	less more
2.10	It is possible to ignore certain significant areas of cost such as training.	Draw attention only to external capital costs such as equipment purchases.	Formality	less
2.11	Desire to self-justify the non-bureaucratic 'direct action' 'back of an envelope' approach.	Stress that (a) the site is compact; (b) the management structure is unified; (c) most internal resources are people's normal work.	Justification	more
2.12	AT&T want to apply their newly-acquired quality assurance accreditation to the project.	Because quality assurance is, nominally, a legal requirement, reluctantly accept AT&T's increased bureaucracy and cost.	Formality External agents	more more
2.13	Failure to involve users and think things through led to the nursing system being 'a complete cock-up'.	Adopt a more cautious approach to defining how users will work with systems, and to planning their implementation.	Participation Pace	more slower
2.14	Desire to be seen to be keeping costs low.	Appeal to NHS norms and stress minimal level of investment. Be seen to be 'trawling the world' for equipment purchases. Ignore internal costs.	Justification	more
2.15	Project team has lack of clinical know-how.	Second members of clinical departments to project team.	Participation	more
2.16	People from clinical departments contributing to the project make wanton promises and false claims of legal requirements.	Do not trust clinical participants' promises and demands.	Participation	cautious

Table 4.4 cont./

2.17	Clinical departments which are dealt with insensitively can unilaterally refuse to use new systems.	Use members of the internal project team rather than AT&T IT professionals to install systems and 'stroke' people.	External agents	less
2.18	Project team members who deal with user departments must understand departmental politics and sub-cultural issues in order to know the limits of possibility.	Use members of the internal project team rather than AT&T IT professionals to negotiate requirements with users.	External agents	less
2.19	Junior staff in clinical departments sometimes have the power to refuse to use new systems.	Find out who effectively makes the decisions concerning the use of a system and consult them.	Participation Pace	more slower
2.20	Some clinicians are accomplished designers of small computer systems, and will want to design their own systems.	Stress the benefits arising from the integrated nature of the new systems.	Justification	more
2.21	Trainers of nurses and doctors in the use of systems must take account of their professional sensitivities.	Bring in specialist trainers.	External agents	more

4.3.3 Summary

The same six categories developed from Case 1 were found to be appropriate for the data from Case 2, although one category, *selling*, was renamed *justification*. This proved to be a more complete way of describing processes associated with promoting or defending the reasons for the change and for the processes employed. The change drivers in both cases were justifying their actions, both to themselves and others.

In addition it was found necessary to add some new dimensions in order to account for and describe every process element. It was also found necessary to make certain adjustments to the definitions of some categories to accommodate the data from both Case 1 and Case 2.

A summary is given below of the application of each of the six categories on the hospital information systems project. The latest definitions and dimensions of the categories are also listed.

1 EXTERNAL AGENTS

Definition: The use of change consultants, project contractors and other 'experts' from outside the organization.

Dimensions: More...Less

Development of the computer systems was 'outsourced' to AT&T. The project manager was content to allow AT&T to deal with the detailed design and technical project management of the various integrated elements of the project. He was, however, careful to keep control over AT&T's activities where these required them to communicate with users, either establishing and defining users' requirements or installing the new systems in the various clinical departments.

Specialist clinical trainers were brought in when needed to train doctors and nurses.

2 FORMALITY

Definition: The formal documentation and communication of project requirements definitions, cost-benefit analyses, quality assurance measures and other project plans and controls.

Dimensions: More... Compromised... Less

Certain procedural rules govern the management of public sector systems projects. The procedures were intended to reduce the likelihood of project mismanagement. In particular, spending organizations were nominally required to follow detailed formal organizational 'methodologies' for sanctioning and controlling expenditure and assuring quality. One of the project manager's main concerns was to keep project bureaucracy to a minimum, to allow him to get on with the projects with as little unnecessary paperwork and as little interference from auditors as possible. He complied with some of the requirements for documented plans and controls, although in a somewhat careless, perfunctory fashion. Other requirements, including the management of internal costs, he was able to ignore. He tried to keep his dealings with AT&T as informal as possible, although there were signs that AT&T were starting to increase bureaucracy in their own interests.

3 PACE

Definition: The pace of an aspect of the project at a particular time. (Relative to other aspects or to the same aspect at other times, rather than absolute).

Dimensions: Faster... Slower

The incremental, modular approach to the project was a significant feature of its pace. In addition, the experience with the nursing system led to a slower, more cautious approach to defining and planning the individual modules.

4 PARTICIPATION

Definition: The involvement of staff other than change drivers in scope decisions.

Dimensions: More... Less
Bold...Cautious

The project manager was aware of two reasons why he would need to involve users in defining and designing systems. First, he and his team lacked the specialist knowledge possessed by the clinicians about the workings of their departments. Second, he perceived the need to develop systems that users would actually want to use (a perception reinforced by the nursing system failure). This applied to the clinicians themselves and sometimes to the more junior staff whose jobs would change as a result of a new system. He learned, however, to mistrust some of the users' technical demands and their promises of delivering tasks.

5 JUSTIFICATION

Definition: Justifying the content and process of the change both to the change drivers themselves and to others. Includes educating and promoting to staff the idea that the change was inevitable and desirable, that its organizational and individual benefits outweighed its organizational and individual costs.

Dimensions: More... Less

The project manager was keen to justify his informal approach to project management and cited several reasons why such an approach was appropriate. Both change drivers stressed the (nominal) low cost of the project by comparison with systems development costs in the NHS generally. The chief executive claimed that the benefits to the hospital were already becoming apparent. The project manager described his formally-demonstrated efforts to minimize expenditure on capital equipment.

6 ROLE DEFINITION

Definition: The clarity of definition of the respective project management roles and responsibilities of the change drivers.

Dimensions: Clearer... Less clear

Several factors led to the two change drivers operating with clearly-defined responsibilities. Although the chief executive claimed to have experience of systems development projects in other hospitals he was new in relation to the project life cycle and saw no need to become involved in the detail, as he had on the clinical directorates project. His role was simply to support the project manager. The project manager, on the other hand, had been there since the start and had become experienced at operating within the constraints imposed on the project management role by external requirements for formality and internal resistance to change.

4.4 Learning and implications for next stage

- 1 In Chapter 4 two projects of change in the same organization but with some fundamentally different characteristics have been analyzed using a constant comparative approach structured around the initial conceptual framework: context, content and management process. The analytical process in both cases was the same. It involved immersion in the data and the application of repeated, iterative comparative coding, memoing and diagramming techniques. These led to a level of understanding which enabled the case to be presented in a way which explained the change drivers' perceptions of why, what and how the changes were introduced.
- 2 Slightly different formats of description were found to be appropriate for the two cases. The subject of Case 1 was a swift and extraordinary restructuring of the trust's senior management. The aims of the change were to realign the structure and the culture of the organization in response to specific problems. There was little direct technical content. The internal and external environmental issues (context) set the scene for the change (content), and the two aspects were presented in that order. Case 2 was a relatively routine four-year incremental programme of updating the hospital's computer systems. The overall scope of the new systems (content) set the scene for a description of significant features of the organizational environment (context), with a more detailed description of one element of the programme illustrating interplay between content and context.
- 3 With some minor enhancements to their titles, definitions and dimensions, the six management process elements were consistent across the two cases.
- 4 The importance of interviewing both identified change drivers in each case was confirmed. In Case 1 the chief executive was the principal change driver, with the project manager handling some of the more routine tasks. In Case 2 the chief executive played a peripheral, supporting role to the project manager, who maintained a deep involvement in day-to-day aspects the project.

A third project had been identified by the chief executive. Interviews were conducted with the chief executive as project sponsor, with notable involvement, and the project manager's deputy, who was also involved, but at a lower level than the project manager, who was unavailable for interview. It was apparent that, had the case been written up, its quality

would have been undermined to a significant extent by the ‘missing’ data from the project manager.

5 Two issues arise from the research design and from Cases 1 and 2 which have implications for the next stage of the study:

(a) Cases 1 and 2 were conducted in a London-based public hospital employing 1200 people. The management processes enacted by the change drivers of the two projects could be described in summary in very similar ways, even though the projects had some markedly different characteristics. A reason for this may have been that the changes were being described by managers within the same organization. Many of the significant context issues arose from the fact that the organization was in the public sector, and more specifically in the NHS. How would the kinds of conclusions concerning management process be affected if the projects of change were in a *private sector* service organization of a similar size and geographical location?

(b) The importance of interviewing both the change sponsor and the project manager was confirmed. The effectiveness of an open-ended approach to the interviews was also confirmed, since a preconceived framework of processes would have laid the research open to missing subtle and critical aspects of the processes which were discovered and which would not have been accessible through existing theoretical frameworks. The opportunity will be taken in the next stage of the work to discover whether data from a wider range of organizational actors could prove useful in producing a richer analysis of management processes than that provided simply by data from the nominated change drivers.

5 RESULTS FROM ASSOCIATED NEWSPAPERS

At the end of Chapter 4 it was argued that the setting for the next stage of the study should be a private sector organization in which the interpretations of a wider range of informants than the identified change drivers should be sought.

An opportunity to address these issues was presented by the London editorial office of Associated Newspapers Limited (ANL), where research access was granted. Two recently-completed projects of organizational change were identified by the group's Information Systems (IS) director. He named the change drivers, including himself, of the two projects. He also identified a number of other individuals in the company who were connected with the projects, either as subjects of the changes or as contributors to the change management process from other parts of the organization. The two projects are the subject of Cases 3 and 4, presented in this chapter.

Section 5.1 introduces the recent far-reaching changes in the UK newspaper industry, and outlines their effect on ANL. Some relevant details of the organization are given. The processes of gaining research access and identifying projects of change and informants are described, with details of the collection and analysis of data.

Case 3, the first of the two small internal restructuring projects in ANL is presented in Section 5.2. The case format is similar to that of Cases 1 and 2. With some refinements to their definitions and dimensions the same six categories of management process were found to be appropriate for describing all the data.

Case 4, the second ANL project, is presented in Section 5.3 in the same form, with little change to the categories.

Section 5.4 summarizes the interim conclusions from the first stage of the study and explores the common origins of the management processes employed on all four of the projects studied so far. With reference to the literature on managerial control a possible explanatory mechanism is identified, linking contextual factors to management processes. Implications for the next stage of the study are discussed.

5.1 Introduction

The study in ANL took place early in 1995, a few years after the whole industry had gone through rapid and fundamental change. In the words of one informant:

‘... we’ve gone from the nineteen-thirties to almost the twenty-first century in about six years, and that is mainly because of IT.’

In that relatively short time UK national newspaper producers had seen radical technological change accompanied by the redundancy, almost overnight, of many traditional and well-paid skills. Despite violent (and well-publicized) efforts to resist radical change, in London’s Fleet Street and in east London, the swift transition from ‘hot metal’ to electronic processes had revolutionized the industry.

Associated Newspaper Limited (ANL) produced The Daily Mail, The Mail on Sunday and the Evening Standard, with their various magazines and supplements. During the recent industry-wide changes ANL’s total workforce had been de-unionized and reduced from 9000 to 3000.

The company had a joint editorial office for its three main titles. Editorial staff, who numbered around 1500, were based in a modern block off London’s High Street Kensington. The office had been occupied by ANL since 1988, when it was first built. In the traumatic times of the mid-1980s there was a constant threat of disruption of the company’s operation by disgruntled production workers. The extreme importance to the company of avoiding loss of newspaper production, even for a single day, was reflected in the existence on another site of an entire mirror-image back-up editorial facility which could be immediately brought into use if, for whatever reason, the Kensington site were damaged or threatened. The newspapers were printed by ANL’s allied company, Harmsworth Quays Printing Ltd., elsewhere in London. The Daily Mail was also printed at various sites around the country.

As with Ealing Hospital NHS Trust, access to ANL was gained through a former Thames Valley University business student. The former student worked in the newspaper group’s central Information Services (IS) department. She arranged an introduction to the head of the department, the IS director. Although he was not at the very top of the organizational hierarchy he was a main board director with substantial responsibilities throughout the group. He reported to the managing director. At an initial meeting the IS director was briefed on the broad aims of the doctoral study and asked whether there were any current or recently completed projects of internal change in his part of the organization. He identified two projects of internal restructuring in his

department and described their origins and scope. Characteristics of the two selected projects are summarized in Table 5.1:

Table 5.1: Comparison of the two Associated Newspapers Ltd. project characteristics

	Case 3	Case 4
Title	Amalgamation of Photoservices and Optronics	Transfer of the NEAT Project
Origin	Opportunity to save space and staff costs, and to offer a better photographic service to the group's newspapers.	The need to move a software development and implementation project to a department in which it could be better managed.
Nature of scope	Staff redundancies; equipment installations.	Structural reorganization.
Drivers identified	Project sponsor and project manager	Project sponsor and project manager
Main driver	Project sponsor (IS director)	Project sponsor (IS director)
Status	4 months duration. Started April 1994, substantially complete August 1994. On schedule, apart from two delayed redundancies.	Change happened December 1994.
Budget	£200,000	none

The IS director named himself as responsible for initiating both projects and identified the other members of the organization who had partial managerial responsibility for each project. He was then asked to name several others in the organization who were involved in the projects and who, in his opinion, could provide a broader perspective of the management process of one or both of the projects. He did so, and offered his help in setting up a schedule of interviews. During the study one other individual was named by an interviewee and was added to the schedule. The complete list of interviewees is shown in Table 5.2. The change drivers are marked *.

Table 5.2: Associated Newspapers Ltd. interviewees

Title	Ref.	Role on first project (Amalgamation of photoservices and optronics)	Role on second project (Transfer of the NEAT project)
Group IS director*	ISD	Initiator, main driver of staff changes	Initiator, main driver
Photoservices Manager*	PSM	Driver of physical and staff changes. Manager of merged department.	None
Photoservices Supervisor 1	PS1	Participant in design of new department layout. Increased responsibilities as a result of change.	None
Photoservices Supervisor 2	PS2	Participant in design of new department layout. Increased responsibilities as a result of change.	None
Building Services Manager	BSM	Internal advisor and main driver of physical changes. Liaison with building contractor.	None
Building Services Designer	BSD	Draughtsman of new layout	None
Group Software Services Manager*	GSSM	None	Manager of department receiving transferred project and team
Group Computer Services Manager	GCSM	None	Manager of department giving up transferred project and team
Network Applications Manager	NAM	None	Member of department giving up transferred project and team
Head of Personnel	HP	Implemented staff changes	Implemented staff changes
IT Facilitator	ITF	Internal advisor to IS director	Internal advisor to IS director

Interviews were conducted between March 1995 and June 1995. Each lasted between forty five minutes and one-and-a-half hours. Interviews were, without exception, tape recorded and fully transcribed. The IS director and some of the others were interviewed twice, over the period. The interviews were loosely structured around the informant's background, the reasons for the project(s), their role on the project(s) and the roles of others. Both projects were relatively small and self-contained and, in keeping with the IS director's declared

preference for verbal communication, had involved hardly any written material. Archival data provided was limited to an outline project plan and layout for the equipment installation and a set of organization charts showing reporting responsibilities after the two changes.

The data were analyzed in the same way as Cases 1 and 2, starting with the outline framework of inner and outer context, content and management process and building from scratch a coding structure which was able to account for all the data within the framework.

There was considerable overlap between informants' accounts. Some additional information was provided by the additional informants, although this was limited to factual details and information about each individual's position. There was also some disagreement. This took the form of differing opinions about who had been responsible for managing the changes. This point is further explored in Section 5.4.1.

A report of the analysis was sent to the IS director for his verification. He confirmed his complete agreement by telephone, both of the facts and of the analysis.

5.2 Case 3: Amalgamation of photoservices and optronics

The first project of change in ANL concerned the amalgamation of two of the departments in the IS director's managerial domain. The case is presented in three sections. In Section 5.2.1 the case narrative is given, in which the change context and content set the scene for details of the management processes employed. In Section 5.2.2 the management processes are summarized in the same tabular form as in the previous chapter. Finally, in Section 5.2.3 the use of each category of process is summarized, with refinements to their definitions and dimensions.

5.2.1 Case narrative

Change context

Several significant forces for change formed the background to this project of downsizing and internal restructuring. The advance of digital technology, increased use of colour pictures in newspapers, the trend towards decentralization of newspaper production facilities and de-unionization in the industry had all combined to determine and enable the strategic direction of the organization, of which this project was a part.

The central photographic services (photoservices) department issued film to photographers and processed photographs for the newspapers' picture desks. The department was rapidly becoming an anachronistic intermediary in an era where digital photographic images could be sent electronically direct from photographers to editorial desks. In ANL's chief rival, Express Newspapers, the photoservices department had already been made redundant by digital technology. Staff in ANL's photoservices department were acutely aware of the growing threat to their jobs. They already had direct experiences of being bypassed by new technology in the company, with image scanners being made directly available to picture desks. Nevertheless, for the time being at least, digital images were not yet a full scale reality.

In parallel with technological advances the intense newspaper 'circulation war' had led to ever fatter papers with ever more magazines and supplements¹, all with pictures. Despite this growing demand for pictures, however, the photoservices department was widely considered to be in terminal decline. A net fall in demand for its services, together with the release of floor space previously occupied by redundant black and white processing equipment, provided the IS director with an opportunity to cut costs. He would move

¹ In ANL The Daily Mail had Week-End Magazine, The Mail on Sunday had You Magazine, Night and Day, and The Financial Mail. The Evening Standard had ES Magazine and Classified Week.

another department - optronics² - from another floor of the building into the area occupied by the main part of the photoservices department, geographically uniting the two departments under their joint manager.

Before describing the scope of the departmental merger, it is worth considering an aspect of the context of change within the organization which was of central importance to the IS director, the position of his IS group in relation to the rest of ANL. He summed up the relationship between the role of his department as a service provider and that of the company as a whole, as a producer of newspapers:

‘... in essence if we fail to do our job properly they fail to do their job properly.’ (ISD)

For the IS director doing his job properly meant providing the best quality support service for as low a cost as possible. The needs of the department’s customers were an important determinant of his approach to the departmental merger:

‘The main constraint with it were the customers. Not constraint in the sense of them not wanting it to happen, but doing it in such a way that they got a better service from a lower resource than they had from a higher resource.’ (ISD)

The IS director declared himself ‘a strong believer’ in service level agreements³ with his internal customers, both for internal control of his workforce and for demonstrating benefits. For this reason work measurement was seen as an important feature of the department’s operation.

Change content

There were three main areas of intended benefit from the amalgamation of photoservices with optronics. First, it would release the space occupied by the optronics section. Second, the merger would save money by using a combined, reduced staff for both sections. Third, it would bring the two sections together into the physical domain of their manager, allowing better control. The photoservices department had 23 staff. Many of these were experienced photographic process professionals who were under-worked and, as a legacy from the old days, in the words of the head of personnel, ‘incredibly highly

² Optronics are electro-mechanical devices for producing film which is then used to produce plates for magazines.

³ Formally documented internal ‘contracts’ quantifying the services offered by the department in terms of time, cost and quality.

paid'⁴. The eight optronics staff, by contrast, were younger, less experienced, much lower paid and on fixed term contracts. Another benefit anticipated by the IS director was that, by keeping the more experienced photoservices staff and training them to operate the optronics equipment, a better quality of optronics output and a more professional service to their internal customers would be ensured.

The project had a budget of £200,000. Its scope included rearranging the layout of work stations and equipment in the photoservices department and moving in the optronics equipment from its location on another floor of the building. These changes required electrical work, heating, ventilating and air conditioning changes, fire services modifications and other building works to be carried out. Another part of the scope of the project was to reduce the total number of staff for the two sections from 31 to 15. The remaining staff were to be trained where necessary by the departing staff. Some new capital equipment purchases were included with the project works but were outside its budget.

The IS director's own pay was linked to his achievement of costs savings. One of his aims was to reduce the number and cost of staff in his department to a minimum.

'... we had a department which in essence was, 31 people, we've now got it down to 17. I actually hoped to get it to 15. But we're at 17 at the moment it's the best I've been able to go.' (ISD)

With annual cost savings of £200,000 from salaries the project would have a one-year payback period.

Change management process

One of the features of the project management process was that the project management role was ill-defined. This was reflected in the change drivers' multiple and overlapping perceptions of their own role and that of others.

The IS director identified himself as 'the brains behind it', and said of the photoservices department manager 'he was the project manager of this'. The IS director saw his role as providing 'PR and guidance' while the project manager's was to 'do the biz'. Despite his identification of the department manager as project manager the IS director named two other individuals as having responsibility for 'part of it', including the building services manager and his pre-press manager. The latter had since left the company.

⁴ Some skilled technicians on a four-day week were earning £38,000 a year in 1995.

The department manager did not see himself as project manager, but named three others as being project manager 'some of the time', including the pre-press manager, the building services manager and a technical draughtsman who was 'in charge of the project' who reported to the building services manager but whom neither the IS director nor the building services manager had mentioned. The technical draughtsman was later interviewed, and it emerged that his role had been simply to translate the requirements for the floor layout of the new section into a documented plan.

The IS director was free to achieve the aims of the project in whatever way he chose, provided the service to the newspapers was not jeopardized. He declared an autocratic style.

'Before we started I had all of the employees together and told them what was going to happen, including the fact that there would be redundancies, and the reasons why it was going to happen. That's not democratic that's just me telling them.' (ISD)

Because of his concern that the department manager and the two supervisors reporting to him should be happy with the arrangement he sought their contribution to the details of the department's physical layout and the timing of the staff reductions.

'There was I think quite good discussion, communication about what the changes were to be... I required that the three of them were happy with the plans before they were implemented. That was my protection... not protection, that's the wrong word, I don't need protecting... that was my quality assurance.' (ISD)

The IS director knew that the older, higher paid photoservices staff were in a weak position. He had not given them a routine pay rise in the latest annual round. He emphasized the fact that they were overpaid, especially when compared with the younger, low-paid operators who were losing their jobs. His reason for keeping the higher paid staff was that the older 'professionals' were more experienced, would look after the equipment better and would provide a better service.

'... these guys are professionals with film, and I expected to get, and I did get, a more professional handling of the physical equipment, and a much better understanding of the quality of output which came from the machines.' (ISD)

The position was further justified by the notion that the photoservices and optronics departments' customers actually preferred to deal with older, more experienced people.

‘Customers prefer a more experienced person to a younger person. That’s the way life is.’ (ISD)

The IS director saw two potential sources of staff demotivation which threatened maintenance of a high level of service during the change. First, some of the younger staff knew they were being made redundant, and second, the older people were being told they were overpaid. The latter could be mitigated by promoting to the photoservices professionals the cv-enhancing benefits of learning optronics skills:

‘... there’s always the risk of demotivating people, either when you have redundancies available but also when you tell people that they’re already overpaid... what we were able to do here was by adding in the optronics work we’re putting in a new area, a new skill, keyboard training, all of the things that enhance the cv of the individual, so we’re able to add that in, and it has to be better for an individual.’ (ISD)

The IS director expressed his pleasure at being able to help photoservices staff in this way.

‘they are in a business which is dying. Now it takes a long while to die, but it is dying. With the optronics they had a chance to learn some skills which will be more appropriate to them, in an electronic world. So there’s a ‘sub’ thing there which is of benefit to them as individuals rather than necessarily to me. I’m very happy to have that situation occur.’ (ISD)

As far as the optronics staff were concerned the IS director was not only making some of them redundant, but was having to rely on them to teach their skills to the photoservices professionals who would remain. A policy of openness was adopted, and two optronics staff were promised jobs elsewhere in the organization. No staff were made redundant until the IS director was satisfied that the skill transfer had taken place.

‘I ran with double staff, to make sure there was enough time for the skills to be transferred.’ (ISD)

Apart from potential difficulties with staff, many of the risks of lack of continuity were seen to come from the physical aspects of the project, such as equipment moves and building works.

‘... we had to do all of the work and keep all of the work going at the same time. So the risk was the possibility that we would move

equipment and not have it available when we needed it to be available.’ (ISD)

The department manager was particularly worried about moving the optronics scanners. Thanks to a combination of luck, careful preparation and phased planning the scanners were moved without trouble.

‘... we dealt with that largely by pre-preparing, having the receiving area fully prepared for the machines, and then planning to move them over two different weekends... we were very lucky and we didn’t have any real problems.’ (DM)

The moves were done over as short a time as possible. Much of the riskier work was done at night, when the department’s work load was lowest. This ploy paid off on one occasion.

‘... we had a chemical leak on one occasion, which caused an evacuation, caused us to have to evacuate the floor, by fire brigade requirements... So that was at four o’clock in the morning... it didn’t have any effect on (service).’ (ISD)

A no-expense-spared approach was adopted in contracting for the building and equipment moving works. A single external firm which specialized in photographic work, and which had originally built the department when ANL moved into the building in 1988, was invited to do the work. The firm used several sub-contractors (for example electrical work, air conditioning and fire services). All of the sub-contractors were paid directly by ANL to avoid the possibility of contractual disputes through non-payment by the main contractor.

An unexpected problem arose during the building work.

‘... when the ventilation systems were being played with up in the ceiling, we were getting dust down during production time... for two days that was a very difficult period, but we couldn’t stop.’ (ISD)

The photoservices and optronics staff were financially rewarded for coping with this disruption during difficult times.

‘I gave them a bonus at the end, because they had worked through very difficult conditions and had given an excellent service to the customers. And bearing in mind that two of them were being made redundant at the end of the exercise, and possibly a third one, and also that I’d told them they would not be getting any increases because they were already overpaid in relation to the marketplace, I thought they did superbly well.’ (ISD)

For the building services manager the project was 'extremely carefully planned'. This meant much verbal liaison between the parties involved but, apart from an early issue of an outline bar chart, little of the project schedule was committed to paper. The building services manager said he 'would have liked to do a detailed programme' but there was not enough time, so they planned the detail as they went along.

The success of the project was affirmed by the lack of criticism by the department's customers. The new concern over staff levels reflected the conflicting aims of cost reduction and service continuity at all times.

'I measure a lot of these things on what people say to me. I have no problem, I publish a report every month on optronics and photoservices, I've not had a single critical statement other than that there is concern that we are too... we have too low a staff to deal with emergencies.' (ISD)

The manager of the merged department claimed that the project had already proved to be a success on the grounds that the more experienced photoservices staff were able to avoid certain problems which had existed before the change.

'... this shows a success there because we don't have the problems that we had at that stage where films would go through to the papers that they weren't clean and had an obvious error on them and things like that, now they get picked up.' (DM)

Completion of the project and the achievement of the full staff reduction was slightly delayed by another part of the organization on whom the change drivers were dependent. This had slowed the reduction in staff numbers to its anticipated level. The IS director was seeking to use work measurement to convince the manager of the merged department that the further reduction of two staff was achievable.

'I'm now trying to find ways of measuring the work so that I can I can prove to him that actually he could have a little more re-organisation and get down to 15.' (ISD)

5.2.2 Further analysis of management process

The various considerations and the resulting management processes are listed in Table 5.3:

Table 5.3: Case 3 Considerations, processes, process categories and process dimensions

Ref.	Consideration	Process	Category	Dimension
3.01	A small, self-contained project which could be handled using the normal informal, face-to-face style.	Project manager role not formally identified.	Formality Role definition	Less Unclear
3.02	Desire to stress inevitability of change, including redundancies.	Initial open verbal briefing.	Justification	More
3.03	Need to ensure physical and process functionality of new arrangement	Get photoservices staff to contribute to and agree design details	Participation	More
3.04	Need to reward tolerance of, and emphasize temporary nature of physical disruption during change.	Provide bonus for working in messy conditions.	Justification	More
3.05	Need to maintain motivation of overpaid, no-pay rise photoservices staff in dying profession	Stress career-enhancing benefits of learning new optronics skills.	Justification	More
3.06	Need to justify keeping more expensive staff when the objective was to cut costs	Stress better service to customers and better equipment handling from older, more experienced staff.	Justification	More
3.07	Need to ensure skills transfer from departing optronics staff to remaining photoservices staff	Period of double-manning before staff redundancies.	Pace	Slower

Table 5.3 cont./

3.08	Need to maintain motivation of optronics staff being made redundant	Show that there may be jobs elsewhere in the organization for some.	Justification	More
3.09	Reduce risk of physical problems during equipment moves.	Use proven professional photographic installation contractor rather than in-house department. Do moves as quickly as possible, but at low-risk times and staggered.	External agency Pace	More Compromised
3.10	Remove risk of payment disputes between contractor and their sub-contractors.	Pay sub-contractors direct.	External agency	Less
3.11	Not enough time for documented detailed planning.	Verbally communicated plans.	Formality	Less
3.12	Need to justify further redundancies to department manager	Use work measurement.	Formality	More

5.2.3 Summary

Some adjustments to the definitions and dimensions of the six tactic categories presented at the end of Chapter 4 were necessary to give a complete account of the Case 3 data. The revised definitions and dimensions, and a summary of their application on the photoservices-optronics merger are given below.

1 EXTERNAL AGENTS

Definition: The use of change consultants, project contractors and other 'experts' from outside the organization.

Dimensions: More...Less

Because of the specialist nature of the equipment, building and moving works were let to a contractor with expertise in photographic equipment. To minimize the threat of contractual disputes the contractor's sub-contractors were paid direct by ANL.

2 FORMALITY

Definition: The formal documentation and communication of project requirements definitions, cost-benefit analyses of the project, quality assurance measures and other project plans and controls.

Dimensions: More... Compromised... Less

The project was small, swift and geographically self-contained. An informal, face-to-face approach to planning was adopted, based on discussion and agreement of details as different issues arose. Work measurement was used to defend the need for redundancies.

3 PACE

Definition: The pace of an aspect of the project at a particular time. (Relative to other aspects or to the same aspect at other times, rather than absolute).

Dimensions: Faster... Compromised... Slower

The physical aspects of the project were handled as quickly as possible, with night working, to minimize risk of disruption. There was some staggering of moves of duplicated equipment to avoid unavailability of a particular machine type at any time. The staff aspects were handled slowly and carefully with a period of double-manning to enable training to take place.

4 PARTICIPATION

Definition: The involvement of staff other than change drivers in scope decisions.

Dimensions: More... Less
Bold...Cautious

An autocratic approach to the change was taken by the IS director. There was a some participation of staff in decisions relating to the layout details of the merged department.

5 JUSTIFICATION

Definition: Justifying the content and process of the change both to the change drivers themselves and to others. Includes educating and promoting to staff the idea that the change was inevitable and desirable, that its organizational and individual benefits outweighed its organizational and individual costs.

Dimensions: More... Less

The inevitability of the change was stressed from the outset, and the IS director took trouble to mitigate its negative aspects (job losses and evidence of decline) by stressing benefits to staff. The photoservices staff would be learning new skills. The optronics staff would possibly have opportunities to move to other parts of the company. The need to continue to work during the disruption of the building works was rewarded with a bonus.

6 ROLE DEFINITION

Definition: The clarity of definition of the respective project management roles and responsibilities of the change drivers.

Dimensions: Clearer... Less clear

Apart from the IS director, who remained close to the details throughout, at least four individuals were credited with overlapping project management responsibilities. This aspect will be discussed further after the next case.

5.3 Case 4: Transfer of the NEAT project

This second case study from Associated Newspapers Ltd. involves another project of internal restructuring which the IS director undertook during 1994. The short case is set out in three sections. In Section 5.3.1 the case narrative is presented in the format: change context, change content, change management process. In section 5.3.2 the management processes are summarized in tabular form. In section 5.3.3 the six process categories, their definitions and dimensions are again defined.

