Management of Architects
Within Architectural Businesses

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DECLARATION

The present thesis embodies the results of my own course of study and research and has been composed by myself. No portion of the work covered by the thesis has been submitted in support of any application for another degree or qualification at this or any other university or institution of learning.

Robert Thompson
ABSTRACT

The management of architects within architectural businesses has been identified as an issue influencing the future behaviour of architectural practices. This work goes on to develop and apply a qualitative model (based on systems theory) which enables deeper research into architects' businesses. The modelling of goals at strategic, management and individual levels in the firm are introduced into a Case Study Series. The results are analysed and presented in the form of a social efficiency map.

The thesis explores the modelling of multiple goal-seeking behaviour within firms. The work justifies behaviour at individual level using a fulfilment model (explaining personality as based on a single force toward growth and actualisation). Existing models of business behaviour are used to explain business behaviour at management and strategic levels in the firm.

A rigorous selection of firms included in the series of Case Studies is undertaken. This enables a process of contrast comparison and replication. Initially this work builds on research by the RIBA (undertaken in 1993) and the RIBA's findings from their Case Studies of traditional, multidisciplinary, named, and commercial architectural business. This is the basis for the propositions examined in this research. The research concludes by comparing the results of the Social Efficiency Map by triangulation with questionnaires and a technique of participant as observer (using an
opportunistic method of sampling) to strengthen the findings.

The model proves effective in capturing the 'world view' of architects, based on propositions developed from the RIBA study and those emerging from the Case Studies Series. The implications are applied in the wider sense of the construction industry entire. The systems theory model is extended to facilitate discussion. Recommendations are made regarding the wider problem of 'perceptions' by firms in the construction industry and the permeability of these firms towards change introduced into this wider environment described.
LIST OF ABBREVIATIONS

CABE: Commission for Architecture and the Built Environment

DFBO: Design Build Finance Operate

JCT: Joint Contracts Tribunal

NEDO: National Economic Development Office

RIBA: Royal Institution of British Architects

PFI: Private Finance Initiative
CHAPTER ONE

INTRODUCTION

The Research Problem

Any account of the recent history of the UK Construction Industry describes a pattern of intervention by Government or government-sponsored agencies. The language they use identifies the increasing urgency governments have experienced in an attempt to effect change within the industry. The literature describes a pattern of intervention by government varying from freeing up the market for construction in the 1980s by the Monopolies and Mergers' Commission (1978) to a wholesale reconstruction of the industry by government in the 21st century and the introduction of 'Rethinking Construction' (Egan, 1998).

The entire construction industry is often overburdened through the bewilderment experienced by governments in their failed attempts to implement wider policy. A multitude of reports have thrown up many and varied solutions to 'the problem' with the construction industry, but all in assorted ways have criticised the industry as outdated and inefficient. A pattern of strong language emerges from all these studies feeding...
the bewilderment of government and generating an even stronger reaction from government toward legislating for change in the construction industry.

The RIBA in the 1980s under pressure from the Monopolies and Mergers’ Commission abandoned mandatory fee scales and the other apparatus of a professional monopoly. This was seen in the early 1990s as a major factor in an RIBA Strategic Study of the Profession (1992) which was expected to fundamentally change the way architectural businesses were to carry out their trade. The study predicted that architects should relinquish certain cherished but obsolete beliefs. A need for strategic thinking was identified by the study as an important factor in improving the viability of architectural businesses in the early 1990s and specialisation by architects as the route to future stability.

This prediction by the RIBA Study highlights these cherished beliefs as a singular force worthy of individual study amid the complex system of forces that make up the firm in Barrett & Males (1991).

The RIBA Study (1993) identified that a majority of architectural practices (88%) employ 10 or less architects and of this majority 50% employs 3 or less. A shift towards smaller firms was apparent by the RIBA www.architecture.com (2002) with the majority of architectural practices (80%) employing 10 or less and of this majority 65% employing 3 or less.

A need for strategic thinking by architects is highlighted in the following paradox within

Introduction
architectural firms identified by Winch and Schneider (1993):

"Not only is it difficult to anticipate and control workflow and cashflow, the process also involves managing creative professionals who are culturally resistant to being managed. Many architects find the idea of formal planning and adhering to a fixed strategy impractical. This is paradoxical, since architects spend their working lives developing concepts and then detailing plans for their implementation." (Winch and Schneider, 1993, p. 473)

A common theme in the literature (discussed more fully in Chapters 3 to 5) identifies this unwillingness to think strategically, which is perhaps better described as the ineffective management of goals within architectural businesses. This unwillingness to think strategically may be reflected by the individual architect's performance within business and general criticisms of the performance of architectural businesses by the construction industry as a whole.

This research by Winch and Schneider (1993) has pointed to the thinking process behind defining and establishing goals within an architectural business as fundamentally affecting the behaviour of the architects within a business, the behaviour of these businesses generally, and in the wider sense the performance of the whole construction industry. As Kelly demonstrated, the goal of design is defended by architects at the beginning of a scheme, but finally gives way to cost goal considerations (Wallace and Kelly, 1980). Ferry (1978)
lists delusions suffered by uninformed clients that the architect's objectives will be the same as his own. NEDO (1988) suggests that it is not essential that the client brief be detailed so long as instructions were defined, stating the clients' priorities in terms that could be responded to by the consultants involved in the development of the brief.

Based on the results of research into the factors leading to profitability in the construction related professions Barrett (1989) points out in 1991:

'that it is essential to include soft or people factors as well as hard task focussed factors if a full understanding of organisational performance is to be achieved'. (Barrett & Males, 1991, p. 8)

The mutual establishment of a goal setting process between individuals and groups of individuals has been described in the literature as congruence (Nightingale & Toulouse, 1977). The concept can be expanded by the mechanism of group efficacy and the degree to which goals are perceived and valued by a group (Levine & Moreland, 1991). The beliefs of one group can directly influence the patterns of behaviour of all the players in the construction industry. By this process the effect of a cherished belief that was deeply held by one group within the industry could effect the productivity of the industry as a whole.

Through improving its productivity the construction industry can have an important role in promoting national competitiveness and therefore defending living
standards and achieving a satisfactory rate of growth. The Latham Report (Latham, 1994) said changes have to be made in the industry and this would lead to an increase in overall gross domestic product within the UK. Egan (1998) went further and predicted re-thinking construction would lead to greater savings. Re-thinking Construction demonstration projects have shown dramatic improvements in performance:

- Capital costs reduced 10%
- Construction time reduced 10%
- Predictability increased by 20%
- Defects reduced by 20%
- Accidents reduced by 10%
- Productivity increased by 10%
- Turnover and profits increased by 20%

These targets can be met 'year after year' Egan (1998).

Objectives of the Research

The initial review suggested that businesses are established to accomplish purposes that cannot be established by individual action. It would be simple to assume that business's goals and individual participant goals are complementary. This in effect was the assumption of classical economic theory and most traditional management theories.

Later research identified that, in the first instance, people are much more complex than this theory would suggest. They have many needs and aspirations that cannot be easily met in purely economic terms. Secondly, the business itself has a multiple and complex goal set.
The concept of efficiency within businesses is more complex than just profitability.

"We are not merely interested in the economic success or technological efficiency of a system, but also, and more importantly, in its social efficiency aspects. In general social efficiency entails personal goal attainment on the part of the members at all levels in an organisation, and this includes involvement, satisfaction, participation, and other variables associated with intrinsic motives and psychological rewards."

(Georgopoulos, 1973, p.104)

It is necessary therefore to define what comprises a business and how these goals are generated. Systems theory is an interesting approach which has modelled organisations as comprising the following subsystems or levels: strategic, co-ordinative and operating level (Kast and Rosenzweig, 1985). The business goals and individual goals may be found at each level in an organisation. This thesis has drawn together previous research by Barnard (1981), Kast and Rosenzweig (1985) and Maslow (1943) to identify the mix of goals at each level in an architectural business.

Systems concepts have been used widely in research to provide a broad model for understanding all organisations. In contrast contingency views recognise that the environment and internal subsystems of each organisation are somewhat unique and provide a basis for designing and managing specific organisations. Contingency views are therefore the middle ground
between (1) the view that there are universal principles of organisation and management, and (2) the view that each organisation is unique and that each situation must be analysed separately (Kast and Rosenzweig, 1985).

An underlying assumption of the contingency view is that there should be congruence between the organisation and its environment and among the various subsystems (Nightingale and Toulouse, 1977). The primary role of management is to maximise this congruence. The appropriate fit between the organisation and its environment and the appropriate internal organisation design will lead to greater effectiveness, efficiency and participant satisfaction. In other words greater commonality in goal attainment otherwise described as Social Efficiency.

A comparison of social efficiency is considered here as more effective technique than the previous models, which are based on a marketing perspective or single measures of profitability. The research through a series of case studies will look at traditional, multidisciplinary, commercial and named architectural businesses.

This qualitative approach will examine the following propositions:-

- That the conflict between creative and management aspects of the work is so great that they must be separated

- That the process of design is linear rather than iterative and that it is possible to introduce a well-defined cut off point
• That an adequately coherent design can be created by two different firms despite them having different design philosophies.

These propositions will be validated through a process of contrast, comparison, and replication.

How these objectives were developed expanded and applied is the subject of Chapters 2 to 6.

The Structure of the Thesis

The thesis is structured as illustrated in Figure 1. The three stages of literature review, methodology and results are clearly marked.

The literature review begins with an examination of the 'World View' (Wilson, 1990) of people and businesses and how groups perceive the environment they work in. This gives a context for the definition of the problem and identification of cherished beliefs (Chapter 2).

The problems caused by cherished beliefs, the effect of multiple goal seeking within the firm and the previous research and proposed solutions are considered in Chapter 3, from the individual perspective as well as the management and strategic levels in a firm.

Chapter 4 echoes and continues the examination of the 'world view' of firms and individuals in the architecture begun in Chapter 2. Models of individual behaviour and models of firms' behaviour are examined.
It looks at the development of architectural firms within the environment and identifies and categorises forces within and outside the firm which influence the behaviour of firms' in an identifiable manner.

The research framework and methodology are detailed in Chapters 5 and 6. Through consideration of the approaches and modelling which can be used into the research of business and individual behaviour combined with an examination of the goal setting process, a framework for the classification and analysis of business and individual behaviour is developed. This is the basis for the development of the Social Efficiency Map, and is fully explained (Chapter 5).

In Chapter 6 the exploratory and explanatory nature of the work is shown. A justification for the case study approach, chosen from the range of possible methodologies, and the techniques (semi-structured interviews, questionnaires and participant as observer) adopted within it, is given. Chapter 5 and 6 apply the emerging propositions, enabling the data collection and analysis to proceed.

The research results are presented with separate Chapters (7 and 8) for the intra-case study analysis and conclusions, and the cross-case analyses and conclusions. As an integral part of the analysis summaries of the case are given in Chapter 7.
The research results are presented as a series of propositions that provide the basis for analytic generalisations applicable to the industry in a wider context. The application of these generalisations has implications for qualitative research methods into the area of the construction industry generally. The propositions form a basis to facilitate reasoned discussion into the validity of cherished beliefs held by architects within the industry about the 'proper way' of doing things and identify the strength of architects' views. The value of cherished beliefs can be interpreted in a broader context in order to facilitate discussion and to make implications to the industry as a whole.

The identification of a pattern of goals by mapping the social efficiency of firms and the effect on these firms can be the basis for further research into the behaviour of architects. The technique of mapping goals may form the route towards future quantitative research into the way architects approach resolution of innovative design problems and why, in a more controlled closed research environment. This is done in Chapter 9.
CHAPTER TWO

THE RESEARCH CONTEXT: A DESIGN AXIOM WITHIN UK ARCHITECTURE AND APPROACHES TO ITS ANALYSIS

Introduction

The research problem, its origins, objectives and the strategy of the research have been outlined in Chapter 1. The following Chapter provides an overview of the development of an important axiom within 'the world' of the UK architect regarding design.

This begins with a review of the literature from the perspective of the architect and traces the development of a fundamental axiom within the world of UK architecture. This was alluded to in the RIBA, Strategic Study, 1992, p.6 as a cherished belief, which the RIBA described as must be abandoned by architects. This study by the RIBA in 1992 provides a starting point for the identification of aspects of a common 'world view' held by RIBA architects at that time. From this historical perspective the axiom will be traced into the 21st
century. Any abandonment, which (in 1992) was predicted by the RIBA, of this cherished belief regarding design will become clear.

Only through the replication of the Case Studies carried out in the RIBA Study in 1992 in the environment in 2000 will any change in the thinking process of present day architects become readily apparent regarding design.

A certain rigidity of thinking characteristic of architects is reflected by the strength of the belief held in this design axiom and is revealed in the literature review. The development of an architect's perception about the 'proper way to design' subsequently begins to form the context of this research and is defined in this research as the design axiom:

"An iterative process of design by which good design evolves throughout the project and so the quality building only emerges at the end of the project." (Thompson R F, 2002)

The origins of the 'proper way to design' are traced to the beginning of the last century. The 'arts and crafts' tradition led to the development of a very unique 'English' approach to architecture. The uniqueness of this approach within the 'English Tradition' is examined longitudinally through time. This claim of uniqueness is examined in this Chapter.

The effect of beliefs held by individuals on patterns of behaviour is introduced through a development of the concept of 'world view'. (Wilson, 1990). The wider effect on individuals and groups of individuals'
behaviour is then explored in this Chapter. From this the subsequent effect of a particular 'world view' on goal setting by architects and the performance of the construction team generally is developed. The question of a cherished belief and its influence on the performance of the construction industry as a whole is raised. This leads to a discussion about the dissatisfaction apparent in countless government reports criticising the performance of the industry generally.

A mismatch of goals between architects and the construction team is identified from the literature review. This mismatch of goals is placed within a broader field of concern, that of architectural firms' behaviour as businesses. Various approaches to the analysis of business behaviour are briefly examined in order to determine an appropriate way of analysing multiple goal-seeking behaviour within firms.

It is through the identification and categorisation of individual and business behaviour that a reasoned search for the 'world view' of individuals and groups of individuals begins. The careful analysis of individual and business performance forms the starting point from which an explanation of the formation and reinforcement of cherished beliefs within architecture can begin. An insight into those factors that fundamentally effect the way architects and architectural business view the world will be revealed and go towards explaining subsequent patterns of behaviour by firms.
The development of perceptions

The multiple perceptions held by individuals and groups of individuals can explain paradoxical patterns of behaviour previously identified in literature. The analytical approach is described by the German word 'Weltanschauung'.

"'world view' likened to a filter in the head of an observer, which has been formed and is continually moulded by experience, personality, politics, society and the situation." (Wilson, 1990)

Architects who are RIBA qualified form a readily identifiable group of individuals. This group may be expected to exhibit characteristic patterns of behaviour explained by common beliefs, regarding design and the role of the architect, primarily as a consequence of a lengthy training and strict selection regime.

The approach used in modelling 'Weltanschauung' or 'W's as described by Wilson (1990) is a human activity system. Whereas in a system engineering study it might be reasonable to develop a model of a production process and validate it based upon data collected from the process. It is more useful in the analysis of a human activity system to identify a range of 'W's that are considered appropriate and produce a number of models each one representing a particular 'W' or belief.

Wilson (1990) in his research goes on to make the point that it cannot be emphasised too strongly that what the researcher is doing when developing a human activity
system model is not trying to describe what exists but is modelling a 'view' of what exists.

This fundamental principle identified by Wilson forms the context in which this research project was undertaken. This approach has enabled the collection and identification of the 'W's or cherished beliefs of individual architects, which go on to be analysed and modelled. This model is used to explain some of the previously paradoxical behaviour patterns of architects and their businesses which was found in the literature.

The development of a 'British' design axiom

Generations of Britons have continually moulded the development of architecture within the UK. In order to gain an understanding of the forces that have acted together to bring about what is known as the 'English tradition' it is beneficial to review the literature from a historical perspective.

The industrial revolution in the UK expanded the building market. Occupations, which were formerly the province of the upper streams of society, began to expand to meet the burgeoning opportunity classes. Professional institutions and new centres of learning expanded the scope for those with ability to serve society. Architects faced a situation in which demand-led expansion created scope for exploitation by unscrupulous developers and builders.

During this period of economic and social change Nicholson P.N. (1992) points out that the architects
attempted to maintain their image as a profession by excluding from their number the measurers, developers, contractors and others, some of whom also offered design services (Architectural Magazine, 1834). The role of the architect as the independent educated, gentleman designer became the model of the 19th century. Nicholson P.N. (1992) goes on to describe how this architectural class shunned speculation and fee competition, and claimed an independent status permitting action as an impartial arbiter between the client and contractor.

A pattern of exclusivity claimed by architects is apparent through history. Nicholson P.N. (1992) describes how Philibert De L'Orme in the 16th century felt that during his time the profession of architecture was becoming more specialised and was more clearly defining its responsibilities and privileges. De L'Orme criticised the patrons of his time for choosing master masons and carpenters and even painters to design their buildings rather than architects.

Architects relied on great artists as Paladio, Michelangelo and Bramante to create awareness of the distinction between designers and craftsmen constructors in the minds of their clients. By the end of the 16th century, Alberti was able to write "the craftsman is merely an instrument of the architect" (Campbell, 1747).

This view of exclusivity is common in the world of architects and Nicholson P.N.'s (1992) claims explain a certain rigidity in thinking by architects leading to the exclusion of whatever is unusual, novel, non-central seen in the (Architectural Magazine, 1834). This view of exclusivity lies very deep in the British architectural
psyche. The habit of such puritanical exclusivity seems to be peculiar to architects: other professional bodies have dealt with growing specialisation either by developing a federal structure or by elaborating systems of advanced qualification (Nicholson P.N., 1992).

The rigidity which characterises the architectural psyche is evident, according to Nicholson P.N. (1992), by their adherence to the RIBA Plan of Work. This being the basis of the architects' fee structure, each stage representing a precise fraction of the total percentage fee scale. This, Nicholson P.N. (1992) goes on to claim, represents a very British system, reflecting the long Arts and Crafts tradition giving architects prolonged responsibility right through the design and construction process.

The fundamental shifts have been summarised by the RIBA Strategic Study 1992 in table form. Table 1 summarises the fundamental shifts and this thesis updates the original work of the RIBA in 1992. The principal impacts of these shifts in the profession were identified in the RIBA study as:

- The role (i.e. the degree of influence and the volume of input to the building process) of the architect has been and continues to be in decline
- The architect has in many cases lost his role as head of the building team
- The residual role of the architect has tended to be restricted to design, leading to a loss of responsibility, status and power.
This work goes on to include recent developments introduced by Egan in the late 1990s as:

- The role of the architect is reduced to that of designer
- Outside measures of performance are introduced into the project team
- The client employs advisors to organise the team
- Clients are more sophisticated
- Continuity of work is provided to contractors
- Contractual ties are based on partnering

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<td>Clients</td>
<td>Relatively unsophisticated or influential Less informed purchasers</td>
<td>Different client types Large private sector influence More informed purchasers</td>
<td>Client advisors (CABE) Merging of private and public sectors (PFI) Sophisticated Commercial clients</td>
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<tr>
<td>Clients objectives</td>
<td>Emphasis on one feature of time cost or quality Less awareness of management</td>
<td>Time cost and quality requirements balanced Greater awareness of industries shortcomings</td>
<td>Best value Benchmarking of performance and innovation of design Integrated design and construction</td>
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<td>Procurement process</td>
<td>Standardised Few contract types</td>
<td>Many more contract types Growth of design and build Growth of project management</td>
<td>Repeat work by Negotiated tenders Partnering agreements Supply chains management</td>
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<td>Professional team</td>
<td>Architect as project manager Roles clearly defined and consistent across projects Not much fee competition</td>
<td>Separate project manager Flexible roles Integrated team Careful selection</td>
<td>Continuity of work Involvement by client</td>
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<tr>
<td>Architects role</td>
<td>Defined by plan of work Head of building team</td>
<td>Negotiated can vary for each project</td>
<td>Designer</td>
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Table 1: Summary of trends updated from RIBA strategic study (1992) to the present day

Architects consider design is at the core of the architects' contribution to the construction industry and to society. The RIBA (1992) Strategic Study of the Profession drew attention to the problem of hiding the cost of design:
"Fee scales as they exist in the UK at present (written in 1993) even though they may be sometimes front loaded, subsidise the precious but elusive design contribution of the architect by the implicit guarantee of further fee earning throughout the whole construction process." (RIBA, Strategic Study, 1992, p.8)

This is an increasingly dangerous trade-off especially as the very clarity of the RIBA Architects Appointment (1990) Plan of Work encourages competitors to bid and take over the architect's role - not all at once, nor in total, but stage by stage. The Study goes on to point out:

"Design, in the full sense must be defended and promoted, as it is the architect's greatest contribution to the client, to society and to the construction industry." (RIBA, Strategic Study, 1992, p.8)

These comments by the RIBA may reflect the possible bias towards design by architects when prioritising multiple goals and may explain the pattern identified by Price (1992). Price found the expectation and satisfaction of clients reaches a peak at the design stage, but is subsequently eroded by delays, variations, cost overruns and architects’ poor communication with the client. Once the project is completed there is another rise in satisfaction, but not to original levels (Price, 1992).

The goal setting process within the construction team is confused, as identified in research by Sidwell (1982).
The experienced client ensures that a brief is properly and clearly given, that appropriate consultants are commissioned and an appropriate management structure for the management of the project and the construction process is established. Sidwell (1982) further demonstrated that sophisticated clients (those having built projects before) had a better chance of success with their projects than novices.

Work by Ferry (1978) goes further and actually describes client's perceptions as delusions typically suffered by uninformed clients. Ferry (1978) goes on to list the following perceptions:

- That designing and erecting a building is a process that has been going on for so long that all the major technological problems have been ironed out by now
- The architect's objectives will be the same as his own
- The membership of the relevant professional institution is a guarantee of high competence
- That large building contractors are well organised firms of substance able to guarantee price, quality and time performance
- That experienced professionals and business men will use their experience on each new project and will not be absurdly optimistic about time and money

The process is clearly identifiable in the results of research by Wallace and Kelly (1980). This quantitative study indicated that the aesthetic aspirations of the architect became increasingly sacrificed in favour of cost considerations as the design process continues. The outcome of many interviews, attendance at design
meetings and cross checking of facts against documented data brought the following quantitatively derived results:

- The significance of concordance between aesthetics and design decreases and that between cost and design increases as the design process continues.
- The client is the primary source and cost is the most frequent subject used in attacks upon the aesthetic contributions of the architect.
- The architect defends attacks upon the aesthetic by making reference to the cost of workable alternatives.
- Although the strength and frequency of the architect's defence of previously agreed aesthetic concepts increases, the architect is more likely to abandon aesthetic concepts as a concession to cost as the design process progresses.
- The significance of association between client and cost increases in architectural contributions as the design process continues.
- The significance of association between cost and expressions of dissatisfaction and between aesthetic and expressions of dissatisfaction from the architect increase as the design process continues.
- The architect's contributions, which make reference to aesthetic, remain relatively constant but references to cost increase as the design process continues.

Although the results above were quantitatively derived the reference to the concordance of expressions is significant as apparent in the language used by the individuals studied.
Further moves away from the 'English Tradition' and its importance to design have been identified in the adoption of government of a new approach towards the design problem. The replacement of the Fine Arts Commission and the introduction of a new body, the Commission for Architecture and the Built Environment, has been a key factor in Re Thinking Construction, Egan (1998). This new body, CABE (www.cabe.org.uk), is responsible for the control of design for better buildings on government projects. The traditional professional involvement of the architect is moving further away from the direct involvement as client's agent and the reduced role of that of a design member of the team.

Echoes from the past can be read in the words of Haryott's (2000) paper presented at the M4I conference in which he states:

"Committed leaders in construction . . . have to understand, respect and exploit the design process, and not close it down into simple compartments. If that is done, there is an inevitable certainty to optimise sub-processes and not enhance the whole."

The perpetual argument, carried out through the annuls of architecture, regarding whether design should be iterative or linear with a definite cut-off point, appears to be repeated in 2000, and the problem is defined in this work as the design axiom.

The psyche of the architect is evident in the language used. This approach toward collecting 'W's', better described as individual beliefs, provides a doorway
through which to enter the 'world of the architect' and to build a model of a human activity system based around the architect's business. This 'world view' is captured by collection and interpretation of the language used by architects.

Clients' perceptions: Alternative approaches

Concern about the construction industry in general and the design professions in particular, has been shown by a number of British Governments. The Emmerson Report (1965) was the first to notice the gap between those who design and those who actually build and recommended, in order to improve efficiency, that 'ways should be found that might bring the two processes closer together.'

In 1964 a further Government committee under the chairmanship of Sir Harold Banwell stated:

- "As the complexity of construction work increases the need for a design team at the outset with all those participating in the design as full members is vital.
- Restrictions on the activities of members of the professional institutions needs to be re-examined.
- The use of unorthodox methods of contract procedures has advantages, which should not be lost to members of the public sector through rigid adherence to outmoded procedures." (Banwell, 1964)

The RIBA was the main target of the Banwell Report but in the 1960s the RIBA did not pursue the report's recommendations. In the early 1990s however the introduction by the Thatcher Government of sweeping...
economic change on the professions at that time created a climate in which the ideas incorporated in Banwell could flourish.