The project with which this case is concerned is the transfer of responsibility for a software development project from one part of the organization to another. In that sense the subject is a project within a project. In the course of the analysis it became clear that much of the data relating to the software project itself could provide a great deal of insight into the factors which were influencing the change management processes within the company as a whole. For that reason some of the issues relating to problems on the software development project are included in the case narrative. The implications of this issue are considered in the final part of Chapter 5, which brings together the conclusions from all four cases studied so far.

5.3.1 Case narrative

Change context

In addition to the photoservices and optronics department, the subject of the previous case, the IS director was responsible for several other departments, including Group Computer Services (GCS) and Group Software Services (GSS). The traditional division of responsibilities between these two was that GCS supported the company's hardware needs while GSS dealt with software.

Because of the central importance to ANL of maximizing competitive advantage from technological change the IS director employed two 'futurologists', who happened to be located in the GCS department. Their job was to monitor developments and trends in information and communications technologies, to assess their strategic implications and to predict possible future technological directions for ANL. Some of their ideas became speculative hardware or software development projects which might, at some future time, result in the organization acquiring the knowledge to meet the challenges of technological change faster than the competition.

At any given time the GCS (hardware) and GSS (software) departments had several such projects at various stages of advancement. Although many ideas

never got beyond their preliminary, investigative stages one earlier technological prediction by the futurologists had proved correct. They had forecast the demise of proprietary terminals connected to character-based mainframe computer systems, such as ANL's editorial system, and their replacement by networked personal computers (PC)s. A software development project had been initiated some years previously within GCS to deal with this coming change. The project was code named NEAT (Next Editorial and Advertising Terminal). The network applications manager described the origins of NEAT:

'NEAT was produced because we've got seven or eight hundred users using these proprietary Coyote terminals. These terminals cost about seven or eight thousand pounds a time and they do nothing except act as a terminal on the editorial mainframe, so if you could get a PC to do the same job you could spend fifteen hundred pounds and it'll not only do the job, it would allow you to run Windows, Word, Excel, e-mail round the company. It would open up the whole wide technical world to anyone who currently uses a Coyote, so there were huge advantages but no one world wide has found a way of accessing this system from a PC and we've got a couple of boffins, one in particular who knew how to do it.' (NAM)

NEAT had started its life as a hardware-related issue in the GCS department. However, as it progressed through its stages of development NEAT had become a software product. It was about to be formally released to groups of users in various parts of the company.

Change content

At the time of the study four dedicated staff were employed on the NEAT project. One of these had been responsible for the product's development from the outset and was nominally the project leader, reporting to the manager of GCS. The project had been allowed to develop in an informal, unstructured way, and the software was undocumented. Its release to users had begun and was already showing signs of being badly out of control. When the manager of GCS left the company in October 1994 and was replaced by a new man, the IS director took the opportunity to make a change.

The scope of the change was simply to move NEAT and its team of four, organizationally and physically, out of GCS into GSS. There NEAT would become the responsibility of the manager of GSS. She was seen by the IS director as possessing the management skills necessary to bring the project under control and release NEAT to users in a well-managed fashion.

Change management process

The management process for the transfer of NEAT from GCS to GSS was straightforward. Few people were involved and there was no cost. The IS director simply persuaded the GSS manager that the time was right to move NEAT into her department, and she accepted, without realizing what a poor state the project was in.

For the IS director the change was a natural progression of a software development project from one department to another as it moved through its life cycle.

‘... this was a project that started, correctly, in a technological area, but when the project got through to fruition it was a piece of software, and software we deal with in another department, software support, as distinct from Group Computer Services.’ (ISD)

In this case there was another impetus for change. NEAT had been championed from its inception by the former manager of GCS, who had recently left the company. The IS director was taking advantage of this opportunity to impose his own will.

‘The proposed changes were in part also dictated by the fact that a senior manager, my most senior manager, was leaving at the end of October, and it gave me an opportunity to move one or two things that he held close to his chest into areas where I thought they were more appropriate. So it was a second impetus for change in the circumstances.’ (ISD)

He felt that, although the project management of NEAT under the departing GCS manager had not been bad, its objectives had been allowed to drift.

‘The project management wasn’t too bad but the objectives of the projects were not involving the customers as much as they needed to, and in software services we’re very used to involving the customers at all stages in the project.’ (ISD)

The manager of GSS was inheriting the four dedicated NEAT staff. She was also effectively inheriting direct responsibility for managing NEAT from that point. When asked who was now the project manager for NEAT, she expressed her concern at having to take responsibility for a project which, in terms of integration and leadership, was worse than she thought.

‘Me now, by default... that wasn’t what I... I thought I was taking on a project team, and there simply isn’t a project team, in fact there are three people... and they don’t even speak to each other until I get

them into a room to discuss it, so there is no project management... and even worse than that, I knew that there was no project management, but there is no project leadership.' (GSSM)

For the GSS manager, poor project management and poor co-ordination in the past had led to the project being out of control. The software product had already been released to users in an uncontrolled fashion. This was beginning to cause problems.

'I'm really struggling. What I... for instance, it's actually live, in some areas, and it's hard to catch up with who they've delivered it to this week. There's no concept of version control. So there are those sorts of things to deal with, and the users are unaware of what they should expect or what they're getting.' (GSSM)

Another problem was providing support for the new users, including training and operating manuals.

'There is no documentation to speak of, so I've now got a tech writer who is trying to catch up on documentation. There is no concept of training... not even a half-day, not even an hour of... you know, you've now got it installed on your PC and you can use it, and let me just run through the... nothing. So I'm trying to put all that around it.' (GSSM)

A further problem she inherited was that the product was being released before it had been properly tested.

'... what happens is, you get this deputation, three senior managers from the Evening Standard coming and saying NEAT doesn't work, and I'm saying I wasn't aware that you had it, last time I spoke to the developer we hadn't tested it yet. I don't need that.' (GSSM)

A trend in national newspapers is the opening of regional editorial offices, which can add value for a newspaper's customers by providing a local flavour. The Daily Mail had recently opened such an office in Glasgow. When the Daily Mail was planning its Glasgow office the paper's chief rival, The Express, was known at the time to be considering a Glasgow office. To beat the competition The Daily Mail rushed the Glasgow project through in six weeks from conception to implementation, with no expense spared. The combination of the Glasgow project's speed and secrecy enabled The Daily Mail to succeed in stealing a competitive march on The Express. Unfortunately for the GSS manager, who was not in on the secret, she was unaware of the schedule. What she thought was a test environment for NEAT turned out to be a live environment, adding to the department's mounting problems with the software.

‘... up there in Glasgow thinking we were working on a test environment. We made a bit of a blunder but shouldn’t have mattered too much because it was a test environment. It caused an absolute disaster and we discovered that it had gone live that day but nobody had told us, it was supposed to be a secret - so secret they hadn’t told the people who were supposed to be supporting it.’
(GSSM)

Another looming problem which would need to be addressed in the near future was that of 24-hour user support for NEAT. GSS staff worked normal nine-to-five office hours, and yet editorial copy takers were starting to use NEAT to receive copy from around the world, throughout the day and night. This failure to anticipate and take steps to resolve inter-divisional issues was seen as typical in the organization. The network applications manager foresaw a serious situation.

‘... in a month’s time you find the whole thing goes down. It’s midnight and various articles don’t get into the paper. I cannot imagine who’s head is going to roll over this or where the fingers are going to be pointed. And that that’s I would say is a typical communication, co-ordination problem. No one is finishing off the job.’ (NAM)

Problems were made worse by constant pressure from customers for quick solutions to problems. This pressure was felt by the GSS manager to be a characteristic of the newspaper industry, with its short-term time horizon.

‘... in the newspaper industry, because everything is only a day long, the users are more willing to sacrifice that concept of quality to expedience, and that’s something I’ve never found in any other industry I’ve worked in.’ (GSSM)

She was aware of the need to resist compromising the quality of NEAT by giving in to users’ pressures.

‘... the one thing that can’t be compromised is quality. No one remembers that this piece of crap came in cheap and early, two years later, when you’re still having to deal with the problems.’
(GSSM)

A general lack of understanding of project management was perceived by the GSS manager to be a big problem in the company.

‘We generally have I would say a big problem here in terms of project management and various people’s understanding of who is managing the project, and if ever there’s a weakness that’s it.’
(GSSM)

The problem manifested itself to the GSS manager in the form of lack of co-ordination between different parts of projects.

‘... he manages the project as he sees it but actually that’s just his part of the project with which he’s particularly concerned so there’s a lot of areas that get no co-ordination at all and that applies to NEAT and it applies to Glasgow and it applies to a lot of other things.’ (GSSM)

The IS director and the GSS manager had agreed that the NEAT project leader had no leadership inclinations. Nevertheless he had been allowed nominally to fulfill the role on the basis of his highly regarded technical ability. The lack of suitable candidates for the NEAT project manager role had meant that, reluctantly, the GSS manager had to take over the role ‘by default’. The IS director was suggesting to the beleaguered GSS manager that she could be assisted by a junior member of the team as project leader.

‘We’ve got a project leader, and this is one of these difficult ones that occurs, it’s an issue that we still have though, that was a question that the head of Group Software Services and I were debating just two weeks ago. We have a star in the team, a technological star, absolutely brilliant, highest paid, best rewarded, and he aint no project leader. And we’re just debating that we might take one of the most junior of the team and make him the project leader.’ (ISD)

The obvious solution to the GSS manager, that of bringing in an experienced project manager to manage NEAT at such a critical time, was compromised by cost pressures. The IS director chose to save on project manager staff costs by giving the problems to the GSS manager in this way. The compromise was justified by the IS director’s wish not to add unnecessary bureaucracy or more time to the project schedule.

‘... she’s the one who’s taken it over, and she’s been faced with taking a project which has already started and trying to get it into a clear and concise methodology, which is the sort of thing she’s more used to, but without just adding time to it, without adding bureaucracy to it, to any degree greater than we need. There has to be some bureaucracy, otherwise you get anarchy, but it’s just a question of how little can you have.’ (ISD)

5.3.2 Further analysis of management process

The considerations and the resulting processes employed by the IS director are listed in Table 5.4:

Table 5.4: Case 4 Considerations, processes, process categories and process dimensions

Ref.	Consideration	Process	Category	Dimension
4.01	GCS manager left company, creating an opportunity for change	Move NEAT before it got further out of control	Pace Participation	Faster Less
4.02	Need to explain why NEAT had not been moved earlier	Project management of NEAT 'not bad' in GCS, its former rightful home	Justification	More
4.03	Need to justify move to GSS and get GSS manager to accept it	Logical time to move it - a software product with a need for more user involvement.	Justification	More
4.04	GSS manager realizing that the project is out of control and will want an expensive project manager	Attribute problems to 'boffin' who had managed the project. Deny appointment of project manager on the grounds of avoiding bureaucracy. Nominate a junior member of the team as project leader.	Role definition Justification Formality	Compromised More Less

5.3.3 Summary

The management processes adopted by the IS director were simple, and this is reflected in the short length of the case study. He simply used his authority to impose the structural change on the NEAT team and to reason with the GSS manager that the time had come for her to take the project into her department. By the time she discovered that NEAT was badly out of control the project was already part of her department, and she had no choice but to take direct project management responsibility herself, since the IS director would not provide any more resources.

In terms of the six management process categories the project is summarized below:

1 EXTERNAL AGENTS

Definition: The use of change consultants, project contractors and other 'experts' from outside the organization.

Dimensions: More...Less

No external agents were used. A short-term project manager could have been brought in to resolve NEAT's problems but, to minimize costs and bureaucracy, none was.

2 FORMALITY

Definition: The formal documentation and communication of project requirements definitions, cost-benefit analyses of the project, quality assurance measures and other project plans and controls.

Dimensions: More... Compromised... Less

Other than some revised organizational responsibility charts produced by the head of personnel there was no formal documentation of the change. The lack of project management formality on NEAT itself had led to the project being out of control. The GSS manager was planning to resolve this herself, but was 'struggling'.

3 PACE

Definition: The pace of an aspect of the project at a particular time. (Relative to other aspects or to the same aspect at other times, rather than absolute).

Dimensions: Faster... Compromised... Slower

As soon as the old GCS manager left the company the IS director, who was just becoming aware of the problems with NEAT, took the opportunity to make the change.

4 PARTICIPATION

Definition: The involvement of staff other than change drivers in scope decisions.

Dimensions: More... Less
Bold...Cautious

There was no participation in the change, other than the process of the GSS manager agreeing to take on NEAT.

5 JUSTIFICATION

Definition: Justifying the content and process of the change both to the change drivers themselves and to others. Includes educating and promoting to staff the idea that the change was inevitable and desirable, that its organizational and individual benefits outweighed its organizational and individual costs.

Dimensions: More... Less

The change was justified on the grounds that the rightful home of software products was GSS. Its prolonged stay in GCS prior to the change was justified by the observation that it wasn't project management that was the problem, but that more account needed to be taken of user requirements. Refusal to appoint a dedicated project manager for NEAT was justified on the grounds of cost, time and avoiding bureaucracy.

6 ROLE DEFINITION

Definition: The clarity of definition of the respective project management roles and responsibilities of the change drivers and their delegates.

Dimensions: Clearer... Less clear

Although the IS director named himself 'sponsor' of the restructuring and the GSS manager 'project manager', the latter had almost no role in the change. Her role on NEAT was 'by default'.

Postscript

Two months after the time of the interviews the GSS manager resigned. Shortly after that the new managing director of ANL decided that there was too much duplication of IT expertise in the group. He created a single department under the Evening Standard's then head of IT. The IS director and almost all his 110 staff were fired. Despite having been paid off sufficiently that he would 'never need to work again' the IS director immediately secured a similar position on a Scottish newspaper.

5.4 Learning and implications for next stage

Before moving on to the next stage of the study this conclusion to Chapters 4 and 5 reflects on the course of the research so far. Section 5.4.1 draws together the major points of learning and the interim conclusions from the first four case studies. The common features of the considerations which give rise to the management processes are discussed in Section 5.4.2, with the view that the processes may be considered a reflection of the change drivers' possession of or desire for control. Two relevant perspectives of managerial control are reviewed and related to the study: project control and personal control. In Section 5.4.3 implications for the next stage of the fieldwork are identified.

5.4.1 Learning and interim conclusions

Considerations and management processes

The case studies presented in Chapter 4 (Ealing Hospital NHS Trust) and Chapter 5 (Associated Newspapers Ltd.) are the result of an open-ended, iterative analytical process which was developed and refined over the course of the studies. The process, described in Chapter 3, has in each case enabled elements of the external and internal context of change, the project content and the management process to be identified, coded, dimensioned, and defined. Diagrammatic mapping of the data aided the analytical process and the writing of the case narratives. Each element of management process was attributed to a 'consideration', attended to by one or more change drivers.

Case study formats

A broadly similar format for the narratives of the four case studies was found to be appropriate, with the context of the project described first, followed by a summary of its declared purpose and scope (content), leading to the instances of employed management process. Two of the case presentations deviated slightly from this format. In Case 2 (Updating of Hospital Information Systems) a clearer presentation of the case could be made by describing the content before the context. A more detailed examination of part of the project which had failed provided a deeper understanding of the overall management processes in context. In Case 4 (Transfer of the NEAT Project) some of the aspects of the management process of the NEAT project itself (as opposed to its transfer) gave valuable insights into project management process issues in the company. However, the small size of the ANL projects was found to place significant limitations on the range and depth of analysis possible.

Range of informants

One of the aims of the research is to bring together a fuller range of interpretations of management processes by internal change drivers, including the project manager(s) and the project sponsor(s). In Cases 1 and 2, where each project had a clearly identified single sponsor and single manager the value of including in the analysis the interpretations of both informants was confirmed. In Cases 3 and 4 a wider range of informants was interviewed. Because of the fragmented and loose definition of management responsibilities in Case 3 (Amalgamation of Photoservices and Optronics) the desirability was again verified of including all individuals who were identified as drivers of part or all of the change. The interpretations of individuals other than change drivers were helpful in providing background data and confirming factual information. However, they added no new management process data. This applied both to subjects of the change (the photoservices supervisors) and to those involved peripherally (the IT Facilitator, the Network Applications Manager and the Head of Personnel). Perhaps this lack of additional insight into management processes is not surprising, given that the standpoint of the study is the perspective of the change drivers.

Interpretations of projects and project management

The subject of the study is the management of *projects* of change. Although neither the trust's chief executive nor ANL's IS director had any hesitation in identifying their own projects it was clear that their management styles, including their understanding and application of project management principles, were markedly different. There was some evidence that this difference existed in the organizations as a whole as well as in the individual change drivers' approaches. By providing a wider spread of project contexts the use of paired cases in the two organizations helped to highlight the importance of context, including project orientation, to the determination of management process. The data show that the extent and nature of project management culture in each organization had clear implications for the management processes of the projects of change.

Specifically, the NHS was accustomed to managing internal change initiatives as projects, in a formal sense, with project steering committees and 'methodologies'. NHS publications make explicit recommendations concerning projects and project management. For example, in their guide to NHS Trusts the NHSME advocate that when hospitals apply for trust status, '... the task is best undertaken by a project team with a designated project manager able to give proper leadership to the development of the proposals' (NHSME, 1990). The informants' familiarity with the basic concepts of project management and with its methodologies illustrated their presence in NHS culture.

In ANL the situation was markedly different. Whether through innocence or intent some of the most basic tenets of project management were at times absent, even on projects with a high technical content. The need to stay focused on objectives, and the concept of a project manager as the point of integrative responsibility, were both given scant regard. There was evidence in the data that this attitude was of central relevance to the process of change in ANL, not just within the IS director's domain but throughout the company.

Common management process elements

The characteristics of the four projects of change were significantly different, both within and between organizations. All four were classed as 'projects of internal change', yet in terms of context, purpose, size, duration, urgency, uncertainty, definition, and technological content the projects were in many ways dissimilar. In addition to differences in management process arising from the projects themselves and from their organizational settings, the change drivers were clearly aware that the management processes were, at least in part, attributable to their own individual experiences and personal preferences. In all four cases, however, each instance of management process in the data could be placed into one of six categories, which together defined the boundaries of a limited repertoire of processes. The dimensions and definitions of the six categories were progressively refined to include all the management process data.

5.4.2 Managerial control

Having, at this intermediate stage in the study, tentatively settled upon these six categories of management process, the question arises: what common features are shared by the 'considerations' which give rise to the management process responses? How might they be classified, and what theories exist which can help explain them? The case studies tend to confirm March and Shapira's (1988) assertions that managers believe they can reduce risks by using their skills to control dangers, and further that their actions may be better understood in terms of attention paid to selected issues rather than notions of decision making on the basis of complete information. The data show that, having decided to implement a project of change, the managers' subsequent actions may be considered as attempts to reduce their risk of blame for failure and enhance their prospects of achieving or being associated with success by exercising *control* over certain selected aspects of the change.

Two different perspectives of managerial control are relevant to studies of management processes in projects of organizational change. First, there is the idea of control mechanisms which are applied by managers. All institutions, by

their very nature, control human conduct (Berger and Luckman, 1966). The very existence of an institution implies and embodies a primary level of social control of its individual members by the institution's culture, and 'additional control mechanisms are required only in so far as the processes of institutionalization are less than completely successful' (Berger and Luckman, 1966: 73). Modernist perspectives of control in the field of organization theory, including the standardization of behaviour through bureaucracies, are described by Hatch (1997). She identifies that perspective of control which is related to ideas of bureaucracy as the cybernetic⁵ model of performance evaluation and feedback. At the project level this theory constitutes one of the core themes of project management. As such it is of central relevance to this study.

The second perspective of control which would appear to be important relates to individual managers' perceptions of their own ability to exercise control over their environment. This is the psychological construct known as 'personal control' (Greenberger and Strasser, 1986). In the present study a certain perceived level of personal control over their environment is implicit in change drivers' initial declared intentions to implement planned change. Expressions of personal control beliefs are further embodied in the change drivers' subsequent actions which make up the totality of the management process of the change.

These two meanings of control, *project control* and *personal control*, are explored in the following sections. It is argued first that the presence or absence of project control is a key aspect of change project management, and second that the personal control perspective has the potential to provide fresh insight into attempts to understand how management processes in projects of organizational change may be studied as responses to managers' interpretations of issues and events.

Project control

This study's concern with project management processes draws attention to theories of project control, since in project management literature control is central to the project manager's role. The sense of the concept of control in the context of project management is performance evaluation and feedback, using a mechanical analogy. In a typical treatment Spinner (1992) defines project control as:

... taking the necessary action on those items shown [by the performance monitoring process] to be drifting. (Spinner, 1992: 51)

⁵ Cybernetics is defined by the Oxford Dictionary as 'the science of systems of control and communications in animals and machines.'

This emphasis on action, as opposed to simple monitoring, is made by others, including Andersen, Grude and Haug (1995: 151). They pursue the notion that control is often mistakenly identified by project participants with reporting bureaucracy, and assert that ‘control is management, not paperwork.’

The aim of managers who seek to control projects in this way is the setting and achievement of objective measures of project performance, often expressed as cost, schedule and quality goals. For many writers on project management, these three sets of goals are self-evidently in conflict, representing the ‘impossible triangle’ for the project manager, who must juggle their priorities according to the demands of the particular project (see for example Turner, 1993a; Lock, 1996). According to Clark and Lorenzoni (1978) the three corners of the triangle have ‘equal priority’ for the project manager. For others priorities are pre-set. For example, the central importance of cost control, especially in the context of projects with high capital expenditure, is emphasized by King (1968, cited in Kharbanda et. al. 1980: xvii) who asserts that ‘cost control *is* project management’.

The importance of project control to managers of projects of organizational change is less well-established or understood, especially when control of project costs is of significantly less interest to project managers than the reaction of organizational members to the change and the performance of the organization after the change. In Section 2.2 evidence was examined that rational notions of project control have been over-emphasized, both in theory and in practice, at the expense of other less formalized processes. It was concluded that, although this may once have been the case, the inadequacy of purely mechanistic models of project management is now widely accepted. In Section 2.3 Buchanan and Boddy’s (1992) conception of control was mentioned as being but one of three project management ‘agendas’. Control expertise is identified by those authors as an essential component of the managerial repertoire of the change agent, along with technical competence (the ‘content agenda’) and political and communications skills (the ‘process agenda’). The ‘control agenda’ is discussed as follows:

Conventional project management texts and training courses concentrate on project control methodologies, such as critical path analysis and budgeting techniques. The project manager is thus expected to be familiar and competent with a range of planning, scheduling, budgeting, resourcing and monitoring techniques, with setting and meeting deadlines and targets. Problems with project monitoring and control are typically blamed in cases of delay or overspend. Project management training courses conventionally dwell on these issues to the exclusion of the other two agendas... (Buchanan and Boddy, 1992: 70)

Section 2.3 described how the research of these writers shows how the relative priorities for the change agent of the three agendas is dependent on the context of change (Buchanan, 1991; Buchanan and Boddy, 1992). They find that, while control is not the top priority of the three agendas in any of the contexts studied, it is of significant importance in all of them.

Cases 3 and 4, in Associated Newspapers, show that conventional project control was conspicuous by its absence, both in the two projects which constitute the primary focus of the case studies and in the NEAT and Glasgow projects, which are incidental. The low priority given to formal control appears, at least in part, to stem from lack of project control expertise, as well as from the projects' size (small, short duration) and from the culture of the company as a whole (based on short time horizons and an attitude of 'beat the competition at all costs').

The hospital case studies throw further light on the application of project control. In Case 1 (Clinical Directorates) there was some attempt to adhere to rudimentary project management ideas, including defining change drivers' roles and planning the stages of the structural change in outline form. However, the goals of the project were more concerned with the performance of the trust as a whole, and less with the (minimal) cost of making the change, so the application of project control was of marginal relevance.

Case 2 (Hospital Information Systems), on the other hand, was concerned with tangible computer systems, budgets and externally-imposed controls. The concept of control, in a project management sense, was central to the case. Interestingly, however, the project manager was not concerned with applying project control in order to set and achieve project objectives so much as with avoiding project control in order to obscure their non-setting or non-achievement.

In all four cases the importance of project control to the study was reflected in the emergence and development of *Formality* as one of the six process categories.

Personal control

The second view of control which would seem to be relevant to interpretations of the initiation and implementation of organizational change is change drivers' beliefs about the extent to which they have control over their environment. This construct, labelled by Greenberger and Strasser as *personal control*, is defined as:

the individual's beliefs, at a given point in time, in his or her ability to effect a change, in a desired direction, on the environment. (Greenberger and Strasser, 1986:165)

Parkes (1989) identifies three distinct facets of personal control in the work environment. For the researcher, each of these facets implies a different ontological and epistemological position. Personal control may be thought of as a subjective construction of reality, as an objective characteristic of reality or as a stable personality variable. These three facets are described below, with examples of their application.

- 1 Control is a *subjective construct* 'which reflects the situational characteristics as appraised or evaluated in the light of the beliefs, attitudes and expectations of the individuals concerned' (Parkes 1989: 22). This subjective view of personal control has been applied at the level of strategic management by Dutton and Jackson (1987), who build a conceptual model relating organizational action to the labelling by managers of strategic issues as threats or opportunities. The model adopts an interpretive view of organizational decision making, in which certain issues penetrate top management's 'strategic filter'. Those issues which are categorized as threats are likely to be attributed certain negative qualities including lower personal control. Opportunities, on the other hand, will be associated with higher control.
- 2 Control is an intrinsic, *objective characteristic* of the situation. This realist position is adopted by Milburn, Schuler and Watman (1983a; 1983b), who develop a typology of eight kinds of organizational crisis based on three dimensions: organizational control over the environment, opportunity-threat and susceptibility. Using examples of both preventive and reactive strategies, a prescriptive model of individual and organizational response to crisis is developed which includes, for example, decentralization in times of 'uncontrolled' crisis (i.e. undesirable environmental issues over which managerial opportunities for control are absent).
- 3 Control is a *dimension of individual difference*. The individual difference variable known as *locus of control* derives from the work of Rotter (1966). According to this view individuals who tend to attribute control over events to their own actions are said to have an *internal* locus of control, while those who attribute control to outside forces are said to have an *external* locus of control. Many studies of personal control which take this position have been conducted by organizational and occupational psychologists concerned with measuring the impact of work conditions on employee well-being and satisfaction. Spector

(1986) reports a meta-analysis of studies concerned with job design and employee participation. He finds that high levels of personal control are commonly associated with high levels of job satisfaction, commitment, involvement, performance and motivation, and with low levels of physical symptoms, emotional distress, role stress, absenteeism and turnover. The importance of this view of personal control and its implications for job design are clear.

The three examples given above affirm Parkes' (1989) assertion that the interpretation of the control construct in any particular study depends on the conceptual and methodological focus of the study. This research is based on managers' perceptions of their reality, which implies adoption of the subjective view of personal control in addition to the objective. Apart from this methodological consideration there is support in the literature that individuals' subjective perceptions of the extent of their control over the environment play a more important role in determining their responses to situations than the objective reality of the situation (Parkes 1989). The aptness of the subjectively interpreted view of the environment in this context is further supported by Greenberger and Strasser's (1986) observation that:

Individuals are exposed to a great deal of information, but the adjustments they make to their control perceptions are based only on those particular events to which they *attend*. (Greenberger and Strasser, 1986:169, emphasis in original)

The concept of control as a generalized belief (an individual's locus of control) clearly has some relevance to this study, in which the main source of data is interviews with individuals. The attention by change drivers to particular issues and the nature of their response to those issues will be determined by their individual knowledge, skills and attitudes, as well as by personality factors, including, to the extent that it has explanatory value, their locus of control. Differences in locus of control between individuals have, however, been found to account for little explained variance between 'work-related outcomes' (Parkes, 1989:39). Further, Greenberger and Strasser (1986) argue that personal control 'is not a stable and enduring personality attribute'. It is a cognitive construct, based on perception, and can change over time. To that extent psychometric measures of locus of control are less relevant to this study than the subjective, interpreted perspectives of individual managers.

Returning to the case studies, each consideration/management process pairing could be described and explained by the following general proposition:

Each consideration represents an interpretation of an issue over which the change driver feels a degree of personal control, ranging from no control to a lot of control. The management process response to the issue is an expression of that personal control.

Taking an example from Case 1 (Clinical Directorates), one of the considerations was the potential of the clinicians to reject change in general, and the new structure in particular. Some of the aspects of the chief executive's response to this threat expressed low perceived control. He adopted a cautious, incremental approach to reform, postponing the implementation of 'TQM' until the clinical directorates and their performance monitoring systems were in place. He was careful to involve the clinicians in the details of the decision process, and took trouble to stress both the external threats which made the change necessary and the internal benefits which would ensue, both for the organization and its employees. Other aspects of the management process showed how, once he had committed himself to the change the chief executive's feeling of control over the situation in general enabled him to place limits on the extent to which he was prepared to defer to the clinicians' disruptive potential. The opportunity for change had been enhanced by the recent operational problems, by the chief executive's newness to the trust and by the driving force of the annual business planning cycle.

The multi-dimensional nature of personal control implied in the above example has been acknowledged by Jackson and Dutton (1988), who mention autonomy, resources and competence as three distinct generalized aspects of perception of control in the context of threat and opportunity. It is not clear, however, that the various dimensions of personal control in the example are satisfied by these three. They do not, for example, allow the explicit cover of the dimensions of *opportunity* and *lack of resistance* by those subjects of change with the power to block the change. Both of these are, arguably, aspects of personal control which are not satisfactorily included in notions of autonomy, resources or competence. In this study there is an opportunity to clarify the categories and dimensions of personal control and their relationship with management process, by way of the same analytical process as that which was used to unearth the management process categories and dimensions.

To summarize this review of managerial control it is argued that:

- 1 Both project control and personal control are important concepts for understanding change management processes. The presence or absence of project control is a component of management process, and all aspects of management process are expressions of personal control.

- 2 The subjective view of personal control has methodological ‘fit’ with this study, in which managers respond to their selective perceptions of external reality. The quantifiable locus of control view of the individual is a less appropriate way of building understanding of change management processes.
- 3 Existing categorizations of subjective personal control may be inadequate in describing the case study examples. An opportunity exists to explore and categorize the construct, using a constant comparative approach, and thus to examine from a new perspective how management process is affected by context.

5.4.3 Implications for next stage

Following the theoretical sampling approach, the lessons and conclusions from Cases 1 to 4 and from the review of project control and personal control point towards the next part of the study having certain ideal features:

- 1 The organizational setting for the project(s) of change should have a culture of project management which is both strong (in contrast with the newspaper group) and core to the business (in contrast with the hospital).
- 2 To enable a rich, multi-faceted study to be made the project(s) should be large and important to the organization (unlike the newspaper group projects). This would appear to be more important than the need for paired projects. The organization itself should not be so large as to render infeasible the achievement of depth.
- 3 The policy of identifying and interviewing all principal change drivers should be pursued.
- 4 The same analytical process should be followed, with an additional focus on personal control as a central feature of internal context.

6 RESULTS FROM BECHTEL

At the end of Chapter 5 it was argued that a suitable subject for the next case study would be a major project of change in a project oriented company. Informal enquiries among colleagues associated with major project industries led to the identification of engineering contractor Bechtel as a potentially appropriate setting. The organization's London office was known to be in the middle of a radical two-year project of organizational change. While the initiative had implications for the whole multi-national Bechtel group it was being spearheaded and driven from the London-based division of the company, Bechtel Ltd. A formal written approach was made to the senior management of Bechtel's London office, setting out the research aims and access requirements. Despite warnings from construction industry observers that the company was notoriously unapproachable by researchers, the research topic and approach were apparently deemed sufficiently interesting and non-controversial for access to be granted.

In Section 6.1 the background of the Bechtel group is outlined, and details of access and informants briefly described. Relevant details of the process of data collection and analysis are presented.

The case study (Case 5) is presented in Section 6.2. First the case narrative is presented in the context-content-management process format. The concept of personal control is then developed, defined and related to management process. The case is then presented in tabular form and the six process elements discussed in relation to personal control.

In Section 6.3 learning from the case is summarized and the implications of the findings of the case are considered in relation to the next, final stage of the study.

6.1 Introduction

Bechtel is a US-based multinational engineering, procurement and construction (EPC) contractor. With offices in more than thirty countries the company's worldwide interests are, for the EPC sector, unusually diverse, both geographically and in the type of projects undertaken. Bechtel has a history of achievement around the world on major projects in petrochemicals, power, mining, and civil engineering. The company's employees are said to take pride in the association of the Bechtel name with a great many prominent projects, from the carving of Mount Rushmore to the reinstatement of the Kuwaiti oil fields after the invasion by Iraq. Bechtel was founded in 1898 as a 'two mule

grading team'¹. As an indication of its size in 1995 the company recorded \$12.5 billion worth of new orders in that year. Uniquely among its competitors Bechtel remains a privately-owned American 'family' firm with a traditional, conservative self-image.

Until just before the time of the data collection, in the first half of 1996, the Bechtel corporation had been centrally controlled by an 'executive committee' consisting of owner and CEO Riley Bechtel and a few close associates, based in the corporation's San Francisco head office. At the end of 1995, in response to commercial pressures and following the appointment of a former head of the McKinsey consulting outfit as group vice-president, executive management was restructured from a central executive committee into local operating committees. Profit responsibility for the company's worldwide operations was devolved to four regional execution units: North America, Europe/Africa/Middle East/Southwest Asia (EAMS), Asia Pacific, and Latin America. The head office of EAMS was Bechtel Ltd., in Hammersmith, west London. Its project of internal reorganization is the subject of this study.

Following an informal discussion with a Bechtel employee and a subsequent formal, written approach to the company's senior management a preliminary interview was set up between the researcher and the company's operations manager. The latter had had considerable involvement in the reorganization from the outset, initially as project sponsor and later as head of one of the departments which was to be the main recipient of the impact of the changes. He described the reorganization as two projects, separate but related, each with a designated project manager. He identified five key change drivers in all. These were himself, the two project managers, the manager of engineering and the regional office manager (the top manager in EAMS). In addition two of the company's operational project managers, who were not associated with the change management process, were identified who could give a potentially broader perspective of the change, from the operational level.

The characteristics of the two projects are summarized in Table 6.1.

¹ Source: Bechtel 1996 Global Report

Table 6.1: Comparison of the two Bechtel Ltd. project characteristics

	Project 1 (Case 5a)	Project 2 (Case 5b)
Title	Project optimization	Technical resources
Origin	Commercial pressure to reduce Total Installed Cost (TIC) by 30%. (TIC is the cost of a project to Bechtel's client.)	Need to centralize the technical staffing function (which was departmentalized by engineering discipline).
Nature of scope	Complete operational reorganization, to be applied on all future business projects.	Structural reorganization.
Drivers identified	Regional office manager and operations manager (joint sponsors), full-time designated project manager, engineering manager.	Regional office manager and operations manager (joint sponsors), full-time designated project manager, engineering manager.
Main driver	Project manager	Project manager
Status	Mid-way through a two-year programme. Main physical and organizational restructuring implemented December 1995. Operational details to be completed.	Change officially introduced December 1995. Detailed implementation still emerging. Expected to be handed over by project manager mid 1997.
Resources	Several million dollars-worth of overhead manhours were formally allocated to the combined reorganization.	

The titles and roles of the five change drivers and the two additional project managers are listed in Table 6.2:

Table 6.2: Bechtel Ltd. interviewees

Title	Ref.	Role on Project 1	Role on Project 2
Regional office manager (EAMS)	ROM	Initiator, co-sponsor	Initiator, co-sponsor
Operations manager	OM	Co-sponsor	Co-sponsor
Project manager 1	PM1	Project manager	Interested party
Project manager 2	PM2	Interested party	Project manager
Engineering manager	EM	Interested party, considerable involvement in detailed implementation	Interested party, relinquishing responsibility for technical staffing
Operational project manager 1	OPM1	None, but would in future need to operate in the new structure	none
Operational project manager 2	OPM2	None, but would in future need to operate in the new structure	none

Interviews were conducted between January 1996 and June 1996. Each lasted between one and two hours. All interviews except that with operational project manager 2 were tape recorded and fully transcribed. (The interview with operational project manager 2 was an unscheduled opportunity. Detailed notes were taken.) Project manager 1 and the operations manager were interviewed twice over the period. The interviews were loosely structured around the informant's background, the company's worldwide competitive position and the reasons for the changes, their role on the project(s) and the roles of others. A one-hour formal presentation on the changes by project manager 1 was also witnessed and recorded. Archival data included presentation slides, company reports, an internal document detailing the projects' objectives and scope, and an organizational chart showing the new reporting structure.

The two projects were closely related and interdependent. For the purposes of presentation and analysis it was found appropriate to combine the two as a single case study, here labelled Case 5. The data were analyzed in the same way as Cases 1 to 4, starting with the outline framework of inner and outer context, content and management process and categorizing data from scratch. In addition to analyzing instances of management process and the specific considerations which gave rise to those processes, categories and dimensions of personal control were identified and coded.

There was some overlap between informants' accounts, particularly with regard to the details of the context and content of the changes. However, in addition each of the five main change drivers contributed much unique data from their

individual perspectives, from which a detailed picture of the combined management process of this complex project emerged. The two operational project managers had not been involved in devising the shape of the changes, nor in implementing them. Their contributions were limited to factual confirmation. Four of the change drivers clearly enjoyed a great deal of mutual respect and co-operation, and between these four there were no significant disagreements over who had done what and why. There was evidence that the fifth, the engineering manager, was not truly a member of the 'inner circle' of top management. Some of his perceptions, which were not shared by the others, reflected both this exclusion and the fact that his involvement was limited to implementing the details of part of the change.

A detailed draft report of the analysis was sent to all five change drivers inviting their comments, corrections and suggestions for improvement. The operations manager telephoned his approval. Project manager 2 returned his copy with some minor factual embellishments (and some grammatical polishing of his own quotes). Project manager 1 wrote enthusiastically about the informative nature of the analysis. The regional office manager and the engineering manager did not respond.

6.2 Case 5: Project optimization and Technical resources

This section presents the combined case study for the two linked projects of internal change in Bechtel Ltd., London, which were in progress in the first half of 1996. The two projects were, first, the establishment of a new, horizontally-integrated 'project optimization centre', and second, the creation of a central 'technical resources management' group.

The case is presented in three sections, following a format similar to that of cases 1 to 4. Section 6.2.1 contains the case narrative, structured around the context, content and process of the change. Section 6.2.2 begins by introducing and defining the personal control construct on five dimensions which have been distilled from the data using the same iterative coding technique which was used to develop the management process dimensions. The case is then summarized in tabular form, showing instances of management process and the considerations which gave rise to them. The table also shows related feelings of personal control which are supported by the data. Section 6.2.3 contains a brief discussion of the six elements of management process in relation to the five elements of personal control.

6.2.1 Case narrative

Change context

Increasingly since the mid-1980s a powerful combination of changes in the commercial environment of global EPC contractors had brought a new set of challenges which, for all but the most specialized firms in the sector, demanded an unprecedented strategic response. The changes presented a growing threat to the continuing prosperity and ultimate survival of Bechtel and its many competitors. The changing demands on Bechtel's operations which had been exposed in the years leading up to this study reflected the wide-ranging complexity and commercial turbulence of the sector in general.

The business was now characterized by extreme competitiveness. As the competition reached out into all geographical areas and into all segments of the EPC market there was becoming less to distinguish the major players. There was increasing pressure on contractors to offer their clients better value for money and shorter project schedules. A relative market collapse in Europe and a boom in the Far East had been accompanied by intense competition at the lower end of the market as more companies around the world developed the capability to provide detailed engineering design. In response to this trend, cost-saving initiatives which nibbled at the margins of operational efficiency would no longer be enough. Bechtel's operations in the USA and Europe were

suffering under the high cost of western labour. The company was, on many projects, simply no longer in a position to compete, particularly on the relatively mundane ‘production’ work of detailed engineering design. With advanced telecommunications technology this could be done on modern CAD facilities by low-cost workers in countries such as India for a quarter of the cost.

Bechtel’s managers saw a need to respond in several ways to this growing threat. They would turn their attention to the high knowledge, high value-added end of the business, in particular the front-end conceptual engineering phase of projects. They would form alliances with suppliers, clients and other contractors, and would seek new ways of cutting out the project delays and rework which resulted from the traditional compartmentalization of engineering, procurement and construction operations. They would create a self-regenerating ‘learning organization’, able to pool its global knowledge and hence maintain a position of pre-eminence in EPC practice.

Effective action was made difficult by a number of additional complications. Clients’ decision authority for capital expenditure was being increasingly delegated to their local operations management, which tended to increase the diversity of business approaches needed. The swing away from cost-reimbursable work towards fixed price lump sum contracts exposed competitive weaknesses, particularly in EAMS where there was no buffer of low-risk US government work. The demand for highest net present value facilities which could be achieved through lower-cost standardized plants or more efficient process technologies brought the need for specialization and for alliance with particular process owners. Clients were placing heavy requirements on contractors by demanding their own way in deciding how things were done, even on lump sum contracts where the contractor bore much of the financial risk.

In response to this complex set of forces, Bechtel’s London-based operation, which had over 1000 staff based in its Hammersmith office, had committed to a radical change initiative with two closely-related themes, each designated as an internal project.

- 1 **Project optimization.** Radical restructuring of the engineering, procurement and construction business processes, as part of the objective of reducing the total installed cost of facilities (i.e. the cost to clients).
- 2 **Technical resources.** Removing staffing responsibilities from technical department heads and placing them in a centralized unit.

Change content

The reorganization was the London office contribution to Bechtel's global EPC Process Innovation (EPCPI) initiative. The initiative was part of Bechtel's ongoing strategic response to changes in its commercial environment, and had the stated aim of increasing value to the customer by 30%. Overall responsibility for delivering the changes in London was divided between two managers. One was establishing a new, horizontally integrated 'project optimization centre'. The other was setting up a 'technical resources management' group. This section briefly outlines the purpose and scope of their tasks.

Project optimization. The ultimate aims of the project optimization project were to increase value to clients and shorten project schedules, to change the focus of the operation to suit fixed price lump sum work, and to create a 'learning organization' and multi-discipline centre of technical excellence.

The scope of the change was to restructure the organization both physically and administratively from the traditional EPC functional/project matrix configuration with vertically distinct divisions and multiple interfaces to a horizontally integrated organization. In the new set-up multi-functional asset management teams would have responsibility for an entire work package, from initial conception and design, through to final handover to the client.

The design of the new organization included a plant optimization centre for front end engineering with three major groupings:

- 1 Engineering and design optimization (the rump of the old engineering organization split horizontally into three groupings: conceptual engineering, project definition, and specialist engineering.)
- 2 Supply strategy (to optimize the supply chain).
- 3 Execution optimization (to optimize the execution process, including construction activities).

The key to the success of the new approach was that the optimization centre would produce studies and designs as a *packaged product* which included process and utility flow diagrams, piping and instrumentation diagrams, material take-offs, requisitions for long lead items, execution plans and cost control estimates. The whole optimized package with its core team could then be turned over to the next stage of the project for detail engineering and execution, either in London or elsewhere, including low cost execution centres

in the Far East, with a higher degree of pre-definition, and hence minimal rework.

Multi-Project Acquisition Groups (MPAGs) consisting of engineers, buyers and vendors would be set up. Working as integrated teams, these would eliminate the traditional bureaucratic communication interfaces between these parties and dramatically reduce the bid-evaluate-commit cycle time. The MPAGs would create multi-project agreements with key suppliers, with pre-defined terms and conditions, including pricing and technical specifications. Immediate on-line access to vendor data would be available.

In addition to the restructuring, the changes involved rationalization and simplification of systems and procedures to suit the new streamlined organization, and development of the electronic knowledge bank for the whole Bechtel organization.

Technical resources. The purpose of the second aspect of the changes was to create a more mobile and more versatile workforce, which had a broader scale of involvement in projects, and which was able to fill positions in the new project optimization centre and in project execution. Opportunities for staff development would be improved by centralizing the project staffing function, removing the traditional departmental barriers to moving people freely around the organization. A further benefit would be the release of engineering talent by allowing engineering managers complete dedication to technical tasks rather than expecting them to perform staffing duties as well.

The scope of this change was simply to take responsibility for staff allocation away from technical departments and place all job opportunities in a central location from which the workforce could be assigned by a dedicated, committed team of human resource specialists.

Change management process

In the years leading up to the projects described above Bechtel Ltd. in London had been through a succession of corporate-wide change initiatives driven from its USA headquarters, including 'waste elimination' and customer-focused quality drives. The company's owner and CEO, who had recently taken over the reins of the family business from his father, was perceived by some informants as being particularly prone to management 'fads'. Previous schemes had been seen to fail through staff's ability to pay lip service, pledging their commitment to the latest corporate initiative while failing to take any real action. Senior managers in London, who were often concerned with more immediate problems, had experienced a lack of control over the implementation of 'cultural' change. This contributed to the decision to appoint

an outside consultant for the EPCPI initiative, Coopers and Lybrand, to work with Bechtel in London and come up with a set of recommendations for radical change.

‘[the regional office manager] took that up, with the intention of formally making something happen rather than just paying lip service to it, and he set up the Coopers team.’ (OM)

Bechtel staff were assigned to work with Coopers and Lybrand, but Bechtel involvement in the study was hampered by attention to other issues. Without the consultant’s detached dedication to the study, it might have lost its impetus.

‘Coopers came in, and we put several people with them, but over the... I think they were here six months, over the period they were here, that Bechtel involvement with it was a bit hit and miss, and it was really because Coopers were being paid to do that study with us that they forced the study to completion.’ (OM)

The consultants were able to complete the study within six months. Its output consisted of a set of detailed recommendations of how Bechtel should ‘re-engineer’ its London operation. Although many of the recommendations were aimed at correcting organizational problems which were already known to exist, the report was generally well received by the regional office manager. However, because the findings of the Coopers and Lybrand study were expected to be used in the USA as well as in London there was some hesitance on the part of the regional office manager to rush into implementing them without agreement and guidance from Houston and San Francisco.

Internally the report was distributed to department heads and some preliminary discussions were held. The regional office manager found that the department heads were intent on resisting the changes by casting doubt on their wisdom and by compromising their aims. As a result of this resistance no concrete action on the Coopers and Lybrand report was taken for a further six months. The regional office manager decided to acknowledge the problem and take his time.

‘... you can’t just go do something like that overnight. The culture in a company like Bechtel is very strong and people have learned over the years how just to... I don’t know, sort of round shoulder things. They can just shrug something off, they can sort of give it lip service, and modify it in a way that you don’t really get anything changed. And we distributed the report, and tried to have some discussions with our existing departments, and what we found they did was just turned around and remade the whole thing back into the way it was. And really... it’s a genius that we all

have, and it just occurred to me that it wasn't going to work that way, and then, as I started looking at it I had this whole series of people coming in saying, you know, shit, are you sure this is going to work. So one night I just sort of decided that I was just going to take my time.' (ROM)

He saw the need to take time to get a core team of senior staff to understand and accept the reasons for the changes, and to support him. The consultants were used to help the education process among senior managers. At this time the regional office manager sought and gained the support of his deputy, the operations manager. The two of them held an 'away-day' with the department heads, at which they looked for further support. Also present were two Bechtel managers who were outsiders to the London set-up and who were to become the project managers of the two change projects. The technical resources project manager (project manager 2) described the meeting.

'... he called us off site to Taplow, and explained to us that we were about to undergo a significant change in the organization... what he was looking for there was buy-in, that the management team would support it.' (PM2)

The regional office manager and the operations manager had already concluded that many of the existing departmental managers were incapable of driving the changes.

'Asking the existing people to reorganize themselves didn't really work. I don't think anybody was refusing to do it, but they were almost incapable of doing it... No matter how hard they tried, and how long they took, just... just locked.' (OM)

Their solution to this difficulty was to enlist the services of the two experienced senior project managers from elsewhere in the Bechtel organization and ask them to drive the two aspects of the change as if they were like any other Bechtel project. Both men had corporate-wide reputations as effective project managers. Each had a track record of success. Both expressed the belief that the key to their success in managing the changes in London lay in their 'outsider' status and their lack of 'baggage'. The process optimization project manager (project manager 1) described the need for detached project management.

'[the engineering manager's] background was not suited for implementing such a scheme, you have to have a project manager to do it, and we've appointed two project managers, myself for that, and the other project manager for the technical resources management function... you have to have somebody without any baggage, so basically you had two ex-project managers that have

changed the entire organization. And if we had used existing people it just would not have happened.’ (PM1)

The team of change drivers now consisted of the regional office manager, the operations manager and the two project managers. This was the turning point. These London managers saw that they were ahead of their USA counterparts. The regional office manager and the operations manager had developed the confidence not to wait for direction from the USA, but to seize the initiative, to drive change like a project. To borrow their much-used phrase they decided simply to ‘do it’.

‘In the end we decided we weren’t going to wait for the States. We were ahead of them so we felt strong enough to be able to go ahead and just do it. [project manager 1] became available, [project manager 2] became available, and those two were appointed in their new positions, with a remit to ‘just do it’.’ (OM)

For the regional office manager this marked the end of the process of general staff participation in the changes.

‘And then we just put an organization to it one day, we said we weren’t going to have any more forums or any more discussions, we were just going to do it.’ (ROM)

He described how project manager 1 was selected for his unstoppable drive, which he saw as a characteristic of his industry.

‘... he’s just unstoppable... you know he’ll just go on a straight line, right up the beach... people in this industry are also... are always sort of time driven... we’re project driven... you get on a schedule... if they know they’re only going to do something for a year they just try to compress the hell out of it.’ (ROM)

The two project managers were given full delegated responsibility to implement the consultants’ recommendations by establishing and heading up the two new organizational entities. Project manager 1 summed up his position at the time.

‘I came in, I had no baggage, I don’t have any friends as such, and they said do it.’ (PM1)

The appointment of the two project managers enabled the rest of the new management structure to fall into place. The operations manager expressed doubt that this could have been achieved through the previous democratic process.

‘We then had another series of all day sessions with the other managers in the office, but with [the two project managers] in position saying OK, well I’m this guy, and I’m that guy, now, how are the rest of you going to work around that. There was a lot more structure to it, but with six or eight people around saying well who wants to be what... I don’t know if we’d have ever got there like that.’ (OM)

This consolidation of the change management team marked the end of political compromise of the changes. The regional office manager was able to adopt a single minded approach and stick to the undiluted spirit of the consultants’ recommendations. The participative approach to refining the change philosophy was abandoned.

‘...there was that tendency to kind of jimmy it around to keep everybody happy. We’ve abandoned that.’ (ROM)

Apart from the appointment of the two project managers another enabling or justifying factor in the change process came from drawing comparisons with the USA. There was a perception that the London operation had a culture of change and was more agile than Bechtel’s USA offices. Project manager 2 described a preference for planning change in the ‘ponderous’ USA as an excuse for avoiding action, and an inability to ‘get past the existing management’. The operations manager described how London’s action-oriented risk-taking ‘seat of the pants’ approach contrasted with the bureaucratic change processes which were traditional in Houston and reflected the change drivers’ independence.

‘Houston has lots of documents... they have a schedule, they have a flow-chart, they have all kinds of written status... We’ve had none of that. It was defined but loosely structured. And the idea of that I think was that we had a lot of independence... it was design as you go.’ (OM)

The importance of a flexible approach was underlined by project manager 2, who saw the pitfalls of detailed planning in the face of uncertainty.

‘... when you’re going into an organizational change like this you need to think through very thoroughly what you’re about to embark on, you need to set out your guidelines, you need to understand where you want to go. But above all you need to be flexible. One of the risks of developing a plan and a structure, a theoretical plan and a structure, in too great a detail is you tend to create a path without knowing whether it’s going to work or not.’ (PM2)

Whether the change would achieve its aims would be difficult to judge. There was a general feeling amongst all the change drivers that, although the new organization might not prove to be perfect the old one was definitely wrong, and that this was a good enough reason to go ahead. The operations manager stressed the existence of external factors that could 'knock it off course'. Project manager 1 expressed his determination that his project would not fail for internal reasons. The regional office manager foresaw the need to change course if necessary, but to 'get it rolling'.

The change drivers stressed that they had put a lot of effort into selling the need for change to staff, and into making sure that staff understood how the new organization would function, and how it would affect their jobs. The team saw their role as overcoming resistance to the changes through a tireless, ongoing programme of presentations, forums and discussions. One of the justifying themes for the process optimization project was the protection of jobs and the inevitability of the company's demise if change failed to happen.

'... you need to do what is right for the business, ultimately you protect their jobs. If we don't do it they will be unemployed.'
(PM1)

Project manager 2 saw that one of his tasks was to break the concept of core technical departments. His aim was to convince technical staff that their future lay in focusing on projects rather than on their technical functions.

'... what we want people to see is that there is value in working on projects, that working on projects is the place to be. That's where recognition comes, that's where our challenges come, that's where we make our money. They have a certain core skill base, but that isn't the only thing they can do. Being assigned to a project is actually desirable, as opposed to being assigned to one of the core departmental organizations. So we want people to be excited about working on projects by focusing on the project, and breaking down this identity with departments and identity with disciplines within engineering. You can be an engineer in Bechtel with a civil background... and that's all you need. You don't need to say I work for the civil department and I report to a civil chief. We're trying to break the concept.' (PM2)

He felt that achievement of the dissociation of individuals' organizational identities with departments would depend on their acceptance that times had changed. Traditional paternalistic notions of staff career development had been displaced by a focus on the 'real work' of projects.

‘... what we’re telling people now is that... the way we’re bringing about this change is first of all, as an individual you have to accept responsibility for your career, because nobody’s going to do it for you. If you’re depending on somebody else to do it you’re probably terribly mistaken because in the business world today nobody has the benefit of enough time to stop and think about other people’s careers. Everybody is working hard on the real work which is executing projects.’ (PM2)

He felt that younger people would be able to adapt more quickly than the ‘older guys’. He welcomed this and expressed a desire to stimulate the younger employees, who would be carrying the organization forward into the new era.

As well as selling the changes to staff there was a perceived need to sell them to clients, since they too would need to adapt and accept the new way of working. In addition, project manager 1 had been putting some effort into explaining the changes to visiting Bechtel senior managers from the USA. Without educating them their commitment and support could not be taken for granted.

‘Our two senior vice presidents were here on Tuesday, and I made a two hour presentation to them also, so I now have to bring those people on because they’re still in the old EPC silos. They know something has changed, but they don’t know what has changed. [They provide] general vocal support also, that’s important, at meetings, you know, presentations that I make, the general manager comes in and simply supports what we are doing, and expresses his total commitment to it.’ (PM1)

Around the time of the start of the change implementation the office had won a major project to design and build a petroleum refinery in India. The design stage of the project, referred to as ‘the Reliance project’ was mobilizing at the time of the interviews. The project was huge, even by Bechtel’s standards, and would eventually lead to the employment of more than 1000 people in Hammersmith. Bechtel’s success in beating their closest competitor after a long battle to win the job had ended a famine of work in the office. The regional office manager described how winning Reliance had diverted staff’s attention from the changes, making the change drivers’ job easier.

‘... people in this industry [are] depressed when there’s no work and when there’s work they’re all happy, and so everybody was all focused on... gee, we’ve got a lot of work in house. Now had we been completely devoid of work I think we would have had a lot of people wondering what was going on, but I think we escaped a little bit.’ (ROM)

Reliance had a further important effect on the projects of change. It provided the regional office manager with the opportunity to remove at a single stroke all of the chief engineers² who had proved to be the strongest source of resistance and were acknowledged as having the ‘most to lose’ by the changes. Reliance was so large and so important that he was able simply to assign all the chief engineers to the project as lead engineers for their respective disciplines, at the same time relieving them of their departmental responsibilities. Significantly, the chief engineers’ deputies were moved up to head the departments. Unlike the departing chiefs the deputies were not seen as being senior enough to interfere in the change drivers’ efforts.

‘... [the deputies] weren’t in control of the organization, they weren’t defensive to the point where, this is my organization, I have built it over the years and I’m going to defend it. So they were more open minded and willing to take on the change.’
(PM2)

This sweeping staff change was also seen to ease the task of project manager 2. Engineers’ familiar departmental heads were suddenly no longer there, reinforcing the idea that staff would have to get used to change, and to being on their own as far as their career was concerned.

‘It just swept through so quickly people don’t even think about it: whoa, the person who knew me is no longer there, I have to start over again.’ (PM2)

In some ways, then, Reliance was an enabling opportunity for change. In another way, however, it illustrated two problems in implementing the new project optimization structure which had yet to be overcome. First the company had to have projects of a suitable size to fit the new organizational structure. Reliance was too large.

‘The physical size of projects means that we couldn’t physically locate a Reliance into the optimization group...’ (OM)

Second, it needed clients’ complicity. Reliance’s clients insisted on the old, familiar way.

‘They weren’t interested in it. They wanted a very traditional kind of project.’ (ROM)

² Bechtel had a dozen or so engineering specialist groups under the control of the engineering manager. These included mechanical, control systems, piping, electrical, vessels, telecoms, environmental, geotechnology, and pipelines. Each engineering discipline had a “chief”. Under the old structure each chief was responsible for allocating specialist staff to projects, as well as for their technical performance.

Moving part-completed projects into the optimization centre was not thought to be a good idea, so the work of the new set-up was limited initially to studies and proposals. Having established the basis of the new structure the regional office manager's concern was 'trying to get a job to actually go through this process.'

It was generally accepted that the two change project managers would have limited tenure in their new positions. From the perspectives of the regional office manager and the operations manager the company had two of its best and most senior project managers tied up on managing internal change rather than making money on projects.

'Whilst we want him to do this, we also want him to run projects. We make money on projects. This company's always been project focused. Whilst in theory it might be right to spend more attention on this stuff, the reality is that if some big project comes up that demands [project manager 1] then that'll be it.' (OM)

'... he's also one of our best project managers, and so it is possible that... a job comes in or something we'll have to replace him.'
(ROM)

The two project managers were themselves keen not to remain in their change management functions longer than necessary. Encouraged by the regional office manager they had both been lining up successors.

Although people of their seniority and project management experience had been needed to start the changes, it was generally felt that, provided the possibility of a 'rearguard action' had been removed, others of a lesser calibre could see the changes through to completion.

'You just have to shut everything down, and we've done that, we sort of gutted engineering, and took people and tried to spread them around, and do other things with them so that we wouldn't have kind of a... I don't know what you'd call it... a rearguard action.' (ROM)

Project manager 1 had pursued this ideal with radical, symbolic physical changes.

'If it is not radical the tendency will always be to go back to the way we used to do it, so I've physically moved everybody, physically demolished their offices, physically gave them new titles, physically rearranged the entire floors, so people know that things have changed, and they can't go back to the way they used to do things. I took all of the secretaries away.' (PM1)

Project manager 2 was especially keen to return to the familiar world of defined accomplishment offered by construction projects. He expressed discomfort at the lack of objective ways of measuring his achievement in his role as technical resources manager. He saw that others might be reluctant to take on the role, and stressed that it was good experience.

‘I think that no other position in the company will help a manager to learn how to manage a workforce better than this role, but... people, technical people especially will think that’s hard, and they don’t want to do it.’ (PM2)

In an attempt to introduce objectivity to the role he was using data from the annual corporate staff questionnaire survey to monitor employee satisfaction and understanding of the changes. He considered that this data offered insights into the true feelings of staff.

‘We need to know what the perceptions of the employees are. It’s very likely that, when I’m making a presentation and having a discussion with them in a group, that I’m not going to hear their true feelings.’ (PM2)

He acknowledged the limits of his own understanding of the way the company worked and explained how this reinforced the need to delegate detail.

‘I want to leave that to the team... I recognize that I had to be very careful not stipulating how people were going to work, because I didn’t understand the work processes any more.’ (PM2)

From the engineering manager’s point of view the technically complex nature of the company’s business meant that great care had to be taken in translating the spirit of the changes into its detailed systems and procedures. Nevertheless project manager 1 explained that the approaching deadline for the company to satisfy Lloyds in the renewal of its ISO quality standard accreditation was speeding up this formality. He described how, in the style of an engineering project, he had broken the task down into a number of ‘work improvement programmes’, each to be delegated and delivered as a separate package:

‘...with a sponsor, hours, value and job number, and a brief description, the objective, justification, deliverables, the people involved and when we’re going to do it. And then we’re going to be scheduling it, over this year, how we’re going to implement it, over what time period, and that’s basically the budget for this year... they will be monitored and tracked, it’s basically an overhead expense, and you know we don’t have unlimited

resources and funds available, so I have an administrator that will actually track and report progress against it.’ (PM1)

This formality, although very much in evidence at the level below the change drivers, was not present among the change drivers themselves. Project manager 2 described how the team operated on the basis of trust.

‘[the process] was very unstructured, in fact it... once [the regional office manager] sent us out for the task, he didn’t even follow up. He has never, in the whole time we have done this, he has never called me up and said can you come and give me an update on where you are. I volunteered a couple of times, and I have sent him some information, but other than that it’s like it’s total trust.’ (PM2)

With one exception the change drivers were all doubtful that the effects of the changes would be clearly demonstrable. They felt that to attempt to isolate the effects from those of other influences would be futile. They expressed the view that the changes were necessary and that was that. The survival of the company would be sufficient proof that they were effective. The engineering manager alone expressed a different view. He wished develop a mechanism whereby he would be able to demonstrate to ‘skeptics’ that the new way was achieving its aims.

‘We deliberately kept very careful metrics here, about the savings, and so far the figure here is in excess of 60 million, as an example, reported savings, just with this new approach here... so that’s the type of thing that’s being captured so that when the skeptics come along, here’s the case studies, this is what’s been happening, what’s your problem.’ (EM)

6.2.2 Further analysis of management process

The principal features of the management processes employed on the two combined projects are summarized in Table 6.3 below. The format of the table is the same as that at the end of Cases 1 to 4, except that an additional column has been added: *Control cat.* This column contains the categorization of personal control expressed by the change driver(s) in their adoption of the chosen management processes in response to the listed consideration.

The personal control construct, categorized on five dimensions, is defined as follows.

PERSONAL CONTROL

The individual and collective beliefs of the change drivers which give rise to greater or lesser feelings of being able to implement the scope of the desired changes.

AUTONOMY. The extent of perceived autonomy about how to respond. Have I got the control and the freedom to act or am I constrained by rules or directives?

RESOURCES. The extent of perceived availability of resources or means for responding. Have I got access to the resources that I need?

COMPETENCE. The extent of perceived personal competence to act. Am I competent, and am I perceived by others as being competent?

OPPORTUNITY. The extent of perceived availability of workload which presents an opportunity to effect the change. Is the opportunity there at the moment?

CO-OPERATION. The perceived extent to which the change will be welcomed and supported by those change subjects with the potential ability to disrupt or block it.

Each instance of personal control shown in Table 6.3 is followed by (-) or (+).

(-) indicates negative feelings of personal control on one or more dimensions and that the management process response is an expression of that perceived lack of control. It may also express an attempt to increase control.

(+) indicates positive feelings of personal control on one or more dimensions which are exploited, with that exploitation being expressed in the management process response.