One trigger for change was the RIBA abolishing, in 1983, the scale of mandatory fees and the consequent introduction of fee competition into the 'architects' world'. This action by the RIBA followed criticism from the office of Fair Trading and also a Monopolies and Mergers' Commission Report (1978) on advertising by solicitors, vets and accountants. The RIBA fee scale was not the only thing to go. Restrictions on advertising were lifted. The director's rule was also abolished which was a legacy of the architect psyche of exclusivity alluded to by Nicholson P.N. (1992) which had restricted architects from being directors of building firms.

The theory was to enable architects to be totally involved in the full production of buildings. Carter (1981) in the Architects' Journal was one of the first commentators on the new roles of architects. He said:

'That the new found freedom of architects to initiate speculation or to direct building or component companies, must be used to broaden and deepen the profession's educational base.'

This change in the rules by which architects carried out their trade opened the door for an USA style of speculative entrepreneurial architect. This was a threshold architects were unable to cross.
Nicholson P.N. (1992), commenting on the abolition of fee scales, points out that the RIBA, whilst allowing practitioners to have freedom of operations, had not by 1992 revised its traditional thinking on educational parameters for future architects. He went on to note that practice, education and training need to rethink the traditional values and look towards a new and vital industry. (Nicholson, P.N., 1992).

In the 1990s change was to arrive in the form of the Latham Report (1994). Government had moved on and a new Labour government had targeted the building industry for reform. In particular, and in greatest trouble, was the traditional role of the architect. The title of the report 'Constructing the Team' (Latham 1994) makes a powerful statement in itself.

The role of the architect in Latham's re-constructed team was to change forever. The introduction of the Private Finance Initiative (1996) and the Design Build Finance Operate (DBFO) Contracts used by government, not only aided government's accounting of the national debt when considering capital expenditure plans, but sanctioned a blurring of the traditional boundary between the client and the contractor. This partnership between government and the 'city' led to the abandonment of competitive tendering and the concept of partnering. These were partners who could be trusted to take over the running of public services completely, or provide the capital investment, buildings, administration, etc and rent the facilities to government.

Constructing the team endorsed the shift in the responsibility of investment from the public to the
private 'commercial' sector. The role of the architect as described in the RIBA Strategic Study Phase 1 (1992, p. 28) as 'trusted advisor' was beginning to disappear, as traditional clients in wide sectors of the market no longer existed.

The Egan Review 'Rethinking Construction' (1998) would have wider implications for the role of the architect. Some of the recommendations included by Egan were to have a direct influence on the way architects were to undertake their work. The Government set up a new Commission to oversee design. This is the Commission for Architecture and the Built Environment, CABE, (2000) to oversee the work of the architectural profession.

The failure to recognise the effect change would have on architectural businesses was a concern identified in 1992 by the RIBA Strategic Study Phase 1:

"When the profession held its team leader role, it was expected to control the implementation phase as well as providing the initial concept and detailed design. This expectation no longer exists, with clients saying they no longer see that as being part of the designer's brief."

(RIBA Strategic Study Phase 1, p.29)

The study went on to identify how this would have an important influence on how architects run their businesses:

"What is clear is that those architects wishing to combine design and production offers within a practice need to both structure their organisations
and acquire the quite distinct skill sets to provide both services to a very high standard."
(RIBA Strategic Study Phase 1, p.29)

The RIBA Study recognised, even in 1992, that change in the environment would influence the way architects would run their businesses. Change since that time has been considerable. What effect would this and subsequent changes have on the way architects would run their businesses in 2000?

Architectural businesses

The RIBA Strategic Study of the Profession drew attention to the ways in which new procurement routes were allowing clients greater control over the design and building process. In 1992 they had won client acceptance because they were perceived to be the way in which a client could reduce the risk of cost and time overruns. The RIBA however maintained the architects' 'arts and crafts' tradition stance within the RIBA Strategic Study (1992):

"However the clients need to be made aware of the value of design input throughout the building process - restricting the architect to conceptual design alone may lead to situations where excellent design concepts are profoundly compromised by poor implementation."
(RIBA Strategic Study Phase 1 1993, p.16)

In this ground-breaking study by the RIBA there appeared to be a potential mismatch between what architectural practices were offering and the requirements of the...
clients. The clients wanted to purchase specialist skills to meet their specific needs, rather than generalist skills offered by a traditional architect. These specialist skills can be defined in terms of building type—retail, office, even conservatory extensions, geography, or in terms of technical specialism. As long as architectural practices continued to define their skill base very broadly, there was danger that clients would not recognise the specialist skills they were able to provide.

An insight into the 'world view' of architects as a group is given in these comments by the RIBA Strategic Study of the Profession Phase 1 1992:

"At the heart of the disquiet among British architects today is the perception that they are losing status, scope and their share of the market."

(RIBA Strategic Study Phase 1, 1992, p.47)

They go on to state:

"Implicit in the précis of the architectural predicament is the ethos of competition and rivalry."

(RIBA Strategic Study Phase 1, 1992, p.48)

and raise the question of competition or collaboration:

"It assumes a struggle within and across professions for which few building professionals have any real taste and which reports on the construction industry's inefficiencies regularly
deplore; it limits horizons and ambitions; it **discourages a commitment to quality**, especially where competition to fees comes in. The concept of competition sits ill with the way in which architects see themselves and wish to be seen; as committed professionals offering a **product of quality** not only to the immediate client but also to the users of the building and passers-by."

(RIBA Strategic Study Phase 1, 1992 p.48)

The words used by the RIBA give an insight into the 'world view' of architects as a group and particular words may have special meaning for architects. The word 'quality' and the emotive language used by the RIBA indicate these phrases are of interest and have been highlighted by the researcher.

"Again it is worth stressing that economic motivation appears to play a surprisingly small part in British architects' lives. Studies always show that job satisfaction is far more important. For instance it was anticipated (written in 1992) that small British practices would decline sharply over the past twenty years because of their poor competitive position. In fact they have hardly declined at all; not as it appears because they have become more efficient or competitive, but because of the satisfaction to be gained from working this way even when rewards are scanty."

(RIBA Strategic Study Phase 1, 1992 p.48)

The concept of economic motivation was clearly not an issue in 1992 for architectural businesses.


Segmentation of architectural businesses

The potential mismatch between what architectural practices are offering and the requirements of the clients would, it was predicted in the RIBA Strategic Study (1992), have a fundamental effect on the way architectural businesses operate. A direct challenge in the architects' claim for prolonged responsibility right through the design and construction process is becoming apparent, driving the demand for architects to be specialists and not generalists.

Despite the rigidity which characterises the architects' psyche described by Nicholson P.N., (1992), the RIBA in the Strategic Study (1992) predicted change in the structure of the profession:

"Within a profession, certain factors may affect how successful it is at resisting competition and protecting its area of work. Professions may become segmented internally so that one group becomes more differentiated in the work it does than another. Abbott (1988) cites two interesting elements of internal differentiation which are of relevance to architecture; that of stratification into a core and secondary structure and workplace organisation."

(RIBA Strategic Study Phase 1, 1992, p.66)

Stratification into core and secondary groups occurs when one group concentrates on the most pure professional work, typically concept design, and withdraws from other tasks. The second group
concentrates on tasks of working-up drawings and contract administration.

Abbott (1988) argues this process is usually irreversible and makes a profession less able to respond successfully to challenges. However, the RIBA Strategic Study (1992) points out that stringent client dissatisfaction could persuade a profession to reverse this irreversible process through training and education.

The second element of internal stratification occurs through the organisation of the workplace and the division of work into routine and non-routine areas reflecting status, experience and client preferences. The effect of this division is that when a profession becomes too closely identified with routine work, then the profession is likely to experience stiffer competition from para-professionals.

The implication is that gradually architects would lose completely their prolonged responsibility right through the design and construction process.

This application of Abbott’s (1988) theory to architecture by the RIBA Strategic Study is an important point. The nature of the construction industry and the segmentation of demand for architecture means that there will not be a single role for architects in the future, if the RIBA's analysis of the problem in 1992 was correct. If this trend towards increasing complexity and specialisation was likely to continue, this implies that if architects are to maintain their position against the para-professionals and others they would have to
continually upgrade their knowledge base and provide new solutions for clients, which have added value. If correct this represented a challenge to the contemporary 'world view' of architects in 1992 requiring a new approach towards their thinking.

The RIBA Strategic Study said:

"Individuals will therefore have to choose between the options of becoming a) specialists b) project managers organising the work of those specialists or c) generalist architects restricting their work to those projects, which do not require a high level of specialist knowledge."
(RIBA Strategic Study Phase 1, 1992, p.72)

Whatever route they take they must, of course, ensure that the skills they learn do not become outdated.

The result of segmentation leads to stratification on an individual level, and the RIBA Study predicted there will be specialists, project managers and generalists, and went on to describe them organised into practices that will give clients what they need. The RIBA Study identified two options at the practice level. These were to be broadly divided into those firms offering a specialist and those offering a generalist service. Some of the alternatives identified in the RIBA Strategic Study (1992) included the following:

Specialist firms offering:

- highly specialised design advice for one particular building type.
efficient production facilities (acting as executive architects).

highly innovative individual design.

design management services to co-ordinate the input of a collection of separate specialist design firms, so providing a single point of contact.

construction management services to cover the whole process of building including financial and programming aspects.

Generalist firms offering:

- a fully integrated in-house service using individual specialists and project/business managers.
- small-scale generalist advice for a wide range of buildings which do not require a high level of specialist knowledge.

The RIBA in 1992 could not have predicted the changes that would occur over the next 10 years but the important point in their Strategic Study is the recognition that change must occur in the thinking of architects.

Performance of architectural firms

The literature review indicates a potential mismatch between the goals of the architects (represented by a loyalty toward design axiom) and the ordinary business goals of a firm. The resistance towards the split between design and production, which the RIBA maintained had already happened to a significant degree in 1992,
indicated a further mismatch in the strategic thinking of architects.

If this split between design and production were true and continued up to 2000 the predictions of the RIBA Strategic Study of the Profession Phase 1 (1992) indicates architects would need to abandon their cherished beliefs regarding the design axiom in favour of the following underlying assumptions:

- "that the conflict between creative and management aspects of the work is so great that they must be separated.
- that the process of design is linear rather than iterative and that it is possible to introduce a well defined cut off point.
- that an adequately coherent design can be created by two different firms despite their having different design philosophies."

(RIBA Strategic Study Phase 1, 1992, p.74)

The underlying assumptions indicated in italics represent a contradiction to the fundamental beliefs of architects, toward 'quality architecture' described in the literature and brought about by the influence of the arts and crafts tradition on British Architects. These cherished beliefs are the building blocks in the formation of the traditional 'world view' of architects described in the RIBA Strategic Study in 1992. The underlying assumptions will not be supported if architects are not prepared to abandon cherished beliefs and embrace the new 'world view' advocated by the RIBA Strategic Study in 1992 contrived to ensure the survival
of architects' businesses in the face of competition from para-professionals.

As will be developed in this thesis the 'world view' or strength of belief and adherence to existing underlying assumptions or goals by the architects within architectural businesses directly affects the strategy, management and performance of architectural businesses.

Performance Models of Architectural Firms

Careful consideration is required on the choice and use of an appropriate model for the measurement of performance of and between architectural firms. Logically the choice of the appropriate measure will contain more details of the firm other than a simple measure of profitability. Architects and architectural businesses have many goals, not just making profits.

A brief review of the literature follows.

Coxe et al's (1980) model of a business embraces many of the cultural and operational differences found in architectural practices. Coxe et al distinguish three main ways in which architectural firms execute their projects (design technologies): strong delivery, strong service, strong ideas. After this Coxe et al distinguish two types of cultures or ethos, which motivate practices (organisational values) which are practice centred business and business centred practices.

Many (but not all) of Coxe's findings based on their US research were supported by the RIBA's own research.
However, two main weaknesses were identified by the RIBA regarding Coxe's model: firstly it assumes for any one situation only one set of factors will suit, and secondly it confuses a useful device for reflecting internal or peer group perceptions with a mapping or positioning matrix based on client needs and perceptions. (RIBA Strategic Study Phase 1, 1992, p.127).

Winch and Schnieder (1993) developed the work of Coxe et al and the insights provided by Porter (1980). Winch and Schnieder (1993) proposed a model which indicates four generic strategies for better than average performance in architectural practice: strong delivery; strong experience; strong ideas; strong ambition. The first dimension is that of project complexity. This measures how demanding the project is in terms of the sophistication of specification, its size, the rapidity of the work required, or other special requirements. The second is the client's preference for quality and whether the client chooses to emphasise conception or realisation in determining quality.

The research by Winch and Schnieder recognises the strategic management of architectural practices does not come easily. Arguably, the most important business goals are of financial success, size and market share, and how to achieve them, are not always the goals of the partners in the architectural practice, and indeed, may at times be in conflict with success on the aesthetic dimension. This realisation indicates simple measures of performance cannot explain the complexity of individual and business behaviour.
A more sophisticated model is described by Georgopoulos (1973) who developed a systems approach to understanding organisational effectiveness within a hospital organisation in terms of an input-output model.

- In terms of output, organisations are classified into three main types, those whose primary output is some physical product, those whose output is some service and those whose primary output is information.

- On the input side organisations import a variety of material and non-material resources and facilities from the environment, various kinds and forms of matter energy and information.

A simple input-output model would not be sufficient to explain the critical processes of resource allocation, of co-ordination of effort, of social and psychological integration, and of organisational strain and its management that occur within two levels it describes as collective level and individual level in the organisation.

According to the Georgopoulos (1973) model it is necessary to examine the problems at collectivity level if we are to learn what they mean for the total organisation as a system. It is also necessary to examine them at the individual level in order to understand and explain member behaviour in the system.

The route towards developing a model based on a Human Activities System approach depends on a diagnostic approach to modelling rather than the predictive models described above.
Categorisation of Firms

It is important when examining the effects of business performance between firms to consider other relevant factors. This thesis has attempted to isolate and categorise the effects of contextual as well as organisational variables when comparing the performance between the firms studied.

The RIBA Strategic Study is therefore used as the starting point for categorisation of architectural businesses:

"What may be appropriate for a small innovative partnership in terms of organisational structure staff management style motivation and reward requirements systems and procedures and/or orientation of service may differ considerably from that of a large quoted organisation driven primarily by a search for growth or profits."
(RIBA Strategic Study Phase 1, 1992, p.126)

Using these comments in the RIBA Study as the starting point, the firms to be studied in this thesis will be carefully selected based on the following variables.

Independent variables:- capital value of work per annum, number of staff, location, development stage, RIBA listed firm, independent, fee bidding, and staff contracts.

Dependent variables:- structure, services offered, strategic planning ability, ownership, decision
making skills, reward mechanisms, job costing, marketing, satisfaction, philosophy.

The variables listed here were based on, where possible, the relevant factors identified between the firms used in the RIBA Strategic Study of the Profession 1993 series of Case Studies.

Approaches to Research Methods

It was important at the outset of the research to distinguish an appropriate approach to the research questions, be it sociological, psychological, or some other. To this end a brief review of the alternatives and prior approaches of some other research studies is made.

Microeconomic theories of the firm tend to view the firm as something of a black box. Such theories appear to be interested in the relationship between the firm's inputs in the form of capital labour and raw material obtained at certain costs, and its outputs (in the form of products or services) which are sold at some price. More precisely marginalist theories of the firm are interested in explaining general patterns of relationship between changes in the inputs and changes in the outputs for large numbers of firms operating in competitive environments.

Such theories base their analysis on a specific set of assumptions about the nature of the firm, that is, that is the economists concept of economic man or put simply profit maximisation is the sole goal of the firm.
(1989) points out occupational psychologists strong reactions to these views of economists.

Experimental psychologists are constantly proposing and testing paramorphic models of human perception, attention, learning and motivation.

A paramorphic model is one that relates inputs (stimuli) to outputs (responses), while making no claim that the psychological processes proposed in the model are in any way adequately descriptive of the true psychological processes occurring within people's heads. The validity of a paramorphic model is to be assessed not by the realism of its assumptions or hypothesis, but rather by the extent to which observed outcomes agree with the outcomes predicted by the model.

Organisational behaviour focuses on the transformation process within firms, how these processes are carried out, how they are organised, and how differences in inter-firm organisation are related to intra-firm differences in effectiveness and productivity (given identical inputs to the various firms). Rather than searching for common patterns of relationships between inputs and outputs between large numbers of firms, organisational behaviour seeks to understand how and why a given firm or a given subset of firms is as productive or effective as it is in the process of transforming inputs into outputs.

What Leibenstein (1969) refers to as X inefficiency to explain the difference between general patterns of behaviour and individual patterns of behaviour by firms
is, in fact, an article of faith or belief for organisational industrial psychologists.

A marginalist theoretical model of the firm would seem to be inappropriate in the light of this literature review and the paradoxical evidence of architects' unwillingness to act in purely economic terms supports this view. A paramorphic model, based around a human activity system allowing for the perceptions of architects and architectural practices, is therefore a more appropriate starting point to explain the transformation process of the inputs (stimuli) and the outputs (responses) within architectural firms.

No claim can be made that the psychological processes proposed in the model is in any way adequately descriptive of the true psychological processes occurring within individuals' heads. The effect of propositions constructed around the 'cherished beliefs' of architects and their effect on business behaviour (apparent from the literature review), will become clear in the model of a firm introduced in Chapter 5.

Summary and Conclusion

This Chapter has placed the research problem within the context of:

- the development of ideologies
- the importance of design
- clients' perceptions alternative approaches

The Research Context
• architectural businesses
• factors affecting the performance of architectural firms
• approaches to research methods

This thesis lies within the traditions of organisational behaviour and the paramorphic modelling of human perception, attention, learning and motivation. The research question specifically focuses upon the perception of architects towards the goals of the firm and the transformation process within the firm.
CHAPTER THREE

THE DESIGN AXIOM AND ITS INFLUENCE ON BEHAVIOUR

Introduction

The importance of design, what architects mean by design and the formation of a cherished belief and its contribution to a 'world view' of the architect has been introduced in Chapter 2 and will be developed further in this Chapter. The previous Chapter has outlined how the RIBA Strategic Study has pointed to the influence of beliefs on perceptions by firms and within firms directly affecting patterns of behaviour within businesses and business strategy.

This concept of patterns of organisational behaviour within architectural businesses will be developed. The influence on architects' perceptions because of the upheaval in the view of clients regarding a 'design belief' will be further explored in this Chapter. The behaviour of a firm will be modelled in the form of an
input transformation output model. The inputs will include clients' beliefs and will be described in the form of an environmental pressure. The transformation process will necessarily include the beliefs within the firm which come together to form the business culture. The input and the transformation process will influence the output of the firm. A model of this transformation process will be explored in this Chapter to enable deeper insight into the effect of beliefs as explaining observed patterns of behaviour within the firm.

The notion of a framework within which to categorise the behaviour of architectural firms and the development of a method of interpreting these patterns of behaviour will be introduced in this Chapter. This process of interpretation will lead to a deeper understanding of the reasons why firms are adopting particular strategies and patterns of behaviour. This will be the starting point for the development of a diagnostic model of the firm.

Inputs are drawn from the environment by a firm and contribute towards influencing the behaviour patterns within the firm. Some environmental influences are necessarily imposed on the firm by government, many in the form of legislation, labour, technological and financial controls.

Notwithstanding government's role in legislating, employment, health and safety, tax and the multitude of other legitimate controls over industry this chapter identifies, government or one of its agencies comprises the largest client of the UK Construction Industry. As such governments through the generations have been in
the habit of intervening directly in the way the industry is organised. As with the coal, shipbuilding and steel industries of the past, construction is massive in size and remains, even in 2002, very influential in the wealth creation and prosperity of the UK economy.

The traditions of the construction industry stand in sharp contrast to the 'modern' approach towards work in 2002. Perhaps reflective of a different age, even in 2002, the professional class remains a strong influence in the beliefs and behaviour of individuals within the UK construction industry. The multifarious groups of organisations and individuals that make up this disparate and complex industry is beyond the scope and resources of this study. However the beliefs of the architectural profession as taken in context of the RIBA Strategic Study Phase 1 (1992) and Phase 2 (1993) contrasted with the influence of government will be explored further in this Chapter.

Towards Defining Performance

A host of reports sponsored by government have thrown up many and varied solutions to 'the problem' with the construction industry, but all in mixed ways have criticised the industry as outdated and inefficient. Strong language emerges from many of these reports generating an even stronger reaction from governments towards legislating for change in the construction industry.
Of greatest interest was Banwell in the 1960s. Interestingly Banwell adopted a sociological approach to 'the problem' of the construction industry. Banwell (1960) in the 1960s was the beginning of a series of influential reports affecting the industry. In the 1990s Latham (1994) suggested new procurement routes could raise poor performance. A new government came into power in 1997 and a year later Egan (1998) introduced 'Rethinking Construction' the latest influential report. This was new. In the 21st century government was continuing the traditional 'pragmatic' approach adopted by governments of the 1930s towards a mixed market economy, but with a new twist - the Private Finance Initiative, Local Authorities Regulations (1996). This was in sharp contrast to the alternative and more simplistic capitalist approach 'freeing up' market forces in 1980s adopted by the Thatcher Government.

The environment within which the construction industry operates may be considered as that of a disparate set of competing groups, each with their own multiple goal set. Within this complexity, performance may best be considered as the compromise reached between each competing group. Few governments have considered this approach preferring to legislate rather than understand. Banwell (1996) attempted to understand the process of goal-setting within each competing group. Later reports, typically Latham and latterly Egan (1998), have adopted a corporate-managed approach and a road-show style of selling their reports to the industry. The approach is via a series of public meetings held around the UK in an attempt to win hearts and minds in the industry towards abandoning the 'traditional' and embracing 'rethinking'. However, any change introduced and its subsequent effect
on the behaviour patterns within this complex and traditional industry is at best unpredictable, but the consequences of failure as a threat to wealth creation for the whole economy is all too real.

Performance itself can be considered from a number of perspectives. Later reports, Egan (1998), adopt benchmarking to set standards of performance and are used as a comparative approach related to some measure of best practice within the industry.

This thesis will consider the problem of performance of the industry from the perspective of the 'enlightened architect'. The RIBA Strategic Study of the Profession (1992) reflects the aims contained in the RIBA Charter, 1837, which survives unchanged in 2002:

"General advancement of civil architecture. . it being an art esteemed and encouraged by all enlightened nations, as tending greatly to promote the domestic convenience of citizens, and the public improvement and embellishment of towns and cities." (RIBA, Strategic Study Phase 1, 1992, p.54)

The language used by architects will be considered towards gaining a deeper insight into the meaning of words and expressions commonly used. The words highlighted in bold in the RIBA Charter have been identified by the researcher as of particular interest giving an insight into the enlightened status the profession considers itself to enjoy.
Difficulties arise in defining such terms as performance. Establishing absolute measures of performance of design led many researchers to comparative forms of analysis. Comparisons of the cost and time performance of UK building projects with those in other developed countries were unfavourable (see Latham, 1994).

Poor performance has inevitably focused around the poor briefing process and its fuzzy interpretation leading to 'the problem' of design. The perception of the architect and the perception of the client regarding design are often not the same; phrases such as quality can be interpreted as having different meanings. The effect of disparate beliefs regarding design and the language used will be explored later in this Chapter.

This Chapter goes on to review the literature, which specifically examines the design problem (from the architect's perspective) and the language used.

Design as a Factor Affecting Project Performance

Chapter 2 began to draw attention to the affect of 'world view' and its influence on the development of a range of cherished beliefs within the world of the architect. Debate and research in this area has necessarily encompassed aspects of the perception focused around the problem of interpretation of design principles.

Latham's report 'Constructing the Team' (1994) was intended to benefit clients by improving the industries
performance and teamwork and thereby achieve better value for money. Latham (1994) pointed out that clients were not always getting what they asked for much of which was laid at the door of poor briefing. Getting the design brief right is crucial to the effective delivery of the project.

Latham (1994) could not find unequivocal evidence about poor performance on site, and how the British construction industry compares with other countries. The Report did identify some surveys that have been carried out which pointed to British performance being below that of some of our international competitors. Some larger clients certainly believed this to be so, and have introduced new technologies, systems of procurement and research to raise the standards of British construction, for example: The UK Construction Challenge (1993); Setting Standards in the Construction Industry (1993).

Set against this background of criticism against the traditional approach of the construction industry, Latham (1994) pointed to some performance issues that were being addressed through new procurement routes and new technology, such as knowledge-based engineering.

Latham (1994) further identified scope for improvement through greater standardisation of components and design details and more off-site prefabrication. This, Latham (1994) said, would require effective teamwork by designers, contractors, sub contractors and manufacturers.
One of the main areas where performance could be improved was, as Latham (1994) pointed out, the effective management of the design process and this being critical to the success of a project. The language used by Latham (1994) moved towards a definition of good design using many indicative phrases. Good design does not necessarily involve high cost. Good design will provide value for money in terms of both total costs and costs in use. A well-designed building need not be to a high level of specification. A well-designed project will impact upon the satisfaction comfort and well-being of its occupants, and, if it is a commercial building, upon their productivity and performance. **Quality** should be the overriding consideration. (Latham, 1994).

This word 'quality' as used by Latham (1994) has been identified in bold. Quality is defined in terms of value for money, effective use of space, satisfaction of occupants and productivity and performance.