Taking the first row of the table as an example, the consideration is the regional office manager's knowledge that technical managers have in the past got away with paying lip-service to corporate change programmes. This represents a feeling of lack of control over those with the ability to resist the changes (negative co-operation). The expression of this desire for control is reflected in the process response: exploiting the corporate desire for change by spending corporate resources to employ a consultant to produce a study which is explicit enough to provide a detailed plan of action and overcome the inertia. At the same time the action expresses control by exploiting autonomy from the USA by becoming the global leaders in implementing EPCPI. In

summary, the act of employing the consultants in this instance expresses the possession of *Resources* (+), *Autonomy* (+) and the lack of, and desire to increase *Co-operation* (-).

Table 6.3: Case 5 Considerations, processes, process categories and process dimensions

Ref.	Considerations	Control cat.	Process	Process cat.	Dim'n
5.01	Desire to formally make something happen rather than to continue to allow managers to pay lip service to change.	Autonomy (+) Resources (+) Co-operation (-)	Employ an objective external consultant, Coopers and Lybrand, to produce a study with itemized recommendations for action.	External agents Pace Formality	more faster more
5.02	(1) Evidence of ability to 'round-shoulder' change led to lack of confidence in ability to implement change. (2) Uncertainty over whether to take the lead on implementation of change over the USA.	Co-operation (-) Competence (-) Autonomy (-)	Delay implementation of Coopers and Lybrand study for six months.	Pace	slower
5.03	(1) Unable to do it alone. (2) Need to build the support of a core team of senior managers who understand the need for change and have the ability to implement it.	Autonomy (+) Resources (-) Competence (-)	Use Coopers and Lybrand to help educate. Get support of operations manager. Invite top selected team to 'away-day'.	External agents Justification Pace Role definition	more more slower clearer

Table 6.3 cont./

5.04	(1) Realization that existing managers are unwilling or incapable of reorganizing. (2) Two experienced senior project managers from outside London available to come in and drive it like a project. (3) 'Felt strong enough' to implement change without the blessing of the USA.	Co-operation (-) Resources (+) Competence (+) Autonomy (+) Competence (+)	Appoint two experienced Bechtel project managers from outside London to come in and 'just do it'. Reify change as a project.	Role definition Pace Participation Formality Justification	clearer faster less more less
5.05	Democratic approach with six or eight people wouldn't work.	Autonomy (+)	Delegate complete responsibility to (PM1) and (PM2).	Participation Role definition	less clearer
5.06	Learned to resist the tendency to compromise the ideal through trying to keep everyone happy.	Autonomy (-) Co-operation (-)	Be single minded about sticking to the recommendations.	Participation	less
5.07	(1) No need to take the lead from the USA. (2) More agile and change-oriented than the USA.	Autonomy (+) Competence (+)	Non-bureaucratic 'seat of the pants' approach compared with USA.	Formality Pace	less faster
5.08	Outcome unpredictable. Need to have a go and tweak it if necessary.	Autonomy (+)	Don't be over-concerned with failure itself, (but be able to tell if the causes of failure are internal). Get it rolling.	Pace	faster

Table 6.3 cont./

5.09	(1) Staff need to understand why the changes are being made and how they will work. (2) Clients must see that the changes are good or they will reject the new approach. (3) Visiting senior managers from the US can help promote the change if they are informed about it.	Co-operation (-) Autonomy (-) Autonomy (-)	Presentations to staff, visiting US top brass and clients.	Justification	more
5.10	When there is a lot of work people don't worry about change (Reliance won).	Opportunity (+) Co-operation (+)	Less need to communicate	Participation Justify	less less
5.11	(1) Chief engineers will resist change. (2) Deputy chiefs not in control and not senior enough to interfere. (3) Reliance project won.	Co-operation (-) Co-operation (+) Opportunity (+)	Destabilize the old guard by putting chief engineers on Reliance project. Do not invite deputy chiefs to further participate in change decisions.	Pace Role definition Participation	faster clearer less
5.12	Implementation of change depends on the complicity of clients and on the availability of the right kinds of project.	Opportunity (-)	Restrict scope of operation.	Pace	slower

Table 6.3 cont./

5.13	(1) Two senior project managers are tied up on this rather than making money on projects and furthering their careers. (2) Starting the change was the difficult part. As long as you've burned the boats others will be able to finish it. (3) Need for radical, irreversible physical change.	Resources (-) Resources (+) Co-operation (-)	Project managers line up successors. Remove the possibility of a 'rearguard action'.	Role definition Participation	clearer less
5.15	Recognize own limitations.	Competence (-)	Leave it to the team.	Participation	more
5.16	Technically complex work requires care in procedural change.	Autonomy (-)	Attention to technical detail.	Pace Formality	slower more
5.17	ISO certificate revalidation due in May	Autonomy (-) Opportunity (+)	Get new systems and procedures in place.	Formality Pace	more faster
5.18	Large but finite resources allocated for change.	Resources (-)	Detailed planning and control applied.	Formality	more
5.19	The team has total trust.	Autonomy (+)	Loosely defined structure	Role definition	less
5.20	Need to be able to justify change to skeptics.	Co-operation (-)	Keep careful records.	Formality	more

6.2.3 Summary

The conclusions of the Bechtel study are presented below in the form of a brief discussion of each of the six management process elements and their apparent relationships with personal control.

1 EXTERNAL AGENTS

External agents (Coopers and Lybrand) were used to increase control in two ways. First, to help overcome the effects of doubts and resistance on the part of the department heads and to exploit the corporate desire for change by producing a formal, detailed list of recommendations for action. Second, to provide vocal support to the regional office manager at the time in the early stages when internal support was lacking and he needed help in building it.

2 FORMALITY

At the top level the absence of formality reflected the team's mutual self assurance and their growing self-belief in the preparedness for change in London by comparison with the USA. Below the level of the change drivers formality was used extensively to increase control. Examples of this included the formal detail of the Coopers and Lybrand report, the decision to use a formal project management approach to its implementation and the appointment of detached, experienced project managers, and the desire by the two project managers and the engineering manager to control their own futures by using metrics to express their achievement.

3 PACE

The pace of change was slowed initially by the regional office manager's uncertainty over his ability to overcome resistance without the support of a strong team, and over the extent of his autonomy over the USA. After the project optimization structure had been introduced there was a lack of suitable work to put through it, which slowed the full extent of its implementation. There was some evidence of a slow, cautious approach to changing systems and procedures in the face of external quality constraints, although this restriction on pace was somewhat relieved by the impending Lloyds visit. The availability of resources for external consultants helped overcome the initial resistance, and the pace increased dramatically with the coincident arrival of the two project managers and the Reliance project. These events enabled the change drivers to give unhampered structure to their team and helped provide the confidence to forge ahead even though the outcome was uncertain.

4 PARTICIPATION

The regional office manager's early tendency to involve the department heads in designing the changes and, later, in implementing the consultants' recommendations reflected his need for their co-operation and his desire to 'keep everyone happy'. This participation, however, only resulted in compromise and resistance. As he learned to resist this compromise the participative approach to the introduction of project optimization was abandoned. Control was asserted when the project managers took charge and was consolidated when the chief engineers were moved out of the way, with their deputies being insufficiently senior to trouble the change drivers. The concern of the technical resources project manager, on the other hand, was to maintain a participative approach, partly because he wanted to ensure a feeling of 'ownership' of the new staffing process on the part of those who would run

it after his departure, and partly because he did not feel competent to handle the details himself.

5 JUSTIFICATION

Before the appointment of the project managers and the removal of the chief engineers the regional office manager and the operations manager, with the help of the consultants, spent a lot of effort justifying to senior staff the need for the changes, in order to establish support and develop understanding of the new way. After that point there was a shift in the staff communication process. There was no longer a need to sell the changes to senior managers, and the whole team of change drivers was able to spend their efforts communicating at the lower levels of the organizational hierarchy. The process of gaining control over the change by justifying the new way to clients and visiting managers from the USA continued.

6 ROLE DEFINITION

There was a lack of clarity of management roles and responsibilities in the new organization in its early stages, both at the top level in relation to the USA and at the local senior management level. The political compromise reflected the lack of control felt by the regional office manager and the operations manager over the departmental heads and over the USA. As control was assumed roles at the level of project manager and below were clarified, although a certain flexibility was maintained between the change drivers themselves. Defined responsibilities were delegated. The more passive roles of the new departmental heads were reinforced as the physical changes were imposed and the possibility of 'rearguard action' removed.

6.3 Learning and implications for next stage

This section draws together the major points of learning from the Bechtel study, Case 5. The implications of the findings of the case for the next, final stage of the study are discussed. A justification is made for the selection of the fourth organizational setting.

6.3.1 Learning and interim conclusions

Management process

No refinements to the six categories of management process, their definitions or their dimensions were found necessary. The range of reported conduct of change drivers in Cases 1 to 5 was captured by the six categories.

Personal control

The Bechtel case provided an empirical example of how the subjective possession by change drivers of control over change relates to the management processes they employ. In Section 6.2.3 five dimensions of the personal control construct were clarified and defined. This builds on a previous reference by Dutton and Jackson (1987) to the multi-dimensional nature of the construct in the context of response to strategic threat and opportunity.

The case thus confirmed and clarified one of the interim conclusions from Cases 1 to 4: change driver's feelings of personal control over the implementation of a change project may be described as a combination of their perception of autonomy, resources, competence, opportunity and co-operation. The data indicated that the change drivers' adopted management processes represent expressions of that combination. It was argued that processes associated with high personal control are expressions of the possession and exertion of that control. Processes associated with low personal control are expressions of lack of control and of the desire either to increase control or to justify the position that increasing control is not possible.

Range of informants

The case confirmed that a more complete picture of the management process perceived by the change drivers could be obtained by interviewing all change drivers, including the project manager. Further, the case confirmed that the accounts of organizational members peripheral to the driving of the implementation process add little new information.

Size of project

One of the conclusions from Cases 1 to 4 was that projects which are larger and more significant to the organization have the potential to provide the setting for a richer, more valuable study of management processes than smaller, less significant projects. Case 5 was therefore selected for its size and significance. The importance of project size was confirmed by the range of data and the resulting depth of analysis which was made possible.

Project orientation

In Cases 1 to 4 it was found that the exercise of formal project plans and controls was an important aspect of management process, and that managers tended to avoid control in certain circumstances. One of the reasons for selecting Bechtel as the setting for Case 5 was the company's strong project orientation in contrast with Ealing Hospital NHS Trust and Associated Newspapers. This characteristic of the organization proved to have important consequences for the change management process and was able further to clarify the role of traditional notions of project control in internal change. Although formality at the level of the change driver team was minimal, even in such a strongly project-oriented company, project manager 1 was keen to exercise strong formal project control *downwards* over his project.

There appeared to be two reasons for this. First, he was appointed for his project management expertise. He saw the formal approach to internal change projects as being no more than an extension to his normal way of working. The process optimization initiative was a large, expensive project in its own right. An appropriate degree of control would ensure the adherence to costs and schedules by the subordinates to whom he had delegated packages of detailed work, and a high degree of definition would stop them from remoulding the scope to suit their own interests. The second reason for the employment of a high degree of project control was to ensure that, should the project fail to deliver its intended benefits it would *demonstrably* not be due to the project manager's failure to deliver the agreed scope, but would be due to forces beyond his control, such as the withdrawal of human resources or funding, or unanticipated changes in the company's commercial conditions.

6.3.2 Implications for next stage

Each of the first three organizational settings confirmed the importance of an appreciation of context in studying not only the content of change, but also the management process, the central theme of this study. Cases 1 to 5 have shown that context has implications for analysis at every level, including the sector, the organization, the project, and, individually and collectively the team of change drivers.

From the time the research design was first outlined it was intended that the fourth setting should be a manufacturing organization. Applying this original intention, and continuing the policy of theoretical sampling, the domestic appliance manufacturing operation of the Electrolux corporation based in Luton, England was chosen over several other possibilities for the final stage of the study. This choice was guided by the lessons of the first three organizations. The Luton operation of Electrolux was of a similar size to the other three organizational localities and fulfilled the manufacturing criterion. It was mid-way through a major programme of internal restructuring and agreed to co-operate in the research. Like Bechtel its head office was overseas. In contrast with the major, heavy industry project nature of Bechtel, however, Electrolux's operation was light and low-technology, and in a strongly unionized setting.

The differential characteristics of the four organizations may be summarized as follows (Table 6.4):

Table 6.4: Differential characteristics of the four organizations

	Ealing Hospital NHS Trust	Associated Newspapers	Bechtel	Electrolux
Sector (1)	public	private	private	private
Sector (2)	service	service	service	manufacturing
Ownership (1)	public	shareholding	private	shareholding
Ownership (2)	UK	UK	USA	Sweden
Project orientation	established but peripheral	very weak	core	established but peripheral
Power channel (1)	clinical	editorial	technical disciplines	union
Power channel (2)	managerial	commercial	projects	management

7 RESULTS FROM ELECTROLUX

The subject of this final results chapter is a major project of internal change at Electrolux's vacuum cleaner manufacturing facility in Luton, England. At the end of Chapter 6 the reasons for the choice of this research site were outlined, with its characteristics compared with those of the first three sites.

In Section 7.1 background details of the Electrolux group and the Luton operation are provided. The principal characteristics of the change project are listed. The process of gaining access to the organization and identifying the interviewees is described. Relevant details of the data collection and analysis processes are outlined.

Section 7.2 contains the case study, presented in the established form of narrative, tabular summary and descriptive summary of the six management process elements and their links to personal control.

Section 7.3 summarizes the learning from Case 6, the Electrolux study. The results are considered in the light of learning from Cases 1 to 5.

7.1 Introduction

In 1996, the time of the study, Electrolux was a major multinational corporation. With around 600 companies in more than 40 countries the Electrolux group of companies employed over 150,000 people. It was the largest manufacturer of electrical appliances in the world. Its size was not always appreciated by outsiders because, unlike its major competitors (for example Philips and Panasonic), Electrolux traded under a variety of different brand names in different countries. This diversity of identity was a legacy of Electrolux's policy of growth through acquisition of companies and their brands, which was exercised with particular vigour in the 1980s. In 1996 Electrolux brands included Frigidaire, Flymo, Husqvarna, Tricity-Bendix, AEG, Parkinson Cowan and Zanussi. The companies were all wholly-owned subsidiaries of Electrolux, a Swedish corporation with its head office in Stockholm.

Until the early 1990s Electrolux was organized on a national basis. Each local Electrolux company with a manufacturing or sales organization served the needs of its country and was administered by a national organization. In 1993 the group was restructured. National barriers were removed and Electrolux was organized on a product line basis. Each product line was administered by a product line management team in Stockholm.

There were five product lines, dubbed internally *Cold, Hot, Garden, Wet* and *Dirty*. The chief executives of the five product line groups were part of Electrolux's top management structure, which also included corporate quality and 'pure' research and development. The *Dirty* division, known as D-division, had its own chief executive in Stockholm responsible for manufacturing, sales and marketing of 'floor care products' - principally vacuum cleaners.

The Luton operation started in the 1920s as a manufacturing site for Electrolux vacuum cleaners. Over the years, under the old nationally-based organization structure, Luton's manufacturing activities expanded to include refrigerators, freezers, oil-filled radiators and microwave ovens. By 1996, under the product-line organizational structure, all products except vacuum cleaners had disappeared from the Luton operation, and were made elsewhere. In 1988 the Luton business employed 3,000 people. As a result of the group restructuring, including the resiting of refrigerator manufacturing, there were, in mid-1996, 750 employees remaining on the Luton site, 600 of whom were hourly-paid production workers.

Access to Electrolux was first arranged in August 1995 through a former business student at the University of Luton, where the researcher was an external examiner. The original purpose of access had been to write a teaching case study on the organization's new product development project management methodology. While data for the teaching case was being collected it emerged that the organization was in the midst of a major project of change which may have proved suitable as a research setting. The opportunity to study the project was pursued in May 1996. At an initial interview with the factory's divisional director and chief executive the project was outlined and its suitability for study confirmed. The divisional director described how there had initially been six people at the site, including a designated project manager, plus himself, involved in defining and implementing the project. He explained, however, that the team had contained only four individuals, including himself, who had been the effective change drivers. This view was also largely expressed by the other three. The divisional director agreed to allow the interviews with the change drivers to take place.

The main characteristics of the project are summarized in Table 7.1:

Table 7.1: Electrolux project characteristics

Case 6	
Title	The step change project
Origin	Desire to become a world class manufacturer of vacuum cleaners
Nature of scope	A sequenced effort to exploit potential for improvement in all areas of the business, including design, materials management and manufacturing.
Drivers identified	Divisional director (sponsor), project manager, materials manager, design and development manager.
Main driver	Project manager
Status	Three years into a programme initially envisaged as five years in total. The outstanding tasks were known but not formally scheduled.
Resources	Consultants fees unknown, estimated at several hundred thousand pounds. Internal resources not budgeted.

The titles and roles of the four nominated change drivers are listed in Table 7.2:

Table 7.2: Electrolux interviewees

Title	Ref.	Role on Project
Divisional director	DD	Initiator, champion
Step change project manager	PM	Project manager
Design and development manager	DDM	Step change driver
Materials manager	MM	Step change driver

The four were interviewed in May 1996. The divisional director and the design and development manager were interviewed again in June 1996, with a list of follow-up questions which arose during the process of transcribing the earlier interviews. All interviews were recorded and transcribed. Additional data included corporate reports, organizational charts showing reporting responsibilities before and after the changes, and a conference paper written by the project manager. The starting point for the process of coding and analysis was the same preliminary conceptual framework as the other cases. The data provided many further instances in established personal control and management process categories, but added little to their refinement, indicating saturation.

In terms of overlap of perceptions, and of agreement and disagreement, the four change drivers were effectively two pairs. The divisional director and the design and development manager were older, more senior managers who had been with the company for the majority of their careers. The project manager and the materials manager were younger people who had each been with the company for about eight years. They had been plucked from relatively junior positions and given major responsibility on the basis of their potential ability to conceive, communicate and drive change. The members of the younger pair apparently agreed with one another on every major issue, and were prepared to talk more openly about where the company's problems lay. The older pair, whose accounts also tended to agree, expressed more caution about what had been achieved and also seemed more reluctant to confront the problems which were holding back the success of the project. There was a certain amount of disagreement between all four over the chronology of events, which perhaps reflected the company's tendency not to schedule the project but to allow it to unfold in an unplanned fashion.

A detailed account of the analysis was sent to the divisional director for his verification and approval, and for distribution, under his control, to the others. He wrote back, stating that he found the analysis 'very interesting and thought provoking'. He offered no suggestions for changes.

7.2 Case 6: The step change project

This section contains the case study of the project of internal change undertaken by Electrolux Luton between 1993 and mid-1996, the time of the data collection for the study. The aim of the internally named *step change project* was to transform the Luton operation from its perceived status as a traditional, hierarchically-organized manufacturing operation to a world class business with all day-to-day decisions taken by 'empowered' teams of employees.

The case is presented in three sections. Section 7.2.1 contains the case narrative, structured around the context, content and process of the change, as described by the four change drivers. The commercial forces for change on Electrolux Luton in the 1990s are outlined, and the change is set into context by a discussion of three important features of the company's recent history. The change content is then outlined, in the form of lists of tasks already completed and those outstanding at the time of the data collection. The final part of the case narrative describes the features of the management process reported by the change drivers, divided into three chronological phases.

In Section 7.2.2 the case is summarized in tabular form. Lastly, Section 7.2.3 contains a descriptive summary of each of the six elements of management process as expressions of personal control.

7.2.1 Case narrative

Change context

Until the mid-1980s Electrolux's Luton operation enjoyed relative freedom from competitive pressure. The business served a mainly domestic market, which to a large extent it shared with a single major competitor (Hoover). There was little need for aggressive marketing. In that climate it was by the standards of today, according to the design and development manager, possible to operate inefficiently, producing expensive products to low quality standards, and still make money.

By the early 1990s several commercial forces had combined to signal the coming end of this demand-driven twilight of comfort. Globalization of the household appliance market meant that, increasingly, Luton found themselves competing against a range of cheap, high quality products, in both their domestic and foreign markets. Over-supply in the market led to downward pressure on price from retailers, for whom margins on domestic appliances had dwindled.

A further irritant to Luton was that a significant share of their potential market had been won by an audacious new entrant. In a market where, according to the divisional director, 80% of vacuum cleaners sold at a price of less than £100, UK-based Dyson Appliances Ltd. were able to sell theirs for £200. The Dyson product boasted a strongly differentiated appearance and some innovative features, but cost little or no more to manufacture than conventional designs.

Accompanying this increased external competition was the restructuring of the acquisitive Electrolux group from a country-based structure to an international product-line operation. This placed Luton in a position of actual or potential competition with other Electrolux products and acquired brands made in other operations in the group's floor care division in other countries, including Italy, Germany, Sweden and the USA.

To understand the effect of these forces on the Luton business, and to better appreciate the context of the company's management response, the situation should be considered in the light of three significant features of the company's recent history and future direction, discussed in turn.

A traditional past. First, in easier times Luton had developed a tolerance of internal difficulties and outdated traditions, many of which were not shared by newer Electrolux business units around the world. Some of the more obvious consequences of this legacy were openly undesirable and could therefore be dealt with relatively easily. For example in 1993 the factory was making up to 6000 'incompletes' a month¹, and had a reputation among its suppliers for repeated disruptive changes in delivery priorities. Few would argue that such inefficiencies should be tolerated.

Other characteristics were not so simple to eliminate, being entrenched customs and practices of a unionized work force. The general perception among change drivers was that procrastination had in the past often proved to be more attractive than action. Two of the more serious issues were the existence of a 'LIFO' redundancy policy (Last In First Out) and a remuneration system for hourly paid workers based on individual piece work. The factory had an untidy, dirty, old-fashioned image. It was dubbed the 'Siberia of Electrolux' elsewhere in the group. Visitors were known to make jokes based on the notion of a dirty factory making vacuum cleaners ('Don't they work then?'). There were no lockers or canteen areas for employees. Smoking and eating on the shop floor were allowed.

Despite these features (or perhaps partly because of them) the factory was far from being considered a bad place to work. The company treated its shop floor

¹ Typically unfinished products awaiting parts delivery.

employees well. It was 'family oriented', with many employees having relatives working there. The LIFO system had enabled the emergence over the years of a '25 Year Club' for more than 100 long-serving employees. Recently, resentment among newer members over their relative lack of tenure led to the disbanding of that elitist group.

A stable present. The second significant feature was that the step change project was initiated in 1993 in circumstances perceived by many to be unfavourable for change. The company had just come through a major economic recession with no job losses; it was UK market leader in some areas; it was an award-winning exporter of 50% of its production; it was bringing out new models; production had surged to 7000 units per day and was projected to grow; the workforce was expanding. Further, the company was achieving its profit targets on a £65m annual turnover, a performance record which could not be claimed by some other Electrolux companies at the time. Perhaps unsurprisingly, when told about the Luton divisional director's plan to make far-reaching changes the reaction of many employees was, 'Why us? Why now?'

A global future. The third circumstance which should be taken into account was that the Electrolux group as a whole were taking steps to pursue their own corporate vision. In a bold attempt to bring together all their diverse operations around the world Electrolux were striving to achieve common standards and administrative frameworks which could help to optimize the use of their vast resources and thus to create more value for their customers. Luton were expected to play their part in these corporate change initiatives which were, to a great extent, running on a parallel course with Luton's own internal efforts.

It was under these conditions that the divisional director decided in October 1993 to go ahead with an internal project introducing some far-reaching changes to his organization, which he had been considering for two years. The project was not crisis-driven, nor was it Stockholm-driven. It was a local initiative which would integrate many important individual manufacturing principles such as inventory reduction and efficiency improvement. The divisional director had been encouraged by the management best seller *The Machine That Changed The World* (Womack et al, 1990), a study of the shift from mass production to 'lean production' in the automobile industry. He had formed a vision of manufacturing excellence, and had become a devotee of the practice of 'benchmarking'². He had toured the USA and Europe visiting a diverse set of Electrolux and non-Electrolux companies, some of which were Japanese 'transplants'. He had seen how ambitious targets could be met and

² Making quantified observations of perceived good practice in other organizations.

continuously improved upon by an empowered work force operating in clean, tidy conditions in a flexible team-based structure with the right reward systems. The target he set for himself and his employees was to become a world class³ manufacturer of vacuum cleaners.

Change content

The benchmarking visits by the divisional director had highlighted the possibility of considerable improvement in all key areas of the Luton operation, including new product design, materials management and manufacturing. Management consultants Andersen Consulting were brought in to conduct an audit of the operation, and their report confirmed the potential. With Stockholm's approval Andersen were then engaged to help plan a restructuring initiative, titled the step change project, and to assist in the early stages of its implementation.

The aim of the project was stated by the divisional director as simply 'to become the first world class manufacturer of vacuum cleaners'. In order to begin to operationalize this goal and to make visible the extent of its achievement five 'core competencies' of the business were established which could be the object of specific improvement targets. The five core competencies were listed as:

- 1 New product design and development
- 2 Materials management
- 3 Electric motor development and manufacturing
- 4 Injection moulding
- 5 Production assembly

The way to world class status was to be through team working, constant challenging of the status quo, benchmarking and the progressive elimination of non-value adding activities. Teams would be formed of committed, autonomous, integrated sets of employees, empowered, rewarded and supported by a delayered management structure. All tactical decisions, whether they concerned personnel, materials, engineering, production or quality, would be taken by the teams. Ultimately each team would be responsible for a business unit and would have its own budget.

The main elements of the achieved scope of the step change project at mid-1996 may be described as a series of managerial actions. Six Luton employees below top management level led by an appointed 'step change project

³ The meaning of "world class" was defined by the divisional director as : "giving shareholder value, contributing to the group's profits, but also giving customer satisfaction and employee satisfaction."

manager' were selected and seconded as far as possible from their normal duties to work full time with the consultants. Over a six month period this 'core team' examined best practice elsewhere and set about planning how the Luton operation could achieve a state of perpetual self-regenerating improvement in the key areas identified.

After this initial planning stage the team was expanded and formed into three special 'work streams' in new product introduction, materials management and manufacturing. Their task was to establish specific, measurable targets in the three areas, and then to set about achieving them.

By mid-1996 the following achievements had been made:

Generally:

Aggressive benchmarked targets for improvement set in all core areas.
Employee suggestion and reward scheme streamlined and improved.
Staff departments downsized.
Increased use of training, workshops and general employee communication.

In new product introduction:

New product lead time reduced by 60%.
Department restructured around project teams rather than functions.
Electrolux group formal project management process introduced.
Design support team moved to main factory.
Accelerated tool testing, using CAD data to machine test parts from solid.
Product testing function relocated in the design department.

In materials management:

Supplier and materials functions merged.
Production control responsibility devolved to business unit teams.
Buyers' office moved into factory.
Significantly reduced supplier base.
Moved towards supplier development using higher calibre buyers.
Material shortages virtually eliminated.
'Frozen period' introduced in order book.
Kanban internal and external production control methods introduced.

In manufacturing:

Business unit teams established in all production and stores areas.
Press work outsourced.

Schedule adherence improved.

Many improvements from site consolidation, including a less fragmented layout and a substantial reduction in floor area.

At mid-1996 the following achievements were still to be made:

Removal of LIFO policy.

Rationalization of payment system, including finding an acceptable alternative to piece work.

Improvement of take-up of the employee suggestion scheme.

Simplification of the production lines.

Improvements to housekeeping.

Improvements to worker mobility and flexibility within manufacturing sections.

Removal of distinctions between direct (production) and indirect (materials) workers.

Improvement of communication of company challenges and objectives.

Change management process

For purposes of analyzing the step change project management process the case may be divided into three phases:

Phase 1: from October 1993 to March 1994. Immediately following the restructuring of Electrolux's UK operations Luton's divisional director seized the opportunity to pursue the world class vision that he had been harbouring for two years. Because there was no crisis for change the divisional director was careful to engage an independent consultant to confirm his expectations about the company's potential. This they did, and the divisional director gained Sweden's approval to further employ the consultant to help initiate the change. With Andersen's help a team of change 'champions'⁴ was established. They benchmarked several organizations and set ambitious targets for change. The team had some early successes and became enthusiastic to pursue the project.

Phase 2: from March 1994 to May 1995. Encouraged by their recent experiences with benchmarking and a growing belief in their ability and need to carry forward the process alone, the change drivers agreed to bring an early end to their association with Andersen. In the year following Andersen's departure the company embarked on an unplanned sequence of changes, with the change drivers turning their attention to wherever they felt was right. They adopted an 'easiest first' approach, starting with the non-unionized

⁴ An Andersen term.

departments. Further successes were acclaimed, particularly in improving relations with suppliers and in virtually eliminating 'incompletes'.

Phase 3: from May 1995 to mid-1996 (the time of the interviews). Problems started to appear when the change team turned their attention to some of the more intractable aspects of the operation. There was a growing realization that abandoning the organizational hierarchy was more difficult than they had imagined. Management admitted their inability to give up control, and saw that the work force did not necessarily want to take responsibility for business decisions. At the end of the period disillusionment was setting in as the change drivers realized that some things were less easy to change than others. Enthusiasm for change was starting to wane, with the team members spending more of their time on routine duties.

Details of the three phases are presented below.

Phase 1: The divisional director 'first got excited' about the step change project idea in 1991. For two years he became increasingly convinced of the potential for improvement, but took no action. Then, in October 1993, the Electrolux global reorganization provided the necessary trigger.

' [with] the change in the management structure in the UK, I felt for the first time that we could really take some risks.' (DD)

At that time the operation was profitable, which brought into question the wisdom of introducing radical change. The materials manager summed up the situation.

'There was no burning platform... The focus and the commitment wasn't there. It was seen as... it's not broken, what are you trying to fix, we're making money, the orders are here, we're bringing people in, we're recruiting people, where's the problem, why do you need to make these changes?' (MM)

To confirm the divisional director's expectations, to help convince the doubters, and to help convince the division's product line manager in Stockholm, Andersen Consulting were brought in to do a feasibility study to establish Luton's potential. The exercise was used to gain approval from Stockholm to further employ the consultants, who were seen as 'good but not cheap'. Their role was to 'kick start' and accelerate the change process and, at Stockholm's insistence, to help Luton set quantified targets for improvement.

'We had to show [the head office product line manager] what we wanted to do, and set ourselves some targets which we said we would meet... we selected our core competencies and then we set

for each of those core competencies Key Performance Indicators, which we said we would improve by certain elements, in certain periods of time. So it was a... head on the block, really.' (DDM)

The consultants taught the change drivers to aim for fast change, thus fulfilling their role of accelerating the process in its early stages.

'They were essential to get us to question not just what we did, but the speed with which we did it, because every time you came up with a time scale they'd throw it in the bin and said you could do it in half the time.' (PM)

Stockholm played their part in keeping up the pace by monitoring Luton's progress.

'They were very visible and very challenging in coming over probably every two or three months, and saying, OK show me what you've done, you know, where are we now, where are the time scales.' (MM)

When the change drivers were being selected the divisional director and his long-serving and trusted design and development manager shared some doubts that the latter was the right man to lead a key area of change. The divisional director used a recruitment consultant to increase confidence that the design and development manager was the best person for the job.

'So although it was an internal appointment we looked at him against external candidates. And so he should feel very confident that we've actually got the best guy.' (DD)

There was no self-selection of team leaders. They were picked by the divisional director and interviewed by Andersen to confirm their suitability. Their roles as change agents were clearly established and their targets for improvement allocated. To underline the unusual importance of the step change project they were as far as possible relieved of all responsibilities to their previous line managers.

'We got all our duties taken off us, because normally these projects are, you know, bustingly important and they're so important you can do all your other work as well, whereas this was the first time that we were actually taken off the thing that we were previously doing.' (PM)

Part of the role of Andersen in this stage of the project was introducing the change drivers to the practice of benchmarking. The consultants used their contacts in other firms, and arranged visits to show not only that large

improvements were possible, but also to reassure the change drivers and the departmental managers that other firms too had problems which they had overcome.