This view Latham (1994) takes towards design highlights the new and dominant role of the client. Latham (1994) expressly states that the design leader must ensure that the client fully understands the design proposals, and agrees that they meet his objectives. Latham points out that the design team must offer the client a vision of the project in a form, which the client can understand and change in time.

The historical role the architect enjoyed as the recipient of a client's unquestioning patronage described in Chapter 2 no longer exists. The traditional problem of the hidden cost of design within the RIBA
plan of work has been revealed as delusion by architects and by-passed by clients.

What is of greater interest is the language used by Latham (1994) and the impression this gives of a 'world view' very different to that of the RIBA's charter. The language used by Latham (1994) is much tighter and more defined than language typically used by architects, quality can be measured in terms of 'value for money'. This alternative 'world view' of quality within the building process represents a challenge to established architects' beliefs regarding the good design and quality represented by the design axiom described in Chapter 2.

Egan (2001) in the report 'Rethinking the Construction Client the National Debate' develops Latham's (1994) view confidently stating:

"The public sector must achieve best, whole life value for taxpayers' money it must deliver major improvements in social infrastructure. On time, on quality and on budget; and that requires rapid, radical change."

(Egan, Rethinking the Construction Client the National Debate, 2001, p.1)

The Egan Report 'Rethinking Construction Rethinking the Construction Client the National Debate' (2001) has a different 'world view' eschewing the phrase quality in favour of whole life value. They, 'meaning the client' setting standards of performance 'benchmarks' of:

- assessing best value,
obtaining best performance from contractors, 
developing partnering.

The client is at the core of this process according to 
Egan's report.

The Report 'Rethinking the Construction Client The 
National Debate' (2001) goes further and encourages the 
client to superintend the whole building process:

"This government is committed to modernising our 
public services. The construction industry is vital 
to the delivery of that objective. Public sector 
clients need to achieve best value and quality in 
performance and design. I therefore urge all those 
involved in construction procurement to attend 
these important meetings."

(Brian Wilson, Minister of State Industry & Energy, 
2001).

The Construction Industry Task Force (1998) instigated a 
series of workshops in the form of a National Training 
Programme delivered through the Construction Industry 
Training Board to help client organisations and their 
suppliers develop the skills and techniques required to 
implement Rethinking Construction.

The language used in the Report 'Rethinking 
Construction' (1998) is even more radical than Latham 
(1994) and has in fact developed a new language, beliefs 
and way of thinking, thus forcing change on the 
traditional design axiom within architecture.
"To summarise, the Task Force wishes to emphasise that we are not inviting UK construction to look at what it does already and do it better: we are asking the industry and Government to join with major clients to do it entirely differently. What we are proposing is a radical change in the way we build. We wish to see, within five years, the construction industry deliver its products to its customers in the increases in efficiency that are both possible and necessary we must all rethink construction"
(Sir John Egan, Chairman of the Construction Task Force, 1998)

The rethinking construction was a fundamental root and branch upheaval in the industry.

"In formulating our proposals for improving performance we have studied the experience that has been gained at the cutting edge of construction and in other industries that have transformed themselves in recent years. We have learnt that continuous and sustained improvement is achievable if we focus all our efforts on delivering the value that our customers need, and if we are prepared to challenge the waste of poor quality arising from our existing structures and working practices."
(Sir John Egan, Chairman of the Construction Task Force, 1998)

The word quality as used by Egan (1998) has been identified in bold. Egan’s (1998) interpretation as offered in his report is a more radical use of the word, linking existing organisational structures and working
practices with quality. The enlightened view of architecture as an art to be esteemed and encouraged described in the RIBA Charter, has been replaced by 'rethinking construction'. The rethinking is concerned with delivering the value the customer needs and the Report goes on to define this as the 'best whole life value' and is to be achieved by 'restructuring and changing working practices'.

The perception of architectural firms towards these changes is critical. The effect radical change will have on the inputs the firm takes from the environment is effected by the willingness of architectural businesses to correctly interpret the powerful language used by government. Although this language used by government, the largest client of the industry, is powerful and radical history has demonstrated its influence is limited and often subverted.

What mechanisms do architectural practices use to perceive environmental change and enable internal organisational reactions to emerge and effect behaviour patterns?

The development of a conceptual framework for understanding patterns of behaviour within organisations

In effect passive economic planning has been exercised by government through Banwell (1964), Latham (1994) and Egan (1998). These sources in the environment for change will have had a varying influence on the observed patterns of behaviour by architectural firms within the construction industry. The pattern of behaviour is
dependent on how perceptive a firm is towards this change in the environment.

In light of a human activity system model described in Chapter 2 and considerations of 'world view' on the effect of behaviour patterns of firms perceptions can be identified. The objective in this Chapter is to introduce and discuss several areas of research from the literature regarding organisational behaviour. This is relevant to understanding the behavioural change that occurs within a firm when it is subjected to forces in the environment affecting the firm's inputs. The response by the firm and the change of behaviour within the firm is subject to the perceptions of the firm and the individuals within the firm, the whole combining to form the business culture.

A conceptual framework identifying the systems within a firm that affect organisational behaviour is depicted in Figure 3.1 and is drawn from systems theory, introduced in Chapter 2. In this figure the direction of the arrows indicates organisational decision making is shown as both a determinant of, and a response to, the environment outside the firm's boundary layer. As will be seen through exploration of the decision-making process within firms, organisations in part determine their environment and can alter its characteristics by moving about the environment.
Organisations also adapt to their environment through their choice and design of formal management and organisational practices.

The three elements within management and organisational practice considered in this study are:

- organisation structure
- control and reward systems
- the goal-setting process

These three practices are important because they are direct outcomes of the management decision-making process, and they have been sufficiently studied from the psychological perspective to permit some definitive conclusions with respect to their relationship to business behaviour. They, therefore, form the basis of
the research instrument described in Chapter 6. The diagram in Figure 3.1 also indicates the question of how management practices affect the motivation and ability of individual organisational members to perform their roles effectively.

As a response to environmental change a firm may undertake alternative strategies to survive. The firm may change internally by managing change, its structure control and reward systems and goal-setting process. This change will affect the culture of the firm. The alternative is for the firm to change the inputs into the firm. It does this by moving from its present environment to a more hospitable environment. In a scenario of the environment where a powerful government client undertaking a rethinking exercise about how firms undertake the work, some architectural firms will move away from government work altogether.

In addition to the superficial modelling of patterns of behaviour by the firm as a whole, the diagram in Figure 3.1 enables the three elements within management and organisation and their relationship to be located in the model and the psychological perspective of the transformation process better understood. This is the first step towards mapping the effect of change within the firm.

The transformation process comprises the downward flow of influence in the organisation from decision-making to management practices and finally to individual responses. The diagram in Figure 3.1 shows that influence also flows in the opposite direction. The individual members selectively perceive those parts of

The Problem of Design
formal management practices that are most relevant to their needs and in turn exert influence on those practices according to the goals they prefer, the rewards they value most, and the directions and constraints of the organisation structure that they find most acceptable. Their responses may be intended either to support or thwart the intent of the formal management practices.

Organisational effectiveness as viewed here is primarily a function of the degree or fit or congruence among the environment, the management practices, and individual preferences. The decision-making process is viewed as a pervasive process that regulates the degree of fit among these elements. Any organisation that can effect this degree of fit between its environment, management practices, and individual preferences may be considered to be Socially Efficient.

Instability in the wider environment comprising the market place for architecture, if accurately perceived by architectural firms, will therefore necessarily result in observable patterns of change within architectural firms.

Architects' perception of design influencing patterns of behaviour

In the light of the comments in the Latham (1994) report identifying 'quality' as 'value for money' and the even stronger language used by Egan (1998) eschewing quality in favour of 'whole life value', it is worthwhile to examine further the literature about what architects
perceive key words like 'design' and 'quality' to mean. Architectural businesses may be exhibiting changed patterns of business behaviour because of pressure from government-sponsored clients redefining the design axiom described in Chapter 2.

It would be erroneous to dismiss the architects' view of quality in favour of Latham (1994) and latterly Egan's (1998) government-sponsored report 'Rethinking Construction', much of which sprang from an examination of the Japanese car industry. The strong influence the English 'arts and crafts' tradition has had on the way architecture in Britain has developed was revealed in Chapter 2.

In the early 1990s the architects' traditional role was supported by JCT Standard Forms of Contract, popular at the time, which supported the architects' role as clients' agent in which architects were expected to control the implementation phase as well as providing the initial concept and detailed design. This expectation no longer exists in 2002, with clients saying that they do not necessarily see that as being part of the designer's brief and a multitude of JCT Contracts are now available to support the clients.

In the 1990s the RIBA maintained the traditional view of iterative approach towards design:

"The profession will argue that the control of the implementation is what ensures the quality of the end result. The architect is the only one with the vision of the building as a whole up until the
point that it is handed over and therefore it is desirable that he retains responsibility."

(RIBA Strategic Study Phase 1, 1992, p.29)

This view expressed by the RIBA (1992) illustrated a pre-emptive attempt to get around a growing problem soon to be sanctioned by Latham's (1994) engineered definition of good design identified in Chapter 2 and an uprising by clients hostile to the design axiom. Compromise by the RIBA in the form of an offer of a better managed version of what architects do already but with a strong emphasis towards retaining control of design implementation would fail.

What was becoming clear to the profession in the 1990s was expressed by the RIBA in the report:

"What is clear is that those architects wishing to combine design and production within a practice need to both structure their organisation and acquire the quite distinct skill sets to provide both services to a very high standard."

(RIBA Strategic Study Phase 1, 1992, p.29)

The hostile forces identified in the environment in the 1990s were exerting a downward influence on the boundary layer between the firm and the environment. The result may be expected to have resulted in an identifiable pattern of change in the behaviour of architectural firms.

The conceptual framework modelled by Arnold et al (1980) in Figure 3.1 indicates that powerful forces are contained within the firm. This 'culture' of a firm will
affect the response by the firm and within the firm to external change. The views of individual architects within the firm are therefore essential in modelling the behaviour of a firm.

The architects' view of the added value they deliver is fairly clear from the RIBA Strategic Study (1992) in the traditional environment still existing in the 1990s:

- design excellence
- a unique blend of artistic and technical skills
- a unique understanding of how the separate elements of aesthetics, space and function can be effectively brought together in a building
- the ability to visualise
- vision design flair
- the ability to convert user requirements into reality (RIBA Strategic Study, 1992, p.30)
- he feels however that this has been undermined by a client who is more driven by time and cost than by quality considerations
- he, therefore feels that he needs to be retained throughout the implementation phase to ensure that the quality is maintained
- this was the role, which he held when he was trusted advisor and team leader within the traditional contract. In small and medium scale projects this involvement is sometimes still welcome. (RIBA Strategic Study, 1992, p.31)

The RIBA Study (1992) indicates that architects in the 1990s remained resolute in their belief in the traditional design axiom described in Chapter 2.
In 2002 much debate has centred around Egan's (1998) 'Rethinking Construction Report'. Has the pressure for change and the introduction of demonstration projects swept away the traditional views of architects?

A flavour of the continued scepticism by architects is indicated in the contemporary literature. Nicholson R. (2000) supports comments in a paper by Prasad (1999) highlighting the dangers of the relatively new but growing belief that the construction process needs only concept designers and production engineers. Nicholson R. (2000) describes this belief as:

"A fundamentally flawed model since it undermines the opportunity to integrate design and construction through the all important detail design stage."

(CIC Conference Managing Design in Construction, 2000, p.2)

Prasad (1999) recycled the design axiom in a paper, 'Opportunity or Threat' given at the RSAW Conference 1999 Rethinking Construction Opportunity or Threat, Port Merion:

"If the Eganite Utopia were to come about in its crudest form, architects like me will be reliant on a few wealthy customers with particular tastes, divorced from producing for the majority of people"

(Prasad, Opportunity or Threat, Rethinking Construction, 1999, p.1)
In an article in SCROOP, Prasad (1999) further comments, in his article 'Reconstructing Thought', on rethinking construction and on the formidable challenge it presents which demands the integration of large number of disciplines:

"Architecture can play a pivotal role contributing a much needed intellectual, aesthetic and ethical dimension resisting a dumbing down of building production. Or it can be further marginalised, reserved for special commissions, the body styling of buildings and urban scenography."

(Prasad, Reconstructing Thought, SCROOP, 1999, p.3)

The argument revealed in Chapter 2 is seen to run on through time. This thesis springs out of the RIBA Strategic Study Phase 1, 1992. The views expressed at that time were by the RIBA and supported by a series of Case Studies undertaken in the RIBA Strategic Study Phase 2, 1993.

Any conclusions drawn from the current debate around rethinking construction would only give anecdotal results. The RIBA Strategic Study in 1993 undertook a scientific qualitative piece of work into the construction industry. Only by a process of contrast comparison and replication with the results of that Study will any demonstrative qualitative results emerge from this thesis.

It is useful, therefore, to examine further what the RIBA Strategic Study used to identify the varying cultures of firms and a framework which enabled a
classification and categorisation of the firms included in their series of Case Studies.

The perception of design and its effect on patterns of businesses behaviour

The boundary between the firm and the environment is an illusive concept to define. Some characteristic patterns of behaviour have been identified at corporate level in the firm and they can be used to enable the process behind decision-making at corporate level to be better understood.

Architectural firms in a competitive market will try to make the best of any competitive edge they have. By such differentiation of services, or 'horses for courses', as the RIBA Strategic Study (1992, p.128) described provides a means of comparing practices. The effects of environmental influences such as direct fee competition, where like for like is not compared, can be reduced.

An existing categorisation of business behaviour can be used to identify firms that behave in different ways. This enables a process of comparison between the firms via a series of Case Studies to take place. The RIBA Strategic Study of the Profession (1993) did this and suggested some assumptions about how it thought the firms would change in the future.

The appropriateness of the firms selected for the Case Studies is important if a series of 'follow on' Case Studies based on the RIBA Strategic Study Phase 2 (1993) is to be undertaken in this work.
The RIBA Study identified the need for clear understanding of the key strategic issues facing practices in their search for long term survival and based their Case Studies on the following criteria, internal competitive advantage, external differentiation, and scope of the practice.

The first of these criteria is internal competitive advantage. Understanding what the business does well compared to others in the sector, maximising these advantages, and advertising them to potential clients is important. Underlying this there needs to be an astute understanding of how and where a firm creates value, both for its clients and itself. Porter's (1980) value chain was considered by the RIBA Strategic Study (1992, p.126) as providing a useful construct for analysing both a firm's primary activities, and its support services. A firm's competitive advantage may be from its relationships with clients or other consultants, in another it may be from efficient production, and in a third it may be from its design ability.

The RIBA Strategic Study (1992, p.126) goes on to point out what may be appropriate for a small, innovative, partnership in terms of organisational structure, staff, management style, motivation and reward requirements, systems and procedures and/or orientation of service may differ considerably from that for a large quoted organisation driven primarily by a search for growth or profits. This point is important in identifying an important criteria when selecting the firms to be included in the series of Case Studies in this research.
The framework used by the RIBA Study is that developed by Coxe et al. (1980) based on the work of Maister which was introduced in Chapter 2 and is more fully described here. Encompassing the cultural and operational differences found in architectural practice in the USA, Coxe identified three ways in which architectural firms undertake projects (design technologies) and two main types of cultures or ethos which motivate practices (organisational values). A matrix of six core positionings is developed each characterised by a different mix of appropriate management requirements.

Practices located in each box on the matrix are likely to have particular and differing strategic needs in areas such as: project process and decision making; organisational structure; staff recruitment and development; sales message; types of clients; marketing approach and marketing organisation; pricing and profit; management style and leadership, and rewards to principals.

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Table 3.1: Illustrates Core positioning of architectural practices in RIBA Strategic Study, 1992, p.127

Many, but not all, of Coxe's findings based on their US research were supported by the RIBA's own UK observations.
Coxe's research went on to speculate that there was a design technology continuum that ran from the practice centred business towards the business centred practice. Maister added those firms that superposition concentrate on a narrow band of technology. The inference being that firms would tend to superposition along the continuum towards being a business centred practice strong on delivery.

The two main weaknesses of the model were described by the RIBA Strategic Study Phase 1 (1992, p.127). Firstly, it assumes that for any one box only one set of factors will suit. Secondly, it confuses a useful device for reflecting internal or peer group perceptions with a mapping or positioning matrix based on client needs and perceptions.

The next important criteria is externally positioning and differentiating the practice. The initial process of appointing an architect is considered in the RIBA Strategic Study Phase 1 (1992, p.128) to be often based on the 'horses for courses' principle, particularly for clients involved in repeat commissioning. The preliminary selection is likely according to the RIBA Study (1992) to depend on how the practice is perceived to be positioned in relation to the client's or the project's needs as shown in the Table 3.1.

Firms positioned in the top left quarter will be used by clients concerned with complex projects. Those positioned in the top right will be firms combining both high creativity and experience of complex buildings, and chosen by clients seeking high status buildings. Firms
in the bottom right quarter will be considered when more radical design solutions are sought, where the client wants creative ideas but for a simple building type, and so needs less specialised experience. The RIBA Strategic Study (1992, p.129) considered few firms are likely to survive in a sector long term if located in the bottom left quarter, unless through their low overheads or cost structure they can gain project experience quickly or manage to win some design competitions.

If a shortlist of firms is made by the client the second decision varies according to other skills. In a design competition a design approach may be the key differentiation.

This highlights that a key concern for architects is the differentiation of the firm by a clear positioning and
clarification of the values and design or working values of the firm.

This model is useful as it introduces the concept of firms moving about in the market place and exhibiting the ability to behave strategically. A major issue for firms is how to shift position. In principle firms may seek to improve on their design creativity, through their image or reputation, by quality of service delivery and through association with other firms.

The problem is that each positioning requires a congruent mix of supporting factors (structure, culture, style, systems, etc) which means it is easier to move in some directions than in others. The strategies or behaviour a firm adopts directly influences the firm as a whole. The firm exhibits its 'world view' by its pattern of behaviour.

The final criteria is the scope of the practice. This third area of strategic thinking is the practice's activities, its breadth, and the location of the business in the overall industries stream of activities.

For architects there is a need to build a reputation for experience and at least a perceived specialism in a number of market segments and areas of service. The difficulty is in developing new business. One approach for gaining experience is, for example through some form of alliance with another practice that has complimentary range of experience and skills.
The main options open to architects are based on a mix of vertical or lateral diversification and broad or narrow focus. They include remaining as centrally located architectural practices offering a broader range of services, diversifying into other building services, development or construction or diversifying out of construction into, say, design.

The diagram in figure 3.3 represents the prediction made in the RIBA Strategic Study Phase 1 (1992) that architects could no longer stay in the centre ground providing a traditional service. The complexity of
services required from clients was overwhelming the traditional role of the architect. The study predicted the profession turning into specialists interpreted as:

- Architects breaking through the boundary and moving upstream towards being developer architects.

- Architects, others becoming signature architects and relinquishing control of the design implementation phase to an executive architect.

- Various larger practices with sufficient competencies to carry out a broad-based strategy have sought to develop an extensive multi-disciplinary range of skills within the boundary of one firm.

- The RIBA identified the majority of practices in the Case Studies done in 1993 had tended to stay put.

As the architects changed so too would their businesses with firms concentrating on specialist areas. Super-positioning in the market place for architecture:

- Traditional firms

- Named firms

- Multidisciplinary firms

- Commercial firms

Smaller design-based practices may be expected to break through the traditional boundaries of a firm and focus
on design particularly on larger projects, along the lines of French bureau d'études models.

Diversification combining architects with constructors has tended to be into architecture by the constructors. There are also some examples of architects teaming up with design consultants. Although architects continue to assist clients in finding sites, there appear to have been few other moves to get closer to the client.

The RIBA Strategic Study Phase 1 (1992, p.132) did highlight that ultimately this was the core issue facing the profession as a whole. It questions the very business of architectural practice and the personal objectives of individual architects. Yet in reality the power to decide may lie outside the profession and in the hands of clients and the public.

Summary and Conclusion

This Chapter has reviewed the literature regarding performance issues relating to design and identified powerful environmental forces that are challenging the architects' traditional approach towards good design.

A relationship between the environment and the firm has been explored in greater depth and a conceptual framework of a business introduced. A path has been identified by which the environment can influence the performance of the firm and the firm can influence the environment by adapting to it or moving to a more hospitable part of the environment. This conceptual framework begins to open up the black box economics
regarded as affecting the individual firm performance or the 'x efficiency' as identified in Chapter 2.

Perceptions of firms and individuals were explored by the identification of their language. This analysis led to a deeper understanding in this Chapter of what has been previously described as 'cherished beliefs'. The core belief at the centre of the architects' 'world view' was based around the iterative process of design was explored in detail in this Chapter.

The RIBA Study of the Profession was used extensively in order to capture the 'world view' of architects and the study used as the basis for this research. The separation of the architect role into concept architect, design architect and executive architect, and the more aggressive developer architect was explored in detail, and provided a juxtaposition to the psyche of the British architect described in Chapter 2.

The framework used by the RIBA Strategic Study (1993) was described and its application as a basis for categorising firms included in this study developed. Organisational structure, culture, systems and procedures were identified as important variables distinguishing firms and will be explored in Chapter 4.

The concept of a boundary between the firm and the environment was identified and the effect of the fragmentation of architecture into signature design and executive architects modelled. Modelling individual and firms' behaviour will be explored further in Chapter 4.
The strategic behaviour of firms enabling movement by the firm in the business environment was examined. The RIBA Study gave an example which enabled a realisation that architectural firms exhibit complex multiple goal-seeking behaviour. The approach towards research into these businesses via a Case Study qualitative route may be most applicable. The effective exploration of individual and group beliefs and the subsequent explanation of the behaviour within a firm will require a very clear research strategy and implementation if the results were to be easily identifiable and reliable.

The RIBA Strategic Study of the Profession was identified as the basis upon which this research could build. It is clear that the limits of this research is bounded by the perceptions of RIBA qualified architects. One important criterion therefore has been established that the research is limited to RIBA qualified architects and RIBA listed firms.
CHAPTER FOUR

FACTORS AFFECTING THE PROBLEM OF DESIGN

Introduction

The literature review has so far identified the nature of the design problem and considered some proposed solutions. This Chapter forms part of the link between this review and the first part of the research framework, which is completed in Chapter 5.

It does this by re-examining the problem of the complexity of an architectural business. The mix of needs and aspirations of individuals within the firm come together to form a collective 'worldview' by the firm; the emerging pattern of goals begins to define the boundary between the firm and its environment.

Social learning theory is described and identified as a pathway towards a closer definition of the 'world view' of architects and their businesses. Previous research into group efficacy is reviewed and its influence in the formation of common views held by groups in the wider environment explored.
The formation of learnt behaviour by individuals, on the basis of their expectations, and learning through modelling, is considered towards explaining, in part, observed patterns of behaviour within the firm. The final part of behaviour is explained through cognition. The definition of a 'world view' of individuals is developed along work carried out regarding cognition and applied later in Chapter 5 by the technique of semi-structured interview of individuals based on a series of questions.

Previous research into the effect of group efficacy within an organisation is reviewed. The contextual characteristics formed within organisations are shown in previous research to be influenced by perceptions, values, and the codes of conduct that predominate within larger cultural contexts. This larger cultural context can form an identifiable source influencing behaviour patterns within firms where the boundary between the firm and the environment is permeable or cognitive to these influences.

A framework is established to enable deeper research into the processes that act within a firm, which drive a firm's strategies towards multiple goal-seeking behaviour. Firms are categorised based on the RIBA Strategic Study Phase 2 Case Studies (1993) and propositions taken from the RIBA study enabling comparison between the previous RIBA research in 1993 and the firms included in this research in 2000.

A self-fulfilment model is derived from Social Learning Theory (Bandura, 1977) to conceptualise the individual's relationship with the organisation and the explanation
of the cognitive process developed more fully. Work by Vroom (1964) has been developed by this research and is used as a basis for modelling expectancy. The 'world view' or cognition of individuals or firms, is captured by the careful derivation of a set of questions identifying a set of goals, which form the basis of a semi-structured interview described in Chapter 5.

The reasons for identifiable patterns of behaviour in groups of individuals and groups of firms are explored more fully. Individuals and firms are grouped and the possibility of these groups being categorised is explored using the RIBA Strategic Study (1993) as a basis. This work by the RIBA in 1993 forms the basis for the development of the propositions in this Chapter. The predictions made by the RIBA study in 1993 will be examined in the series of Case Studies undertaken in 2000. Any change in the cognitive process regarding the strength of cherished beliefs held by the firms selected, or a move toward a more strategic thinking process by firms will become apparent.

The reasons for individual behaviour is briefly explored in this work, but in a necessarily complex subject some assumptions must be made. The main assumption is that the source of energy, which is what drives individuals to behave in a particular way, is based in personality theory. The theory is fully discussed in this work to enable a meaningful categorisation of individuals. The reasons for businesses behaviour patterns is less defined in the construction sector. Previous work in strategic decision-making by contractors in the construction industry is explored.
This work by the RIBA Strategic Study (1993) illustrates that firms exhibit higher level goal-seeking behaviour. The literature reviewing firms' behaviour patterns and the effect of growth on firms is examined and incorporated into the model of the firms' goals.

The concept of the social efficiency map is introduced but the identification of firms' goals by categorisation and subsequent modelling to form the vertical axis of the social efficiency map are more fully developed in Chapter 5.