‘Andersen’s would support us in saying it’s achievable, you know we stand by the plan, and anybody who thinks it can’t be done we’ll show you someone who’s done it, so it was almost a fait accompli for many of the senior managers who were a little nervous at first at the scale of some of the changes.’ (PM)

Phase 2: After the Andersen team had been working full time with the change drivers for six months the combined team had already made some notable achievements, particularly in materials management, and had virtually eliminated ‘incompletes’. The project manager felt that he and the rest of the team had learned quickly from the consultants about the benchmarking process. They had also learned the importance of taking a lot of trouble to justify to employees why change was necessary, but not necessarily coming up with a complete plan before starting action. With the confidence that came from this learning Andersen’s perceived usefulness was rapidly declining.

‘We were learning less and less and doing more ourselves.’ (PM)

Despite the successes there was concern that other employees were merely paying lip service to the changes, and that once the consultants had gone would revert to previous practice.

‘I think we had a lot of lip service being paid to people being committed to it, and that they were just sitting back and waiting for the consultants to go, so that they could go back to the way it was.’ (MM)

The team had always been keen to demonstrate that the changes were not being driven by the consultants. For this reason the team had been careful to ensure that they, not Andersen personnel, led meetings and presentations to employees. The team’s new-found confidence in their ability to go it alone, combined with the increasingly urgent need to show employees that the empowerment process was driven from within, led to the decision to part company early with Andersen. Six months after the start of the step change project, three months earlier than planned, the change team decided to stand on their own feet.

‘... it was very important that we said good-bye to them at that time. Because if we’d gone on much longer I don’t think anyone would have come along with us.’ (MM)

The project manager increased his efforts to improve communication about the project to the company's managers. He found, however, that he could not assume that other managers would disseminate any further the information he provided. The company had an entrenched 'need to know' information policy which had to be overcome.

'We realized no one was telling [the supervisors] anything, so they rightly were getting the hump... in the end I started sort of sticking them on the notice boards and handing them out to people, whatever... we have been untouched for a number of years, and people were on this sort of need to know basis.' (PM)

In the early stages the divisional director and his team were spending a lot of time selling the new ideas to shop stewards. He realized early on that he would also need the co-operation of full-time union officials, who also became recipients of day to day change information.

Despite efforts to communicate the aims of the project and to schedule short term actions there was no long term plan. The aim of the step change project had always been measurable improvement. For this reason the importance of setting targets and monitoring achievements against performance metrics was central to the process. Formal scheduling and control of the project's scope were, however, not seen to be important. Indeed the divisional director felt that scheduling the complete scope of the project was undesirable for two reasons. First he felt that formalizing the timing of future actions would be setting himself and the team up for demonstrable failure to move quickly enough. Second he thought that such formality would be daunting, in that people would be overwhelmed by what was still to be done. He used a domestic metaphor to make the point.

'I think that's a bit daunting to do that. I mean maybe we should do it, and I think perhaps I should do it. [But if] my wife starts to write down a list of things I should do, and there's plumbing, perhaps the radiator's leaking... and in the end, the list becomes so long I get so daunted by it that I almost lose heart. I feel that she's adding things on the end of the list faster than I'm knocking things off the beginning of the list. I think that if we start to say to people that these are all the things that we're going to do, people will say it's... oh, forget it, you know.' (DD)

The change drivers' scheduling policy had, from the outset, been to attack the easiest problems first, and to turn their attention to wherever they felt change was immediately achievable. Since Andersen's fee was a proportion of achieved performance the consultants had done nothing to discourage this

process. In the words of the design and development manager a consequence of this tendency to take the easy way, regrettable in hindsight, was that:

‘We started our team working structure from the top down.’ (DDM)

The top-down, easiest-first policy was later widely seen as the wrong approach. Nevertheless it was followed and the early changes were mainly attempted in the non-unionized departments such as design and development, and procurement, where redundancies and changes to working practices could be imposed with comparative ease. Changes in practice on the shop floor were cautious and experimental.

‘We’ve sort of accelerated this change in this area [design and development]. We have changed dramatically in my view the areas which we are not constrained too much by, in other words all the staff areas have changed dramatically.’ (DDM)

The project manager explained how the early redundancy of a non-co-operator in the purchasing department helped reinforce the seriousness of the change team’s efforts, if only at the management level.

‘You cannot afford to leave people in the organization who are a walking example of non-change... the option to just tread water isn’t there, and you either have to be enthusiastically being seen to be in the boat and rowing, not splashing your hand in and out of the water and pretending you’re swimming. And the first guy who left on the basis of not paddling, I think had a profound effect on everyone else.’ (PM)

After several months of tackling problems in non-unionized areas and setting up tentative pilot schemes in the factory, it became apparent that the company’s most serious obstacles to being world class happened also to be its most intractable and deep-rooted problems. Two significant barriers to change in the factory were the LIFO redundancy policy and the piece work payment system. The company’s management had long known that these traditional practices were holding back change and encouraging a preponderance of long-serving employees who favoured the stability of the old way.

The divisional director expressed his awareness of these issues but justified his hesitance in dealing with piece work on rational grounds.

‘I’m anxious not to throw out the baby with the bath water. Most people have taken piece work out, and they did it a few years ago, I think we’re one of the remaining surviving companies that still have got piece work. But those who took piece work out generally saw a 20% to 30% productivity drop.’ (DD)

The design and development manager's view was that the 'easiest first' policy had been wrong. The company should have tackled unionized resistance first.

'We have changed what we could, and now we're starting to change what we can't (laughs). What we have to do now is attack that area. That's holding us back now. We haven't attacked the difficult area first. And my view is that if I knew then what I knew now, and I'd have been party to it, I would have insisted on doing the hard thing first.' (DDM)

The project manager and the materials manager supported this view.

'Everyone knows it's wrong, and it's an area that with every redundancy when we throw good people out, we know we should do something, and we subsequently haven't.' (PM)

'One of the things that was said when the step change project started was that there should be no sacred cows, and unfortunately we still have far too many of them. I think LIFO, I think, the piece work system, I think they're tough to tackle and so we don't do it.' (MM)

One notorious attempt to introduce change on the shop floor had been a failure. In a tentative, experimental scheme a traditional production assembly line had been 'empowered' but its workers had quickly become disenchanted with the new way. After an unhappy period, when output was clearly diminished, the line returned to its former practice. The divisional director and the design and development manager gave two independent reasons for this failure, both avoidable in hindsight. First they picked an assembly line which did not lend itself to integration and team working.

'We picked the wrong line... it was structured... these things come down to detail in the end, the way the product was made, the way it was engineered, the way the line was engineered didn't encourage people working in that way. Because, what you had was a group of people at the front doing... all doing one job, the same job, then a group of people in the middle were doing another job the same, and a group of people at the end doing another job the same, so the people at this end of the line had no conception of what the people at the other end of the line was doing. What you really needed was three sets of people all doing the same job, making the product, you know, and we have actually... the irony is we had that in other areas.' (DDM)

Second, problems of working together in the new way were blamed on inadequate training.

‘We didn’t do the training and that’s what happens to most people, they’re so anxious to get a result they don’t put the training in first. We would have gone faster if we’d done that.’
(DD)

The failure was a set-back to the step change project because it reinforced the message on the shop floor that the old way was better.

‘We lost output, and we reverted, and I think that set us back quite a bit. Because the message goes out that this is actually the best way to do it. The old way is the best way. The single most difficult thing about change is the view that the old way is the best way.’ (DDM)

All four change drivers liked to encouraged the idea that becoming associated with the change project offered development opportunities for the individual.

‘What I would say to them is... purely on a personal level, look at what it may do for you, you know, if you get on the train enthusiastically and show what you can do, you know, you may arrive somewhere else.’ (PM)

All four described how they were attempting to rid the company of a deep-seated ‘blame culture’. In many cases this simply meant tolerance of passive roles. In other cases employees who had shown themselves to be successful in the new way of working were given opportunities and promotions. With almost biblical relish the project manager described the case of one storeman who had embraced benchmarking and the world class goal and had quickly risen to the level of business unit manager.

‘Let them go and make some mistakes. And by the same token let them be washed in the glory stick. They certainly didn’t think he was a business unit manager, and it’s interesting now that he’s, you know, he’s just on a longer and longer leash in terms of what he’s allowed to go and do.’ (PM)

Phase 3: In the last year of the project , leading up to the time of the interviews it became increasingly apparent to the change drivers that certain characteristics of the operation were making the achievement of world class status more difficult to achieve than the early successes had indicated. Apart from LIFO and the piece work policy, which they had not begun to tackle, inherent constraints were becoming more obvious.

Two acknowledged problems were, first, achieving a culture of cross-functional integration in an entrenched departmental hierarchy, and second, recruiting people of a sufficiently high calibre into the materials department. The change drivers saw that effective team workers were hard to find in the job market.

‘... we’ve found that it’s been impossible to find the right type of person to do the job we wanted, and we came to the conclusion that they’re not out there for you to go and find. We’re going to have to create them ourselves, so we’re trying to pick the best and develop them in the role... I’ve found it quite alarming what we’ve been through.’ (MM)

In one attempt to overcome these problems the design and development manager and the materials manager had taken the unprecedented step of making a material co-ordinator the leader of a new product development project, a task that had always been done by a designer. In the words of the materials manager this was intended to ‘try and force this thing with cross-functional working’, at the same time raising the status of the materials department.

Another problem was interference from Stockholm. Luton had always been expected to play their part in a series of global change initiatives with acronyms such as JIT-90 (Just In Time), TQM (Total Quality Management) and PLUS (an initiative to improve payment terms).

‘Often in the past major projects have come wafting in from Stockholm as being the flavour of the month or whatever, and it’s sort of Moses carries that tablet down the hill and gives you it...’ (PM)

From the start the change drivers felt the need to stress to employees that step change was a locally inspired effort.

‘There had been numerous previous programmes taking place, and a lot of people initially thought the step change programme was another one of those, but... [the divisional director] tried to communicate the message that this one’s different because it’s local, it’s not... you know it’s not come from Sweden, we’re doing this to ourselves.’ (MM)

The divisional director described how directives from Stockholm had in the past caused problems which had become confused with the effects of the step change project, to its detriment.

‘We were being pushed by the group to reduce our lead times, and as we reduced the lead times so the shortages got worse and worse, and things were going wrong here, and people were muddying that up with the step change. The shop stewards were saying, these teams don’t work, we want to get back to the days of the foremen and the charge hands.’ (DD)

The design and development manager claimed that corporate priorities clashed with Luton’s efforts and diluted Luton’s change resources. He gave the example that union problems were, to Luton, far more urgent than the need for adherence with the global quality drive.

There was a growing realization that some employees would never embrace change. For the project manager they had been over-tolerant in some areas, including non-unionized departments.

‘We really flogged along in purchasing for much longer than I would have liked seeing, with people who either couldn’t or wouldn’t do it.’ (PM)

Much of the tolerance of ‘traditional people’ came from the divisional director, himself a survivor of the old days. He described the need for a balanced mix of ‘the two types of people’: traditional and change-oriented types. Traditionals were useful in planning roles, to keep people’s ‘feet on the ground’.

All four change drivers made repeated references to the extreme difficulty of changing from a command-based hierarchy to an empowered organization. Many managers found it hard to give up their power and many employees at lower levels simply did not want to have the responsibility for seeking improvement and making decisions.

The following quotes give an insight into the difficulties experienced by the divisional director and the design and development manager, the self-confessed ‘traditional’ half of the change driving team.

‘One of the difficulties that some of the management team suffered from. They thought that, you know, if you have teams then you’ve got to leave them on their own, but... you know, you really can’t afford to do that.’ (DD)

‘We keep some control on that, because it is important... to do the calculations in a consistent way, so that’s the only piece of bureaucracy that I’ve left in the structures.’ (DD)

‘We started to have some real industrial relations problems, the teams didn’t know how to handle those, and so they’d refer to their manager and their manager would take the decisions.’ (DD)

‘They kind of put us back in the position of making the decisions, as well as some people felt uncomfortable letting go of the authority levels, so they weren’t very confident, they wondered what they would do if all the teams took all the decisions.’ (DD)

A convenient device for the design and development manager was to classify his own domain of decision making as ‘strategic’, with decisions delegated below that level. Any decision he took was classed as strategic, although he admitted that he and the divisional director sometimes reverted to hierarchical type and took decisions that were less than strategic.

‘Occasionally we both slip up, like he occasionally reverts back to... go away and do this, and I occasionally revert to - he’s told me to do it so I must drop everything and do it, and that’s... having worked together for so long, it’s very easy to do: I’m the boss. And you know, that happens still.’ (DDM)

The project manager observed that employees who didn’t want change tended to be older, although this was by no means an ‘absolute rule’. Some older people were found to accept change and some younger workers resisted it.

The factory’s employee suggestion scheme provided generous individual staff bonuses calculated from the potential financial benefits of their suggestions, and continuous efforts were being made to make the scheme more straightforward and appealing. At the time of the interviews the divisional director expressed his continuing disappointment at the take-up of the scheme. The materials manager gave her view of the situation.

‘They don’t contribute... there’s obviously a core there that don’t. For so many years we’ve asked them to switch their brain off as they’ve come in the door, now all of a sudden we’re asking them to switch it back on. That’s not going to happen over night. And so far it hasn’t happened in a couple of years. And it’s difficult to accept that some people just want to come in, earn their pay and go home.’ (MM)

Having seen at first hand many shining examples of world class manufacturing companies the project manager held the view that changing an existing set-up was far more difficult than establishing a world class operation from scratch. He attributed part of the ongoing problems in Luton to the company’s history as a typically traditional UK manufacturing site. He gave his view of a typical employee’s attitude.

‘It is a factory, therefore by definition it should be a toilet as well. If you’re not wandering round head to foot in shite, you know, you haven’t done a day’s work, basically.’ (PM)

He felt that threat of closure was a powerful incentive to change, and hinted at the relative futility of his own ceaseless efforts to persuade and cajole Luton’s employees. He had seen factories in other countries manufacturing messier products in relatively pristine conditions. He cited the example of Electrolux’s Mexico factory.

‘Our motor shop in Mexico, you know it was an absolute shithole, to put it crudely, and he said, we gave them a year and said you either clean it up or we close it down, and it... crisis driven projects are much easier for people to get their heads round, than walk out of that presentation and think, ‘what did he mean by that then?’ But it looked like a doctor’s operating theatre when I walked round it.’ (PM)

The divisional director summed up the rather difficult position facing his team after three years of step change.

‘We’re going through a sort of valley of despair... it dips below the line, then somebody says you must be doing something wrong, you know, you’ve got it wrong, you’ve... go back to this old method, whatever it was, and so, most people abandon the programmes at that point, and go back to this, instead of which I’m insisting that we go through this valley of despair.’ (DD)

7.2.2 Further analysis of management process

The case is summarized in Table 7.3, divided into the three phases.

Table 7.3: Case 6 Considerations, processes, process categories and process dimensions

Ref.	Considerations	Control cat.	Process	Process cat.	Dim’n
Phase 1					
6.01	Change in UK management structure empowers divisional director to take risks	Autonomy (+)	Put change on agenda after a two-year delay	Pace	faster
6.02	Difficulty of initiating change in time of no crisis, and personal doubts	Co-operation (-) Autonomy (+) Competence (-)	Get Andersen to confirm potential. Sell it to employees and to	External agents Justification Pace	more more slower

	about wisdom.		Sweden.		
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6.03	(1) Consultant needed to kick-start radical change (2) Approval from Sweden needed to fund consultant	Competence (-) Autonomy (-) Resources (+)	Quantification of targets to justify change leads to Sweden approving Andersen engagement to help start project.	Formality Justification External agents Pace	more more more faster
6.04	Doubts that existing development manager is right team member. Need to convince oneself and other team members that he is right.	Competence (-)	Engage recruitment consultant to confirm that he is better than all external candidates.	External agents Justification	more more
6.05	Managers are able to discover team leaders	Competence (+)	New roles defined by management	Role definition Participation	clearer less
6.06	Managers should set team performance targets	Competence (+)	Performance standards set by management	Formality Participation	more less
6.07	Need to acknowledge importance of change and demonstrate commitment	Co-operation (-) Resources (+)	Team members expected to give up all other responsibilities	Role definition Justification	clearer more
6.08	Need for reassurance that other firms have problems too	Competence (-)	Observe negative qualities as well as positive in benchmarking	Justification	more
Phase 2					
6.09	(1) Experience of regression to old ways after consultant has gone. (2) Need to show that change is not consultant-driven.	Co-operation (-)	Be seen to front meetings with consultant in background.	Justification	more

6.10	(1) Have learned the consultants' tricks. (2) Need to show as early as possible that management are standing on their own without the consultant.	Competence (+) Co-operation (-)	Get rid of consultant early, and continue with the same processes.	External agents Justification	less more
6.11	Need to get support of shop stewards	Co-operation (-)	Sell benefits to them.	Justification	more
6.12	Need to overcome 'need to know' culture.	Co-operation (-)	Increase efforts at communication.	Justification	more
6.13	(1) Planning sets you up for failure. (2) Some parts will be more difficult than others.	Competence (-) Co-operation (-)	Stop justifying it and just do it. Start with the easier parts and take it from there.	Formality Pace	less faster
6.14	We rushed into it without sufficient thought and changed the wrong thing.	Competence (-) Co-operation (-) Opportunity (-)	Slow down.	Pace	slower
6.15	Need to encourage employees' willingness to be associated with change.	Co-operation (-)	Promotion within new structure for those who help change succeed.	Justification Role definition	more clearer
Phase 3					
6.16	Need to stress benefits to individuals' careers	Co-operation (-)	Sell developmental angle.	Justification	more
6.17	Continued imposition of group-wide change and confusion between group-driven and local initiatives.	Autonomy (-) Co-operation (-)	Stress the difference.	Justification	more
6.18	Realization that some people will never buy in to the change.	Co-operation (-)	Stress that you need a mix of traditional and change-oriented types.	Justification	more

6.19	Realization that people used to a command and control style will find it hard to change (at all levels).	Co-operation (-) Competence (-)	Rationalize the continued need for managers to take decisions.	Justification Participation	more less
6.20	Realization that it is clearly easier to start a world class manufacturing operation from scratch.	Competence (-) Co-operation (-)	Rationalize that all UK factories are like that.	Justification	more
6.21	Realization that many have rejected the change, and that the company is in a 'valley of despair'.	Competence (-) Co-operation (-)	Stress the temporary nature of the distress.	Justification Role definition	more less clear

7.2.3 Summary

Instances of the six management process elements in the Electrolux study, and their links with personal control, are summarized below.

1 EXTERNAL AGENTS

Three aspects of the divisional director's personal control were relevant to the first stage of his appointment of Andersen Consulting, to confirm the potential for change. First there was a need to justify the desirability of change in that crisis-free time to overcome the potential lack of co-operation. Second, the divisional director wanted support and confirmation that his own feelings were right, a doubt which was also expressed in the decision to appoint the recruitment consultant. Third, he lacked autonomy from Sweden, who would have to approve the project. The extension of Andersen's appointment to the first six months of the project reflected the Luton managers' lack of experience of benchmarking and radical change, with the Swedish input at this stage further underlining their lack of autonomy and resources. The early decision to terminate involvement with Andersen arose when the change drivers' own growing confidence combined with their increasing perception that the more the consultants' presence was prolonged the less credibility the project would have for employees.

2 FORMALITY

Formality was initially imposed by Sweden and passed on to the change teams by Luton management in the form of targets, both for improvement in performance and for the time scales of change. As the project progressed and specific project funding was no longer visible nor needed, the application of project scheduling and cost control was abandoned. The change drivers saw no benefit in setting daunting schedules which might demotivate employees and expose their own inability to plan the unknown future and achieve project tasks to a schedule.

3 PACE

When the Electrolux group product line organization was introduced in 1993 the divisional director felt free enough to initiate the process of action, and the step change project got under way after a two year build-up. The pace was briefly slowed by the need to quantify benefits in order to get funding for the consultants. Once the consultants were appointed they were able to accelerate change, forcing the pace particularly in non-unionized areas and encouraging the change drivers to take swift action. Two features of the project led to a slowing of the pace after the first year. First the failed attempt to introduce team-based working on the assembly line increased the feeling that it would thereafter be more difficult to convince employees that the new way was better. Second, there was a realization that the more intractable aspects of the project were all that remained.

4 PARTICIPATION

The lack of participation reflected in the 'top down' approach was a result of managers' underlying belief that teams could not really be expected to lead the changes, and of their own familiarity with the command and control culture. They were encouraged by the realization that many employees did not want to accept responsibility for decisions, and that self-motivated staff able to work effectively in cross-functional teams were hard to find. Managers selected team members, defined their roles, set their targets for them, and continued to impose their decisions on staff, even though they sometimes acknowledged that this was against the spirit of the step change project.

5 JUSTIFICATION

The high incidence of management processes intended to justify both the changes themselves as well as the approach to change reflect the change drivers' general perception that selling and communicating were essential if they were to gain any control over the change process. There was a continuous

process of justification to Stockholm and to the Luton work force and the unions. As the project went on the justifications turned towards the change drivers themselves, with an increasing incidence of rationalization of failure and acknowledgment of difficult times ahead.

6 ROLE DEFINITION

The change drivers' roles were clear initially, as the project got off to an enthusiastic and successful start. The divisional director made sure that everyone understood the roles of the change teams and stressed the importance of the step change project by removing the change leaders from their normal duties. As the project took effect the change drivers became more used to finding their own roles, which were made less clear by their declining dedication to managing the changes less as a project and more as the everyday business of the organization.

7.3 Conclusions

This final section summarizes the main points of learning from the Electrolux case and indicates how the findings of the study as a whole will be explored in the final chapters of this thesis.

Management processes

Case 6 confirms that the six categories of management process identified and refined over the course of the study offer a comprehensive way of describing the actions and intentions of drivers of projects of organizational change. Some of the six, in particular participation and formality, have a significant presence in organizational literature. In Chapter 8 the findings of the six cases which make up this study are reviewed in relation to the literature on each of the six categories.

Industry context

One of the reasons for selecting Electrolux as the setting for the final study was its status as a manufacturing company, in contrast with the other three service organizations. The importance of researchers' attention to context in the field of strategic management was established in Chapter 2. However, the focus of the strategic literature is the link, in context, between change content and organizational performance. In Chapter 2 it was argued that the extent to which context, at both industry and organizational levels, is a determinant of project management process is an under-studied phenomenon. Its importance has been a strong feature of the emerging conclusions uncovered by the theory-building analytical process in all six cases. The feelings of personal control which are reflected in those management processes are clearly strongly influenced by context, as well as by the individual characteristics of change drivers.

The studies confirm March's (1996) observation that managers attend selectively to certain key issues. In each case there is a unique, core set of a few central issues which both enable and limit action in this way. In the Electrolux case, for example, managers' actions are shaped by such context issues as the persistent effects of tradition and the desire for conformity with manufacturing industry norms and expectations, including but not limited to Electrolux's group aspirations. In Bechtel the influence of project orientation was one of the central characteristics.

In Chapter 8 the central context issues in each of the cases are explored, and in Chapter 9 the implications of this study for management practice are discussed. It is argued that it is difficult and yet important for managers to understand how the characteristics of their own organizational context affect their feelings of personal control.

Personal control

Case 6 also confirms the conclusion, summarized in Section 6.3, that management processes in projects of organizational change may be considered as expressions of personal control. In addition to the development and definition of the six management process categories their link, via personal control, to context is the central contribution of this study. The research has resulted in a new perspective on the project management process which suggests many further questions and opens possibilities and opportunities for further work in this area. These are discussed in Chapter 9.

8 CROSS-CASE ANALYSIS

The first and second stages of analysis of the six cases were set out in Chapters 4 to 7. Each case was presented first in the form of a narrative description and second as a summary tabulation and discussion of each of the six management process elements. The purpose of this chapter is to take the analysis to a third stage of data reduction. The aim is to express the findings of the study in the form of an emerging theory which is generalizable to all six cases.

Two aspects of the study are addressed. First, data and analysis from the cases are brought together and the case findings summarized in the form of a series of theoretical propositions linking the five categories of personal control with the six categories of management process.

Second, the concept of personal control as an intermediary between context and management process provides an opportunity to examine how context affects management process. It is argued that positive and negative feelings of personal control are a link between key characteristics of the organization and the change drivers' actions. For each of the six cases the *central issues*, to which the change drivers directed their attention, are identified. These central issues are aggregated to form a set of seven *key organizational characteristics* which existed to a greater or lesser extent in each organization.

The overall theory arising from this study is expressed diagrammatically in the form of a summary model. The essence of the model is that **attention to key organizational characteristics gives rise to positive and negative feelings of control which are expressed as management processes.**

The chapter concludes with a summary of the learning process which took place throughout the case studies.

8.1 Management processes and personal control

8.1.1 Introduction

In this section each of the six management process categories is presented in a separate sub-section which starts with a cross-case tabulation showing, for each instance of the category, the following information:

- 1 The reference number of the instance from the secondary analysis table in the case. For example, 1.05 refers to the fifth row in the summary tabulation for Case 1.
- 2 The personal control elements which accompanied the instance.
- 3 The relevant dimension of the management process under consideration.
- 4 A summary description of the process, using fragments of quotes appearing in the case narrative.

After each tabulation there is a discussion of generalized processes . The purpose of the discussion is not only to establish cross-case generalizations but also to allow this final stage of analysis to take account of exceptions to those generalizations, and to integrate the latter into the analysis. Glaser and Strauss stress that unless exceptions are fully dealt with in this way analysis is incomplete.

Sometimes such incomplete analysis can be spotted easily because [the analyst] uses a phrase such as 'in general' to qualify his [sic] main analysis; for instance, he may assert that 'in general such and such is true', but readily admit there are exceptions - he may even briefly explain why there are exceptions - but he does not really offer a full analysis of the conditions causing exceptions, let alone integrate it with his main analysis. (Glaser and Strauss, 1971: 7)

Conjectured generalizations, which take account of exceptions, are then summarized in the form of propositions relating the management process element to the personal control dimensions.

In relation to the first four of the six elements, propositions concerning their negative aspects (for example restriction of use, reduction of use, or non-use of external agents) are not simply the converse of the positive (increased use). In order to achieve generalizability and to satisfy exceptions across all cases it was found necessary to have a separate set of counter-propositions for negative aspects.

8.1.2 External agents

Table 8.1: Cross-case tabulation of processes of engagement, deployment and disengagement of External agents

Ref.	Personal control	External agents	Process
1.05	Autonomy (+) Competence (-) Co-operation (-)	more	Engaged the 'support of the regional change management team.'
1.09	Autonomy (+) Competence (-) Co-operation (-)	more	Brought in temporary specialists with a 'track record' who could 'speak with authority' to clinicians.
2.02	Autonomy (+) Competence (-)	more	Used AT&T, since hospitals 'are not in the business of developing computer systems.'
2.12	Autonomy (-)	more	Tolerated AT&T's insistence on quality bureaucracy.
2.17	Autonomy (+) Resources (+) Competence (+) Co-operation (-)	less	Use internal team who are 'sensitive in their dealings with people's feelings and expectations' to install systems rather than insensitive outsiders.
2.21	Autonomy (+) Resources (-) Competence (-) Co-operation (-)	more	Bring in specialist trainers who understand 'professional sensitivities'.
3.09	Autonomy (+) Resources (-)	more	Use a specialist contractor rather than the company's in-house building services department.
3.10	Autonomy (+)	less	Take responsibility away from contractor for payment of sub-contractors.
5.01	Autonomy (+) Co-operation (-)	more	Employ consultants to formalize action rather than allow 'lip service' to continue.
5.03	Autonomy (+) Resources (-)	more	Extend consultants' remit to 'help educate' staff.
6.02	Autonomy (+) Competence (-) Co-operation (-)	more	Doubts about the wisdom and possibility of initiating change, particularly in times of no crisis.
6.03	Autonomy (+) Competence (-) Co-operation (-)	more	Outside help needed to 'kick start' radical change.
6.04	Autonomy (+) Competence (-)	more	Needed recruitment consultant to convince that internal appointment was 'the best guy'.
6.10	Autonomy (+) Competence (+) Co-operation (-)	less	Having learned the consultants' approach, show that internal change drivers are able to operate without them.

Generalization

External agents were used in all cases except Case 4. Each instance of the use of external agents in Cases 1, 2, 3, 5 and 6 represented a unique expression of the change drivers' personal control. Each instance of the employment or termination of outside consultants and other experts reflected a complex balance of the dynamic and competing components of personal control at a particular point in the project. Despite this complexity, however, it is possible to draw some general conclusions.

Autonomy. Almost every instance of the engagement, use and disengagement of external agents was a positive expression of the change drivers' autonomy to act, within certain budgetary constraints, in a manner of their choosing. Even in Cases 5 and 6, where the relatively high cost of employing the consultants was such that head office funding approval had to be obtained, the change drivers initiated the process of engagement of consultants, directed their use and decided when to terminate them. The one exception to perceived autonomy over the use of external agents was Case 2, where the project manager was forced by externally imposed rules to accept AT&T's insistence on applying bureaucratic quality standards.

Resources. Naturally, the engagement of external agents indicated the possession of the necessary financial resources. In cases 2, 3, 5 and 6, these were part of externally-approved budgets; in Case 1 the various outside experts were either free or cost so little as not to need outside approval. Apart from financial resources and the contributions of the change drivers themselves (see *Competence* below), in Cases 2, 3 and 5 external agents were brought in to address a perceived lack of available internal expertise on which the change drivers could draw. In Case 2 some of AT&T's responsibilities were withdrawn when the project manager saw that members of his own internal team were better placed to deal with issues which demanded political and professional sensitivity.

Opportunity. Cases 1, 2 and 3 were concerned with the introduction of changes to ongoing day-to-day operations. In these cases the change drivers expressed no doubt that the opportunity for change - in the sense of there being in progress at the time an operation to which the change could be applied - was present. In Case 5 there was a declared underlying assumption, in which Coopers and Lybrand played no part, that the right kind of projects, where the change could be applied, would come sooner or later. In Case 6 Andersen were instrumental in establishing that the opportunity existed to apply benchmarked changes to each of the five core competency areas. Once the opportunity was confirmed the consultant helped the change drivers decide which areas of the

factory presented the best immediate opportunities for change, encouraging and setting the 'easiest first' pattern.

Competence. In several instances the change drivers engaged external agents when they doubted or wished to supplement their own ability to see through the change unaided. Cases 1 and 2 contain examples of this, where outsiders with special competencies were brought in temporarily for specific tasks. The Case 2 project manager's desire personally to involve himself more with user acceptance, and to use AT&T less in this role, shows a heightening of his perception of his own relative competence at overcoming resistance. The use of Coopers and Lybrand in Case 5 was more a result of the need for time-consuming attention to detail and legitimation of the change initiative than lack of self-confidence in the ability of the change drivers to do the job themselves. In Case 6 both Andersen and the recruitment consultants were used to back up the divisional director's uncertain hunches, with Andersen being dismissed ahead of time when the change team's perceived competence had grown.

Co-operation. Most instances of the employment of external agents through lack of perceived self-competence were accompanied by an expectation of lack of control through non-co-operation. Exceptions to this took two forms. First, in Cases 2 and 3 external agents were employed purely for their specialist technical skills. Second, where technical specialism was not an issue and where little resistance to change was foreseen the issue of self-competence was of little concern and the perceived need to use experts was of relatively small importance. In Case 2 the restriction on AT&T's involvement was a result of their stirring up a hornets' nest of non-co-operation. In Case 6 the early termination of Andersen was the result of the tipping of a fine balance between the growing confidence of the change drivers as they learned the consultants' methods, and the prospect of increased resistance the longer they stayed.

Propositions 1(a) to 1(e)

The engagement of, and delegation of responsibilities to external agents is an expression of change drivers' perceptions of the balance of (a) their autonomy; (b) their possession of financial resources combined with lack of possession of competent internal resources; (c) their uncertainty over the extent of opportunity to pursue the change; (d) uncertainty over their own competence either to plan or to implement specific aspects of the change; (e) potential lack of co-operation.

Proposition 2(a) to 2(e)

The willful disengagement of, and denial of responsibilities from, external agents is an expression of change drivers' perceptions of the balance of (a) their autonomy; (b) their possession of internal resources to continue the change; (c) removal of doubts over the opportunity for change; (d) their own competence to continue to drive the change; (e) the existence of areas of low resistance to change or the threat of increased resistance due to the presence of the external agents.

8.1.3 Formality

Table 8.2: Cross-case tabulation of processes of Formality

Ref.	Personal control	Formality	Process
1.01	Autonomy (-) Opportunity (+) Co-operation (-)	more	Use 'vital and fundamental' business plan to spell out externally imposed requirements.
1.08	Opportunity (+) Competence (-) Co-operation (-)	more	Request preparation for workshop.
1.12	Co-operation (-)	more	Use 7-S framework to demonstrate professionalism and commitment to planning.
1.20	Autonomy (-) Co-operation (-)	more	Use legitimating power of executive board.
2.04	Autonomy (-)	more	Legal requirements for public sector capital projects.
2.05 2.06 2.07 2.08 2.09 2.10	Autonomy (+) Resources (-) Competence (-) Co-operation (-)	less	Avoid 'time wasting' and pointless formal planning and monitoring processes.
2.12	Autonomy (-)	more	Tolerate AT&T's increased quality bureaucracy.
3.01 3.11	Autonomy (+) Competence (+) Co-operation (+)	less	'No time' for formal planning. Reliance on verbal communication between change drivers and contractor.
3.12	Autonomy (+)	more	Use work measurement to show need for more staff cuts.
4.04	Autonomy (+) Co-operation (+)	less	No project manager appointed on the grounds of avoiding bureaucracy.
5.01	Co-operation (-)	more	Employ consultant to objectivize and itemize project scope.

Table 8.2 cont./

5.04	Competence (+) Co-operation (-)	more	Reify the change as a 'project'.
5.07	Autonomy (+)	less	Non-bureaucratic (seat of the pants' approach compared with USA.
5.16	Autonomy (-)	more	Need for attention to technical detail.
5.17	Autonomy (-)	more	Revise procedures for ISO certificate.
5.18	Resources (-)	more	Finite resources for change.
5.20	Co-operation (-)	more	Careful records to measure 'before and after' effects of change.
6.03	Autonomy (-)	more	Quantify targets to get funding approval.
6.06	Competence (+)	more	Performance targets set by managers.
6.13	Competence (-)	less	Planning sets you up for failure

Generalization

In each of the six cases there were instances of the adoption, use, avoidance or abandonment by change drivers of formally communicated plans and controls. Each instance of adoption or use was an expression either of the possession of personal control combined with a desire to exercise that control or an expression of the lack of possession of personal control combined with a desire to increase that control. Each instance of avoidance or abandonment was an expression of the lack of possession of personal control and of a desire not to worsen or expose that lack.

Autonomy. In Case 1 the change drivers' lack of autonomy in the face of externally-imposed regulations is expressed in their attempts to increase their control by using those regulations to justify and legitimate change. In Case 2 the purposeful emphasis on compliance with legal requirements for approval of capital expenditure diverted attention from the project manager's desire to avoid formality in respect of relatively uncontrollable but nevertheless significant internal costs. The grudging acceptance of AT&T's quality procedures was an example of lack of autonomy overcoming the desire to minimize bureaucratic exposure of problems. In Cases 3 and 5 the lack of formalization of the tasks of the change drivers themselves reflects a combination of their unrestricted freedom and their shared, understood goals. An exception to this is Case 3, where the IS director used work measurement to objectify his decision to further cut staff. The deliberate lack of formal project management in Case 4 showed the IS director's unrestricted power to over-ride his staff, who were denied the desired formality to demonstrate and help overcome their own lack of control. In Case 5 the imposition of formal plans and controls lower down the organization was partly a result of the need to comply with legal requirements. At the beginning of Case 6 formal goals were imposed and closely monitored by Sweden. As this external pressure sharply

declined after the termination of the consultants so did the perceived need for adherence to schedules.

Resources. The relationship between financial resources and formality was the same in all cases. Where there was an externally-imposed need for the approval and control of limited budgets the minimum necessary formality was applied. Where there was no imposed requirement, or when the change drivers learned that such control could be circumvented, formality was as far as possible avoided. In Case 5 scheduling and control of the tasks of a known internal work force whose time was allocated for that purpose, and who were accustomed to such control, was highly formalized. Where it was felt that there was an uncontrollable or unpredictable availability of internal resources to bring about the change, as in Cases 1, 2 and 6, formal control was absent. In Case 2 the desire not to waste resources was used as justification for the perfunctory, minimal adherence to requirements for formal processes.

Opportunity. The opportunity for change in Case 1 was bounded by the financial year. The sense of urgency which could be generated by this deadline was maximized by the issuing of formal schedules linking the restructuring activities to the business planning cycle. The lack of such limitations in Cases 2, 3, 4 and 6 was accompanied by unhurried, open-ended schedules. In Case 5 the opportunity to impose the full extent of the reorganization was restricted by the lack of an appropriate portfolio of projects on which to apply the changes. However, this meant that the preparatory work which made up the bulk of the project could proceed with its schedule unhampered by the complications of an overload of work.

Competence. The tightly-scheduled formal introduction of the new structures in Cases 1 and 5 expressed the change drivers' belief in their competence to bring about the changes to the design of the organizations, at least on paper. In Case 3 and 4 this formality was lacking. Despite the IS director's own perceived self-competence, no-one was monitoring the specific achievement of the project tasks. In Case 2 detailed planning and scheduling by AT&T of programming work on each individual module reflected the change drivers' self-assurance in their ability to deliver the technical content of the upgraded software modules in accordance with the schedules which were part of the formal requirement for capital expenditure approval. In contrast, the vagueness or lack of detail of the implementation plans showed their lack of self-assurance at being able to introduce the new modules. In Case 6 the change drivers' early confidence in the superior ability of managerial over operational staff led them to set formal targets for the 'empowered' workforce. Scheduling activity declined as the perception grew that 'planning sets you up for failure'.

Co-operation. Formal plans and controls were issued by change drivers as a way of confronting potential lack of co-operation by reifying the project. This was seen in Cases 1 and 5, and in the early stages of Cases 2 and 6. However, when the change drivers were confronted by actual resistance to change in the latter two cases, the attempted use of formality quickly declined as its meaninglessness only served to reinforce the perception that change was resistible. In Cases 3 and 4 the informal approach reflected the IS director's perception of his absolute ability to talk his way out of any possible resistance. This perception was reinforced by unfolding events.

Propositions 3(a) to 3(e)

The use or acceptance of formal plans and controls is an expression of change drivers' perceptions of the balance of (a) their lack of autonomy or their desire to objectify the project's undesirable consequences; (b) their awareness of externally-imposed budgetary limitations and deadlines and the existence of a known, dedicated work force who would understand and respond to formal control; (c) a limited 'window' of opportunity for change; (d) their competence in delivering those aspects of the project detailed in the plans and monitored by others; (e) potential but unrealized non-co-operation.

Proposition 4(a) to 4(e)

The non-use or willful avoidance or abandonment of formal plans and controls is an expression of change drivers' perceptions of the balance of (a) their autonomy; (b) the lack of external imposition and scrutiny of financial expenditure and deadlines, and the existence of a known, dedicated work-force who would respond to formal control; (c) unrestricted opportunity to attempt the implementation of change; (d) their lack of competence in delivering those aspects of the project not detailed in the plans; (e) lack of potential resistance or realization of actual resistance.

8.1.4 Pace

Table 8.3: Cross-case tabulation of processes of Pace

Ref.	Personal control	Pace	Process
1.01 1.03 1.18	Autonomy (-) Opportunity (+) Co-operation (+)	faster	Build on dissatisfaction with status quo. Introduce new structure in time for business plan deadline.
1.02 1.16	Co-operation (-)	slower	Phased approach to change.
2.01	Co-operation (-)	slower	Incremental, modular approach rather than 'big bang'.
2.13 2.19	Resources (-) Co-operation (-)	slower	Experience of non-acceptance of systems led to more cautious approach.
3.07	Co-operation (-)	slower	Double-manning during skills transfer.
4.01	Opportunity (+)	faster	Resignation of GSS manager provided opportunity.
5.01	Resources (+)	faster	Use consultant to produce objective study.
5.02	Competence (-) Co-operation (-)	slower	Evidence of staff's ability to 'round shoulder' change.
5.03	Autonomy (-)	slower	Uncertain whether to take the lead from the USA.
5.04	Resources (+)	faster	Experienced project managers become available.
5.04 5.07	Autonomy (+) Competence (+)	faster	Felt strong enough to implement change without the blessing of the less change-oriented USA.
5.08	Autonomy (+)	faster	Acceptance that possible failure is inevitable, will not be viewed negatively, and is reversible..
5.11	Opportunity (+) Co-operation (+)	faster	Replace chief engineers with less potentially disruptive seconds-in-command.
5.12	Opportunity (-)	slower	Non-compliant clients and the wrong kinds of project.
5.16	Autonomy (-)	slower	Need for attention to detail in standards and procedures.
5.17	Autonomy (-) Opportunity (+)	faster	ISO certificate revalidation due.
6.01	Autonomy (+)	faster	Change in UK management structure empowers divisional director to take risks.
6.02	Competence (-) Co-operation (-)	slower	Doubts about wisdom and possibility of change in time of no crisis.
6.03	Resources (+)	faster	Funding approval enables Andersen to 'kick-start' project.
6.13	Competence (-) Co-operation (-)	faster	Acceptance that some parts will be easier than others.
6.14	Competence (-) Opportunity (-) Co-operation (-)	slower	Rushed into it and tried to change the wrong operation.

Generalization

Each row in Table 8.3 represents an instance of the change drivers' perception of the relative pace of the project. Most instances of faster pace are expressions of positive personal control and most instances of slower pace express a lack or reduction of personal control. There are exceptions to this, which are built into the propositions.

Autonomy. Case 5 illustrates the effects both of perceived lack of autonomy and of realization that autonomy was, after all, possessed. The change drivers started slowly and hesitantly, expressing their uncertainty and reluctance to take the lead for change ahead of the USA. The realization that they were unconstrained by head office combined with their feelings of a superior track record of change to enable the pace to be accelerated. The positive effects of perceived autonomy on faster pace, and vice-versa, were also present in Cases 4 and 6. The exceptions to these generalizations were that in Cases 1 and 5 the restrictions to autonomy caused by the imposition of external directives were turned to the change drivers' advantage and used to force the pace. In Case 1 the externally-imposed business plan deadline, and in Case 5 the deadline for ISO re-certification, were employed in this way.

Resources. In Case 2 the lack of internal staff resources and the tight limitations on financial resources were cited as constraints on pace. The availability of money for consultants in Cases 5 and 6, and the availability of high-calibre project managers in Case 5, were seen to have a strongly positive effect on the early start and acceleration of the projects.

Opportunity. Cases 1, 4 and 5 contained examples of the opportunistic exploitation of a temporary relaxation in potential non-co-operation, to accelerate the pace. In Case 1 this opportunity took the form of general dissatisfaction with the status quo; in Case 4 the resignation of the long-standing GSS manager enabled the change to be accelerated; in Case 5 the pace was enhanced by the chance to remove the potentially-disruptive chief engineers and replace them with their more compliant deputies. Cases 5 and 6 both showed the slowing effect of the non-existence of the right kinds of operation on which to impose the planned change.

Competence. The effects on project pace of the change drivers' perception of their own competence to bring about the intended changes were made apparent in three different ways. First, if their competence was in doubt but untested they proceeded with initial caution (Case 6). Second, if early confidence in their own abilities was later shown by events to be misplaced, they slowed the pace (Cases 2 and 6). Third, if an early lack of confidence was bolstered by

success or by the realization that barriers to success were not necessarily all-embracing, they speeded up the pace (Cases 5 and 6).

Co-operation. Table 8.3 shows that in every instance except one perceptions of pace are positively related to the expectation of co-operation and negatively related to the expectation of resistance. The exception is Case 6, where the 'easiest first' approach resulted in an initial euphoria of pursuit of achievement which was later replaced by a feeling that, by leaving the more intractable areas until last they had effectively damaged their chances of ever completing the changes.

Propositions 5(a) to 5(e)

The relative speeding up of a project's pace is an expression of change drivers' perception of the balance of (a) their autonomy or their ability to take advantage of constraints to their autonomy in the form of externally imposed schedule directives; (b) the availability of financial and internal staff resources; (c) the existence of opportunities to take advantage of a potential relaxation of potential non-co-operation, and of a suitable work-load on which to impose the change; (d) their competence to proceed with selected parts of the project; (e) a lack of possibility of non-co-operation on those selected parts.

Propositions 6(a) to 6(e)

The relative slowness of a project's pace is an expressions of the change drivers' perception of the balance of (a) their lack of autonomy; (b) the lack of availability of financial and internal staff resources; (c) the lack of a suitable work-load on which to impose the change; (d) their lack of competence to bring about any part of the change; (e) their expectation of non-co-operation.

8.1.5 Participation

Table 8.4: Cross-case tabulation of processes of Participation

Ref.	Personal control	Participation	Process
1.07 1.08	Co-operation (-)	more	Away day to discuss the establishment of new roles.
1.17	Competence (+) Co-operation (-)	cautious	Readiness to impose control if clinicians show signs of failing their new responsibilities.
1.20	Autonomy (-) Co-operation (-)	less	Use power of executive board to overcome resistance.
2.13	Competence (-) Co-operation (-)	more	Failure of nursing system shows more involvement of users needed.
2.15	Resources (+) Competence (-)	more	Clinical department experts seconded to project team.
2.16	Competence (+) Co-operation (-)	cautious	Clinical departments make false demands and unfulfilled promises.
2.19	Co-operation (-)	more	Consultation needed with 'real decision makers', sometimes junior staff.
3.03	Resources (+) Competence (-) Co-operation (+)	more	Involvement of staff to ensure physical functionality of new layout.
4.01	Autonomy (+)	less	Move NEAT, effectively against the wishes of all parties.
5.04 5.05	Resources (+) Competence (+) Co-operation (-)	less	Bring in experienced project managers to 'just do it'.
5.06	Autonomy (-) Co-operation (-)	less	Stick to the letter of the recommendations. Avoid political compromise.
5.10	Opportunity (+) Co-operation (+)	less	Less need for two-way communication when workload is high.
5.11	Opportunity (+) Co-operation (+)	less	Replace chief engineers with deputies unaccustomed to having a say.
5.13	Resources (+) Competence (+) Co-operation (-)	less	'Burn the boats' to remove the possibility of a 'rearguard action'.
5.15	Competence (-)	more	Project manager recognizes his own limitations and leaves detail to the team.
6.05 6.06	Competence (+)	less	New roles and performance standards set by management.
6.19	Resources (-) Competence (+) Co-operation (-)	less	Realization and acceptance that all levels resist empowerment.

Generalization

The instances of participation summarized in Table 8.4 show that the relationship between this aspect of management process and the five elements of personal control is complex. Where the objectives of the project of change include employee 'empowerment' and the creation of a bottom-up approach to organizational learning this would indicate the suitability of a participative approach to defining and executing the project. However, reluctance on the part of the change drivers to relinquish their perceived superiority in decision making tend to counteract the natural devolution of control.

Autonomy. Case 4 is an example of absolute freedom to act over-riding any hint of democratic participation. The IS director's decision to move NEAT went against the wishes of everyone involved. Cases 1 and 5 show that constraints on managerial action due to outside rules and directives may be emphasized for the purpose of limiting the possibility of a participative approach to change. Both cases show that project reification may be brought into play or held in reserve if there are signs that the choices of the empowered work force may conflict with the aims or wishes of the change drivers. Thus both the possession or lack of possession of autonomy may contribute to participation, depending on the balance of the other elements of personal control.

Resources. Much participation is a result of the change drivers' acceptance of the need to use the specialist know-how of the change subjects as a resource in the *details* of implementation, if not the overall policy. Cases 2, 3 and 5 provide evidence of this. Case 5 also shows that when high powered or specialized internal resources are employed and brought in as fully-acknowledged members of the change driving team for the purpose of strengthening the team this results in a reduction in the possibility of participation immediately below the level of the change drivers.

Opportunity. In Case 5 the sudden arrival of the Reliance project diverted the attention of staff away from the disruptive effects of the reorganization and allowed it to take place with less need to involve staff in discussing details. At the same time the opportunity to replace the chief engineers with their deputies effectively removed a level of management at which participation was seen to be necessary. In Case 6 the change drivers' own failure to find an appropriate production line for implementing the new way led to them increasing their efforts to achieve the desired level of employee participation.

Competence. On the relationship between the change drivers' perceived competence in managing the change and the level of participation in the details of its implementation, two different sets of circumstances may be generalized.

First, Cases 2, 3 and 5 show that lack of technical competence is accompanied by a willingness to delegate decision making responsibility, at least initially. Second, Cases 1, 2, 5 and 6 show that, as trust in delegation is shown to be, or anticipated as being misplaced, a level of caution is employed as change drivers restrict or prepare to restrict participation. In every case the more the perceived competence relative to that of the change subjects the higher the level at which participation is restricted.

Co-operation. Perhaps not surprisingly, co-operation is the element of personal control which appears most frequently in connection with the change drivers accounts of participation. The relationship between the two concepts is, however, difficult to pin down. In Cases 1 and 2 the involvement of clinicians was invited as a means of overcoming potential resistance to change. In the same cases the change drivers were, however, prepared to restrict opportunities for participation if change subjects took advantage of the approach to distort the aims of the change to their own ends. In Case 3 the tension between the potential lack of co-operation and the need for participation in technical details was resolved by the IS director 'buying' co-operation through the promise of jobs and bonuses. In both Cases 5 and 6 the change drivers had experienced the negative effects of allowing staff too much say in change policies and were starting to pursue alternative approaches.

Propositions 7(a) to 7(e)

The adoption and use of a participative approach to change is an expression of change drivers' perceptions of the balance of (a) their autonomy, when combined with a willingness to engender a spirit of devolution of responsibility for decisions; (b) their willingness to use internal specialist technical know-how to ensure functionality; (c) their lack of opportunity to leave behind old practices on an old workload; (d) their lack of decision making competence relative to that of the change subjects; (e) their expectation that opportunities for participation would overcome the threat of a desire to resist change.

Propositions 8(a) to 8(e)

The avoidance or abandonment of a participative approach to change is an expression of change drivers' perceptions of the balance of (a) their absolute autonomy, or their lack of autonomy combined with an intent to exploit that lack of autonomy to reify the project; (b) a strengthening of the change team by bringing in the additional resources of new members; (c) their opportunity to use a changing workload to remove the need for participation; (d) their lack of decision making competence relative to that of the change subjects; (e) experience of the ineffectiveness of such an approach or its exploitation by change subjects for other ends.

8.1.6 Justification

Table 8.5: Cross-case tabulation of processes of Justification

Ref.	Personal control	Justification	Process
1.01 1.08	Autonomy (-) Opportunity (+) Co-operation (-)	more	Stress difficulties, intent to change and mandate.
1.03	Opportunity (+) Co-operation (-)	more	Stress widespread dissatisfaction and 'insight'.
1.05	Resources (-) Co-operation (-)	more	Stress that change management team are 'free'.
1.10 2.14	Resources (-) Co-operation (-)	more	Appeal to NHS norms of expenditure.
1.11	Autonomy (-) Co-operation (-)	more	Stress that no trust, no hospital.
1.13	Opportunity (+) Co-operation (-)	more	Stress low management costs and clinical benefits.
1.14	Co-operation (-)	more	Stress 'meaningfulness' of management jobs.
1.15 2.01	Resources (-) Competence (-)	more	Stress incremental approach with a long way to go using low-calibre resources.
1.19	Autonomy (-)	more	Emphasize difficult environment.
2.05 2.06 2.07 2.09 2.11	Co-operation (-)	more	Stress desire not to waste resources on management control bureaucracy.
2.20	Co-operation (-)	more	Stress benefits of integrated systems.
3.02	Autonomy (-) Opportunity (+) Co-operation (-)	more	Stress inevitability of change, including redundancies.
3.04	Co-operation (-)	more	Stress gratitude for forbearance during temporary disruption.

Table 8.5 cont./

3.05	Co-operation (-)	more	Stress 'lucky to have a job'.
3.06	Competence (+)	more	Stress better service despite sub-optimal cost reduction.
3.08	Co-operation (-)	more	Promise possibility of jobs elsewhere in the company.
3.12	Co-operation (-)	more	Use work measurement to justify staff cuts.
4.02	Competence (-)	more	Explain why NEAT had not been moved earlier.
4.03	Opportunity (+) Co-operation (-)	more	Explain why NEAT needs to be moved.
4.04	Competence (-)	more	Dismiss reasons for previous problems.
5.03	Co-operation (-)	more	Build commitment of managers to change.
5.04	Opportunity (+) Competence (+)	less	Appoint experienced managers to 'just do it'.
5.09	Autonomy (-) Co-operation (-)	more	Sell change to staff, clients, visiting top brass.
5.10	Opportunity (+)	less	No need to worry about change when there's plenty of work.
6.02	Co-operation (-)	more	Stress potential for change.
6.03	Autonomy (-) Resources (-) Competence (-)	more	Stress need for consultant to 'kick start'.
6.04	Competence (-)	more	Stress suitability of internal candidate.
6.07	Co-operation (-)	more	Stress importance of step change.
6.08	Competence (-) Co-operation (-)	more	Observe negative benchmarked qualities too.
6.09	Competence (+)	more	Stress not consultant driving change.
6.10	Co-operation (-)		
6.11	Co-operation (-)	more	Sell benefits to shop stewards.
6.12	Co-operation (-)	more	Need to overcome 'need to know' culture.
6.15	Co-operation (-)	more	Stress career development for supporters of change.
6.16			
6.17	Autonomy (-) Co-operation (-)	more	Differentiate local from group initiatives.
6.18	Competence (-)	more	Stress need for mix of traditional and new types.
6.19	Resources (-) Competence (+)	more	Rationalize need for continued hierarchy.
6.20	Opportunity (-)	more	Rationalize difficulty of changing traditional UK factory rather than starting from scratch.
6.21	Competence (-) Co-operation (-)	more	Stress temporary nature of 'valley of despair'.

Generalization

Many of the instances of justification shown in Table 8.5 can be attributed to a desire either to overcome potential non-co-operation, or to rationalize potential challenges to the change drivers' competence.

Autonomy. The lack of autonomy from Sweden in Case 6, and the inability of staff to differentiate between the ill-effects of local and group-wide change initiatives, meant that some effort was put into differentiating the two. It also led to the need to justify the changes to Sweden in order to get funding approval. In Cases 1, 3 and 5 the change drivers used their lack of autonomy to reify the project, stressing economic difficulties and the inevitability of change.

Resources. The desire by the change drivers in Cases 1 and 2 to demonstrate their thrifty approach to management is reflected in their frequent stressing of low-budget, cost-minimizing, non-bureaucratic approaches. Apart from financial resources, in Cases 5 and 6 the low calibre of staff in the industry as a whole is blamed for the lack of success of some aspects of the change.

Opportunity. There are instances of justification in cases 1, 3, 4, 5 and 6 which indicate the taking of opportunities by change drivers to build on dissatisfaction with the status quo and the inevitability of making changes to the existing way of managing the workload. In Case 6 the difficulty of changing an existing operation rather than starting from scratch is emphasized.

Competence. In Case 1 the chief executive was at pains not to make incautious claims of his own competence. He separated the successful achievement of the administrative change from the achievement of the benefits it was intended to bring, which would take several years to be realized. In Cases 3 and 4 the IS director was conscious that, by his own declared criteria, two possible charges of incompetence could be levelled against him. One of these he blamed on others; the other he gave a logical explanation for. Cases 5 and 6 contain examples of the change drivers prolonged exercising of their perceived superior decision-making ability. In Case 6 the change drivers emphasized the need to demonstrate to staff their own managerial competence. They described the consultants' role first in building up and then ultimately threatening that perceived competence.

Co-operation. The cases contain many examples of the use by the change drivers of justification processes to overcome potential or actual non-co-operation. These include building commitment by stressing to all concerned the desirability, efficacy, inevitability, wisdom and economy of the change, pointing out their mandated authority, and rewarding co-operation with jobs and bonuses.

Propositions 9(a) to 9(e)

Justification of the change itself, of the approach to change and of the apparent lack of progress of the change is an expression of change drivers' perceptions of the balance of (a) their lack of autonomy; (b) their lack of financial or internal resources; (c) the existence of opportunities to build on dissatisfaction and to stress the inevitability of change; (d) possible apparent lapses of competence on their part, or the expected length of time before the ultimate effects of the change would be realized, or their superior decision-making ability; (e) potential or actual non-co-operation.

8.1.7 Role definition

Table 8.6: Cross-case tabulation of processes of Role definition

Ref.	Personal control	Role def'n.	Process
1.06	Co-operation (-)	unclear	Second project manager from change management team. Sponsor retained control.
2.03	Resources (+) Competence (+)	clearer	Distinct separation of roles. Established, technically-adept project manager had clear responsibility.
3.01	Co-operation (-)	unclear	Project manager role shared/confused.
4.04	Co-operation (-)	unclear	GSS manager nominally appointed project manager (against her wish and against her professional instincts).
5.03	Resources (+) Co-operation (-)	unclear	Gradual build-up of top level supporters with loosely defined roles.
5.04	Resources (+)	clearer	Experienced project managers appointed to change team.
5.05	Competence (-)	clearer	Delegation of detail to technical experts at implementation stage.
5.11	Opportunity (+)	clearer	Remove entire level of senior management. Delegate responsibility for detailed execution.
5.13	Autonomy (+)	clearer	Project managers line up successors.
5.19	Competence (+)	less clear	Total trust and agreement over policies.
6.05	Autonomy (+) Competence (+)	clearer	New roles defined by management.
6.07	Resources (+)	clearer	Team members give up other responsibilities.
6.15	Autonomy (+) Co-operation (-)	clearer	Promotion for those who helped change succeed.
6.21	Competence (-) Co-operation (-)	less clear	Failure, loss of focus.

Generalization

In each case the extent to which the project roles and responsibilities of individuals were defined or left undefined by change drivers varied over different levels in the organization. A higher degree of definition reflected a higher degree of anticipated or experienced control. Anticipated control was strongly linked to project management expertise. Reduction of clarity of role definition reflected lack of control shown up by negative experiences during the project.

Autonomy. Autonomy from outside directives to delegate clearly defined roles was unrestricted in all but Cases 1 and 2, where NHS guidelines signaled expectations of a clear sponsor/manager split. In Case 1 this split was technically acknowledged, even though the sponsor retained substantial control over the project's details. In Cases 3, 4, 5 and 6, where there was no restriction on autonomy, the extent of definition was determined by other dimensions of control.

Resources. In Cases 1, 2, 5 and 6 the identification and appointment of project managers by project sponsors was dependent on the availability of individuals who were perceived as trusted, competent and committed to the change. In Cases 3 and 4 the sponsor deliberately kept roles beneath his own vague. In Case 5 both project managers were keen to keep control over their own destinies by lining up a deputy who could succeed them.

Opportunity. Cases 5 and 6 provided the only instances where the opportunity for change was made uncertain by the nature of the company's work-load. In Case 5 the effect of this on clarity of project roles and responsibilities was difficult to establish, since it was possible for the project managers to delegate many detailed tasks in the form of changes to systems and procedures. In Case 6 the lack of opportunity only became apparent after the failed attempt to introduce change on an assembly line. The subsequent relaxation and drift of clear responsibilities for change provide the only clue that clarity of definition of roles was negatively affected by the existence of a suitable work opportunity.

Competence. The lack of clarity of definition of project manager and project sponsor roles in Cases 1, 3, 4, in the early stages of Case 5 and in the later stages of Case 6 reflect a balance of (i) the sponsors' wish to retain control, based on his own perceived ability in each case to manage the day-to-day aspects of the change at that stage in the project relative to that of his project manager, over (ii) expectation of improved control through effective project management.

Co-operation. The unremitting expectation of non-co-operation in Cases 1 and 4 led to the sponsor in each case retaining substantially undelegated control. The selectivity of delegation of tasks in Cases 2 and 3 reflected the perceived need for a participative approach. In Case 5 the controlled downward release of authority, particularly after the events of the Reliance project, accompanied the lessening threat of resistance. In contrast, in Case 6 the dissipation of initially clear responsibilities reflected the growing feeling of lack of control over remaining changes.

Propositions 10(a) to 10(e)

The degree of clarity of definition of downward-delegated roles and responsibilities, both between the change drivers and at lower levels, is an expression of the change drivers' perceptions of (a) their autonomy; (b) the availability of committed, trusted colleagues combined with the need to implement the change; (c) the existence of an opportunity to implement the planned change; (d) their expectations of control through project management given the superiority of competence of the delegates in those aspects delegated; (e) lack of potential or actual resistance.

8.2 Central issues and key organizational characteristics

One of the aims of this study has been to examine the effect of the context of a project on its management process. For this reason projects were studied in four different organizational settings. Along with project content and project management process, *context* has been one of the elements in the analytical framework. The constant comparison method led to the identification of a context coding group labelled *key organizational characteristics*, aggregated from the *central issues* to which change drivers allocated significant attention in each case.

Section 8.2.1 takes Case 1 as an example, and explains how these case-specific central issues, which may be considered as the essential features of the context of a case, were identified. In Section 8.2.2 the central issues from all six cases are described. In Section 8.2.3 the central issues from the individual cases are aggregated to form a set of generic key organizational characteristics in the form of seven contextual dimensions which were represented to a greater or lesser extent in each case.

8.2.1 Identifying central issues

The ‘transcendental realist’ ontological perspective which has been adopted to identify possible mechanisms linking the behaviour of managers with their organizational environment was explained in Chapter 3. Central to the application of this perspective has been the role of managerial cognition as the intermediary between stimulus and response. To put this cognitive view into its wider perspective it is first explained how it differs from two other theoretical perspectives in organizational literature.

First, in the field of organizational behaviour, cognitive orientations are distinguishable from *behaviourist* theoretical perspectives. The latter are based on the positivist view, which restricts the objects of scientific investigation to those phenomena that are directly observable. Cognitive orientations, including social cognition (Wyer and Srull, 1986; Salancik and Pfeffer, 1978), expectancy theory (Vroom, 1964), attribution theory (Weiner, 1985) and control theory (Campion and Lord, 1982), on the other hand, regard ‘the workings of the human mind as a legitimate object of investigation’ (Buchanan and Huczynski, 1991: 19).

Second, in strategic management literature theories based on managerial cognition may be set apart from theories from the *deterministic* paradigm, discussed in Chapter 2. In this view change in an organization is seen to be produced by its environment.

The cognitive approach, which emphasizes the active role of the individual, underlies the ontological, epistemological and methodological orientation of this research.

In Section 5.4 the view of managerial attention as a scarce resource was discussed. March and Shapira's (1988) assertion that the actions of managers arise from their limited attention to selected issues has been borne out by this study. The allocation of managerial attention in a case may be indicated by aggregating the 'considerations' in the summary tabulation of the case into a small number of central issues.