The categorisation of individuals and of firms enables the identification of dependent and independent variables between the firms chosen for the inclusion in the Case Studies. This work was begun in Chapter 3 and is now completed and fully explained and the variables listed at the end of this Chapter.

The Special Characteristics of Architectural Businesses

Chapter 1 has identified that architectural businesses are established to accomplish purposes that cannot be accomplished by single architect. The concept of Social Efficiency was introduced as an indicator of business performance in preference to a single measure of performance.

In the wider sense architectural businesses have many goals, not just making profits. How these goals are established and prioritised is the collective 'world view' of the firm and the individuals within it. Decision-making, organising, goal setting, controlling
and rewarding all affect the performance of organisational members. The process through which these practices effect individual performance are largely psychological. The application of Social Learning Theory (Bandura, 1977) is considered in the analysis of businesses and its implications on individual performance.

Social learning theory maintains that individuals develop hypotheses about the association between their own behaviour and future consequences on the premise of their experience and observations. To the extent that the hypotheses are correct their future performance will lead to expected results. Individuals are hypothesised to act on these hypotheses (expectations) when they perceive that they can behave in the manner required (efficacy expectations) and when they perceive that such behaviour will result in the desired outcome (outcome expectations). These two kinds of expectations and their relationships among person's behaviour and outcomes are shown in Figure 4.1.

Figure 4.1: Difference between efficacy expectations and outcome expectations (Bandura, 1977, p.79)

Social learning theory asserts that individuals learn behaviour and choose to engage in it on the basis of...
their expectations and the value they place on the outcomes they expect. Outcomes can be divided into three components.

- The intrinsic satisfaction one gains from engaging in particular behaviour,
- The intrinsic satisfaction one gains from successful accomplishment of goals, and
- The satisfaction one gains from the extrinsic rewards for engaging in behaviour or accomplishing goals.

It is possible to identify these expectations and the method developed in this research which is based on the work of Vroom (1964) will be introduced later in this Chapter.

The illusive concept of 'world view' may be, therefore, more accurately defined as the perception of expectations and outcomes and this is the approach adopted in this research. These expectations can be viewed as cognitions that represent the individual's generalisations about cause-effect contingencies in the environment.

According to social learning theory such cognitions are formulated (learned) through two sets of processes:

- Response consequence processes.
In addition, social learning theory maintains that motivation to engage in learned behaviour results, in part, from response consequence processes and modelling but to a greater extent from a third process, the self-regulation process.

Response consequences convey information and serve as motivators for future action. By experiencing different outcomes to their actions individuals develop hypotheses about which responses are most appropriate in various situations. This information serves as a pointer toward future action. Response consequences perform a motivational function in that they create expectations that certain behaviour or levels of performance will result in valued outcomes, avoidance of negatively valued outcomes or no outcomes at all. The extent that these outcomes that are cognitively associated with behaviour and are valued either positively or negatively by the individual means they take on a motivational force.

Learning through modelling (observational learning or learning through verbal instruction) is governed by four component processes.

- The attentional process, determines what one selectively observes from modelling influences in the environment.

- The symbolic retention in memory of activities that have been observed. Observed activities are transformed into visual or verbal images.
• The conversion of symbolic representation into appropriate behaviour.

• The motivational process is where information about response consequences obtained through observation is used to form both efficacy expectations and outcome expectations.

Careful thought must be given to correctly incorporate the above in any Case Study protocol. A series of questions would not be sufficient in capturing the cognitions of individuals in the firm. Of equal importance is the environment of the firm including decorations, pictures and interpersonal behaviour.

Self-regulation, the third process by social learning theory is primarily a motivational process concerned with maintaining behaviour once it is learned. In the absence of immediate external reinforcement some behaviour is maintained by anticipation of its consequences, but most is maintained by the process referred to by Bandura (1977) as self-regulation.

Self-regulation consists of several sub processes.

• Establishment of specific goals and sub goals where motivation is maintained by anticipation of long-term goal achievement and assessment of progress in terms of sub goals.
• Establishment of standards of performance regarding the quality, quantity, time, and expense criteria by which goal accomplishment is to be judged.

• Establishment of environmental conditions that serve to maintain intended behaviour.

• Self-control of thought processes by imagining the rewards and punishments associated with effective and ineffective performance. This serves to maintain goal-directed work until the performance matches or exceeds the person's imagined standard.

• Provision for the evaluation of the adequacy of behaviour. This information serves as a basis for comparing performance with established goals.

• Self-reinforcement takes the form of either self-evaluative reactions or tangible self-administered rewards and punishments.

The effect of self-regulation is critical in designing Case Study protocol based around a questionnaire. Simple yes and no answers would not be sensitive enough to include for the effect of self-regulation.

The complete understanding of an individual's cognition is a complex subject and well outside the scope of this work. What is understood by 'world view' is the modelling of a human activity system as described in Chapter 2. What the researcher is doing in developing a human activity system model is not trying to describe what exists but is modelling a view of what exists. The
identification of the point of view of an individual makes the activities and performance of the system meaningful.

The words and language used by the individuals and the situation is therefore very important in determining the validity of the information collected. Although premature, it is important to point out that it is necessary to carefully collect these individual cognitions based around a carefully constructed semi-structured interview structured around the typical goals of a firm. This mapping of goals will be discussed at length later in the Chapter.

Individuals do not act in isolation, but the sum of individual cognitions do not add up to the 'world view' of the group as a whole. The behaviour of groups of individuals has been identified in research and described as group efficacy. Group efficacy is a group's belief in its ability to perform effectively (Lindsley, Brass and Thomas, 1995).

Through observational and self-report techniques researchers have established that group efficacy is a meaningful and measurable group attribute; levels of group efficacy vary even among groups that appear to have equal skills, abilities and resources (Campion, Medsker and Higgs, 1993).

However, unlike the relatively straightforward relationships obtained at the individual level, the group level relationships between group efficacy beliefs and group effectiveness that have been observed are
modest, complex and apparently moderated by other factors in the workplace (Campion et al, 1993).

Theoretically it seems likely that group efficacy is distinct from the individual beliefs group members hold about themselves or their group, because group efficacy arises through group interaction and the process of collective cognition.

The approach adopted by this research is towards capturing the effect of cherished beliefs held by RIBA qualified staff within a firm. This research acknowledges the potential problem between the relationship between group cognitions affecting efficacy and effectiveness and individual cognition. It is important to identify a boundary around the research and so moderate the effect of larger cultural context if the work is to be meaningful. This research is therefore limited to those firms that are listed in the RIBA Directory of Practices (1998) and the interviews are carried out with RIBA qualified architects. Group efficacy therefore is not included in the study but rather the cumulative beliefs are collected of individual architects and patterns identified in terms of mapping social efficiency.

The purpose of this Chapter is to establish a framework for the mapping of goals at strategic, management and individual levels in a firm. The map will form a model from which the interpretation of goals by individuals within the firm is possible. The semi-structured interview will explore the 'needs process' which forms the basis of individual goal-seeking behaviour by architects within architectural businesses. The effect
of secondary goals within the firm can be plotted and patterns of behaviour explained more fully.

It is necessary therefore to investigate where do needs come from in individuals and in businesses. In individuals the psychological energy to behave in a particular way comes from the needs systems that exist in our personalities. Although businesses do not have personalities, every business is a purposeful organisation directed towards the achievement of objectives and so exhibits identifiable patterns of behaviour.

Models of Personality

Understanding an individual’s relationship with the firm and its environment is complex. This stems from the web of personality theories at hand. While it is well beyond the scope of this work to try to make a summary of these theories, it is possible to provide an indication of alternative theories at hand by referring to Maddi’s (2000) comparative analysis.

Maddi points to three competing models of individual personality:

- Conflict model,

- Fulfilment model, and

- Consistency model.
The conflict model refers to the work of Freud and others who have argued that the behaviour of individuals is a result of conflicting forces within man. Accordingly life is a compromise, which at best involves a dynamic balance between the two forces (love and aggression) and at worst involves a foredoomed attempt to deny the existence of one of them. Individuals are motivated to behave in ways to reduce the tension caused by this conflict.

In the fulfilment model, among whose proponents is Maslow (1943), there is a presumption that a single force toward growth and actualisation shapes our behaviour. Conflict is seen as a possible occurrence, but one, which represents an unfortunate failure. Here tension is not associated with conflict that has to be reduced, but instead tension is actually sought, because the greater the tension the more vigorous is the expression of the drive toward self-actualisation.

The consistency model is based on the work of McClelland (1953). In essence it is not concerned with driving forces, but emphasises the influence of information from the outside world. If the information is consistent with previous expectations, the individual feels pleasure, but if there is inconsistency between this information and their expectations, the individual strives to decrease the discomfort this induces. The treatment of this relationship between tension and behaviour means the consistency model falls between the extremes of the other two models.

The organisational psychologists who have focused on the interface between the individual and the organisation...
have adopted implicitly one of two strategies to deal with this complexity. One strategy has been to accept one theory as valid and to work from there. As an example McGregor (1960) developed his Theory Y assumptions about organisation and management based on Maslow's (1943) version of the fulfilment model.

The other strategy has been to develop an eclectic model, which combines elements of several theoretical approaches. For example, Porter and Lawler (1968) slice motivation theory into drive— or what Maddi would call conflict—theory and expectancy theory; they recognise that it was also useful to build elements of drive—theory into their model.

This eclectic approach is in essence the one which Lorsch (1973) in his research chose to adopt because he pointed out:

"It provides us with what seems to be the most accurate map we can find for dealing with the territory of man’s interface with his organisational work setting. In developing our eclectic model of the individual, we have tried to utilise those assumptions about human behaviour, which our reading of the literature indicates are widely shared."

(Lorsch, 1973)

He went on to add:

"We recognise elements of the consistency, conflict, and fulfilment approaches in our model. We have also avoided, as far as possible, becoming
involved in speculating about the internal structure and dynamics of personality systems. Recognising that all we would be able to measure are individual feelings, interests, and attitudes, we have not gone very far in speculating about which are intrinsic and which are learned, or how one classifies them in terms of the structure of personality."
(Lorsch, 1973).

The object of this thesis is to map the 'worldview' or cognition of the firms and the architects within those firms. This research is collecting specific individual feelings, interests, and attitudes, regarding the questions in the semi-structured interview and compares them with the firm's beliefs. Careful analysis of the answers goes toward explaining patterns of behaviour within the firm. The research does not go very far in speculating about which are intrinsic and which are learned, or how one classifies them in terms of the structure of personality. Characteristically many architects' cherished beliefs will be learned but this will be identified during the interview.

This research goes further and identifies the interface between the firm and the environment by a list of questions put to the representative of the firm. This mapping process captures the perceptions of the firm and the architects within that firm.

The questions put to the architects will, therefore, be based on the fulfilment model; it is assumed that architects will be driven by a need towards self-fulfilment. This Chapter will later explore research
that identifies patterns of behaviour by firms that goes some way to describe multiple goal-seeking behaviour and more importantly the ranking of these goals by firms. Firms behave in particular ways but this behaviour cannot be said to be driven by personality, unlike the individuals that comprise the firm.

The eclectic approach will not be ignored, however, in this research. It is a fundamental in qualitative case study research to accurately interpret the information collected. This interpretation is carried out by multiple sources of evidence, and in which a simple eclectic model will be included in the participant as observer technique, which will form part of the research protocol described at length in Chapter 6.

The Source of Psychological Energy is in the Needs Systems

It is necessary to understand what drives individuals to behave in particular patterns. The fulfilment model describes tension being sought by an individual in order to develop towards self-actualisation. It is fundamental to this research that an identifiable group of individuals, typically architects, form the group of individuals suitable to be studied in the research. The greater appreciation of architects' needs process will go towards explaining particular behaviour patterns and enable their behaviour to be modelled, so forming the basis of the semi-structured interview.

The energy that most researchers speculate is the source of the drive to self actualisation is assumed to be
located in the need systems of the personality. Where these need systems come from is a difficult question to answer, and beyond the scope of this work. However, no one disagrees with the notion that personality manifests energy.

Personality therefore has energy. The energy in every need system is always ready to release itself, to bubble over. But so long as the boundary of the need system is strong enough, the energy will not release itself. When the energy bubbles over, the need system is in action. Need systems that are quiet and not in action are inert needs or potential active needs.

The amount of energy in every need system differs. The more important a need, the more potential energy it has to release. By watching people behave we can infer from their behaviour what need system is in action.

A need is described as being in action or not in action, because all our needs are rarely in action at the same time. Personality scientists call this action, this bubbling over of energy, tension. A need that is in tension, is a need in action. Psychologically healthy people usually have certain goals of self-actualisation or enhancement. They are willing to accept temporary frustration if it will help them in the long run. Thus they may at times be more interested in sustaining and directing tension than in escaping from it. This is an important point, as some personality types actually seek tension. Personality types will be explored further in Chapter 6 and used as a basis for justification of the research model.
An interesting point is raised by Goldstein (1952) who points out that it is important to distinguish between 'pleasure by release of tension' and the active 'feeling of enjoyment'. This relates directly to a typical variety of individual's 'world view', e.g., 'live for today', or 'live for tomorrow'. Work by Hackman & Oldham (1980) identifies why some workers are motivated by complex and demanding jobs and some are not.

In order to model these needs it is necessary to identify and rank them in order of importance. The needs may be described as goals held by individuals, who move from one goal to another. The personality of the individuals included in the study is therefore important. A group of architects may reasonably be expected to be seeking tension in their move towards higher level goals and eventual self-actualisation, they are 'living for tomorrow'. In the study of architects' behaviour therefore it is considered the use of a fulfilment model is justified.

Modelling Individual Goals

In the fulfilment model there are at least five sets of goals, which are called basic needs. These comprise physiological, safety, love, esteem, and self-actualisation. In addition to this individuals are motivated by the desire to achieve or maintain the various conditions upon which these basic satisfactions rest and by certain more intellectual desires.

These basic goals are related to each other, being arranged in a hierarchy of prepotency. This means that
the most prepotent goal will monopolise the consciousness and will tend to effect the 'world view' of the individual when it is in action. The less prepotent needs are minimised, even forgotten or denied. But when a need is fairly well satisfied, the next prepotent higher need emerges, in turn to dominate the 'world view' of the individual. Gratified needs are not active motivators.

In order to model this hierarchy of needs a framework is required. One accepted theory was established by Vroom (1964) and complements the approach used in this research being based on a fulfilment model.

Vroom's Expectancy Theory assumes that:

"The choices made by a person among alternative courses of action are lawfully related to psychological events occurring contemporaneously with behaviour."

(Vroom, 1964)

In other words, people's behaviour results from choices among alternatives and these choices (behaviours) are systematically related to psychological processes, particularly perception and the formation of beliefs and attitudes. The purposes of these choices generally are to maximise pleasure and to minimise pain.

Vroom's (1964) theory has three key mental components that are seen as instigating and directing behaviour. Referred to as Valence, Instrumentality and Expectancy, each of these components is in fact a belief. This will be examined in detail in Chapter 5.
In order to complete the model it is necessary to understand patterns of behaviour of firms. It is necessary, therefore, to conceptualise the firm's relationship to its environment. The literature regarding firms' behaviour is not as apparent as the literature regarding individual behaviour. Firms do not have personalities but do exhibit identifiable patterns of behaviour.

Models of Firms' Goals

The literature identifies that firms do behave in predictable patterns which can be categorised. The reasons for these behaviour patterns must lie within the firm.

Every business is a purposeful organisation directed towards the achievement of objectives (Fellows et al, 1983). Given this definition, these objectives may be identified by statements or behaviour of the firm or its managers. Objectives are the desired future conditions that the business strives to achieve and constitute the critical first step in the formulation of a business strategy. These desires or goals once identified may be prioritised and classified into a hierarchy of pre-potent desires or objectives. Two classes of objectives for business organisations have been widely recognised: economic and non-economic.

The focus of the classical microeconomic theory of the firm was on economic objectives — specifically that the firm could be represented by a single entrepreneur,
whose sole objective was to maximise profits. This view of economic objectives has, however, been increasingly challenged.

The economy has become more sophisticated and direct challenge to microeconomic theory has grown. The growth of joint stock companies and the subsequent separation of ownership from control, has brought about a new concept of the economic objective of the firm. The dilution of ownership due to a large number of shareholders has given control to professional managers who have little equity stake in the company and therefore little incentive to maximise profits (Fellows et al, 1983). It is considered that professional managers' strategy for the firm is maximum growth by which they benefit more directly through bonuses but maintaining a minimum acceptable level of profit for the shareholders.

This is an important point and the selection criteria of the firms included in the series of Case Studies in this research had to allow for this type of variable. The actual eventuality was that none of the firms in the series of Case Studies were joint stock companies.

A further challenge to profit maximisation came from Drucker (1958) who proposed survival as the central purpose of the firm. Drucker's thesis is that to ensure long-term survival a firm may have to accept short-term objectives that conflict with profit maximisation.

The research into business behaviour contrasted with that of individual personality theory. It is noticeable that firms display a type of pre-potency towards goal-seeking behaviour.
Work by Channon (1976) examined patterns of behaviour of construction firms. The ease with which an individual may enter the construction industry, coupled with the prospect of high rewards for hard work, have encouraged the formation of a large number of entrepreneurial-led firms. The majority of these firms have remained small but, according to Channon’s 1976 Study, many of the largest construction firms were dominated by entrepreneurs or by their descendants.

It might, therefore, be expected that profit maximisation would be a prime objective of construction firms if classical economic theory is correct, but in practice this is seldom true. There is evidence that, for the most part, construction firms do not seek to maximise profits but rather, pursue other objectives. Above a certain level of profit the entrepreneur may value his leisure or partaking in civic duties more highly than profit.

There is considerable support in the contracting industry for the idea that contracting is a 'way of life' and that many contractors would not wish to cease business even if they could obtain a higher return on their capital and labour by using it in some other way (Hillebrandt, 1974).

There is little doubt that Drucker’s survival motive is dominant in construction firms of all sizes. In times of recession in the industry there is a well-known tendency for contractors to 'buy' work by submitting tenders for building projects at cost or less to maintain their workload and ensure survival.
The literature has identified that construction firms have wider objectives than previously considered in classical economics, and evidence of pre-potency of goal-seeking behaviour described in construction firms.

The Case Studies of architectural firms, therefore, should be sensitive enough to look for this type of behaviour in architectural businesses.

A list of objectives can be established from the literature to form the basis of the semi-structured interview, and used to map the goals of the firm.

Typical economic objectives for a contracting firm given by Barnard (1981) are:

- growth of turnover.
- earnings.
- market share in existing markets.
- number of markets in which the firm operates.
- stability of annual gross turnover.
- gross profit.
- return on investments.
- fixed assets or shareholders equity.
• utilisation resources.

Non-economic objectives are less tangible and are often a reflection of the basic philosophy of the firm's founders or owners (Fellows et al, 1983). In addition, there are the objectives of other participants in the firm. The firm is seen as a collection of divergent interests — managers, workers, shareholders, suppliers, clients, etc., — each with their own objectives. The reconciliation of these interests is a major part of the strategic management role. These objectives will act as a modifying influence on the primary economic objectives. This modification may be the outcome of direct management action in recognition of the participant's wishes or be arrived at by negotiation between a 'coalition' of the firm's members, as envisaged by Cyert and March (1963).

Typical non-economic objectives for a contracting firm, put forward by Barnard (1981), are:

• internal political retention of control by the owners.

• external political to avoid intervention by government.

• to meet aspirations of employees.

• develop employees' full potential.

• serve clients and the general community.
- maintain a good reputation.

Goals occur at different levels in the firm, put simply at strategic level, management level and individual level within the firm. How clear the goals are is a primary managerial function but goals are always set, at least implicitly.

The strategic level goals emphasise desired future conditions, which the organisation tries to achieve. Management level goals are more specific goals and include, for example, production quantities, cost targets, sales quotas, and completion deadlines. The philosophy of the firm, or its mission or purpose is typically kept in the 'back of the mind' as a general guideline for operational goals.

Having established from the literature a framework and list of typical goals that can be found in every firm, how can this list be applied individual Case Studies?

**Modelling Individual Firms' Goals**

In order to gain a broader understanding as to why firms behave in a particular manner the Case Studies must be carefully selected from the large number of firms in the market place for architecture.

A selection process based on the RIBA Study will be the starting point for the categorisation of firms included in the series of Case Studies carried out in this research. Patterns of behaviour already identified in
literature and work by the RIBA has been used to establish the categories of firms used in this research.

The RIBA strategic study of the profession identified a number of categories of firms based on the work of Maister (1987), which was introduced in Chapter 3 of this thesis. The process the RIBA used is more fully described below.

The RIBA study concentrated initially on the strategic level goals of the firm and the philosophy of the firm as the parameter to enable categorisation. In recognition of the many cultural and operational differences found in architectural practice, Maister et al (1987) have developed a framework that distinguishes two main types of culture and three main ways in which architectural firms execute their projects ('design technologies') identified in Figure 3.2 in Chapter 3. This was the approach adopted by the RIBA study.

Their framework leads to a matrix of six core 'positionings', each characterised by a different mix of appropriate management requirements which was fully described in Chapter 3.

With respect to their culture and the underlying ethos motivating them, most firms included in the RIBA Strategic Study Phase 2 (1993) fell cleanly into one of the two categories of Maister's framework, namely practice-centred businesses and business-centred practices. The firms described in the RIBA Study Strategic Study Phase 2 (1993) as Business-&-Design but Specialist-Co, however, seemed to straddle the two categories.
Practice-centred businesses are those ultimately driven by the exercise of the profession or occupation as an architect. They included the firms described by the RIBA Strategic Study Phase 2 (1993, p.40) as:

- Small-Design-Co,
- Research-Co,
- Social-Design-Co,
- Trad-Co,
- Specialist-Co,
- High-Tech-Co.

These firms' 'philosophy' placed enormous value on 'total commitment to the building', 'being a bloody good designer', being 'a practice that sets the standards, both academically and in practice', 'realising clients' dreams, giving clients more than they'd ever thought they'd get.' RIBA Strategic Study Phase 2 (1993, p.46)

Business-centred practices tend to see what they do as a more commercial activity. They included the firms described by the RIBA Study as:

- Multidisciplinary-Co,
- Quality-Co,
**Design-\&-Architecture-Co.**

In contrast these firms' 'philosophy' was often with a focus on a quantitative bottom line; they tended to express monetary goals as a priority. Albeit not an exclusive one: e.g. 'to make a sensible living despite the profession in which we find ourselves', 'to provide high quality architectural services ... at a profit', 'to be knighted for services to architecture and to be exceedingly wealthy' RIBA Strategic Study Phase 2 (1993, p.46)

The RIBA study reflected earlier work done by Channon's 1976 study and comments by Hillebrandt (1974) about contracting firms as a 'way of life'. The RIBA Study (1993) found for a large number of practices and architects, size and money are not the major-motivators nor reflections of success.

However as the study was carried out in 1992, two points are of note which were raised by the RIBA. Firstly, possibly as a result of recession, all firms appeared to be becoming increasingly aware of the bottom line (and in this sense becoming increasingly business-led) recognising that money ultimately determines possibilities. Secondly, there can sometimes be differences between the values of the directors and those of staff.

There was less consensus amongst practices in the RIBA Strategic Study (1993) in defining where they were positioned on Maister's (1987) matrix in terms of their 'design technologies'. These Maister describes as follows:

*Factors Affecting the Problem of Design*
• Strong delivery (procedures) firms were organised to provide an efficient service on similar or routine basis. Their project technology is designed to mass-produce previous solutions with reliable technical cost and time management.

• Strong service firms were organised to deliver experience and reliability, particularly on complex projects. Their project technology was often designed to provide a complete service to clients who wanted to be closely involved in the process.

• Strong ideas firms were organised to deliver singular expertise or innovation on unique projects. Their project technology flexibly accommodated the nature of any assignment, and often depended on one or a few outstanding experts or 'stars' to provide the last word.

The RIBA Strategic Study (1993) pointed out it is the emphasis that makes the difference. At their most successful, firms specialising in each 'technology' still exhibit strengths in all areas of design, service and delivery. This may be why a number of practices in the study wished to place themselves in several boxes. In reality, however, the RIBA Strategic Study (1993) found few, if any, firms seemed actually to deliver all to the same standard.

An alternative method of categorising firms and perhaps a more obvious one is the legal status of the firm. This can offer a useful parameter for categorisation. The
formal definition the firm uses to describe itself falls into one of the following categories.

- The single person enterprise: the owner of the firm is the firm, at least from a legal viewpoint.

- Partnerships: a partnership will normally be under a formal partnership agreement.

- Private companies: the Companies Act 1980 defines a private company as a company that is not a public company. The majority of private companies are limited.

- Public Companies: to go public a firm must not only satisfy the statutory requirement of the Companies Act 1980 but also the Stock Exchange.

- Co-operatives: the formal establishment of a co-operative is valuable in that it gives the members limited liability.

Firms move about their environment. They are not static, they develop and grow becoming more sophisticated in their strategy and 'philosophy'. Woolven (1978) identified five major types of strategic decision-making systems used by construction firms. These categories have been applied in this research to architects' firms:

- Ad hoc, there is a lack of overall direction or strategy in the firm.
• Extended budgeting, top management’s concern is still on operational matters rather than strategy.

• Partially formalised, there is now a positive formalised planning effort with top management devoting time, money, and energy to planning activities.