In Case 1, for example, the enacted management processes listed in Table 4.3 arose from the change drivers directing their attention to just a few central issues. To illustrate the existence of central issues, Table 8.7 below lists the individual 'considerations' from Case 1, with their associated processes, as shown in Table 4.3. For each specific consideration the general central issue which underlies the actions or intentions of the change drivers is identified.

Table 8.7: Case 1 considerations, management processes, and central issues

Ref.	Consideration	Process	Central issue
1.01	1994/95 Business plan required to be issued March 1994	Use plan to stress difficulties, intent to change and mandate	Externally imposed rules may be used to overcome potential resistance from clinicians
1.02	Need to maintain confidence of 'awkward squad'	Caution not to turn the place upside down	Potential resistance
1.03	Trust staff dissatisfied with status quo	Build on dissatisfaction to make and market change	Organizational instability in recent history may be used to overcome potential resistance
1.04	Staff will be asked to take on more responsibility	Stress change for the better to the working lives of individuals	Concern to be seen not to be increasing management bureaucracy and costs
1.05	Regional change management team available and free	Use them, stressing that they are free, despite the use of costly change consultants being the norm in other hospitals	Appeal to industry norms to demonstrate that change being done on a shoe-string

Table 8.7 cont./

1.06	Need to differentiate project sponsor and project manager	Second project manager from change management team	Response to externally-imposed directives and expectations concerning project management
1.07	New clinical directors must be actively committed to change	Hold away-day to get people excited about establishing new roles	Potential resistance
1.08	Need to secure commitment to change and purpose for away-day	Send out paper setting out agenda and requesting preparatory work	Externally imposed rules may be used to overcome potential resistance from clinicians
1.09	Clinicians may doubt that clinical directorates is the right solution	Hold workshops using experts who can speak with authority	Appeal to industry norms to overcome potential resistance
1.10	Management will be seen to be spending excessive money on consultants	Use paid consultants as sparingly as possible, appealing to NHS norms	Appeal to industry norms to demonstrate that change being done on a shoe-string
1.11	Merger talks undermining credibility of trust entity	Stress that no trust, no hospital	Use externally-imposed trust rules and instability of recent history to overcome potential resistance
1.12	Need to compromise between PM's wish for structured project planning process and CE's desire to minimize bureaucracy	Use simple milestone schedule and 7S framework in an informal way	Conscious response to externally-imposed directives and expectations concerning project management
1.13	New structure might be seen by clinicians to increase management costs	Stress management resources spread thinly and clinical benefits of new structure	Concern to be seen not to be increasing management bureaucracy and costs
1.14	Managers' jobs might be seen by them as too big	Stress meaningfulness	Concern to be seen not to be increasing management bureaucracy and costs
1.15	People will lose sight of the seriousness and enormity of the task	Be cautious in claiming success; stress phased approach	Comparison with industry norms to show managerial prudence
1.16	Pressures for change will cause change overload	Resist simultaneous introduction of quality initiative	Need for caution in interpreting externally-imposed expectations for change
1.17	Empowered clinicians might fail their responsibilities	Be ready to step in if things show signs of going wrong	Potential resistance

Table 8.7 cont./

1.18	Clinical directors must meet the deadlines of the annual planning cycle	Officially introduce the new structure in good time	Externally imposed rules may be used to overcome potential resistance from clinicians
1.19	Externally imposed financial requirements will be impossible to meet	Emphasize continuing difficult circumstances imposed from without	Externally imposed rules may be used to overcome potential resistance from clinicians
1.20	Change will be resisted internally	Use the legitimating power of the executive board	Externally imposed rules may be used to overcome potential resistance from clinicians

Table 8.7 shows that the specific considerations which give rise to the behaviour of the change drivers are centred around a few central issues. These are summarized in Section 8.2.2 for all six cases. At the end of Section 8.2.2 a series of secondary issues is identified. Whilst these were apparently not as important as the central issues they played a significant role in determining change driver behaviour.

8.2.2 Central issues in the six cases

In Case 1 three central issues summarize the principal considerations behind the management processes:

- 1 **Rule issues.** The change drivers were responding to and operating in an environment of externally imposed rules, regulations, recommendations and guidelines.
- 2 **Management cost issues.** The change drivers were faced with persistent ideological and commercial conflict. They sought to balance financial stringencies imposed on public hospitals with the growth in administrative bureaucracy which was intended to support new formal financial obligations and service responsibilities.
- 3 **Potential resistance issues.** The change drivers were attempting to bring about radical changes to the roles and responsibilities of hospital staff, particularly senior clinicians, who were perceived to have ingrained ways of thinking and a lot of power to resist unwanted change.

In Case 2 the central issues are similar. Because of the more tangible nature of the project's scope, however, they are framed in slightly different terms.

- 1 **Project management bureaucracy issues.** The change drivers were operating in a public sector capital project management role. There were certain requirements to follow such projects through a proceduralized, formally documented and controlled process of initiation, implementation and close-out.
- 2 **Subjective cost/benefit issues.** In addition to objective formal requirements for quantified cost-benefit analysis the change drivers were expected to deliver new computer-based information systems which *were perceived internally* as creating, subjectively, a feeling of positive balance of benefits over costs.
- 3 **Professional expert issues.** The change drivers were attempting to introduce integrating systems to a differentiated set of 'professional niches'. The change drivers needed to elicit and interpret the requirements of clinical experts, many of whom had no personal interest in changing from their existing disparate ways of working to a hospital-wide system.

In Case 3 the central issues reflect the need to keep up with and exploit technological change in a fast-moving day-to-day environment whilst maintaining the integrity of the internal service role of the photoservices department.

- 1 **Customer benefit issues.** The IT department existed to provide a service to its internal customers. The IS Director aimed constantly to capitalize on technological advance to provide a demonstrably better service for a demonstrably lower cost.
- 2 **Staff benefit issues.** The immediate threat of digital image transmission had left photoservices staff in no doubt about the imminent redundancy of their present skills. The project provided the change drivers with an opportunity to prolong the jobs of some photoservices staff and to allow them to learn new skills for the future.
- 3 **Issues of continuity during change.** The photoservices department was expected to provide high-quality pictures to producers of daily newspapers, virtually around the clock. Disruption to that service was to be avoided at all costs.
- 4 **Management role issues.** The change drivers' roles were ill-defined in a formal sense, with at least four people sharing overlapping responsibility for managing the project. This had implications for the need for effective day to day communication.

By comparison with the Case 3 project, the change in Case 4 was relatively unsuccessful. The central issues reflect unresolved compromise brought about by the competing aims of bringing the NEAT project under control and the IS director's pursuit of cost savings.

- 1 **Management control issues.** Relocating the NEAT project was intended to address problems of lack of management control.
- 2 **Customer pressure issues.** The change was intended to enable the GIS Division to respond faster and more effectively to the growing pressures and demands from their customers.
- 3 **Structural compromise issues.** The success of the change was compromised by personalities, internal disagreement and territorial disputes, and by the IS director's desire to minimize project management bureaucracy for the sake of saving on full-time staff costs.

In Case 5 three central issues were clear representations of Bechtel's characteristics.

- 1 **Technical professional issues.** Bechtel employed highly technically qualified professionals whose skills were integrated on large, complex engineering projects. The change drivers faced issues of professional sensitivity and engineering design integrity.
- 2 **Project reification issues.** The company's project culture had a significant influence on the change drivers' approach. The formal definition and objectification of the change as a project, and its role as a temporary assignment, reflected this culture.
- 3 **Multinational subsidiary issues.** Initial uncertainty over the relative roles of the London and USA offices was increasingly resolved as the change drivers focused on their sub-cultural differences.

The central issues in Case 6 reflected the focal bias of the Electrolux change drivers.

- 1 **Traditional issues.** The company had a marked legacy of entrenched 'traditional' practices and values, including its unionized structure and paternal hierarchy. The untidy, run-down appearance of the site were physical manifestations of its 70-year history.

- 2 **Multinational subsidiary issues.** Head office in Sweden exerted control over the step-change project, particularly in its formative early stages. In addition the expectation of concurrent compliance with group initiatives was a pervasive issue. Luton's status as member of a multi-national group of factories guided its benchmarking activities.
- 3 **Benchmarking issues.** The company became a member of a community of organizations which sought to learn from one another's successes and failures. The change drivers sought solutions to their problems and legitimacy for their actions through evidence from other firms.

The foregoing summary of key issues reflects the three or four principal considerations in each case. In some cases relatively less important, but still significant issues also played a part in gaining the change drivers' attention. These secondary issues were identified as:

Ealing Hospital NHS Trust: unstable recent history; tendency to appeal to industry norms.

Associated Newspapers: renewed, modern self-image; independence from other organizations; tendency to differentiate from the competition; unstable history.

Bechtel: private ownership.

Electrolux: stable history; low technology.

8.2.3 Central issues summarized as key organizational characteristics

An examination of the central issues from all six projects provides a cross-case comparative view of how the selective attention of change drivers is influenced by the characteristics of their organization and its sector. This aggregation of case-specific central issues resulted in the final identification of seven generic *key organizational characteristics* which acted to a greater or lesser extent in each case. In common with the other major categories of the final version of the theory, the key organizational characteristics were the result of a complex and lengthy process of theoretical iteration. The final labelling and definition of the seven aggregated key organizational characteristics is shown below. Appendix B contains an earlier version, which shows the characteristics' dimensions before the latter were condensed into a single 'extent' for each characteristic.

Key organizational characteristics

OWNERSHIP: PUBLIC/PRIVATE

The extent to which the organization is a public or privately-owned entity

SELF-IMAGE: TRADITIONAL/MODERN

The extent to which the organization has a traditional or modern self-image

GROUP MEMBERSHIP: MEMBER/INDEPENDENT

The extent to which the organization is part of a conglomerate

CONFORMITY: ISOMORPHIC/DIFFERENTIATING

The extent to which the organization is an active member of an isomorphic sector

HISTORY: STABLE/THREATENED

The extent to which the organization has a recent history of stability

ORIENTATION: PROJECT/PROCESS

The extent to which the organization uses projects in its mainstream business

TECHNICAL EXPERTISE: HIGH/LOW

The extent to which the change subjects have 'expert power' derived from their technical expertise

A diagrammatic representation of the eight key organizational characteristics, and a qualitative representation of their relative significance in each organization, as revealed by the allocation of management attention, is shown in Appendix C. In Section 8.3 it is shown how the presence or absence of these key organizational characteristics helped shape the change drivers' feelings of personal control.

8.3 An integrated theoretical model

A set of propositions linking *management processes* with *personal control* was derived in Section 8.1. In Section 8.2 the role of the *key organizational characteristics* as indicators of the allocation of managerial attention was developed. Taken together, these three concepts form the basis of the final stage in the theory building process - the building of an integrated theoretical model which summarizes this explanation of how the management processes of a project of change are determined by its context.

To illustrate the mechanism, three sets of examples are presented. First, in Section 8.3.1, two examples of 'simple trios' are given, each being a combination of a single dimension of each of the three concepts. Second, in Section 8.3.2, two examples of 'complex trios' are provided, wherein multiple dimensions of one or more of the three concepts act together. Third, a further complication is introduced in Section 8.3.3, which gives examples of both positive and negative feelings of personal control arising from the same organizational characteristic. This feature of the theory has important consequences for its practical implications, discussed in Chapter 9.

In Section 8.3.4 the three major elements of the theory which is built from this study are brought together. The essence of the theory is that key organizational characteristics (context), influence change driver behaviour (management process) through the intermediate cognitive link (personal control). The theory is presented in the form of a summary model.

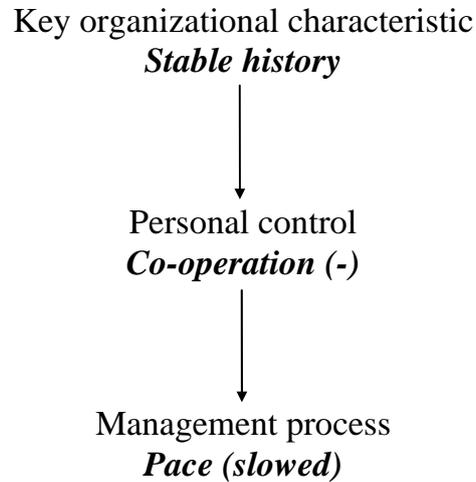
8.3.1 Simple trios

A central theme of this thesis is that an underlying mechanism exists, whereby a cognitive intermediary - personal control - links key organizational characteristics with management processes. This mechanism may be illustrated with examples from the data. It is possible to represent many combinations of the three concepts as simple linked 'trios' consisting of conceptually self-contained processes. In the following two examples attention to a single key organizational characteristic influences a single dimension of the change drivers' feelings of personal control which is, in turn, expressed by a single management process. The examples are selected from the many occurrences of the mechanism in the summary tabulations of Section 8.1.

Simple trio: example 1

In Case 6 Electrolux's recent stable history had resulted in an acknowledged lack of a 'burning platform' from which to launch change. This resulted in an

expected lack of co-operation, a consequence of which was a delay to the start of the project while an independent assessment of its wisdom was established.



Simple trio: example 2

In Case 5, the technical complexity of Bechtel's projects meant that the proposed changes could not be introduced without the need for carefully planned changes to the company's engineering procedures. This led to the need for the change drivers to rely on technical specialists whose contribution to the changes was directed, monitored and controlled through a highly formal, structured approach.

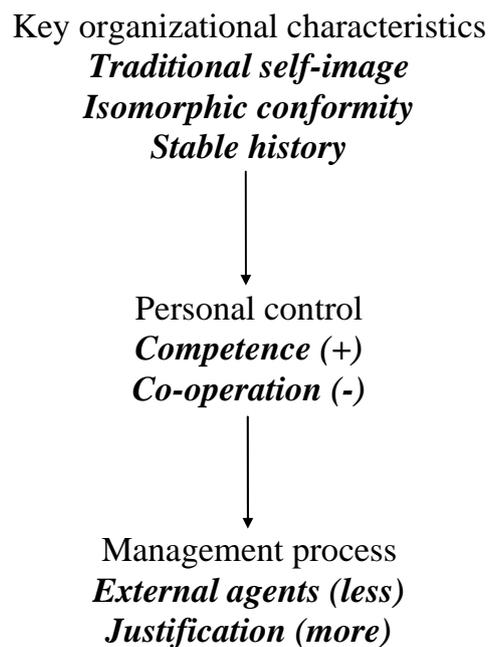


8.3.2 Complex trios

In other instances, as shown by the summary tabulations in Section 8.1, the situation was more complex, with combinations of more than one dimension of the three central concepts acting together. Two examples of these ‘complex trios’ follow.

Complex trio: example 1

Case 6 describes how the Electrolux change drivers prematurely cut short their association with Andersen Consulting because the change drivers were concerned that resistance to change arising from the company’s stable past and from its long tradition of non-change would result in the factory workers ‘reverting’, having viewed the change as yet another consultant-driven fad. Acknowledging the likelihood of this, the change drivers asserted that they had learned enough about the benchmarking process to be able to continue without the consultants.



Complex trio: example 2

In Case 2 the Ealing NHS Trust change drivers described how compliance with the full formal public sector requirements for project cost control, including cost-benefit analysis, was seen as a waste of time. They appealed to NHS norms of capital expenditure to justify their ‘back of an envelope, non-bureaucratic’ approach.

Key organizational characteristics

Public sector

Isomorphic conformity



Personal control

Autonomy (+)

Resources (-)



Management process

Formality (less)

Justification (more)

8.3.3 Positive and negative features of key characteristics

The situation is further complicated by another factor. The data show not only that there were complex, multi-dimensional links between the three central concepts, but also that each characteristic had simultaneous positive and negative effects on personal control. For example:

- * **Ownership (Public/Private):** Bechtel's private ownership could increase the autonomy of its managers and hence make the company more responsive to change. The characteristic could also decrease the autonomy of regional change drivers through demands for compliance with the changing whims of the owner.
- * **Self-image (Traditional/Modern):** There were many negative features of the traditional self-image of Electrolux. The change drivers' reluctance to face up to the more intransigent aspects of the step change project at the outset led to further-entrenched non-co-operation. On a more positive note, the image enabled the change drivers to make a sharp distinction between the old and the new, using opportunities to make highly visible and symbolic promotions of supporters of the step change project.
- * **Group membership (Member/Independent):** Electrolux Luton's sister factories provided opportunities to pursue their benchmarking aims. However, internal competition between Electrolux group operations

threatened the change drivers' perceived ability to overcome resistance to integration at the departmental level.

- * **Conformity (Isomorphic/Differentiating):** The Trust change drivers were able to appeal to 'acceptable' NHS norms to justify their own prudent management. On the other hand, well-publicized examples of the failure of similar change initiatives in other hospitals led to a feeling of lack of control.
- * **History (Stable/Threatened):** Electrolux's stable history meant that slack resources were available for change. The lack of a 'burning platform', however, led to some resistance.
- * **Orientation (Project/Process) :** Bechtel's project culture enabled the senior change drivers to appoint experienced managers of change to define and drive the tasks needed for the reorganization. The managers, however, expected to move on to other projects before the change was finished.
- * **Technical expertise (Low/High):** The expectation that technical people can and will find reasons for not changing was evident in both the Trust and Bechtel. However, the knowledge that the details could be left to the experts was an enabler of a desired participative approach.

This feature of the data, wherein each key organizational characteristic may have both positive and negative effects on personal control, has important consequences for practicing managers who attempt to drive organizational change. These consequences will be explored in Chapter 9.

8.3.4 Summary model

In summary, the findings of the six cases may be described by an integrated theoretical model. The model, shown in Figure 8.1, encapsulates the major theoretical contribution of the thesis.

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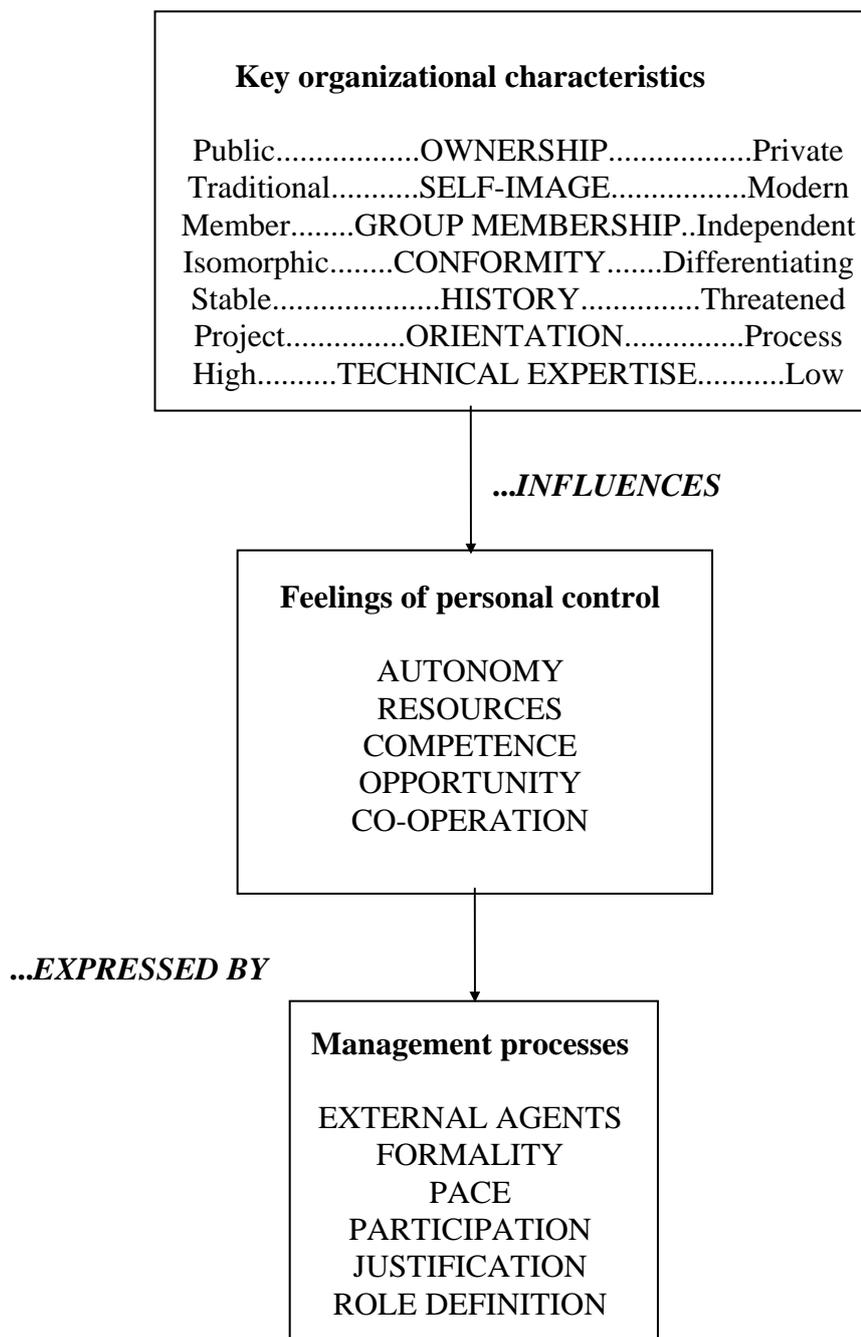


Figure 8.1: Integrated model of dimensions of key organizational characteristics, personal control and management process

The practical implications of this model are explored in Chapter 9, where examples of its use as a diagnostic tool to enhance personal control are described.

8.4 Summary of learning

This section summarizes the learning stages in the six case studies. The learning has arisen both from the application of the constant comparison approach which continued through the study, as well as from the final cross-case analysis presented in this chapter.

Table 8.8: Summary of stages of learning

Case	Learning
1 and 2	Development and application of qualitative coding, memoing and mapping technique, guided by research questions and simple analytical framework.
	First stage narrative case presentation structured around elements of analytical framework with quotes illustrating specific instances of change drivers' perceptions of action or intent. Second stage data reduction and summary tabular presentation.
	Management processes in two projects with different characteristics capable of closely similar categorization.
	Importance of principal change drivers as multiple informants.
3 and 4	Management processes of two further projects in an organization with significantly different characteristics capable of closely similar categorization, despite details of application of processes influenced by characteristics, including public/private sector distinction.
	Multiple informants in addition to change drivers confirm factual information but add no new data on management processes.
	Change drivers' conception and use of 'projects' is culturally determined, clearly different in the two organizations and an important feature of context.
	Management processes reflect a desire for control. A review of literature on selected aspects of control reveals that the personal control construct is an attractive addition to conventional notions of project control as an analytical device linking management process with context.
	Small projects place significant limitations on the range and depth of analysis.

Table 8.8 cont./

5	Importance of project orientation as a key organizational characteristic confirmed.
	Collapsing dimensions into one continuum of extremes for each management process category simplifies and focuses the emerging model.
	Five dimensions of personal control clarified and defined.
	Conclusions on management process categories and range of informants confirmed.
	Larger project provided the opportunity for a richer, more valuable study, more important at this stage in the study than the paired projects approach.
6	Saturation of management process categories.
	Saturation of personal control categories and confirmation of the useful conceptual role of the construct as intermediary between context and process.
	Identification of key issues in each case.
Cross-case	Tabulation of instances from all six cases in each of the six management process categories leads to generalization of relationships, including exceptions, between management processes and personal control. Generalized relationships presented as a series of propositions.
	Summary of key issues generalized to seven context continua, labelled 'key organizational characteristics'.

9 CONCLUSIONS

This final chapter draws together and summarizes the conclusions of the study. In Section 9.1 the contribution to knowledge made by the research is made explicit. Section 9.2 examines the implications of the study for management practice, offering practical advice for change drivers. The study's limitations are acknowledged in Section 9.3. In Section 9.4, opportunities for further research arising from this study are identified. The chapter ends, in Section 9.5, with a reflection on the need for a continued close relationship between management research and practice in the field of planned organizational change.

9.1 Contribution

In Chapter 2 it was argued that understanding of contemporary management practices in relation to projects of organizational change was in need of updating and development. Evidence was found in the literature that the rapid growth in importance to society of the planned change phenomenon in recent years has tended to outstrip knowledge of its ever-shifting processes. Researchers have begun to pursue new strands of investigation in new directions which cross boundaries traditionally delineated by such fields as project management, strategic management and the management of organizational change. They have revealed a need to explore the developing meanings of organizational actors who attempt to bring the application of micropolitical, cultural and social understanding into their realm of rationality. Further, there is a persistent undercurrent of demand for empirical enquiry which examines processes of organizational change in ways which take account of the acknowledged role of context.

This research builds on the observation that, as a concept, the project management of organizational change is widely embraced and used by practicing managers as a means of defining, directing and energizing their efforts to respond to perceived environmental forces. It has confirmed the rich potential of entering a pre-paradigmatic field of knowledge with an open, exploratory approach. Case studies from four industries have provided novel insight into the complex processes which represent the interpretation of a changing context and the resulting management processes. By identifying, expanding and developing the role and meaning of personal control as an intermediary between managerial perception and action a fresh perspective has been brought to management processes in projects of organizational change.

The contribution of this research, generalized within the limits of the cases studied, may be summed up as follows:

1 Management processes

Management processes in projects of organizational change have been categorized and dimensioned in six elements. The six together represent a convenient device for describing the intentions and chosen actions of drivers of pre-defined projects of organizational change. The categorization provides an analytical framework which is distinct, robust, complete, parsimonious and accessible to the managers whose accounts informed it. It builds on previous work, in particular that of Buchanan and Boddy (1992), by expanding concepts of project control beyond the cybernetic sense, by integrating them with other processes rather than separating them, and by taking account of the roles of other change drivers in addition to that of the nominated project manager.

A reoriented version of Pettigrew's processual model has guided this analysis, and its application has formed the basis of the overall theoretical contribution. In Chapter 2 the meaning of process in this study was clarified and distinguished from other meanings of the term in strategy process literature and in operations management. The building of this processual approach contributes a novel dimension to conceptualizations of process in management literature.

2 Personal control

The extent of each of the six elements at any time has been conceived as an expression of change drivers' perception of their personal control. In this way personal control is an intermediary between the context of change and the actions of managers.

To a greater or lesser extent processes express either the possession and exercise of control, or the lack of possession and/or pursuit of control. Identification of the linking role of the personal control construct builds on previous work by providing a way of establishing how management processes are determined by their context. As Miles and Huberman (1994) suggest, intervening variables can clarify relationships. The personal control construct has been used to clarify the relationship between context and management process. The construct has been developed as five categories. This categorization builds on previous work by adding opportunity and co-operation to the three elements, autonomy, resources and self-competence mentioned by Jackson and Dutton (1988).

Research by Carpenter and Golden (1997) suggests that that the personal control construct has the potential to play a central role in discussions of strategy formulation and implementation. They describe experimental research, using business students as subjects, which explores the related construct of

perceived managerial discretion and its links with other constructs, including locus of control and managerial power. Perceived managerial discretion, defined by Carpenter and Golden (1997: 187) as ‘executives’ [perceived] ability to affect important organizational outcomes’ clearly has a great deal of overlap with personal control, particularly with regard to perceived autonomy.

There is great potential, discussed in Section 9.4 for further *empirical* research exploring how perceptions not only of autonomy but also of the other dimensions of personal control identified in this study relate to theories of cognition and decision making. Each of the six management process elements has been analytically linked to each of the five personal control elements. The conjectured links, which take full account of exceptions to generalized associations, are presented in the form of propositions (some links require two propositions to take account of positive and negative actions). This builds on previous work by providing a finely-fragmented account of relationships between management processes and their contexts. Each narrowly-specified relationship lends itself to operationalization and testing by quantitative study.

3 Context

A key reason for choosing a theory building approach to this study was the comparative lack of existing theories which could have been used as a foundation for enquiry into organizational change project management processes in context. Despite the widely acknowledged importance of a focus on context, discussed in Section 2.3, there have been few comparative empirical studies. A further contribution of this research has been to identify a series of generic characteristics of organizations which can help explain managerial behaviour.

This contribution, which casts light on the role of *specific* organizational features such as ownership and technical orientation, builds on previous studies, described in Chapter 2, which use the role of context in a more conceptually indistinct way.

9.2 Implications for management practice

Contemporary management literature explains how demands for organizational flexibility have led to a general move towards project-based approaches to management. This trend is accompanied by the related, but subtly different, notion of a project approach to organizational change. Application of the project approach to change is recommended in much prescriptive advice to managers. Its prevalence in practice has been supported by this study. Projects are, therefore, both the means and the end of many organizational change initiatives. It follows that understanding of processes of projects and project management of organizational change has a double significance for practicing managers. If the findings of this study are taken at face value, what are the implications for change drivers? What practical advice can be offered? What, in short, has been learned from this study about improving the chances of a project's success and lessening the chance of failure?

In Section 9.2.1 the importance of developing an understanding of how the context of a project of change affects change drivers' feelings of personal control is asserted. Section 9.2.2 suggests two ways that the theoretical model presented in Chapter 8 can be used as an analytical framework for managers who seek to enhance their personal control, thereby improving their likelihood of taking positive, informed decisions.

9.2.1 Understanding the effects of context on personal control

In Chapter 2 evidence was reported of a growing appreciation of the importance of an awareness of a project's context. Project context may be considered at different levels. At the global level, for example, Pant, Allinson and Hayes (1996) describe research which indicates that project management suits the culture of some countries (for example the USA) better than others (for example the UK). This has complex implications for multinational operators who use projects. Morris (1994) stresses the general centrality of context to the management of projects. He asserts that the future of the discipline will be characterized and determined by change in political, social, environmental, economic and technological context at both sectoral and organizational levels. A practical example of the importance of awareness of organizational context is provided by Von Dran, Kappelman and Prybutok (1996), who studied the effectiveness of training programmes in organizational transformation projects. They found that, without consideration of cultural context, training investments were wasted.

The vital significance of context and the futility of searching for easy, context-free universal rules for organizational success is summed up by Pettigrew and

Whipp (1991: 7). They stress that there may be 'no assumption of single best management practice and no prospect of a quick fix'. By definition, managers who conceive and drive projects of organizational change believe that the external and internal context which makes up their professional domain is, at least to some extent, controllable. It follows that better understanding of that context and of its effect on their feelings of personal control, and on their attempts to exercise that control, is itself a worthwhile goal.

In what way is context likely to affect personal control? A broad conclusion of the influential work on organizational decision-making by March and colleagues (see March, 1988 for a comprehensive account) is that managerial attention is a scarce resource. Rather than rationally weighing up all possible choices managers selectively attend to certain aspects of context at the expense of others. In the realm of project risk management Turner (1993a: 243) echoes this idea when he refers to the limitation of managerial attention to the 'significant few' risks. Building on this principle, and linking it to the idea of personal control as a set of intervening variables between context and action, it is argued here that in order to comprehend the effects of context on their own management processes managers should seek to understand how the issues to which they direct their scarce attention relate to their own personal control.

All the managers in this study had spent their professional careers largely within the confines of a particular sector. Many of them had remained in the same organization for practically the whole of their working lives. It is possible to speculate that such specialization leads to introspection and blindness to the effects of context on management process, when managers have no direct experiences of management processes in other sectors.

Evidence of this 'organizational introspection' in the case studies has been revealed by the central presence of certain issues in the data and the absence of others. In Chapter 8 it was asserted that the central issues reflect a bias in managerial attention which is associated with certain key organizational characteristics.

Jackson and Dutton (1988) describe experimental research by social psychologists which shows that when people feel that they have little control over a situation they are more likely to engage in wishful thinking, relying on faith or resigning their futures to fate, restricting the amount of information they attend to and the solutions they consider. Staw et. al. (1981) label this phenomenon 'threat-rigidity'. In comparison high feelings of control are likely to be associated with more open information searching and in more overt appraisal processes. If managers are able to increase their feelings of control, they will create more favourable circumstances for effective decision making. Applying this notion to the findings of this research leads to the suggestion that

if managers are aware of the positive and negative effects of their organization's characteristics on their own feelings of control they can take steps to publicize and enhance the positive effects and to play down and reduce the negative.