• Formalised planning, is not only formal, it is also regular.

• Strategic management, the basic philosophy of strategic management is that strategic thinking should transcend the whole organisation.

Further work in the area of business growth, was carried out by Churchill and Lewis (1983). This study has echoes of Maslow’s (1943) hierarchy of needs. Firms were seen, in reality, to exhibit characteristics of multiple goal-seeking, and choose the goals they prefer, selecting higher level goals as the firms became more successful.

It cannot be said that firms have a personality, or that firms displace a previous goal in favour of higher level goals once the previous goal has been satisfied going on to exhibit a drive toward self actualisation. The philosophy of the firm, however, has been shown to be important when categorising a firm. The approach used by the RIBA Strategic Study (1993) using Maister’s (1987) study as its 'key work' is therefore justified.

Work by Drucker (1958) challenging the classical economist’s view is supported by work of Churchill &
Lewis (1983) which echoes the work of Woolven (1973). The RIBA (1993) Strategic Study used a framework to categorise firms into stages of development. Understanding a practice’s positioning in terms of such stages of development appears to be a useful indicator of the key concerns likely to be facing it.

- **I Existence**, the principals tend to do everything directly supervising subordinates and the strategy is simply to remain alive.

- **II Survival**, the problem shifts from mere existence to the relationship between revenue and expenses.

- **III-R Success-rest** basic financial, marketing and operational systems will be developed.

- **III-G Success-growth**, the owners typically risk all in going for growth.

- **IV Take-off**, problem here is how to grow rapidly. The organisation will typically become decentralised. The owner and the practice’s activities may become reasonably separate, although the firm is likely to be dominated by the owner(s)’ presence and financial control.

- **V Resource maturity**, concern is consolidating and controlling the gains.

Further work in this area by Miles and Snow (1978) identify that as firms grow management responds to their environment by developing many alternative strategies.
and corresponding structures. However, they suggest that patterns do emerge and that there are several archetypes that seem to exist in many different industries.

- Defenders are organisations which have narrow product-market domains.

- Prospectors are organisations which almost continually search for market opportunities, and they regularly experiment with potential responses to emerging environmental trends.

- Analysers are organisations which operate in two types of product-market domains, one relatively stable, the other changing.

- Reactors are organisations in which top managers frequently perceive change and uncertainty occurring in their organisational environments but are unable to respond effectively.

Unlike the individuals that comprise firms, it is not easy to explain the reasons for the firm's energy and behaviour. It is, however, possible to construct a framework from which the multiple goal-seeking behaviour patterns of individuals and the firms that employ them can be mapped and interpreted.

**Variables between Firms**

It is essential to carefully select the firms to be included in the series of Case Studies. As has been identified in the literature, firms have higher level
goals than maximising profits. The obvious starting point, therefore, is the legal entity of the firm and as we have seen as firms grow and prosper the 'philosophy' of the firm begins to play a more important role in categorising a firm. It is this philosophy that is of interest in this research towards explaining the paradox identified by Winch & Schnieder (1993) in Chapter 1.

Categories of Firms included in RIBA Strategic Study (1993)

The starting point in order to categorise firms is the philosophy of the firm. This is perhaps better described as the culture of the firm. In this work the culture of the firm is based on the RIBA Strategic Study (1993) which draws heavily on the work of Maister as described earlier in this Chapter.

The RIBA Strategic Study (1993, p.40) carried out Case Studies of several architectural firms. Four of the firms included in the study are briefly described below.

Traditional; Trad-Co, formed in 1965, and for much of its existence a multi-partner practice with its individual fiefdoms, Trad-Co is now incorporated and under its third generation of leadership, with 29 staff. Appears to be at success rest stage, achieving sufficient market presence to ensure survival and economic health. The culture and values of the firm comprise a practice-centred business, ultimately driven by the exercise of the profession or occupation as an architect and strong on service. Although a limited
company they functioned as a partnership with organisational decision-making by consensus. Leadership was broadly based with partners playing facilitative and managerial roles. The firm aimed to retain staff and maintain a low level of staff turnover.

Named or signature; High-Tec-Co, is a design-led practice with an international reputation for modern architecture, with a staff of 52. Appears to be at success rest stage, achieving sufficient market presence to ensure survival and economic health. The culture and values of the firm is a practice-centred business ultimately driven by the exercise of the profession or occupation as an architect and strong on ideas. The firm was more operational and project based in their management and thinking. The key driver was the design ideas and creativity of their owners. A single individual dominated the practice in leadership terms, although was now structured to permit other directors. The firm prefers high involvement clients with whom they could have rapport.

Multidisciplinary-Co; an international, 'integrated design and management company' of 50 staff. Multi professional and comprising architects, surveyors, engineers, project managers, management consultants, and planners, the practice takes an extremely broad and innovative approach in satisfying the clients' needs for the procurement of buildings. The firm is at take-off, the key problems are how to grow rapidly and to finance growth, and relate to whether the owners can delegate authority to improve managerial effectiveness and whether there will be sufficient cash. The culture and values is a business-centred practice tending to see
what they do as a commercial activity and strong on service. The firm had clear goals and objectives with regards to their overall size and financial performance goals. They showed less loyalty than other firms did to staff when workload declined. Typical clients preferred less involvement, expecting to delegate execution of the project after making the selection.

Commercial; Integrated design and management, the study did not identify a business-led firm strong on delivery providing an integrated design and management service. The study speculated that the firm would be a firm organised to provide a highly efficient service on similar or more routine assignments, or to clients who seek more of a product than a service. Their project technology is designed to repeat previous solutions over and over again with reliable technical, cost and schedule compliance. The strategic study predicted such a firm would be similar to the multi-disciplinary firm and a hypothetical firm has been included based on this assumption.

The RIBA Strategic Study (1993) recognised that a selection criterion was necessary in order to enable identification of suitable firms to be included in their series of Case Studies.

An abstract of the variables that differentiate the firms in the RIBA Strategic Study (1993) has been tabulated (Table 4.1) and will be used as the basis for the selection of the firms to be included in this study. The variables, which are fully explained in Chapter 6, are chosen by the experience of the researcher (with 15 years in industry as a professional) and are as follows:
• Structure

• Services offered

• Strategic planning

• Ownership

• Decision making

• Reward mechanisms

• Job costing

• Satisfaction

• Philosophy

The table in Table 4.1 is an abstract of the description of the categories of firms included in the RIBA Study separated into the variables identified.

The Determination of the Initial Case Study Proposition

The study carried out by the RIBA strategic study made several predictions on how it expected firms to change as they changed in their ways of thinking towards a more strategic approach. This research selects firms similar to those included in the RIBA Study Phase 1 (1992) and Phase 2 (1993), based on the information in the reports.
The way this research is designed based in the fulfilment model means that expectations can be more easily identified in the Case Studies, and therefore go some way to answering questions raised in the RIBA Study.

This study is equipped to identify goals in the semi-structured interviews utilising social learning theory to capture the firm's world-view. The first interview with the firm's representative identifies the goal attainment of the business included in this research. As such this interview is defining the boundary layer between the firm and its environment. The major purpose of the present study is to determine whether the effects of one aspect in the environment (the efficacy beliefs of RIBA members as a group) vary with the strategic characteristics of the RIBA members as a business.

General Proposition

This leads to the development of the first part of the general proposition in the dissertation, which states:

**Proposition I**: that there is an interaction between those environmental conditions which are associated with the business goal attainment and certain strategic characteristics of the participant business.

Consequently the effects of each variable can be understood through a simultaneous study of both.
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**Table 4.1: Dependent Variables abstracted from RIBA Strategic Study 1993**

**Factors Affecting the Problem of Design**

**Case Study A**
- Trad-Co
- Dependent Variable: Trad-Co
- Ownership: Trad-Co
- Decision Making: Trad-Co
- Reward Mechanisms: Trad-Co
- Job Costing: Trad-Co
- Marketing: Trad-Co
- Satisfaction: Trad-Co
- Philosophy: Trad-Co

**Case Study B**
- Multi partner, individual fiefdoms
- Dependent Variable: Multi partner, individual fiefdoms
- Ownership: Multi partner, individual fiefdoms
- Decision Making: Multi partner, individual fiefdoms
- Reward Mechanisms: Multi partner, individual fiefdoms
- Job Costing: Multi partner, individual fiefdoms
- Marketing: Multi partner, individual fiefdoms
- Satisfaction: Multi partner, individual fiefdoms
- Philosophy: Multi partner, individual fiefdoms

**Case Study C**
- Trad-Co
- Dependent Variable: Trad-Co
- Ownership: Trad-Co
- Decision Making: Trad-Co
- Reward Mechanisms: Trad-Co
- Job Costing: Trad-Co
- Marketing: Trad-Co
- Satisfaction: Trad-Co
- Philosophy: Trad-Co

**Case Study D**
- Trad-Co
- Dependent Variable: Trad-Co
- Ownership: Trad-Co
- Decision Making: Trad-Co
- Reward Mechanisms: Trad-Co
- Job Costing: Trad-Co
- Marketing: Trad-Co
- Satisfaction: Trad-Co
- Philosophy: Trad-Co
### Table 4.1: Dependent Variables Abstracted from RIBA Strategic Study 1993

<table>
<thead>
<tr>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
<td><strong>Commercial-Co (hypothetical)</strong></td>
</tr>
<tr>
<td><strong>Money</strong></td>
<td>Individual fiefdoms</td>
<td>Day to day</td>
<td>Day to day</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
<td><strong>Commercial-Co (hypothetical)</strong></td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Multi partner</td>
<td>Matrix</td>
<td>Multi partner</td>
</tr>
<tr>
<td></td>
<td>Full agent, traditional</td>
<td>Individual</td>
<td>Full agent, traditional</td>
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<td></td>
<td>Team</td>
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<td></td>
<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
<td><strong>Commercial-Co (hypothetical)</strong></td>
</tr>
<tr>
<td><strong>Services Offered</strong></td>
<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
<td><strong>Commercial-Co (hypothetical)</strong></td>
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<td></td>
<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
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<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
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<td><strong>Trad-Co</strong> (Traditional)</td>
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<td><strong>Trad-Co</strong> (Traditional)</td>
<td><strong>Multidisciplinary-Co</strong> (Multidisciplinary)</td>
<td><strong>Commercial-Co (hypothetical)</strong></td>
</tr>
</tbody>
</table>
The reasons for the predictions in Case Studies A, B, C, and D are described in each Case Study included in Chapter 7. The predictions will then be confirmed or discarded through the Case Study process. The predicted reasons for the similarities between the Case Study based on the RIBA strategic study and Case Study will be described in each Case Study.

Further Propositions

The RIBA Strategic Study has provided this proposition which is being tested here. The proposition is that

**Proposition II:** the perception of the RIBA (1993, p.61) is that of being driven by the ethos of wanting to practice architecture and to design the challenge seems to be how to find ways of improving what they already did rather than to seek any more fundamental change. This will be a predominant perception held by the architects in Case Study A.

**Proposition III:** the perception of the RIBA (1993, p.48) that the right project manager with a sound understanding of the building process could assist architects to 'concentrate on what we are good at', will be a predominant perception held by the architects in Case Study B.

**Proposition IV:** the perception of the RIBA (1993, p.49) that architects are perceived to have a distinctive competence in design. However, this is not always recognised by clients as being of much value. This was, in any case, effectively given away for free, as an enticer, by many in the profession, will be a

Factors Affecting the Problem of Design
predominant perception held by the architects in Case Study C.

**Proposition V:** derived from the RIBA Study (1993, p.49) "that the financial, job costing and programming / project management skills are seen as an integral part of architecture . . . will be a predominant perception held by the architects in a 'Commercial Firm.'"

In the light of these propositions, the case put forward by the RIBA for change within the way of thinking by architectural firms in the early 1990s can be understood. The sensitivity of the qualitative approach adopted by this research identified in Chapter 5 will go towards explaining why firms have or have not changed.

**Summary and Conclusion**

This Chapter provides a deeper insight into the process of multiple goal-seeking within firms. The decision-making, organising, goal setting, controlling and rewarding all affect the performance of organisational members. This aspect of individual behaviour has been explored in terms of social learning theory and the link made between the outcome of individual's expectations and its effect on firm's performance.

The concept of 'world view' has been refined by a review of the process of the formation of individual cognition. The anticipation of long-term achievement acting as maintenance for the motivation of long-term goals adds complexity to the establishment of specific goals and sub goals in individuals. Although interesting, the
understanding of each individual's cognition is a complex subject and outside the scope of this work; the firm is considered as a model not the individual. The importance of self-regulation by individuals in the context of the performance of goals within the firm is acknowledged as being critical in the interpretation of results and development of a research approach sensitive to this will be considered in Chapter 5.

The process of group efficacy has been identified as a source explaining the formation of collective beliefs within the environment potentially influencing the firm. The RIBA has been identified as a group in the environment influencing architects' beliefs. The RIBA Strategic Study of the Profession has therefore been used as a source of propositions in order to identify if the group beliefs in the study will occur in the firms as predicted by the RIBA. This will indicate if any change in the psyche of the architects has occurred.

The behaviour of individuals and firms has been explored and the goal-setting process examined. The fulfilment model has been identified as a basis from which a framework can be developed upon which the goals at strategic, management and individual levels within the firm can begin to be developed further in Chapter 5.

The necessity for multiple sources of information has been recognised as important, in order to validate and interpret the research results and a simple eclectic approach will be an important part of the observer as participant technique developed in Chapter 6.
The behaviour patterns of firms have been considered alongside the behaviour patterns of individuals. A model in the form of a Social Efficiency Map will be developed in Chapter 5, which combines the two. The identification of the behaviour patterns of the firm will be by a lengthy semi-structured interview. This forms part of a research protocol combining the categorisation of the firm, the identification of variables, the identification of goals, the firm's history and the technique of participant as observer by the researcher. The collection of the behaviour patterns of the individuals will be in contrast relatively simple. The research protocol is explained in Chapter 6.

If the research is to be meaningful, the Case Studies must be carefully selected and for the right reasons. These variables have been identified and based on the variables in the RIBA Strategic Study (1993).

The Case Study propositions are taken from the RIBA Strategic Study 1993 and will identify if the 'world view' or behaviour patterns of the firms have changed. The role of the architect as expected by the RIBA in 1993 was anticipated to be more specialist and a split in design and design implementation to have occurred, and the subsequent improvement in performance by the firms realised.
CHAPTER FIVE

THE RESEARCH FRAMEWORK

Introduction

The formation of 'collective beliefs' by an assemblage of groups outside the natural boundary of the firm was introduced in Chapter 4. This concept of an environmentally sourced agent whose group efficacy influences the firm's behaviour will be further developed in this Chapter. A framework will be developed within which the influence of a belief located in the wider environment can be recognised and set in context of the firm. By mapping, its effect on the firm, and on the individuals that work in the firm, can be tracked.

This natural boundary between the firm and the environment will be investigated further. The possibility of the boundary layer being more permeable to certain beliefs held by certain agent groups in the environment than others is explored. A more sophisticated model is introduced in order to understand the effect of environmentally sourced beliefs on the various elements that comprise the firm.
The formation of goals and subsequent multiple goal-seeking behaviour within firms is modelled in greater detail than in previous Chapters. A typical set of goals is developed from the literature reviewed in Chapter 4.

The process of collecting these goals falls into two parts.

The first part is identification and categorisation of the firm through a semi-structured interview with a representative spokesperson of the firm. The results of this semi-structured interview are then analysed by the researcher and goals of the firm abstracted. These answers are condensed to a set of 25 model answers, which are then tabulated. The model answers comprise the vertical axis of the social efficiency map developed by Thompson et al (2001b). This is representative of the firm's perceptions of itself and its goals at the natural boundary layer between the firm and the environment.

The second part of the process is a semi-structured interview with the architects in the firm. The 25 standard questions used previously to model the vertical axis of the social efficiency map are again used but this time are asked directly by the researcher. The interviewee's answers form the basis of the horizontal axis on the social efficiency map developed by Thompson et al (2001b). The object is to ask 'do you think the firm should' questions and not 'what are the firm's goals' questions.
It is important to realise at this point there is no link between the firm’s goals as identified in the interview with the spokesperson of the firm, (first part) and the goals as perceived by the architects (second part). The researcher is dealing with an individual architect’s perception of what the goals of the firm are, not what the goals really are. So there can be no right or wrong answers, only the collection of individual perceptions. This approach enables subsequent analysis by the researcher and the explanation of certain observed behaviour patterns in the firm.

This unique approach looks at two dimensions of the firm. Firstly, the boundary between the firm and the environment, the vertical axis of the social efficiency map. Secondly, the perceptions held by individual architects in the firm, the horizontal axis of the social efficiency map. Recognition and identification of the influence of beliefs from two dimensions enables mapping of any congruence between the two.

Apparent congruence between the environment and the firm may not be always beneficial to the firm. Congruence between goals is also important as illustrated by analysis of the social efficiency map. Goals on the vertical axis of the social efficiency map must be congruent as well as the goals on the horizontal axis. The phenomenon of 'group think' is identified as explaining behaviour in firms where the axis are not congruent. Mapping this behaviour identifies complex patterns, careful analysis eventually explaining behaviour by a firm observed in the field.
The complexity of multiple goal-seeking behaviour is further explored within the firm. An 'on the face of it' positive goal, is identified by analysis of the social efficiency map, to turn from a positive outcome for the firm to a negative outcome for the firm. These goals are mapped through the firm and the reasons why identified by analysis of the horizontal axis of the social efficiency map.

The unique approach developed by Thompson et al (2001b) of social efficiency mapping of the firm will be established and explained in this Chapter. The interpretation and validation of the results will also be outlined in this Chapter along with the justification of the research instruments used. The methodology and research protocol will be fully explained in Chapter 6.

The series of Case Studies, research framework and the whole case study process is introduced in this Chapter but is more fully explained in Chapter 6. How the Case Study propositions (based on the RIBA Strategic study) will be incorporated into the appropriate Case Study will also be explained in this Chapter.

The technique of triangulation, pattern matching and explanation building to establish the validity of the intra-case and cross case studies will be introduced in this Chapter, but the analysis and interpretation of the findings will be fully developed in Chapter 6.
Systems approach and organisational theory

The concept of a boundary layer between the firm and the environment is not new, but forms part of a wider philosophy which provides an integrative framework for modern organisation theory and management practice.

The approach of systems thinking as it relates to organisation and management go back many years. Mary Parker Follet, writing at the time of the classical management theorists, expressed views characteristic of a systems approach. She considered the psychological and sociological aspects of management, described management as a social process, and viewed the organisation as a social system. These qualities are framed in a philosophy, which accepts the premise that the only meaningful way to study organisation is as a system (Scott and Mitchell, 1972).

The identification of key characteristics of organisational systems provides a link between the environment and the firm. A set of behavioural patterns can be identified and the outcome of predicted behaviour established.

This set of behavioural patterns provides a suitable framework for modelling business behaviour. Therefore a systems theory approach will be adopted in this thesis.

While not dismissing the validity of other approaches towards modelling business behaviour, the integrated framework offered by the systems theory approach provides a set of behavioural patterns that have been established in previous research. They can be easily
identified and the outcome of predicted behaviour more readily established.

Behavioural patterns identified by systems theory comprise subsystems or components. A system by definition is composed of interrelated parts or elements. This is true for all systems. Every system has at least two of the following elements according to Bertalaniffy (1968):

- Holism
- Open systems
- Input transformation output model
- Systems boundaries
- Negative entropy
- Steady state dynamic equilibrium
- Feedback
- Hierarchy
- Internal elaboration
- Multiple goal-seeking
- Equifinality
Systems and contingency concepts facilitate more effective diagnosis of complex situations (Kast and Rosenzweig, 1985).

**Factors affecting Goal Congruence**

Multiple goal-seeking behaviour within a firm is the main focus of management. The symmetry or congruence between the goals of the individuals and the firm is important in how effective the organisation will be. The effect of an individual employee's cognition of goal congruence is complex.

An individual is not just interested in personal goals, participation can be end in itself for them. It gives people a chance to be involved in decisions that are important to them, to utilise their abilities in a meaningful way and to be an important part of a team. This tendency for 'means to become ends', is described as Functional Autonomy (Allport, 1937). Participation in goal-setting was further explored by Tubbs (1986), who found that if workers were properly consulted and take the decision as a group they become committed to a new group norm.

There can be two situations in which a tendency to put individual goals over the firm’s goals can be a problem for participative systems. One involves a conflict in goals that splits the organisation horizontally. Perhaps the goals of owners or directors may split from those of the managers. The second situation involves conflicts that exist among departments or functions. Here lines of cleavage are drawn vertically rather than horizontally.
For many individuals there is what Tubbs (1986) has described as participation or what Maier (1963) terms a mutual interest. The various participants are confronted with a win-win situation. When managers and workers share common objectives, the infighting and company politics are typically replaced by problem solving. Synergy is a typical concomitant of such situations. There seems to be an optimal level which varies with the situation (Bass, 1981) but it was shown that goal-setting was more successful if combined with participation.

Synergy is not always desirable between various participants within a firm. Janis (1982) has written about a phenomenon that he calls 'group think'. He likens 'group think' to a disease that impairs group decision-making. The common ingredients included a tendency for decision-makers in each group to avoid raising controversial issues, to refrain from questioning one another, and to refrain from dissenting from an emerging consensus. Janis sees these ingredients as particularly characteristic of highly cohesive groups and of groups in which members share the same values and beliefs.

Diversity between group members is consistent with analytical thinking, as is 'a set of group norms' that legitimises intellectual challenge, disagreement and dissent in the search for answers to difficult problems.
Task Dependent Goals

The nature of the goal under examination is, therefore, important. Clearly some goals require substantial intellectual challenge; others require specialist knowledge or expertise. The cognitive ability of individuals to appreciate differences in goal-setting is critical towards achieving goal congruence.

Argyle (1989) makes the point that it seems that individuals are usually better at thinking up new ideas, and that group meetings are needed to evaluate them. This view supports the work of Thorndike who in the 1930s conducted a simple experiment showing that groups are vastly superior to individuals in solving crossword puzzles, but that individuals are superior to groups in constructing them (Thorndike, 1938).

Composing a symphony, writing a novel or painting a great masterpiece are far more similar to the design of a crossword puzzle than to its solution.

Thorndike's (1938) work illustrates different cognitive skills are required by architects when setting goals regarding creative designs. Order and sequence are of great importance in the initial design concept of an original architectural scheme. In contrast when solving the detail drawings each part of the design has but one correct answer, thus we can solve the puzzle of detail in any order without sacrificing efficiency.

The findings of Thorndike's (1938) work may explain why a single architect prefers to carry out an initial design concept and a team of architects works up the
detail drawings. Although outside the scope of this work, the design axiom may be representative of a continuum of this pattern of behaviour, the single architect carrying out all the work. The 'design axiom' may therefore have its roots in cognition.

Contingency Approach

The process of goal-setting can be seen as being very important and dependent on the management skills within the firm. It is important to highlight there is no one best way to set goals. As can be seen in the example of the crossword puzzle, managers during initial concept designs for schemes require more skill in managing individuals than during the relatively mechanical process of working-up designs and detail design.

There are some theorists who have put forward contingency theories that have attempted to be specific about the way in which styles of leadership should be related to the situational requirements. While this thesis is not specifically about leadership in general or even contingency theories of leadership, four examples of contingency theory are commonly used in practice. A measure of leadership within the firm is therefore required to complete the model of the firm.

- Fielder's Contingency Model (1967),
- Hersey and Blanchard's Situational Leadership (1982),
- House's Path Goal Theory of Leadership (1973),
• Vroom & Yetton's Model (1973).

This research will use the Hersey and Blanchard's Situational Leadership theory model, which will be explained in Chapter 6, and has been chosen mainly for its practicality of application. The research will develop the ideas of Vroom and Yetton to capture the congruence between Organisational and Subordinate Goals and will be explained later in this Chapter.

The contingency approach has been used in this research to model the 'fine tuning' process a firm uses to identify its goals described by Likert (1961).

Systems Theory and the Professional Firm

Work by Barrett (1987) identified the need for optimal organisational and management patterns for professional firms as acute if many are to survive in the increasingly competitive climate. Barrett (1987) carried out his work in the 1980s when there was pressure for the deregulation in the professions.

A model was developed by Barrett (1987) as an attempt to facilitate the diagnostic evaluation of professional firms by establishing a co-ordinating framework within which results from diverse sources could be absorbed, inter-related and tested. The root model, the starting point was taken as a pure Systems model relevant to all organisations. Central to the model is the assumption that the subsystems are interdependent.
Thus a change in any one could send ripples through the others. For equilibrium to be restored this may involve further changes in the initial subsystem. Barrett pointed out:

"This of course creates complications for any analysis in that there is no beginning and end, no single flow of causation through the subsystems'. Analysis would be very likely like a dog chasing its tail. From the problem-solving viewpoint it could be a mess."

(Barrett, 1987)

The proposed model by Barrett had reduced extension (professional firms only) but as a result Barrett maintained it should be possible to connote more. The subsystems were ranked in order of the increasing ease with which they can be changed. There was a mainstream of influence from the top of the list to the bottom, change following the course of least resistance.

Barrett also pointed out that relatively few major influences could have a large effect, and suggested the Pareto Principle as a reason for this. Pareto stated that a small number of causes is responsible for a large percentage of the effect, usually a 20% to 80% ratio.

The particular ordering of the subsystems in Barrett's model was derived intuitively by Barrett (1987), working for more than a decade in professional practice and was as follows:

- Goals and values
• Psychosocial

• Management

• Technology

• Structure

The intention of this thesis is not to consider professional firms in general, but specifically architectural businesses in relation to their social efficiency as reflected by their ability to achieve goal congruence. The action of defining closely the source from the environment that the beliefs being considered are drawn from, and the definition of these beliefs into the form of propositions narrows down the problem of 'dog chasing its tail' syndrome identified by Barrett.

From an organisation perspective the model can be represented as follows: at the corporate level the firm will take into account the demands of the firm’s environment, goals, values and staff characteristics when assessing the appropriate goals, decision making processes and management the firm should use. All of the above are pertinent to the choices about the technology the firm needs which itself together with the other factors has a profound affect on what is the appropriate structure for the firm.
The ease by which forces from the environment can influence the behaviour of the firm is affected by the predisposition of cherished beliefs within the RIBA members of the firm. A predisposition will directly affect the goals and values system at corporate level in the firm. The contingency model proposed is shown diagrammatically in Figure 5.1.

The social efficiency map models the flow of the ripples through the firm originally identified by Barrett (1987).

The process is more complex than the simple contingency model in Figure 5.1. The model does, however, indicate that variations in the permeability of the boundary
between the firm and the environment are dependent on the goals and values system in the firm.

Barrett (1991) describes a force field around a firm maintaining the balance within a firm and points to;

"Changes over the last decade (written in 1991), certainly the last two, have seen the driving forces towards a business oriented approach to practice management strengthen considerably, whilst restraining forces have if anything dwindled. Change seems inevitable. It cannot be ignored or escaped."
(Barrett, 1991, p.8)

A more sophisticated model, therefore, needs to be developed in order to model the downward flow of beliefs from the environment through the boundary between the firm and the environment. This model needs to include the effect of perceptions of individuals within the firm and any opposite reaction by a formation of an upward flow of internally held beliefs within the firm and any consequent effect to the behaviour of the firm.

Following the pattern identified by Pareto any strong belief in the design axiom will make it the principle or sovereign force amid the realm of forces around the firm.

The Appropriateness of Subsystems

It is necessary therefore to model the various boundary layers between the subsystems in the firm. A section through the firm is represented in Figure 5.2. The model
is derived from Arnold (1980) and adapted for this thesis by the inclusion of layers.

The model works in the following manner, an established goal in the environment typically may be, 'good design can only be achieved by one architect working alone on a scheme' becomes accepted by architects as a cherished belief. An architectural business, which is susceptible to the belief, allows this belief to influence the subsystems within the firm, goals and values psychosocial, management technology and structure.

Figure 5.2: Conceptual framework for a professional firm adapted from Arnold H.J. et al (1980)
The essence of the contingency approach is appropriateness. That is, the configuration of a subsystem is not right or wrong but rather appropriate or inappropriate in its particular context. The decision-making process is influenced by a particular belief located within the cognition of decision makers within the firm. Organisational structure, management practices, production, etc are all affected.

The model enables the tracking of multiple goal-seeking behaviour through the firm. This is done by the following process: identification of goals, categorisation and analysis of perception of these goals by individuals in the firm and the expectancy by individuals of achieving these goals and finally tracking the effect of these goals by mapping the social efficiency.

Identification of Firms' Goals by the Researcher

This identification of the permeability of the boundary layer between the firm and the environment is achieved in this research by the use of a semi-structured interview with the firm's nominated representative. This semi-structured interview is based on a detailed research pro forma included in Appendix A and fully described in the research protocol included in Chapter 6 referred to later in this Chapter.

The semi-structured interview is carried out with the firm's nominated spokesperson. It must be emphasised that the spokesperson is answering on behalf of the firm and not giving their own views. The wording of the
questions included in the research pro forma in Chapter 6 is not specified but there is, nonetheless, a definite focus on topics germane to the research. The interviewer asks certain specific major questions but is free to probe beyond them as the researcher sees fit. Although appearing relatively closed, the questions keeping the respondent on course, the interview is, in fact, open and the respondent free to wander from the question. The interviewer does not prompt the respondent for an answer or even the expected answer and the lack of an answer said more about the firm than any forced answer could.

The object of the semi-structured interview is as much exploratory as investigative and the language used by the respondent was as much of interest as the answers themselves. Language is a good indicator of thought and actions. Attitudes and thoughts are assumed to be a prime influence on behaviour, and language a reflection of both.

Cicourel (1964) points to a dangerous insensitivity to the dimensions of language, especially when everyone appears to be speaking the same language. The researcher cannot afford to treat his own language from the perspective of a native speaker but must adopt the position of a crypto-analyst approaching a strange language.

The semi-structured interviews are not socially sterile, and are subject to the same kind of dynamics that operate in normal social life. The interviews are therefore carried out in private, with the researcher adopting a passive role in the interview and not exhibiting any special particular knowledge on the
subject allowing the respondent to dominate the process. The researcher is dressed in a business suit and behaves with deference to the senior position of the respondent.

The researcher guarantees confidentiality regarding the answers given. On this basis considerable trust is given by the respondent in answering the questions frankly particularly with respect to the view of the firm, and often respondents would qualify answers by saying this is not my personal view but the partnership feels strongly that this is the case. The interviewer must be exceedingly careful about expressing his own opinions and seemingly to approve or disapprove of the respondent's answers.

Where the respondent begins to wander from the question the interviewer is able to bring the respondent out, and so has to handle lengthy conversations while keeping the respondent moving and flowing well, before the next topic is covered. This in-depth interviewing allows misunderstandings or non-understandings to be probed, and some sense of the meaning of the language of the respondent can be achieved.

No particular interview is an end in itself but only has meaning in the context of the other interviews being conducted. Idiosyncratic qualities must be eliminated in preference to those generally consistent across the range of interviews. The format of the semi-structured interview enables this to be carried out. It became apparent that the researcher was gaining access to the 'inner life' of the respondents.
Categorisation and Analysis of Firm's Goals by the Researcher

The purpose of this part of the analysis is to illicit the goals of the firm at Corporate and Management levels, and identify and categorise the dependent variables in the firm introduced in Chapter 4.

The first part of the analysis is, therefore, to confirm that the dependent variables fall into the acceptable categories so that the firm selected is suitable for inclusion in the series of Case Studies. The pro forma included in Chapter 6 identifies in red the questions that illicit the answers from the respondent which will contain the information necessary for the researcher to identify the dependent variables.

The questions in bold blue included in the pro forma in Chapter 6 identify where the corporate level, management level and individual level goals may be found in the semi-structured interview. Analysis of the answers enables the table to be completed identified in Table 5.1. The goals number in the table from 1-25 and correspond to the questions later asked in the semi-structured interview with the individual architects. The table includes four columns. The first and second identify the number and question, the third column the level in the firm and the fourth the location of the question in the pro forma in Chapter 6.

These goals by the firm form the vertical axis on the social efficiency map but it is the perception of these goals that is being collected in the next part, the semi-structured interview with the architects.
Table 5.1: Identification and categorisation of the firms' goals

Collection of Individual Perceptions of the Firm's Goals by Researcher

The perceptions of the individual architects within the firm are collected in this part of the research. The approach described for the interview with the spokesperson of the firm (described above) applies to the semi-structured interview with the individual architects in the firm.

The framework of the semi-structured interview is based around the typical goals of a firm, and comprises the 25 question headings identified in the table included in Table 5.1. The approach differs from the previous interview because the questions are specific and the phrases used are included in Figure 5.3 including the...
**Social Efficiency Map**

1. Growth of turnover: do you think the firm should put more work through the office.
2. Earnings: do you think the firm could make more money out of its existing work.
3. Market share: do you think the firm can get more of the existing type of work it has.
4. Number of markets the firm works in: do you think the firm should be doing other types of work in different market sectors.
5. Stability of annual turnover: do you think the firm coped well in the recession.
6. Gross profit: do you think the firm makes a profit.
7. Return on investments: do you think the firm is a good business investment.
8. Utilise resources: can the firm make the most of what it has got.
9. Internal political: do you think the owners will keep control of the firm.
10. External political: do outside firms have a link and involvement with the running of the business.
11. Meet aspirations of the employees: do you think the firm does enough to help you get what you want out of life.
12. Develop employees potential: does the firm do enough to get the most out of its staff.
13. Serve clients: does the firm put the client first in all its decisions.
14. Serve community: do you think the firm will do more to help the local community.
15. Maintain reputation: does the firm do enough to project its image as an architect.
16. Production quota: is the firm getting through the work in the office effectively.
17. Cost targets: is the firm ensuring all jobs in the office are profitable.
18. Sales quota: is the firm marketing itself effectively.
19. Completion deadlines: Does the firm keep the client happy about delivering the goods on time.
20. Mission or purpose: does the firm always try to design a beautiful building.
21. Physiological: are you happy that your getting enough sleep, food and can look after the basics in life.
22. Security: Are you happy that you are in a safe environment.
23. Social: do you feel that you belong.
24. Esteem: do you think it is important to have the respect of others around you.
25. Self-actualisation: does the firm give you the opportunity you need to fulfil your full potential within yourself.

**Figure 5.3: Standard Semi Structured interview questions for use with architects**

Follow-up questions. The questions are phrased in a chatty non-academic style and are not intended to imply...
any right or wrong answer is required from the respondent, the process thus avoiding any characteristics of an examination or a test. The fact that the questions are in chatty style puts the interviewee at ease and aids the conversation. It is important that the questions are put positively, and all in the same manner by the researcher. The protocol is more fully described in Chapter 6.

The questions are described in Figure 5.3, the actual pro forma including follow up questions is included in Appendix B.

Analysis of the answers by the researcher using the rating sheets included in Appendix B plots a positive or negative answer against the vertical axis. The analysis will be explained more fully in Chapter 6.

Modelling Expectancy of Achieving Firms' Goals by the Researcher

The second dimension of the social efficiency map is the horizontal axis. The basis of a fulfilment model is an individual's expectancy of achieving a goal as described in Chapter 4. Vroom's (1964) expectancy theory was introduced in Chapter 4 but its application will be more fully described here.

The questions, identified in Figure 5.3 and Appendix B, comprise a three stage enquiry. The purpose is to identify the expectancy, valence and instrumentality of the interviewee's beliefs regarding the goals of the firm:
Expectancy is the strength of a person's belief about whether a particular outcome is possible. If a person believes that they can achieve an outcome, they will be more motivated to try for it.

Valence: Vroom uses the term to refer to the affective (emotional) orientations people hold with regard to outcomes. An outcome is said to be positively valent for an individual if they would prefer having it to not having it.

Instrumentality: Vroom considers that a given level of performance is positively valent if the employee believes that it will lead to other outcomes, which are called second level outcomes. Something is said to be instrumental if it is believed to lead to something else, if it helps to achieve or attain something else.

Categorisation and Analysis of Expectations by Researcher Using Rating Sheets

Vroom's concept has been adapted in this research to view instrumentality (the first level outcomes) held by the individual in the context of its valence to the firm.

The result of all this information collected from the semi-structured interview with the architects is a list of answers that are rated as positive or negative. Standard Rating Sheets have been developed and are included in Appendix B in order to interpret all the answers in a consistent manner.
The answers given are systematically analysed in order to determine the correct interpretation of the answers given. The tape recording of the interview and the notes made on the social efficiency map during the meeting are processed in the following manner. A rating sheet has been developed based on the rules outlined by Vroom and adapted as described below. This enables consistent allocation of positive and negative values to the responses given by the interviewees.

The first rating sheet included in Appendix B is of expectancy. This is defined by Vroom as the strength of a person's belief about whether a particular outcome is possible or not. The outcome posed here is based on the interviewee's perception of the goals of the firm and the belief if the outcome is possible or not. The research is interested in the perceptions of the interviewee, and no guidance is given to the interviewee regarding what the goals of the firm actually are. The match or mismatches between the perceptions are included on the rating sheet as positives negatives or blanks in their context of value to the firm. The interviewee is asked to identify the factors that contribute to the interviewee's belief. The subsidiary questions are used by the interviewer as a trigger to aid the interviewee but are not used as a prompt. The reasons for the answer are then included on the rating sheet in the form of a tick. The answers are divided into either maintenance or motivators. A typical example of a maintenance answer is given in the case of equipment not available in the firm to allow for increased turnover. This would be included as a maintenance factor marked in yellow. The answer is
rated as a positive or negative in the context of its effect on the firm.

The second rating sheet included in Appendix B is Valence. Vroom uses the term valence to refer to the affective (emotional) orientations people hold with regard to outcomes. An outcome is said to be positively valent for an individual if they would prefer having it to not having it. Better wages would be positively valent and a maintenance factor. In contrast longer hours expected by the firm due to staff cuts which would be regarded as negatively valent and any stress identified would be included as a de-motivator and marked in green.

The third rating sheet included in Appendix B is Instrumentality. Vroom suggests that we consider instrumentality as a probability belief linking one outcome (performance level) to other outcomes. This leads to a complex sequence of interpreting an answer and the alternatives are included in the rating sheets. More pay in the future would be interpreted as a maintenance answer and a positive instrumentality and marked in yellow.

Social Efficiency Map of Goal Congruence

Vroom & Yetton in their New Leadership Model (1973) identify goal congruence as really dealing with the motivation of subordinates, specifically their
motivation to devote their resources and expertise toward a common organisational objective.

Each Case Study lists the answers given by the interviewees. The results from the analysis of the rating sheets are included on the social efficiency map Table 5.2. Each vertical column is an interviewee, identified A, B, C, D, E etc., the motivator answers are included in green and the maintenance as yellow. Analysis of the social efficiency map reveals where a green line forms across the columns there is congruence regarding these goals within the firm. Answers may be positive or negative. Consequently, goals may be positive or negative or shift from positive to negative or vice versa. From this analysis congruent motivator goals are selected for further analysis in each Case Study.

The social efficiency map Table 5.2 comprises a matrix with the typical goals of a firm identified vertically and the individual's expectancy of achieving the goal horizontally. The attractiveness of the reward the individual can achieve and the effects on any secondary goal the individual may have are placed on the horizontal axis.

Shapero (1990) has described an individual work motivation in terms of an expectations-motivation-performance-expectations-comparisons-expectations cycle. He points out the highest motivation cannot overcome an individual's technical incompetence, this factor is overcome as all the individuals in this research are
RIBA qualified architects and may be expected to have a comparable level of technical competence.

Table 5.2 Social Efficiency Map

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</table>

A= partner  B= partner  C= partner  I= staff  J= staff

The Research Framework
The Social Efficiency Map is analysed to identify the goals that are congruent or change from positive to negative. In some cases the firm may not have a goal and this says much about the firm and its tunnel vision.

Validation of the Research Model

The research model needs to be validated in order to accurately compare contrast and interpret the results gathered in the semi-structured interview process. The approach adopted will be by multiple sources of evidence as shown in Figure 5.4.

The most important advantage is gained by using converging lines of enquiry through a process of triangulation (Yin, 1994). Any finding or conclusion in the Case Study is likely to be much more convincing and accurate if it is based on several different sources of information. The following sources of information will be used:

- Testing by means of standard questionnaires.
• Perceptions will be collected by means of a semi-structured interview developed by this research which is based on work by Vroom (1964).

• Participant Observation, by the researcher.

![Diagram of research validation]

Figure 5.4: Research validation

The semi-structured interview will run in conjunction with the participant observation. The researcher will collect a great deal of information about the firm and the individuals within the firm during the Case Study. The Case Study protocol is therefore very important and is fully described in Chapter 6.

Justification of the Model

This is achieved using established research methods to give validation of the results collected from the semi-structured interviews.

This validation protocol is fully described in Chapter 6 and Thompson et al (2001a). It is useful to note here that the strength of the established research methods used is broad. These vary from standard questionnaires,
which are insensitive and do not need to be interpreted by the researcher to a more flexible sociological observer as participant approach. This is used to collect the language used in the firm and records of incidents observed in the firm by the researcher and which need sensitive interpretation. The approach is achieved in two ways:

- **Questionnaires:** the questionnaires used in this research are standard personality type (Friedman & Rosenman, 1978), locus of control (Rotter, 1966), creativity (Raudsepp, 1978), leadership style and leadership effectiveness tests (Vecchio, 1987).

- **Observer as participant:** the language of those studied was collected and defined. The opportunistic or 'snowball' sample method (Fielding & Fielding, 1983) was used to identify the meaning where common language was used by interviewees to describe particular views in the firm and identify hidden meanings. The researcher collected these views by writing down the interviewee's tape-recorded conversations and tabulating the number of times these expressions or phrases were used by the interviewees.

Without the collection of information from multiple sources an accurate interpretation of the social efficiency map would not be possible. The identification of a ridged research protocol is therefore essential if the Case Studies are to be meaningful. The information collected in the field must be collected in the same way if the results are to be comparable between the Case Studies.
Personality Questionnaire

Justification was established as far back as in the 1950s to link the effect of personality and the health of individuals. The Western Collaborative Group Study by Friedman and Rosenman (1959) carried out over 5 years established a classification technique based on interviews of males into Type A and Type B behaviour patterns.

A short rating scale was developed by Bortner (1966) from the research by Friedman and Rosenman. This rating scale was validated by comparison with Friedman and Rosenman's work and the work has become established in general theory.

Two problems with Bortner's short rating scale were identified, the first was the weighting of the questions for the short scale but a significant correlation was shown between the interview classification undertaken in the Western study and self-classification ratings in Bortner's short rating scale. Secondly, the scales developed by Bortner rely on self-appraisals and make obvious contrasts between two kinds of behaviour. Subjects familiar with the concept of Pattern A behaviour might tend to bias their responses and because these are self descriptions the rating scales cannot measure those difficult to verbalise aspects of Pattern A behaviour. In effect, the short rating scale only measures part of Pattern A behaviour.

Vecchio (1987) built on the work of Bortner applying a shortened version of Bortner's scale in a new context.

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Vecchio found the characteristics that seem most helpful to Type A individuals in their rise through managerial ranks (such as persistence, fanatic observance of deadlines, and the like) do not aid them in their performance as top-level managers. Rather, it appears that Type B individuals have better performance records in top management positions.

Bortner's rating scale was shortened by Vecchio (1987) but is sufficient to give an insight into the personality type. This shortened version will be included in this research.

Creativity Questionnaire

There is a potential confusion between creativity in architects described by Winch and Schnieder (1993) and creative individuals generally. Architects may be relying on modelling and in particular symbolic coding to perceive solutions rather than a more rounded wider abstract cognitive process.

When looking for creative individuals a clear definition of creativity is necessary. In research analysing creative executives, Raudsepp (1978) concluded that some of their more salient characteristics include:

- A willingness to give up immediate gain to reach long-range goals
- A great amount of energy
- An irritation with the status quo
The broader range of creative attributes identified by the Princeton Creative Research Inc is considered a good measure of creativity. The time requirements limiting the size of questionnaires in order to make the research practical in a business environment mean that the partial version developed by Vecchio (1987) has been used in this research and is considered adequate for the purposes of this research.

**Locus of Control Questionnaire**

Locus of control is relevant when assessing cognition and Chapter 4 describes part of cognition in the form of response consequences. Response consequences impart information and serve as motivators for future action.

Research by Rotter (1966) found someone who strongly believes that they control events has a high internal locus of control, while someone who feels that they are at the mercy of fate has a high external locus of control.

This research by Rotter (1966) was supported by a 4-year grant from the USA Air Force and monitored by the Air Force Office of Scientific Research. The research was into the effects of reward or reinforcement on preceding behaviour depend in part on whether the person perceives
the reward as contingent on his own behaviour or independent of it. Rotter published a report, which describes the results of several studies of construct validity.

The scale used in this research is taken from Rotter, Liverant and Crowne (1961), the 29 item forced choice test known as the I-E scale. Item validity for most of the items was available from a study by Seeman and Evans (1962) on tuberculosis patients who had evidenced greater self-effort towards recovery versus those who were more passive.

The test used in this study has been adapted from the 26-item scale to a shortened 6-item scale.

Leadership Style

According to situational leadership theory, there is no one best way to influence people. Most of the research on leadership indicates that leader behaviour is a combination of task and relationship orientations.

The Management Skills Profile based on the Federal Government Publication 79-141 has been used here as adapted by Vecchio (1987). The exercise in part is based on the Hersey and Blanchard's Situational Theory; Vecchio comments that Hersey and Blanchard offered their Theory with little empirical evidence of its validity. Vecchio pointed out research suggested that the model may only be partially correct because less experienced subordinates may be somewhat more amenable to direction.
The theoretical aspects of Hersy and Blanchard's model were criticised for not giving a coherent or precise rational for the proposed relationships (Graeff, 1987).

**Participant Observation Generally**

Polsky (1967) offers a convincing case for the observational and naturalistic technique. This case ranges from learning how to listen and keeping one’s mouth shut to the researcher learning the language of those studied.

Polsky’s comments on language are important. He suggests that special jargon can only be seen as an aspect of a subculture but does not contain all the relevant objects and activities within a subculture. He also notes that the frequent use of a term may not be an accurate index of the prevalence of the event so designated. Polsky suggests as one sampling and observational strategy the snowball method. In the context of fieldwork this involves working from one informant to a chain of others who are known to the initial subject. Polsky further suggests that the observer attempt to work downward from the highest status positions within a group. Polsky’s most important recommendation is that the observer immediately and clearly establishes his identity in the field.

Schwartz and Schwartz (1955) examined the effects of direct participation upon the observer and those observed. They noted that an observer’s presence in the field produces behaviours and actions that would not
have appeared had the observer not located himself with the group.

There are many ways to control and assess these effects, the unobtrusive method is explicitly designed to minimise such effects by removing the observer from the field situation.

It is possible for the researcher to systematically vary his activities in the field so that the effects of the various variables can be assessed. He can change his style of dress, vary his speech patterns, talk to different persons, challenge accepted perspectives, act dumb, or act knowledgeable or by varying the demeanour of the field observers (Lofland and Lejeune, 1960).

The act of observation must be seen as interaction. Every gesture and utterance of the researcher displays the interaction quality of the observational process.

**Participant as Observer Techniques**

Four varieties of the observational role can be distinguished (Gold R.L., 1958):

- Complete participation, wherein the observer never makes his true identity known.

- Complete observer, as seen in the experiment where the researcher does not directly participate in the events studied.
• Participant-as-observer and observer makes his presence known, but attempts as fully as possible to become normal.

• Observer-as-participant, the interviewer only meets his respondent once in a fleeting, often stranger-like relationship.

Each of these roles has special problems. The complete observer's problems are described by Orne (1970). They indicate that the complete observer may be more a participant in his own studies than previously considered.

The participant-as-observer and complete participation roles have specific problems. These are: gaining entry into the group to be studied; establishing and maintaining membership after entry has been achieved; avoiding altering by one's presence the behaviour of those observed; maintaining objectivity in the face of new experiences; recording and analysing the data and overcoming the ethical aspects of observation (Turner, 1953).

The observer-as-participant role is used in studies involving one-visit interviews (Gould, 1954). It requires a relatively formal observation technique. The observer-as-participant's contact with an informant is so brief, and perhaps superficial. It is more possible than the other two methods to misunderstand the informant.

Brief relationships with numerous informants expose an observer-as-participant to many inadequately understood

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universes of discourse that he cannot take time to master. These frustratingly brief encounters with informants also contribute to mistaken perceptions which set up communication barriers the researcher may not even be aware of until too late. Consequently, using his prerogative to break off relationships with threatening informants, an observer-as-participant, can leave the field almost at will to regain the role-and-self balance.

**Observer as Participant by the Researcher**

This technique will be used in this Study. Explanation of the protocol used in Chapter 6 is given here.

Participant observation research requires the analysis to be carried out sequentially (Turner, 1953). The process generally comprises three stages of field analysis:

- Selection and definition of problems concepts and indices
- Frequency and distribution of phenomena
- Incorporation of the individual findings into a model of the organisation

**Problems, Concepts and Indices**

The researcher looks for problems and concepts that give hope of providing the greatest understanding of the firm
included the study, and for features that serve as useful indicators of information which is harder to observe. A typical conclusion that the information is available and that a given phenomenon exists, is that a certain event occurred once, or that two events were observed to be related in one instance but the conclusion can say nothing about a pattern or frequency or occurrence of the observed event.

By placing such an observation in the context of a theory the researcher selects concepts and defines problems for further investigation. A theoretical model is therefore constructed to account for that one case, and it is refined in the light of subsequent findings.

The theory of interest in this research by the technique of observational research is the concept of power and its role in influencing decision-making. Including its effect is paramount to understanding what contributes to the process of goal selection within the organisation and will be explored in detail later in this Chapter.

In order to develop a theoretical model the researcher must consider the context of the information source.

*The Credibility of Informants.* Many items of evidence consist of statements by members of the group under study about some event, which has occurred or is in process (Becker, 1958). These statements cannot be taken at face value but neither can they be dismissed as valueless. This is done by questioning. Does the informant have a reason to lie, or hide some of the truth? Does vanity or expediency lead him to misstate his own role in an event or his attitude towards it? Did
he witness the occurrence or is it second-hand knowledge? Did his feelings about the issues or persons under discussion lead him to bias?

Becker goes on to point out, even when a statement examined in this way proves be seriously defective as an accurate report of an event, it may still provide useful evidence for a different kind of conclusion.