9.2.2 Applying the theoretical model

It is suggested that the theoretical model, summarized in Figure 8.1, may be used by change drivers as an analytical tool in two alternative ways. The great complexity inherent in organizational change means that either approach will demand high levels of analytic ability and learning skills. However the depth of understanding of how individual change drivers and their organizations contribute to their own successes and failures, which may be achieved by the approach, has significant potential.

First, the model may be approached top to bottom, starting with the identification of key organizational characteristics and an explicit analysis of the positive and negative effects of those characteristics on managers' feelings of personal control at any point in time. The purpose of this approach is, as suggested in Section 9.2.1, to identify and enhance the positive effects and play down the negative.

To give an example, this study has shown that in multinational organizations the subsidiary status of a company can have important negative effects on change-drivers' perceived autonomy, but that such negative feelings can be offset by positive feelings arising from central resource provision and the relative competence felt by change drivers operating on their own local territory. There is evidence in both Cases 5 and 6, where multinational issues were central, that both sets of change drivers arrived later at the point where the positive aspects outweighed the negative than they might have done if they had specifically analyzed the effects of their subsidiary status in this way.

The alternative use of the model, which is particularly appropriate as a diagnostic tool for projects which are part-complete, is to work from the bottom up. By analyzing the actual management processes employed and seeing how these arise from positive and negative feelings of personal control, the key organizational characteristics may be identified and their positive and negative effects revealed. Change drivers whose actions indicate an emphasis on negative effects may be revealed as unsuitable, and vice-versa.

In the Bechtel and Electrolux cases the latter approach was explored in detail, and its outcome used as part of the process of 'consensual validation' (Gouldner, 1970) of the study. A detailed analysis of the specific features of the projects' context which gave rise to positive and negative feelings of control,

and which were expressed in the management processes, was carried out. The analysis was presented to the change drivers in the form of a list of paraphrased perceptions, each of which indicated positive feelings of control (associated with success) or negative feelings of control (associated with failure).

A selection of such perceptions from the Bechtel case is as follows:

POSITIVE EFFECTS

The success of a change driver will be enhanced by the following perceptions:

Arising from the company's membership of a multi-national group:

I am a detached, objective outsider to this part of the organization.

I have seen the decentralization of the company's decision authority.

I have experienced in this division a comparatively good track record of change.

I am contributing to an effort which has a corporate-wide mandate for change.

I have seen that top management will not let anyone stand in the way of change.

Arising from the company's project orientation:

I have experience of setting up, deploying and dismantling major projects.

I am aware that my role is transient and that I will be reassigned to a real project.

I know that in some ways the outcome of projects is always uncertain.

I have experience of managing in unusual and difficult circumstances.

I know that project companies just get on and do it.

I know that planning a project in too much detail can be futile.

I have experience of removing the old guard on to projects.

I know that projects take people's mind off change.

I know that in project companies there will be a healthy variety of perspectives.

I expect to have to do staff work and project work back to back.

I know that we have a lot of competent senior project managers around the world.

I always experience a lot of freedom when I'm managing a project.

Arising from the technical nature of the company's business:

I have experienced at first hand the faults of the old way.

I know you must leave the detail to the experts.

I know that staff who are not able to accept change will be unemployed.

NEGATIVE EFFECTS

The success of a change driver will be diminished by the following perceptions:

Arising from the company's membership of a multi-national group:

I have seen the failure of corporate-wide attempts at change.

I know that there are similar efforts going on in other parts of the company.

I have seen some top management hesitate to change.
I know this is radical change, untried elsewhere.
I have experienced top management misunderstanding of the change.
I know there is international pressure to take action.

Arising from the company's project orientation:

I know that there will always be important project-related issues for senior managers.
We have always known the problems but have been unable to deal with them.
I expect my attention to the change to be diluted by my involvement with other issues.
I expect to be moved on before this is finished.
I feel uncomfortable on projects where my accomplishments are not defined.
I expect a lack of continuity of resources.
I have experienced a reluctance for the company to invest in the future.

Arising from the technical nature of the company's business:

People who are stuck in their silos will be incapable of implementing change.
I know that in this business you have to be very careful about change.
I know that engineers are rigid and inflexible.
I know that technical people can always justify not changing.

A further illustration of the importance of an awareness of positive and negative effects of organizational characteristics may be drawn from this analysis of the Bechtel case. The negative perception arising from the project managers' temporary status, paraphrased, '*I expect to be moved on before this is finished*', indicates lack of personal control (low autonomy, expected diminishing of resources). The corresponding positive perception, arising from the same feature of the context, is, '*I am aware that my work will soon be done and I will be back on a real project*' (high competence, irrelevance of expected resistance). Both temporary change project managers clearly held the positive view over the negative, indicating their suitability in the role.

On reading the analysis of positive and negative perceptions listed above the project manager of the main part of the company's reorganization wrote encouragingly:

'I have read your draft study sent under your letter dated 2nd May 1996 with great interest. Your interpretation of the situation at Bechtel is very credible and informative. It's a good piece of work.' (PM1)

The extent to which the controllability of the effects of characteristics is enhanced by an awareness of those characteristics clearly depends on their nature. Some effects will clearly be less controllable than others. Nevertheless, it may be argued that a belief in the controllability of the world is itself a

desirable thing. March and Shapira assert the possible effect of a positive attitude towards control:

We may prefer to have managers imagine (sometimes falsely) that they can control their fates, rather than suffering the consequences of their imagining (sometimes falsely) that they cannot. (March and Shapira, 1988: 92)

9.3 Limitations of the study

This section addresses the imperfections of the research design and acknowledges the limitations of this theory-building study.

Theory-testing. According to Deetz (1996), the output of every piece of research is limited by its methodological perspective and is, to that extent, partial, one-sided and unfinished. An obvious criticism which can be levelled at theory-building studies such as this is: how do you know the theories hold if they have not been fully tested? The study is unfinished in this sense. The operationalization of variables for quantitative testing of propositions is an opportunity which will be discussed further in Section 9.4. Follow-up testing of propositions has not been attempted in this study because of limitations of time. One of the more obvious practical drawbacks of qualitative research, identified by Miles and Huberman (1994), is that it is very labour-intensive and time consuming. A great many hours have been spent collecting, processing, analyzing and re-analyzing the data from the six case studies. A number of skills have had to be developed, including case selection and access, interviewee selection, open-ended interviewing, data coding and memoing, and building theories from data. Because of the need to take a pragmatic approach to field access, to experiment with new techniques and at the same time to develop a more informed and critical understanding of the position and use of qualitative research, the output of this doctoral research project has this limitation on its scope.

Retrospective, verbal data. Studies of change should be longitudinal, and ideally concurrent with the whole duration of the change (Pettigrew, 1987b; Van de Ven, 1987). Despite intentions to collect data as far as possible throughout the periods covered by the projects' entire life cycles, there was a degree of retrospective data collection. To some extent this was unavoidable, since projects were necessarily identified by their sponsors at least part-complete. Further, given the opportunistic nature of the study and the time scale limitations, compromise of the ideal was inevitable. Huber and Power (1985) provide guidelines for increasing the accuracy of retrospective reports by managers. Their suggestion that questions should imply richness without complexity was found particularly good advice. Another related issue is the inherent shortcoming of interview-based studies, identified by Outhwaite (1987: 13), that they emphasize language 'to the virtual exclusion of the other aspects of social life'. Although data triangulation from archival sources was used where possible the use of sources other than interview data, for example observation of formal and informal meetings, was limited.

Project diversity. Another problem relates to the organizational and project scope of the study. In the first stage of the fieldwork two projects in each of

two organizations were studied. In the second stage, for reasons explained in Chapter 6, two further, larger, single studies were done. All six projects shared certain important characteristics, including their very conceptualization as *projects of change* by their change drivers. They nevertheless differed to an extent which sometimes made direct comparison of their respective management processes awkward. Some research writers consider that cases should be selected for their *difference* of size, complexity etc. (for example Ragin, 1987; Vaughan, 1992) rather than for their similarity. This shortcoming could be overcome if enough different projects in enough organizations could be studied, but it is doubtful that, within the scope of a PhD, it would be possible to satisfy all critics of case generalizability.

Content and process. The difficulty of separating the content of change from its process was acknowledged in Chapter 2. Clearly there will always be issues in separating ‘what’ (content) from ‘how’ (process). Every objective or action may be considered as part of a process of achieving a content *at a higher level*. The question of level must therefore provide the key. The following example from Case 6 illustrates the problem:

<i>What</i>	<i>How</i>
Stay in business	Become a world class manufacturer
Become a world class manufacturer	Cultural change
Cultural change	Sell a vision of the future
Sell a vision of the future	Written communication
Written communication	Monthly newsletters
Monthly newsletters	Appoint an in-house editor with a budget

At each progressively lower level there is the possibility of divergence down many paths. Problems were encountered while analyzing the data which led to a seemingly unavoidable inconsistency in deciding when an instance depicted content or process. The more intangible the change the more difficult it became to make the distinction. The problem was nowhere more apparent than when dealing with issues of *participation*. When a project objective was to achieve a culture of employee empowerment, managers were bound to use an empowering approach to that end.

Individual managerial style. Because of the limitations of the scope of the study it was not possible to control to any extent for the effects of the management style and project management decision making processes of the individuals who were interpreting the organizations’ needs and sponsoring and managing the projects. By focusing on differences between the circumstances

under which processes were adopted there was a lack of attention to individual effects. There was some opportunity to address this issue in the second stage of the study by selecting larger projects with more change drivers. Nevertheless, because the individual style of the change drivers was clearly so important as a determinant of management process it was difficult to assess the full effect of other context variables.

Researcher bias. Coding and condensing open-ended interview data is, inevitably, a subjective process. Attempts were made to increase coding rigour by careful preparation and maintenance of definitions of codes, properties and dimensions and updating these to accommodate each new development, exception or alternative explanation. Care has been taken to attend to the qualitative maxims of leaving a clear trail of evidence and making an appropriate, plausible representation of how change drivers see the world. Despite these efforts, however, there is an awareness that a degree of bias arising from the unique experiences and expectations of an individual researcher is unavoidable. Some qualitative studies use teams of researchers who fulfill the explicit function of providing checks and confirmations of the replicability of one another's analysis (see for example Gioia and Chittipeddi, 1991). Due to resource constraints this ideal was not possible.

9.4 Opportunities for further research

Glaser and Strauss (1967:103) state that the purpose of the constant comparison method is to generate theory which is 'integrated, consistent, plausible, close to the data and in a form clear enough to be readily, if only partially, operationalized for testing in quantitative research'. The conclusions of the cross-case comparative analysis in Section 8.2 were presented as a set of propositions, each relating one of the management process elements to one of the personal control dimensions. The propositions are grouped into ten sets. Each set represents a balance of personal control which is expressed by the management process under question. A research opportunity arising from this study is the testing of the relationships between the pairs of variables within the sets, in further studies. Objective measures for the variables identified in this study could be developed and the propositions tested in a survey. This 'triangulation', using different methods to examine the same issue from different perspectives represents a further, major study.

This section begins by examining, in Section 9.4.1, literature on each of the six main elements of management process. The aim is not to undertake a full literature review of each, but to summarize relevant themes to the extent necessary to illustrate opportunities for further research. The chapter concludes in Section 9.4.2 with an examination of the implications of the research for other disciplines.

9.4.1 Six categories of management process

External agents

The dominant perspective in research on the use of external agents of change has been that of organizational development (OD), defined by Burke (1982: 10) as 'a planned process of change in an organization's culture'. Literature in the OD tradition focuses on the positive role of management consultants in the organizational change process. Ginsberg and Abrahamson (1991) summarize research findings from OD as well as from other perspectives which have less vested interest in the employment of outside experts. They conclude that two significant roles are played by management consultants. First, they create pressure for realignment by helping to reshape the perspectives of strategic decision makers. Second, they help to counteract resistance to the implementation of change. The presence of outside experts acts as a legitimating signal, emphasizing the importance of the change and thus tipping the balance of power in top managers' direction.

Propositions 1(a) to 1(e) confirm the latter role, fragmenting motives for the engagement of external agents (including, but not limited to, management consultants) into a balance between positive and negative aspects of personal control. Propositions 2(a) to 2(e) add a new dimension, focusing on the process of disengagement of, and denial of responsibilities from, external agents.

Formality

Formal definition, documentation and communication of project plans and controls is an important feature of project management's body of knowledge. This is particularly true in relation to major engineering projects, where formality is equated with control over time, cost and quality. Some of the findings of this study show that the generalizability of this conventional wisdom to projects of organizational change is limited. In particular, instances of the avoidance of formality and the relationship of that avoidance with the desire for control, suggest that there are opportunities to develop an integrated perspective of project control which takes into account both the personal and the cybernetic meanings of the concept. Propositions 3(a) to 3(e) and 4(a) to 4(e) could be tested both in the context of organizational change and in the context of conventional projects.

Two specific findings in the literature are both confirmed and at the same time further clarified by this study. First, Pant, Allinson and Hayes' (1996) assertion that managers in project-oriented organizations will tend to use more bureaucracy has been confirmed in all cases, but with the added proviso that this only applies below the level of the change drivers. Second, the conclusion of Leifer and Mills (1996), that measurable standards are inappropriate in conditions of uncertainty, and that information processing requirements must be matched with information processing capabilities, has been supported, particularly by the Electrolux case, where early demands for formality fell into disuse as project certainty declined. The effects of project orientation and project certainty on formality are both important areas worthy of further enquiry.

Pace

Hassard (1996) argues that the structure of social time, and therefore of organizational time, is based on three 'temporal factors', namely synchronization, sequencing and rate of activity. This study has confirmed that, although all three are relevant and important aspects of the management of organizational change, rate of activity and sequencing (covered here in the dimensions of pace and formality respectively) dominated temporal perceptions in relation to management process, with synchronization being more related to

the events triggering the conceptualization of change itself, rather than to its management process after it had been conceived.

Apart from the opportunity of testing the two sets of propositions on pace - Propositions 5(a) to 5(e) and 6(a) to 6(e) - two further possibilities for project management research have arisen from the findings of the study in relation to literature relating to pace.

First, Gersick (1991) observed that a 'pivotal moment' occurred half way through the anticipated life cycle of projects of organizational change, at which pace quickened as it became 'time to move'. This phenomenon was observed on both of the two major projects of change studied. In Bechtel the point occurred when the two project managers were appointed. The project had first been mooted two years previously and was expected to take a further two years. In Electrolux it coincided with the early termination of the consultants two years after the divisional director had first formed his 'world class' vision. In both cases the time had come to 'do it' or 'just do it'. These words are a notable feature of the data, signifying the 'pivotal moment'. There is scope for more specific research in this area, on all kinds of projects.

Second, in an analysis of literature on the philosophy of time Hassard (1996) describes the evolution of two sociologically-relevant temporal metaphors, the *cycle* and the *line*. Primitive concepts of time, derived from man's struggle with the seasons, were dominated by cyclic metaphors. More modern societies, influenced by Christianity, have adopted a linear concept of time. Hassard explains how the linear metaphor prevalent in industrial society has accompanied the association of time with value, giving it a quantitative, commodified image. He asserts that the growth in calls for temporal flexibility in organizational life implies that time in organizations is a richer phenomenon than is portrayed by the linear view. The issue becomes linear-quantitative versus cyclic-qualitative. The findings of a grounded study by Gersick (1994) of a deadline-based project to start a company backed by venture capital are relevant. She found that managers used two distinct mechanisms to regulate their developmental strategy. The two were temporal pacing, where planning was based on a timetable, and event-based pacing, where the project's pace was determined by the achievement of events. This study contains examples of both types of pacing, with the latter apparently dominant. The life-cycle quality of projects may have significant implications for this fundamental issue. Again in the wider context of different kinds of projects there is scope for further research into the conditions under which the two types of pacing prevail.

Participation

Kotter and Schlesinger (1979) list six strategies for dealing with resistance to change, asserting that the correct choice of strategy is contingent on circumstances. The six are:

- 1 Education and communication
- 2 Participation and involvement
- 3 Facilitation and support
- 4 Negotiation and agreement
- 5 Manipulation and co-option
- 6 Explicit and implicit coercion

Of these strategies, items 2 and 4 imply a two-way process characterized by the active involvement of the subjects of change. They have been represented in this study by the single element *Participation*. Items 5 and 6 represent its converse. (Items 1 and 3 are included in *Justification*). The findings expressed in Propositions 7(a) to 7(e) and 8(a) to 8(e) could be further examined in the light of Kotter and Schlesinger's theory.

Justification

Propositions 9(a) to 9(e) show that instances of justification in the data, which include processes of education, communication, facilitation and support, were associated with a need to increase personal control. The case studies show that the intended consequences of justification were associated with building support for their policies and actions, a common theme in change literature (see for example Goss, Pascale and Athos, 1993). A further, less expected, feature of the data is the extent of justification of possible or actual lack of progress, attributed to changing circumstances which created ambiguity in originally-conceived change scopes. This relates to the work of Baier, March and Sætren (1988), who observe the need for implementers of change to accept ambiguity as a natural consequence of such dynamics as well as of the need to gain support for the change. Ashforth and Lee (1990) identify the avoidance of blame by justification as a way of defending organizational self-interest. Schwenk (1990) suggests that self-serving attribution¹ reduces confidence of staff in management, in turn reducing managerial control. In this study there is some evidence that actual or impending failure of intended change was greeted with a mixture of admission of incompetence and blaming the environment. There is an opportunity to operationalize and test the propositions, at the same time exploring in more detail the links between changing circumstances and political compromise and the different elements of personal control.

¹ Taking the credit for good performance and blaming the environment for poor performance.

Another interesting aspect of the data relating to justification was the frequent use of transport and journey metaphors. These were employed to objectify change and to emphasize both the change drivers' own roles as drivers as well as the change subjects' status as passengers who could get on board or risk being left behind. There is an opportunity to explore the role of metaphors in the justification of change processes.

Role definition

The studies support Pettigrew and Whipp's (1991) assertion that leading change should not necessarily imply a single leader. Simple notions of a leader providing the vision and a project manager implementing the detail are challenged. A complex, shifting process of the use of both role definition and role ambiguity reflected the need for different approaches to this aspect of control under different circumstances and at different stages in the projects' life cycles. Propositions 10(a) to 10(f) reflect the predominance in the data of positive associations between personal control and clear role definition, with the proviso that the relationship depends on the position in the hierarchy of the role in question. The dominant tendency in project management literature is to emphasize role clarity at all levels. Among the change drivers there was a tendency to avoid the constraining and exposing effects of role clarity. Trends towards the abandonment of hierarchies and the creation of flexible organizational forms suggest that the function of role definition in projects of internal change is not straightforward. The case studies confirm Morgan's (1990) assertion that a central problem in realizing leadership is the enactment of followership. Evidence of lack of co-operation leads to the slackening of role definitions. In testing Propositions 10(a) to 10(e) there is a chance to examine the use of role flexibility and ambiguity and their associations with different aspects of control.

9.4.2 Other opportunities

The discussion of opportunities for further research presented in Section 9.4.1 focuses on possible developments arising from the principal elements of the study's output, namely the six elements of management process and their posited status as expressions of the individual and collective personal control of change drivers. Other significant opportunities exist to build on the approach and conclusions of this study. This section considers two such opportunities.

Individual characteristics

This study has established the dimensions of personal control and their role as intermediary between context and management process. The particular aspect of context which has been considered is that relating to organizational

characteristics which lead to greater or lesser personal control. This position tends to ignore the effects of individual cognition and individual stable personality characteristics. Rajagopalan and Spreitzer (1996) describe how research into the links between environmental contexts and managerial cognition shows that there can be significant variation in cognitions of similar environmental events. The study could be extended in two ways to take account of variations in individual characteristics. First, opportunities exist to examine the relationship between individual locus of control and perceptions of management process. Second, by studying projects of change in different firms in the same sector the effect of variations in cognition could be explored. The outcome of such a study is not necessarily predictable, since industries have been observed to fail collectively (Huff, 1982; Abrahamson and Fombrun, 1994).

Conventional major projects

The planning/execution/control cycle in major engineering projects is the subject of much project management research. The approach taken in this study could be replicated in case studies of major projects, with their conventional emphasis on multi-party contracting arrangements. New conceptual and analytical frameworks for major project management, for example Morris's integrated model (1994: 218), could be applied in the pursuit of knowledge of the determinants and results of personal control, thus contributing further to a wider understanding of the management of projects.

9.5 A final word

In the field of management, academics and practitioners attempt to learn from one another. Now, as this learning process moves on it seems to be taking on a new urgency. The organizational world is changing rapidly. Developments in information technology and in the new global environment are bombarding individuals, firms and societies with a quickening succession of sudden threats and unprecedented opportunities. The shakeout of managers whose competence is based on an ability to operate in a command-and-control hierarchy is happening fast. In the immediate world effective managers already know that there is no future in discipline boundaries. They know that an instinct for striking a balance between defining and planning the unknowable, and at the same time moving forward with purposeful action, has become an essential 'sixth sense'. There is a new, elusive and barely touched discipline known as 'programme management'. Its emergence is a recognition that the new challenge is creating a diversity of discrete, small projects that are *manageable*, despite being intimately bound up with one another and with their changing environment.

Morris (1994: 217) asserts that 'project management is stuck in a 1960s time warp'. Observing the actions of managers we learn that, contrary to Morris, up-to-the-minute, innovative forms of project management are alive and well. Irrespective of academics' cherished discipline boundaries, and contemptful of organizations' departmental boundaries, these new forms are already being practiced by enlightened managers. The challenge for academics is to keep track of what is happening, and to reflect and present new practices in such a way that the two-way learning process progresses with due urgency. The contribution of this study has been to take a step in the direction of building new and useful theories about contemporary management processes in projects of organizational change.

List of abbreviations

A&E	Accident and Emergency (Cases 1 and 2)
ANL	Associated Newspapers Limited
APM	Association for Project Management
BoK	Body of Knowledge (UK Association for Project Management)
BSM	Building Services Manager (Informant, Case 3)
BSD	Building Services Draughtsman (Informant, Case 3)
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CE	Chief Executive (Informant, Cases 1 and 2)
CEO	Chief Executive Officer
CPM	Critical Path Method
DD	Divisional Director (Informant, Case 6)
DDM	Design and Development Manager (Informant, Case 6)
EAMS	Europe/Africa/Middle East/Southwest Asia (Case 5)
ECR	Extra-Contractual Referral (Case 1)
EM	Engineering Manager (Informant, Case 5)
EPC	Engineering, Procurement and Construction (Case 5)
EPCPI	Engineering, Procurement and Construction Process Initiative (Case 5)
EIS	Executive Information System
GCS	Group Computer Services (Case 4)
GCSM	Group Computer Services Manager (Informant, Case 4)
GP	General Practitioner (Cases 1 and 2)
GSS	Group Software Services (Case 4)
GSSM	Group Software Services Manager (Informant, Case 4)
HP	Head of Personnel (Informant, Cases 4 and 5)
IM&T	Information Management and Technology (Case 2)
ISD	Information Systems Director (Informant, Cases 3 and 4)
IT	Information Technology
ITF	Information Technology Facilitator (Informant, Case 4)
JIT	Just In Time
LIFO	Last In First Out (Case 6)
MM	Materials Manager (Informant, Case 6)
MPAG	Multi-Project Acquisition Group (Case 5)
MPI	Master Patient Index (Case 2)
NAM	Network Applications Manager (Informant, Case 4)
NEAT	Next Editorial and Advertising Terminal (Case 4)
NHS	National Health Service (Cases 1 and 2)
NHSME	National Health Service Management Executive (Case 1)
NUD.IST	Non-numerical Unstructured Data Indexing Searching and Theorizing (software package)
OD	Organizational Development

OM	Operations Manager (Informant, Case 5)
OPM1	Operational Project Manager 1 (Informant, Case 5)
OPM2	Operational Project Manager 2 (Informant, Case 5)
OR	Operations Research
PC	Personal Computer
PERT	Programme Evaluation and Review Technique
PM	Project Manager (Informant, Cases 1, 2 and 6)
PM1	Project Manager 1 (Informant, Case 5)
PM2	Project Manager 2 (Informant, Case 5)
PMBOK	Project Management Body of Knowledge (USA Project Management Institute)
PMI	Project Management Institute (USA)
PRINCE	PRojects in a Controlled Environment (project management procedure)
PSM	Photoservices Manager (Informant, Case 4)
PS1	Photoservices Supervisor 1 (Informant, Case 3)
PS2	Photoservices Supervisor 2 (Informant, Case 3)
R&D	Research and Development
ROM	Regional Office Manager (Informant, Case 5)
TQM	Total Quality Management

APPENDIX A

CODING STRUCTURE 1: EARLIER VERSION OF CODING SCHEME SHOWING CATEGORIES, SUBCATEGORIES AND CODES

EXTERNAL CONTEXT

EXCON

External forces affecting the overall strategic direction of the organization

COMMERCIAL FORCES FOR CHANGE	EXCON-COMM
INDUSTRY NORMS AND CHARACTERISTICS	EXCON-INDUSTRY
POLITICAL FORCES FOR CHANGE	EXCON-POLITICS
SOCIAL FORCES FOR CHANGE	EXCON-SOCIAL
TECHNOLOGICAL FORCES FOR CHANGE	EXCON-TECH

INTERNAL CONTEXT

INCON

Internal factors determining the change project's objectives, scope and perceived risks

OVERALL STRATEGIC DIRECTION OF ORGANIZATION

TECHNOLOGICAL	INCON-STRATEGY-TECH
COMMERCIAL	INCON-STRATEGY-COMM
DESIRABILITY OF CHANGE TO THOSE AFFECTED	INCON-DESIRE
PERCEIVED RELATIVE POWER OF THOSE AFFECTED TO RESIST/FACILITATE ORGANIZATIONAL PERMANENCE/TRANSIENCE	INCON-POWER-PERM
POSSESSION OF EXPERTISE	INCON-POWER-EXPERT
CONTROL OF RESOURCES	INCON-POWER-RESOURCE
SPONSOR'S FORMAL AUTHORITY	INCON-POWER-SPONSOR
CULTURAL FACTORS	INCON-CULTURE
LEARNING DURING CHANGE	INCON-LEARN
STRUCTURAL DETERMINANTS OF CHANGE	INCON-STRUCTURE

PROJECT CHARACTERISTICS

PROJ

The project's chronology, objectives, scope and risks

CHRONOLOGY	PROJ-CHRON
PURPOSE: INTENDED BENEFITS	PROJ-PURPOSE
PROJECT OBJECTIVES (COST, TIME AND QUALITY)	PROJ-OBJECTIVE
SCOPE	PROJ-SCOPE
RISKS	PROJ-RISK

MANAGEMENT OF THE PROJECT**MAN**

The dimensions of the management of the project, caused or influenced by the project context and the project characteristics.

COST-TIME-QUALITY TRADE-OFF

MAN-CTQ

USE OF EXTERNAL EXPERTS

MAN-EXPERT

FORMALITY OF PLANNING AND CONTROL

MAN-FORMAL

DEMOCRATIC PARTICIPATION IN DECISION MAKING

MAN-PARTIC

MANAGEMENT OF PACE

MAN-PACE

DISTRIBUTION OF REWARDS

MAN-REWARD

SELLING THE PROJECT

MAN-SELL

MANAGEMENT OF SCOPE (DEFINED/EMERGENT)

MAN-SCOPE

TROUBLE SHOOTING

MAN-TROUBLE

PROJECT PERFORMANCE**PERF**

REALIZATION OF INTENDED BENEFITS

PERF-BENEFIT

ACHIEVEMENT OF PROJECT OBJECTIVES (CTQ)

PERF-OBJECTIVE

EXECUTION OF SCOPE

PERF-SCOPE

UNINTENDED CONSEQUENCES

PERF-UNINTEND

APPENDIX B

CODING STRUCTURE II: LATER VERSION OF CODING SCHEME WITH DEFINITIONS AND DIMENSIONS OF VARIABLES

EXFORCE-COMMERCIAL

Perceived changes in the commercial environment which are creating internal imbalance.

AKOC (ACTIVE KEY ORGANIZATIONAL CHARACTERISTICS)

... which have a positive or negative influence on feelings of control.

AKOC-PUBLIC/PRIVATE SECTOR

The extent to which the organization is a public or privately-owned entity

Dimensions: Public sector... Private sector
Privately owned... Limited company

AKOC-TRADITIONAL/MODERN

The extent to which the organization has a traditional or modern self-image

Dimensions: Old... Young
Staid... Vibrant
Backward-looking... Forward looking
Comfort... Pain
Blame... Tolerance of mistakes

AKOC-TECHNICAL/UNSKILLED

The extent to which the change subjects have “expert power”.

Dimensions: High... Low
High tech... Low tech

AKOC-PROJECT/PROCESS ORIENTED

The extent to which the organization uses projects in its mainstream business

Dimensions: High... Low

AKOC-GROUP MEMBER/INDEPENDENT

The extent to which the organization is part of a conglomerate

Dimensions: High... Low
Centrally controlled... Locally controlled

AKOC-STABLE/IN CRISIS

The extent to which the organization has a recent history of stability

Dimensions: Structurally stable... Structurally unstable
Not in crisis... In crisis

AKOC-MANUFACTURING/SERVICE

The extent to which the organization’s output is a tangible product

Dimensions: Tangible... Intangible

AKOC-ISOMORPHIC/DIFFERENTIATING

The extent to which the organization is an active member of an isomorphic sector

Dimensions: Isomorphic sector... Non-isomorphic sector
Active... Non-active

FEELINGS OF CONTROL

The individual and collective experiences, knowledge and expectation of the change drivers which give rise to greater or lesser feelings of “being in control” of the intended change (comfort or discomfort), and which enable or constrain the process response.

FEELING-AUTONOMY. The extent of perceived autonomy about how to respond. Have I got the control and the freedom to act or am I constrained by rules or directives?

FEELING-RESOURCES. Specifically day-to-day time, overall time, money, visible corporate backing and support, internal know-how. The extent of availability of resources or means for responding. Have I got access to the resources that I need?

FEELING-OPPORTUNITY. The extent of perceived opportunity to effect the change. Is the opportunity there at the moment?

FEELING-COMPETENCE. The extent of feeling of personal competence to act. Am I up to it, and am I perceived by others as being up to it?

FEELING-COOPERATION. The perceived extent to which the change will be welcomed and supported by those change subjects with the potential ability to disrupt or block it.

ACTION

The chosen course of action. This represents the purpose and scope of the project.

MP

Dimensions of chosen management process.

MP-EXTERNAL AGENTS

Use of consultants and other “experts” from outside the organization.

Dimensions: Low...High
Brief... Protracted

MP-FORMAL

Documentation and communication of plans.

Dimensions: Formal... Informal
Detailed... Broad brush
Predetermined scope... Emergent scope
Predetermined sequence... Emergent sequence
Rigid... Flexible

MP-PACE

Pace of project (in relation to its scale). Relative rather than absolute.

Dimensions: Fast... Slow
Persistent... Faltering
Dramatic... Barely perceptible
Burn the boats... Parallel stream
Energetic... lethargic

MP-PARTICIPATION

Involvement of change subjects in decisions, up to the point of empowerment

Dimensions: High... Low
Bottom up... Top down

MP-JUSTIFICATION

Educating and selling to the change subjects the benefits of the change

Dimensions High... Low

MP-TEAM

Clarity of definition of roles and responsibilities of drivers and downward devolution of responsibility after the point of empowerment

Dimensions: Clear... Unclear

CHANGE

Dynamics during the project which change forces.