**Volunteered or Directed Statements.** Many items of information consist of interviewees’ comments to the researcher about themselves or others or about something which has happened to them. These comments can be casual chat about the group to a long intimate tête-à-tête between researcher and interviewee. The researcher assesses the evidential value of such comments differently, depending on whether they have been made independently of the researcher (volunteered) or have been directed by a question from the researcher.

Becker makes the point, to what degree is the informant's statement the same one he might give, either spontaneously or in answer to a question, in the absence of the observer or researcher? The volunteered comment seems likely to reflect the researcher’s preoccupations and possible biases less than one that is made in response to some action of the researcher in the interview situation.

**The Observer-Informant-Group Equation.** Becker takes two extremes to illustrate the problem. A person may say or do something when alone with the researcher or when other members of the firm are also present. The evidential value of a comment of this behaviour depends
on the researcher's judgement as to whether the behaviour is equally likely to occur in both situations.

In assessing the value of items of evidence, Becker points out we must also take into account the researcher's role in the group. If he is known to be a researcher, he must learn how group members define him and in particular whether or not they believe that certain kinds of information and events should be kept hidden from him. The researcher can interpret evidence more accurately when the answers to these questions are known.

The role of power within an organisation directly affects how decisions are made.

*Power to make decisions.* Usually when power is considered in an interpersonal or organisational relationship the concern is to explain why actor A did what actor B wanted him to do. It is possible to view the issue from an information-processing perspective. This is to think of A as the recipient of information from B. This information is likely to be of two types: firstly, information about B's values, goals and preferences for outcomes; secondly, information about the environment or other parts of the organisation. Thus the question becomes: why does A give great weight to the information provided by B about his preferences, and his facts? From this perspective, the causes of B's power over A are similar to the conventional view; but the process by which A is influenced by B is transformed into an information process with A attending to and being aware of facts and values transmitted by B (Maital and Meltz, 1980).
In organisational research there are two streams of research on power and influence – the first interpersonal, the second organisational.

A number of researchers (French and Raven, 1959; Kelman, 1961) have argued for the existence of a set of power bases, such as reward, punishment, referent, expert and legitimate power (French and Raven, 1959). These suggest that individual A places great weight on the communicated (or perceived) desires and facts of individual B because individual B has some kind of control (with the exception of legitimate power) over the consequences for individual A.

A second organisational stream of research and theory on power is also devised from a resource dependence approach. It suggests that not all organisational sub-units are equally influential in determining the outcome of organisational decisions.

As Hickson, Pugh and Pheysey (1969) put it: in organisations sub-unit B will have more power than other sub-units to the extent that:

- B has the capacity to fulfil the requirements of other sub-units
- B monopolises this ability.

Following Thompson (1967) and Crozier (1964), Hickson and Pugh and Pheysey (1969) argue that the crucial requirement of each sub-unit in an organisation is the reduction of uncertainty.
The social efficiency map depended on the construction of a fulfilment model based on the work of Maslow (1943) and developing Vroom's (1964) expectancy theory to model social efficiency within architects' businesses. As such it has not directly modelled the effect of sub unit power which is more related to group efficacy. In order, therefore, to interpret the information collected in the social efficiency map an eclectic model of personality has been developed.

**Eclectic model of personality.** This part of the research will use an eclectic model where all three competing models of personality are incorporated into the participant as observer technique and used to explain social phenomena.

Based on these theories the observer will develop an insight into the power within the firm based on information and conclusions about a single event. This will also lead the observer to decide on specific items which might be used as indicators of less easily observed phenomena (Lazarfield and Barton, 1951).

Using Maddi's (2000) model of personality observations by the researcher will be included in the Table 5.3. Whether defining problems or selecting concepts and indicators, the researcher at this stage is using data only to speculate about possibilities. Further operations at later stages may force him to discard most of the provisional propositions.
Checking the Frequency and Distribution of Phenomena

The observer, identifying many interim problems, concepts, and indicators, wants to know which of these are worth concentrating on in the study. This is done by discovering if the events that instigated their happening are representative and common, and by seeing how these happenings are distributed among various people and organisational sub-units.

Participant observations have occasionally been gathered in standardised form capable of being transformed into legitimate statistical data (Blau, 1954). The necessity of the Case Study usually prevents the collection of data in such a form as to meet the assumptions of statistical tests, so that the observer deals in what have been called quasi-statistics (Lazerfield and Barton, 1951).

Conclusions do not require precise quantification. Suppose, for example, that the observer concludes that architects share the perspective that their firm should

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<tr>
<td>Conflict (Freud)</td>
<td>Reduction of tension involved in inner conflicts</td>
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<td>Fulfilment (Maslow)</td>
<td>Human needs hierarchy</td>
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<td>Consistency (McClelland)</td>
<td>To be superior to others needs, and affiliation needs</td>
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Table 5.3 Eclectic Model of Personality based on Maddi’s (2000) Comparative Analysis
provide them with the design experience and the practice in techniques necessary for a designer. Confidence in the conclusion would vary according to the nature of the evidence which might take any of the following forms:

- Every member of the group said, in response to a direct question, that this was the way they looked at the matter.

- Every member of the group volunteered to the researcher that this was how he viewed the matter.

- Some given proportion of the group's members either answered a direct question or volunteered the information that they shared this perspective.

- Every member of the group was asked or volunteered information, but some given proportion said they viewed the matter from the differing perspective of a prospective specialist.

- No one was asked questions or volunteered information on the subject, but all members were observed to engage in behaviour or to make other statements from which the analyst inferred that 'the design perspective' was being used by them as a basic premise.

- Some given proportion of the group was observed using the design practitioner perspective as a basic premise in their activities.
• Some proportion of the group was observed engaged in activities implying the design practitioner perspective while the remainder of the group was observed engaged in activities implying the perspective of the general architect.

The researcher also takes account of the possibility that the observations may give evidence of different kinds on the point under consideration. Just as many items of evidence are more convincing than if there are few, so a conclusion is more convincing if there are many kinds of evidence (Gouldner A.W., 1954).

The justification, which comes from the convergence of several kinds of evidence reflects the fact that separate varieties of evidence can be transformed into deductions from basic propositions which have now been verified in the field.

Construction of Social System Models

Becker (1958) points to the final stage of analysis in the field consisting of incorporating individual findings into a generalised model of the social system or firm under study. The kind of participant observation discussed here relates to explanations of particular social facts by explicit reference to their involvement in a complex of interconnected variables that the observer constructs as a theoretical model of the firm.

In this final stage, the researcher provides a descriptive model which best explains the information
assembled. Becker (1958) points out the most common kind of conclusions at this level include:

- Complex statements of the necessary and sufficient conditions for the existence of some phenomenon.

- Statements that some phenomenon is an important or basic element in the organisation. Such conclusions, when elaborated, usually point to the fact that this phenomenon exercises a persistent and continuing influence on diverse events.

- Statements identifying a situation as an instance of some process or phenomenon described more abstractly in sociological theory.

Cherished Beliefs

The intangible phrase 'cherished belief' is derived from the RIBA Strategic Study (1992, p.6). This states that architects have a particular view about quality especially with respect to good design. The literature review has thrown up the arts and crafts tradition as an example where this approach to design is still considered a valid goal.

The sensitive approach of this research means that identification of beliefs in the firm can be matched to the beliefs of the firm at strategic level, and these can be compared to a generally held belief in the environment.
The proposition is that the expression 'good building' means that 'the architect' has to run the job right through from inception to completion. This is a cherished belief of the profession. Some firms are more permeable at the boundary between the firm and the environment than others to this belief.

This intangible belief could affect the way the firm is run.

Main Propositions

The nature of Case Studies invariably means that propositions will be thrown up by the Case Studies themselves. The Case Studies are included in Chapters 7 and 8 including the Intra and Cross Case Study analysis.

Chapter 4 included propositions taken from the RIBA strategic study of the profession. This was concerned with the ability of the firms to think strategically in what was perceived to be a changing market for architecture in the 1990s.

In 2002 Rethinking Construction (Egan, 1998) requires even more strategic thinking by architectural firms. The question is therefore still valid. Have architects changed the way they think?

The following propositions have been taken from previous research into the problem:

A. Winch and Schneider (1993) identified a strain between the financial success, size and market share and how
to achieve them are not always the goals of the partners in architectural practice and indeed at times will be in conflict with success on the aesthetic dimension. The proposition that firms split up because of forces acting between design oriented architects and business oriented architects.

B. Cox et al’s (1980) suggestion based on the work of Maister that firms that superposition are more efficient than firms that stay in the centre ground.

C. Paradox identified by Winch (1993). A paradox: why do architects who spend their lives organising buildings, planning and controlling the building process cannot run their own businesses effectively.

D. Creative architects are difficult to manage.

Summary and Conclusion

This Chapter in combination with Chapter 4 is the key to this thesis. It forms the link between the literature review and the Case Studies and results. The construction of the social efficiency map is detailed and both the dimensions of the social efficiency map are fully explained.

The existence of pressures in the environment has been established in Chapter 4. The syndrome of 'a dog chasing its tail' has been avoided by a rigid framework within which the perception of goals can be mapped and by a tight focus of this research on the RIBA and RIBA qualified architects as a particular group. Any link
between the environmental beliefs held by this wider group and the beliefs held in individual firms which may account for differences in the social efficiency in the study will be explored. This will be by the use of propositions taken from Winch and Schneider (1993) which identified the paradox explained in Chapter 1.

The perception of the architects participating in the semi-structured interview is stimulated by the standard questions asked in the interview. The way this semi-structured interview is carried out is most important and will be developed further in Chapter 6 establishing a consistent manner for the interview. A research protocol will be developed in Chapter 6 and a pro forma established to maintain a consistent Case Study process.

The interpretation of the social efficiency map and the requirement for validation of the results has led to the establishment of multiple sources of evidence. This allows for converging lines of enquiry through a process of triangulation to arrive at explanations of the Case Study results. The methodology of this approach will be fully explained in Chapter 6.

The cherished beliefs alluded to in previous Chapters as being 'held by a group' in the environment has been included as a proposition in this Chapter. The proposition is taken from the RIBA Strategic Study of the Profession. The main propositions have been developed from the literature review and relate to the unusual patterns of behaviour found in some architectural firms.
The examination of cherished beliefs requires a sensitive approach. This has been adopted in this research by using Social Learning Theory to model the firm. The research has developed a battery of tools to look at different aspects of the firm. The research strategy and methodology to explain the phenomena revealed will be considered in Chapter 6.
CHAPTER SIX

RESEARCH STRATEGY AND METHODOLOGY

Introduction

This Chapter describes the research strategy and methodology. In order to explain the reasons for the choices available a brief review of research methods in management research in construction is made.

This leads to a discussion of the general approach to the research using the systems theory model of a firm introduced in Chapter 5. The careful selection and replication of the Case Studies will be described in full in this Chapter. The reasons for the choice of semi-structured interviews, participant as observer, and questionnaires for investigating the primary components of a firm will become apparent as the need for construct validity is established.

Consideration in this Chapter is given between qualitative and quantitative research. The case is made for a qualitative research approach to studying social phenomenon within architectural firms. The requirement
for sensitivity in the research methods is apparent but the debatable reputation of some of social science's methodologies means it essential that a sound clearly identifiable research protocol is included in the research strategy.

It becomes clear that methods of sociological analysis are linked. The complexity of methods of analysis within sociological analysis generally, is further compounded by the necessary interpretation of language used by the individual architects who form an essential part of the Case Studies. The language used within the firm is seen as integral towards understanding social phenomenon within the firm. A battery of techniques is, therefore, used in order to unravel the complexity of the results collected in the Case Studies and strengthen any explanation of phenomenon studied.

As has been outlined previously in Chapter 4 propositions will be drawn from the RIBA Strategic Study. This Chapter builds on this previous outline, but now fully describes the identification and selection process of the Case Studies. The main parameter for selection of the Case Studies is that the dependent variables in the Case Studies included here are similar to the Case Studies in the RIBA Strategic Study. The conceptual framework is represented by a flow chart illustrating how this research grows out of the RIBA Strategic Study. Having followed this rigorous framework, sense can be made of the social phenomena being studied through classification comparison, contract and replication.
A clear research case study protocol is laid out in this Chapter and is described as a four stage process. The appendices include copies of the standard questionnaires used in the study. A full explanation of the reasons for the questions and a brief description of the literature to support the standard questionnaires is included in this Chapter. The research recognises only subsequent and consecutive research by others will strengthen the findings of this study. The object of the Case Study Research Protocol is therefore to enable and ensure that others easily replicate this research.

The investigation of social phenomenon requires careful analysis of the results of the interviews and questionnaires by the researcher. The consistent interpretation of information collected in the Case Studies is achieved by the formulation of a standard rating sheet; this enables consistency in classification of the semi-structured interviews. The requirement for accurate records is therefore essential.

The human side of the research process becomes very apparent as the Case Studies begin. A strong sense of fidelity between the researcher and the participants becomes apparent. This participation by the individuals in the firm is essential if the research is to be worthwhile but the nature of the research questions often can illicit unexpected answers. A level of trust between the researcher and the participants is, therefore, necessary. The behaviour of the researcher and morality of the research therefore forms an important part of the study. Any access to the identity of individuals or information regarding the Case Studies is subject to a moratorium.
In any qualitative research the objective, detached, rational researcher does not exist. Not only do the researchers bring their own personal history with them into research, also by their presence, behaviour and interaction with those they are studying they affect those very behaviours which they are trying to observe.

The adoption of the 'participant as observer' approach by this research and the triangulation of evidence collected from multiple sources is expected to overcome any difficulties in identifying social phenomenon within the business organisation.

Methods Used for Management Research within Construction Businesses

It is easy to contend the advantages and disadvantages of quantitative and qualitative research approaches. Bryman (1988) identifies two competing views of these approaches. One view is that quantitative research is underpinned by a completely different set of epistemological foundations than qualitative research. The other view is that they are simply different ways to the same end (the end being the understanding of social phenomena).

A greater understanding of these two views is essential towards developing a balanced approach towards understanding a research problem.

The central belief of the quantitative research tradition is of a scientific method modelled on the
natural sciences. Its method is concerned with testing theories. These theories are then tested against empirical evidence and rational criticism (Richards, 1981, p.53). Science advances by substituting poor theories with better theories that produce better solutions, containing more empirical statements that have been confirmed by those they replace.

Testing involves comparing the prediction based on theory with what actually happens. The effects of the observer on the data are eliminated by using a standardised procedure suitable for replication by others as a test of reliability.

In a survey, for example, the researcher's behaviour is tightly specified, the exact wording and sequence of questions is strict, and probes and prompts are discouraged. If each occasion of information collection is experimentally the same, the subjects will respond to the same stimuli and the information will be comparable.

The less rigid approach of unstructured interviews and qualitative observation used in qualitative research leads to criticisms that since no one knows what the responses are to, it is impossible to interpret them. With no basis for testing hypotheses, it is impossible to do other than merely speculate about causal relationships.

Quantitative research is usually informed by a positivist stance and in opposition to the 'naturalism' of qualitative research. Here rigid controls of the artificial experimental setting are rejected in favour of inspecting 'neutral' settings, and such investigation
is done in a different attitude, one of appreciation rather than neutrality and social distance. Such an approach is more open to eclecticism.

"A first requirement of social research is fidelity to the phenomena under study, not to any particular set of methodological principles, however strongly supported by philosophical arguments."

(Hammersly and Atkinson, 1983, p.7)

Social phenomena are seen as unlike natural phenomena, it being argued that the social world cannot be understood in terms of causal relationships or by the subsumption of social events under universal laws.

Cicourel (1981. p.54) makes this point, that micro and macro structures interact with each other at all times despite the convenience and sometimes dubious luxury of only examining one or the other level of analysis. He takes the view that qualitative and quantitative approaches are at each end of the spectrum of micro and macro sociology.

The challenge is to recognise that either micro sociological or macro sociological work bears within it indirect reference to the existence of the other, so that, in maintaining one level of analysis, one also demonstrates that the other is an integral aspect of the phenomenon. The restrictive practices of normal science tend to impede this.

"Even researchers who focus on broader aspects of social interaction using a more ethnographically oriented approach will also create boundaries that
enable them to avoid having to integrate their interview materials and field notes with survey and demographic data on the same topic."

(Cicourel, 1981, p.56)

The problem of boundaries between micro and macro sociological levels of analysis is highlighted in the case of qualitative and quantitative approaches to the study of communications competence. In qualitative research, competence is marked by ability to use language and adhere to behaviour assumed to be normal for the context. Observation, interview, and tape recordings will be drawn on. Quantitative research in the field works from the reference of competence to knowledge of values, norms, and customary practice, testing these by examining response to survey and interview items including secondary analysis of government or poll data. Language used is seldom studied. As Cicourel complains:

"The researchers with the sense of the world that lay actors have; they have created their own theories and methods of achieving an integration of micro and macro levels of analysis."

(Cicourel, 1981, p.67)

Social science cannot avoid the notion of causal explanation. Qualitative research has often ignored this issue and unwilling to concede that causal modelling is a legitimate concern. The comparative method is the only general method for testing causal relations, but there are different approaches.
The experiment is the most powerful means of testing the validity of claimed causal relations. A particular factor is introduced into one situation but not into another that is identical in all other relevant respects. By holding consistent factors relevant to plausible rival explanations, and manipulating the explanatory factor, the existence of the presumed causal relation can be checked.

The procedural model for the qualitative study that tackles the testing of theory is analytic induction. Denzin's (1970) outline of the procedure is shown in Table 6.1.

<table>
<thead>
<tr>
<th>Information types</th>
<th>Enumeration's and samples</th>
<th>Participant observations</th>
<th>Interviewing informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency distributions</td>
<td>Prototype and best form</td>
<td>Usually inadequate and inefficient</td>
<td>Often but not always inadequate; if adequate, it is efficient</td>
</tr>
<tr>
<td>Incidents, histories</td>
<td>Not adequate by itself; not efficient</td>
<td>Prototype and best form</td>
<td>Adequate with precautions and efficient</td>
</tr>
<tr>
<td>Institutional -ised norms and statuses</td>
<td>Adequate but inefficient</td>
<td>Adequate but inefficient except for unverbalized norms</td>
<td>Most efficient and hence best form</td>
</tr>
</tbody>
</table>

Table 6.1: Research validation (Zelditch, 1962, p.576)

In research if diverse kinds of data support the same conclusion, confidence in any conclusion is increased. Implicitly this is only to the degree that different kinds of data incorporate different types of error. Data source triangulation involves the comparison of data relating to the same phenomenon but deriving from different phases of the fieldwork.
Additionally, there is triangulation between different researchers, and also technique triangulation, comparing data from different techniques.

The flexibility of research in the field attracts the charge that such work can be impressionistic, biased, and subjective. Although many respond by drawing on several methods in order to reduce the influence of data from any one method, set of data, or researcher, this only encourages critics to maintain that the analysis has selectively drawn on multiple sources conductive to the chosen argument. It must be recognised that triangulation or the multiple strategy approach is no guarantee of internal and external validity.

It has been established that the natural science model, which is accepted as the basis of quantitative research, involves the following of the various stages of the Scientific Method and all of its canons. On the other hand, qualitative research aims at flexibility and lack of structure in order to allow theory and concepts to proceed in tandem. A simple description of the two ends of the spectrum is described by Yin (1994).

"The results of quantitative research, through the enumeration of frequencies and statistical tests, are said to be 'hard generizable data'; the results of qualitative research, through theoretical generalisation, are said to be 'deep, rich, and meaningful.'"

(Yin, 1994)

The methods, which lead to such results, are presented in summary form in Table 6.2.
<table>
<thead>
<tr>
<th>Quantitative (inquiry from outside)</th>
<th>Qualitative (inquiry from inside)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social survey</td>
<td>Participant observation</td>
</tr>
<tr>
<td>Experiment</td>
<td>Unstructured interview</td>
</tr>
<tr>
<td>Previously collected data</td>
<td>Life history / Case study</td>
</tr>
<tr>
<td>Structured observation</td>
<td>Group discussions</td>
</tr>
<tr>
<td>Content analysis</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2: Summary of research methods (Yin, 1994)

The Research Approach

This research can be considered as basic research, with the objective of exploring, understanding and explaining specific social phenomena with regards to the social efficiency of architectural businesses. The goals of the firm and the perception of an individual within the firm are the specific social phenomena referred to. The cause of such phenomena may lie within the corporate managerial or individual layers of a firm.

The term hypothesis is associated with the positivist (and, hence quantitative) approach to research. Hypotheses are seen as being derived from scientific theories, which are then submitted to (empirical) test. If they fail the test it is necessary to revise the theory. The implication of this is that science is deductive.
The approach used in this research project is more introductory, with the propositions developing not only from the literature review but from the Case Studies. A process of classification, comparison, contrast and replication will be used to explain the social phenomenon identified in the Case Studies. Having followed this process carefully, it is necessary to recognise that the qualitative approach cannot lead to an unequivocal conviction of the validity of findings. Hence, the language of qualitative research is less deterministic. In preference to the term hypothesis, the term proposition has been used.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Case Study Tactic</th>
<th>Phase of research in which tactic occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct validity</td>
<td>Multiple sources of evidence, establish a chain of evidence, key informants review draft case study</td>
<td>Data collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Composition</td>
</tr>
<tr>
<td>Internal validity</td>
<td>Pattern matching Explanation building time series analysis</td>
<td>Data analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data analysis</td>
</tr>
<tr>
<td>External validity</td>
<td>Replication, logic in multiple case studies</td>
<td>Research design</td>
</tr>
<tr>
<td>Reliability</td>
<td>Use case study protocol Develop case study data base</td>
<td>Data collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data collection</td>
</tr>
</tbody>
</table>

Table 6.3: Case Study tactics (Yin, 1994, p.41)

The criteria for judging the quality of research designs are important. Table 6.3 is a comparison of research design approaches. This represents a logical set of statements. The quality of any given design can be judged according to certain logical tests. Four tests
are relevant. Yin (1994, p.40) describes the four tests and the Case Study tactics for dealing with them in the table in Table 6.3.

Critics of Case Studies often point to the fact that a Case Study investigator fails to develop a sufficiently operational set of measures and so subjective judgements are used to collect the data. To meet this test of construct validity Yin (1994) suggests a researcher must be sure to cover two steps.

- Select the specific types of changes to be studied.

- Demonstrate that the selected measures of these changes reflect the specific types of change that has been selected. (Yin, 1994, p.42)

Table 6.3 shows three tactics to increase construct validity.

Causal explanations can be judged invalid and numerous threats have been identified to causal explanations, mainly dealing with spurious effects. Internal validity is, therefore, a concern where causal or explanatory studies are being made, and a causal statement is being made in the research. The concern may be extended to the broader problem of making inferences. A Case Study involves an inference every time an event cannot be directly observed. Thus a researcher will infer that a particular event resulted from some earlier occurrence, based on interview and documentary evidence collected as part of the evidence collected as part of the Case Study.
Table 6.3 shows the analytic tactic of pattern matching is one way of addressing internal validity.

The external validity of a single Case Study can offer a poor basis for generalising results to the broad context. Unlike survey research which relies on statistical generalisation, Case Studies (as with experiments) rely on analytical generalisation. In analytical generalisation the researcher is striving to generalise a particular set of results to some broader theory. However the generalisation is not automatic. A theory (Yin, 1991, p.45) suggests analytical generalisations must be tested through replications of the findings where the theory has specified that the same results should occur.

Pattern matching for Case Study analysis is one of the most desirable strategies. Where the Case Study is an explanatory one, the patterns may be related to the dependent or the independent variables of study (or both) (Yin, 1994, p.109). If the Case Study is a descriptive one pattern matching is still relevant as long as the predicted pattern of specific variables is defined prior to data collection.

The Case Study research can make use of dependent variables by pattern matching them. Using theory to predict a pattern and then explaining why there are differences. The dependent variables, therefore, become non-equivalent dependent variables as a pattern. The dependent variables pattern may be derived from one of the more potent quasi experimental research designs labelled non-equivalent dependent variables design (Cook & Campbell, 1978, p.118).
According to Cook & Campbell, this design, an experiment or quasi experiment, may have multiple dependent variables, that is a variety of outcomes. If, for each outcome, the initially predicted values have been found, and at the same time alternative patterns of predicted values (including those derived from methodological artefacts or threats to validity) have not been found, strong causal inferences can be made (Yin 1991, p.109).

This research will follow the logic outlined by Cook & Campbell (1978). The research is a quasi experiment based on the findings of the RIBA's Strategic Study (1993). Each Case Study included in this research will identify (based on the RIBA Strategic Study) a major proposition. Each Case Study in this research will predict a certain pattern of organisational change and identify the stresses based on the findings of the RIBA Study (1993). Among these changes and stresses each Case Study will specify the following predictions based on the findings of the RIBA study described as propositions and the table is included in Table 6.4.

The predicted outcomes will be assessed with different measures and instruments. The study will specify non-equivalent dependent variables, but for predictable reasons. If the results are as predicted solid conclusions can be reached about the proposition. If one variable does not behave as predicted the initial proposition will have to be questioned.
Table 6.4: Dependent variables used in Case Studies

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Predicted derived from RIBA Study</th>
<th>Case study results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services Offered</td>
<td></td>
<td></td>
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<tr>
<td>Strategic Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership</td>
<td></td>
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<tr>
<td>Decision Making</td>
<td></td>
<td></td>
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<tr>
<td>Reward Mechanism</td>
<td></td>
<td></td>
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<tr>
<td>Job Costing</td>
<td></td>
<td></td>
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<tr>
<td>Marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The first Case Study will be augmented by a Second Case study, but the Second Case study will be different to the first. A different pattern of outcomes will be predicted using the same dependent variables in Table 6.5 and now if the results show the predicted pattern of change to that of the first pattern and this change was produced by the proposition stronger conclusions can be drawn. In this case a theoretical replication will be made.

Certain threats to the validity of this logic are identified by Cook & Campbell (1978). Given the existence of a series of Case Studies, threats to validity will not explain patterns in the outcome of other Case Studies. This threat to validity can only be countered by increasing the strength of the Case Study validity.
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Predicted derived from literature (RIBA Study) Case Study A,B,C,D,</th>
<th>Case Study (A) results</th>
<th>Case Study (B) results</th>
<th>Case Study (C) results</th>
<th>Case Study (D) results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services Offered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Planning</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Ownership</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td></td>
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<tr>
<td>Reward Mechanism</td>
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<tr>
<td>Job Costing</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>Satisfaction</td>
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<tr>
<td>Philosophy</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 6.5: Dependent variables cross Case Study analysis

In essence Yin (1991, p.111) states the goal is to identify all reasonable threats to validity and to conduct repeated comparisons showing how such threats cannot account for the dual patterns in both the hypothetical cases and the Case Studies.

**Research Design**

The research design will follow a careful approach in order to enable pattern matching to be effective. The Case Studies will be selected based on the RIBA Research Strategy and Methodology.
Strategic Study. The abstract of the findings of the RIBA Strategic Study was included in Chapter 4 and will be used to select the firms to be included in this research.

External Validity

In order to minimise the effect of external influences on the results of the Case Studies each Case Study was carefully chosen. The firm selected for Case Study A of a Traditional Firm will form the context for the remaining Case Studies illustrated in Table 6.6.

The independent variables are factors that are beyond the control of the research and the effect on the Case Study of these variables has been minimised by carefully selecting the subsequent firms in each Case Study.

Internal validity

The initial Case Study established the constraints, which identify the firm, and the features that were of importance. The process is critical in order that in future Case Studies the constraints can be relaxed to enable theoretical replication, that is, each case is
selected so that it produces contrary results but for predictable reasons according to Yin (1991, p.53).

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Traditional Firm RIBA Study</th>
<th>Traditional Firm Case Study A expected results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure (1.03 &amp; 3.03)*</td>
<td>Multi-partner, individual fiefdoms*</td>
<td>Multi-partner, individual fiefdoms*</td>
</tr>
<tr>
<td>Services offered (2.03)*</td>
<td>Full agent / traditional*</td>
<td>Full agent / traditional*</td>
</tr>
<tr>
<td>Strategic planning (9.02 &amp; 9.06)*</td>
<td>Day to day*</td>
<td>Day to day*</td>
</tr>
<tr>
<td>Ownership (7.01)*</td>
<td>Equal shares in the partnership*</td>
<td>Equal shares in the partnership*</td>
</tr>
<tr>
<td>Decision making (7.01, 7.09 &amp; 15.03)*</td>
<td>Consensus*</td>
<td>Consensus*</td>
</tr>
<tr>
<td>Reward mechanism (1.04)*</td>
<td>Salaried, non incentive*</td>
<td>Salaried, non incentive*</td>
</tr>
<tr>
<td>Job costing (4.07)*</td>
<td>Overheads allocated as a flat percentage*</td>
<td>Overheads allocated as a flat percentage*</td>
</tr>
<tr>
<td>Marketing (2.01)*</td>
<td>Recommendation and partners contacts*</td>
<td>Recommendation and partners contacts*</td>
</tr>
<tr>
<td>Satisfaction (Maslow)*</td>
<td>Design and social status*</td>
<td>Design and social status*</td>
</tr>
<tr>
<td>Philosophy (Cox, Winch)*</td>
<td>Architecture is a way of life profession*</td>
<td>Architecture is a way of life profession*</td>
</tr>
<tr>
<td>*(see lit review)</td>
<td>*Expected from literature review</td>
<td>*Case Study A</td>
</tr>
</tbody>
</table>

Table 6.7: Table of dependent variables and hypothetical Case Studies found in the literature.

The literature review identifies that firms differ for many reasons. The table included in Table 6.2 lists the constraints identified in the Case Study that will be used to compare each Case Study in the series of Case Studies. The table has three columns. The first identifies the theory and where it can be found in the literature review. The second column shows the
constraints found in the RIBA Case Study and the third column the expected results in Case Study A.

The table included in Table 6.7 uses Case Study A as an example and is taken from the Case Study in Appendix A. The dependent variables including the predictions made are taken from the abstract of the RIBA Strategic Study (1993) and are in the literature review in Chapter 4.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Semi structured interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Business firm’s organisational structure (3.03)</td>
</tr>
<tr>
<td>Services Offered</td>
<td>Details of work the firm undertakes (2.01) (2.03)</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>Firm’s perception of why it exists (9.02) (9.06)</td>
</tr>
<tr>
<td>Ownership</td>
<td>Firm’s financial considerations (7.01)</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Firm’s financial considerations (7.01) (7.09)</td>
</tr>
<tr>
<td>Reward Mechanism</td>
<td>Details of the firm (1.01)</td>
</tr>
<tr>
<td>Job Costing</td>
<td>Firm’s staff (4.07)</td>
</tr>
<tr>
<td></td>
<td>Financial considerations (7.02)</td>
</tr>
<tr>
<td>Marketing</td>
<td>Details of work the firm undertakes (2.01)</td>
</tr>
<tr>
<td></td>
<td>Economic environment (10.01)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Firm’s perception of why it exists (9.01)</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Details of work the firm undertakes (2.06)</td>
</tr>
</tbody>
</table>

Table 6.8: Location of dependent variables in interview questions with firm’s representative
The semi-structured interview with the representative of the firm is used to collect the dependent variables found in the firm. The table in Table 6.8 identifies where in the semi-structured interview (copy included in Appendix A) the variables can be found. The questions marked in red in bold italics, identify the heading and reference number of the location of the dependent variables (Table 6.7) and where they may be found. The dependent variables are factors that are within the control of the research and the effect on the Case Study of these variables will be explained in the research by analysing the information gathered in each Case Study.

Figure 6.9 illustrates the research strategy in the form of a flow chart. The diagram draws attention to the replication logic of the Case Studies. A literature review and Case Study A were conducted simultaneously with the design of the research strategy. An important purpose of Case Study A was to identify the dependent and independent variables. It was expected that the literature review would expose propositions to be tested. In order to investigate the social phenomena in the firm the Case Study strategy was adopted. As the unit of analysis is the firm the results from the social efficiency map and the perceptions of the architects will be generizable to theoretical propositions but not to other firms. The RIBA Strategic Study provided the Case Studies from which the dependent and independent variables were derived. The initial purpose of Case Study A was to replicate as far as possible the Case Study of a traditional firm in the RIBA Strategic Study.
RIBA 'World View' Strategic Study 1993
Effect of external environmental force belief

- RIBA 'World View' Strategic Study 1993
- Effect of external environmental force belief

Case Study A
Traditional Firm
- Split variables into independent and dependent
- Use Maisters Framework (culture of the firm) to establish a Selection process for further case studies

Case Study B
Multidisciplinary Firm

Case Study C
Named Firm

Case Study D
Commercial Firm

Exploration of hypothesis

Cross case study analysis of case studies A, B, C and D

Conclusion
The Implications of the Case Study Approach

A Case Study has been defined as:

"An empirical enquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between the phenomenon and context are not clearly evident and in which multiple sources of evidence are used."
(Yin, 1991, p.23)

Yin attempts to highlight the technical features of a Case Study but he also points out that the focus (or units of analysis) of Case Studies have been variously identified as 'decisions', 'organisations', 'processes', 'events', and so on.

The phenomena of concern in this research are the goals of the firm and the perception of those goals by the architects in the firm. To analyse the source, cause, or effects of these goals outside of the context of the firm would be meaningless.

Multiple sources of evidence were necessary to gain access to the goals at corporate, management and individual levels within the firm. Different data and methods of data collection were necessary in order to access the components of a firm: goals and values; psychosocial; managerial and environmental. These are outlined later and illustrated in Figure 6.9.
The Implications of the Case Study Approach

A Case Study has been defined as:

"An empirical enquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between the phenomenon and context are not clearly evident and in which multiple sources of evidence are used."

(Yin, 1991, p.23)

Yin attempts to highlight the technical features of a Case Study but he also points out that the focus (or units of analysis) of Case Studies have been variously identified as 'decisions', 'organisations', 'processes', 'events', and so on.

The phenomena of concern in this research are the goals of the firm and the perception of those goals by the architects in the firm. To analyse the source, cause, or effects of these goals outside of the context of the firm would be meaningless.

Multiple sources of evidence were necessary to gain access to the goals at corporate, management and individual levels within the firm. Different data and methods of data collection were necessary in order to access the components of a firm: goals and values; psychosocial; managerial and environmental. These are outlined later and illustrated in Figure 6.9.
This Case Study approach will not produce statistical generalisation and therefore, no sampling procedure is required or affected. Case Studies do, however, allow analytical generalisation:

"... that is to generalise a particular set of results to some broader theory rather than to a larger population."
(Yin, 1994, p.39)

In this case these generalisations are to the broader theories identified in the RIBA Strategic Study of the Profession (1993).

In order to produce analytical generalisations it is necessary to replicate the findings of a Case Study in one or more further Case Studies, where the theory would predict that similar results should occur. Hence, a multiple Case Study design was adopted as illustrated in Figure 6.9. The Case Studies were a process of analysing four architectural practices. They were selected to meet requirements specified following the analysis of previous research in the RIBA Strategic Study (1993), described in Chapter 4 and a consideration of the pragmatics of data collection.

Selection of Case Studies

The practices included in the Case Studies in this research were selected from the RIBA Directory of Practices 1998 RIBA (1998). The selection process was initially based on the practice statement included in the entry of the firm in the Directory. Within the statement the researcher is looking for a definition of
what the firm represents, the size of the practice, services offered, previous jobs, location, and the legal status of the firm.

Suitable firms were short-listed and a letter (Appendix C) sent to the senior partner/director. Subsequent to receipt of the letter the firms were contacted by telephone by the researcher to follow up the approach. Of the eight firms approached subsequent to the follow-up call four were identified as suitable for inclusion in the study.

The Research Methods

A database was established for each Case Study using qualitative methods ranging from questionnaires, semi-structured interview and participant as observer techniques.

The researcher through a semi-structured interview with the spokesperson of the firm and through examination of records was able to elicit the goals of the firm as a basis for comparison with the perception of the architects of these goals.

The non-equivalent dependent variables were identified by analysis of the semi-structured interview with the firm's representative and data about the firm from which the researcher could categorise the firm gathered. If a firm did not meet the requirements of the research it would be dropped from the study.
A research Case Study protocol was developed in order to provide consistency in the process of selection of the Case Studies and comparability of the findings.

**Start of Case Study protocol involving 4 Stages follows the pro forma below.**

**Overview of Case Study Protocol**

**Stage 1:** Semi-structured interview with the spokesperson of the firm. Abstract the following information from the pro forma (see Appendix A):

- Independent variables
- Categorise firm
- Dependent variables (questions marked in red)
- Goals of firm (questions marked in blue)
- Historical factual information

**Stage 2:** Distribute questionnaires. Hand to the representative of the firm to distribute to the qualified architects in the firm using the pro forma in Appendix D.

**Stage 3:** Participant as observer, identify the following:

- Language used by interviewees
- Environment organisation operates in
- Phenomena in firm
- Phenomena based in social theory
**Stage 4:** Semi-structured interview with the individual architects in the firm using pro forma Appendix B.

**DETAILED RESEARCH PROTOCOL (to be followed for Case Studies).**

Refer to Appendix A for copy of standard form for semi-structured interview with the firm's representative. **Note:** as described in Chapter 4 the words in blue identify location of goals of the firm. The words in red identify the dependent variables.

**Stage 1**

1.0 DETAILS OF THE FIRM

The questionnaire begins with a panel of general case history questions used for identifying the firm.

1.01 BUSINESS SCOPE DETAILS

The questionnaire includes varied questions under the section 'business scope details'. These include: volume of work in the firm, *volume of work in the office goal-(1)*, complexity of the work, structure of the firm, *employment contracts*, sick leave, *training polices goal-(12)*, ratio of male to female staff, ratio of managers to architects, *personnel policy goal-(9)*, type of firm, ratio of computers to staff and a brief history of the firm. Where the opinion of the spokesperson is requested, e.g. question 1.02 volume of work and the follow up question, does the office appear to be very busy? This is the opinion of the firm not that of the spokesperson as an individual. The purpose of this
question is to illicit any corporate level goals the firm may have regarding the ratio of staff to jobs.

2.0 DETAILS OF THE WORK THE FIRM UNDERTAKES

The questionnaire includes categories in which a firm may fit. The categories give a general guide to business objectives included in the literature.

The sector the firm works in can have an affect on the way the firm is organised. The table in question 2.01 identifies the number of markets the firm works in goal-(4) and captures the level of brief, level of service and approach required by each client in each sector. It is anticipated the level of experience of the client will vary between the sectors identified in the questionnaire. Drucker's work (1974) on management by objectives concludes that clear objectives have a strong affect upon management performance.

A firm must identify how it will best utilise its resources goal-(8) and in order to survive against a broad range of competition architects are developing a core set of skills to which clients will turn because they are not substitutable. The RIBA (1992) outlined options for practices to structure themselves. Given that on an individual level there will be specialists, project managers and generalists, the question is how can they be best organised into practices that will give clients what they need. There seem to be two options at the practice level. These can be broadly divided into those firms offering a specialist and those offering a generalist service. The table in question 2.03 identifies the alternatives outlined by the RIBA (1992).
The way the firm answers question 2.04 gives a guide to how the firm perceives what is its value and points to what the firm considers is its mission or purpose goal-(20) if any. As practices come increasingly under the pressure of fee competition understanding what a practice does well compared to others in the sector, maximising those arrangements, and communicating them to prospective clients (and others) increases in importance.

Question 2.05 and 2.06 identifies strategies the firm developed to cope with the competitive business environment outside the firm. There is a need for fit between this competitive environment and an organisation's strategies, structure, culture, systems and procedures etc. How the firm resolves this will be reflected by how the firm meets specific management goals of completion deadlines goal-(19) and cost targets goal-(17).

An interesting framework in this respect is that developed by Coxe et al based on the work of Maister (1987) embracing many of the cultural and operational differences found in architectural practice.

The importance the firm places on maintaining its reputation goal-(15) is reflected in the answers given in question 2.07. The reputation of the firm is often how it gets work, a useful approach therefore may be to focus on the actual process of architectural selection.
3.0 BUSINESS FIRMS ORGANISATIONAL STRUCTURE

It is important to examine the structure of the firm. Management makes strategic choices that are fundamental in the determination of organisation design. In reality it is not the objective environment to which managerial decision-makers respond, but the environment, as they perceive it be, this a cognitive or non-cognitive process by them and the internal politics within the firm goal-(9).

The table on question 3.01 examines the complexity of the organisation. Complex organisations are characterised by a high degree of task specialisation. The total task of the organisation is differentiated so that particular departments and units are responsible for the performance of specialised activities. In organisations this differentiation occurs in two directions; the vertical specialisation of activities, represented by the organisational hierarchy and the horizontal differentiation of activities, called departmentalisation.

The vertical division of labour establishes the hierarchy and the number of levels in the organisation. The table shown in question 3.01 identifies along the horizontal the typical hierarchy in an architectural practice.

Organisations typically have some basis for horizontal differentiation of activities. These activities are listed vertically on the table in question 3.01. In a small organisation this differentiation may be informal and may arise out of the natural interests and skills of
the individuals involved. Question 3.02 tabulates the amount of delegation and specialisation within the firm.

A major modification from traditional bureaucratic structures has been the development of programme management and the matrix form and has been recognised in question 3.03.

Question 3.05 recognises in many organisations it may be necessary to operate certain sections such as research and development by using the matrix system, and other sections with a more traditional system.

The structure a firm has can have an influence on the amount of conflict within the firm, and this provides the rational behind question 3.04.

4.0 THE BUSINESS FIRMS' STAFF

The approach a firm has towards records and learning from past experiences demonstrates a lot about the sophistication of management thinking within the firm.

The object of question 4.01 is to capture this level of sophistication within the firm's management. The basic problem of labour turnover can be identified by an index of labour stability (Fellows et al, 1983).

The contract conditions in place within the firm as identified in question 4.02 demonstrate a lot more about the firm than one would initially expect.

A study by the RIBA (1993) found that generally practices demand a lot from their staff, but few firms
were in a position to offer high salaries, performance related rewards, security or a career path. The practices also managed staff in a manner broadly consistent with Maister's (1987) framework - albeit qualified by what was feasible and necessary given their stage of development e.g.:

The practice centred service led firms, generally aimed to retain staff and maintain a low level of staff turnover. In a study two firms consciously recruited local staff. The larger firms studied tended to have the most structured career structure, regular promotional reviews, bonuses and so forth, and in turn sought career-oriented individuals with a commitment to both the firm and a client-oriented approach.

The strong idea practice centred firms, both attracted young bright professionals keen to be associated with (up and coming) heroes of the profession.

The business centred service firms, demanded experienced professionals comfortable in their tough but caring environment. Both showed less loyalty than other firms to staff when workload declined, although people at the top were entrenched. Both also advertised for staff and were prepared to get them from further afield.

The business centred strong ideas firms, recruited young bright professionals interested in working on attractive projects. Often employed on a project related contract basis (to reduce variable costs), staff were (presumably) free or encouraged to move on when a specific task/project was over.
Question 4.05 focuses on the number of hours worked by the staff. The RIBA (1993) Study found that generally firms expected long hours from staff - 45 hours per week was not uncommon. Hours tended to be longest where there was most interest in the design work.

The purpose of question 4.07 is to capture the view of the firm, as it perceives its return on capital invested goal-(7) in terms of a business investment. Although most firms reported tight control over practice finances, not all had tight systems for monitoring the performance of individual projects the RIBA (1993) study pointed out. Even with sophisticated monitoring systems, there appeared to be scope for confusion and/or poor management decision-making. Most, if not all, practices judged projects in terms of average profitability, with overheads allocated, rather than on a contribution based approach.

The attitude by the firm towards production quota goal-(16) was the point of question 4.06, what were they monitoring performance against e.g., the ritual collection of time sheets is purely job costing and not a performance measure without the inclusion of production targets included in the figures.

5.0 THE BUSINESS FIRM POLICY TOWARDS TRAINING

The firm's attitude to training is highlighted in question 5.01. This is important. A leading figure in architecture. Luder (1995), describes, for example, on the issue of cut-throat fee competition and shrinking
profits that typify architecture today. Luder saw education as the answer.

The skills base of a firm, and matching this to meeting the aspirations of the employee's goal-(11), is often critical in the success of the firm. Question 5.01 is targeted in this area. The RIBA (1993) Study of several architectural businesses found that the services offered to clients ranged from broad to narrow, with few practices being equipped only with architectural skills.

The purpose, therefore, of question 5.06 is to identify if the firm is developing a skills base. Most practices in the RIBA (1993) Study employed a broader range of skills than just architecture; but quantity surveying and project management skills were rarely amongst them.

6.0 THE BUSINESS FIRMS' PERSONNEL AND ADMINISTRATION DETAILS

The specific nature of the management of practices and changes observed by the RIBA (1993) Study appeared to be dependant on the stage of development and the culture and nature of the firms.

The purpose of question 6.01 is to see how secretive the firm is regarding any business strategy it may have. The RIBA (1993) survey found that partners and directors generally understood the need to place more emphasis on managing their practices as businesses. At least half the sample had also taken outside management advice. However many middle and junior level professional employees still appeared to be ill at ease with practice management and money issues.
The approach a firm takes toward its staff is an important guide to how the firm thinks. Question 6.02 identifies if a firm has thought about how it deals with the staff. If a company has no formal personnel policy it will often mean that there is not a strategic approach, and consequently, a strong emphasis is placed upon expediency (Fellows et al, 1983). A firm should be able to recognise the advantages of recognising and attempting to meet the aspirations of its employee's goal—(11).

The purpose of question 6.03 is to see how the firm recruits staff. The laissez-faire Tatton (1972) approach to recruitment is often done in a hurry, with the consequence of a less than optimum use of labour arising from this type of selection. Question 6.04 identifies if the firm makes the effort to continue this approach in the form of annual reviews over the employment life of the staff.

Question 6.05 says a lot about how a firm is organised. A firm should have a policy towards redundancies. Such plans may never be used, but it is better to be prepared for such contingencies as they will avoid snap decisions (Fellows et al, 1983).

Keeping employees informed about matters that affect them is important. Question 6.06 identifies if the firm is prepared to communicate such information and can be done in a number of ways, with the most basic being a notice board, company magazines or news sheets, all of which engender a feeling of belonging to the firm.
The formality of the procedures for personnel management in a firm can say a lot about how serious the firm is about being an employer. Question 6.07 identifies if within a business information is accessible.

7.00 THE BUSINESS FIRMS' FINANCIAL CONSIDERATIONS

The construction industry comprises a wide variety of firms from the single person enterprise to the large multinational public company. The nature of the ownership of the firm has a direct effect on the decision-making process within the firm.

Question 7.01 recognises each firm will have its own financial structure and requirements but it remains meaningful to consider various categories.

The sources of capital available are listed in question 7.02. The cost of raising capital will vary with the source and its consequent affect the cost to the firm.

Long term capital: this is used to form or expand the long-term capital of the firm. It will be used to purchase the durable (fixed) assets of the firm.

Medium term capital; the sources of medium-term capital are short-life debentures, longer life bank loans and other loans of a life between two and seven years. Retained earnings may also be used to provide medium-term capital.

Short-term capital: it is the type of capital which is required for the day to day activities. The main sources
being accrued expenses and tax provisions and trade creditors, bank overdrafts and short term loans.

In the construction industry capital structures will vary. Question 7.03 highlights these differences. Each type of firm will need a different capital structure to suit its operational requirements.

The perception of the owners of the business towards their financial investment is identified in question 7.04. The cost of capital to a firm cannot be divorced from the cost of capital to the investors. It is possible to calculate the yield on the owners' investment. The extent to which a firm goes through this exercise will identify how serious they are about financial considerations and the earnings goal-(2) the firm can make on the capital invested.

Question 7.06 identifies if the firm considers budgeting, coupled with monitoring and control, is important. It is important to realise that such budgets are not merely predictions of a total cost or price but are time related and will indicate the pattern of accruals. In the case of stage payments, it is in this time relationship which much of the importance of budgeting lies. The stability of annual turnover goal-(5) is therefore an important consideration to a firm when assessing cash flows.

The purpose of question 7.09 is to identify the objectives that are peculiar to that organisation, a generally applicable spectrum of objectives would include profitability, growth, continuity of existence, market share, turnover, size, image, and influence.
Further parameters may be brought to bear on the firm's operations. Lack of managerial ability may preclude a firm's growth beyond a certain size. The owner wishing to retain control or to retain the type of organisation may restrict the size of a firm. The firm or industry may be regarded as a way of life and so a firm will remain in business despite earning low profits (notable among small personally controlled construction firms).

Question 7.07 recognises that budgeting activities are mainly concerned with keeping costs within a predetermined limit with sufficient profit margin. Budgeting therefore is frequently in the form of time allocations to personnel for the performance of prescribed tasks.

The outcomes of the decisions taken by a firm invariably have financial consequences either directly or indirectly. Direct consequences may be monitored as the action progresses, but not so with indirect consequences. The indirect financial consequences are often separated from the decisions by a time lag. Question 7.10 explores whether the firm considers these effects on gross profits goal-(6) over a time scale.

Comparisons with competitors and analysis of trends are as important as the information contained in each set of accounts and is the purpose of question 7.11 and is one way the firm can use to judge the assess their market share goal-(3).

The interrelationships of the main accounting ratios are important (Parker, 1988). Ratios can be broadly classified under three headings:
Working capital ratios:

(a) Current ratio = current assets/current liabilities. This ratio should approximately be from 1.5:1 to 2:1.

(d) Turnover/capital employed. A low ratio indicates that the firm is capital intensive in its operations.

Supplementary ratios:

(a) Productivity, the two factors of production whose productivity is most frequently considered are labour and capital.

(b) turnover/number of employees

8.00 THE BUSINESS FIRMS' APPROACH TO PERKS

Question 8.00 recognises poaching of staff is not uncommon in times of boom. Firms frantically trying to poach staff know the most coveted perks are a company pension and a company car.

9.00 THE BUSINESS FIRMS' PERCEPTION OF WHY IT EXISTS

The formality of the contractual agreements between the firm and their clients gives an interesting perspective on how the firm perceives its mission or purpose goal-(20), question 9.01 is a guide to how the firm approaches this problem.

Previous research into construction firms has established several useful frameworks for categorising
firms. These frameworks provide an insight into the growth stages, thinking process and culture of organisations at strategic levels and the development stages a firm goes through.

Question 9.02 has applied the following categories to architects' businesses. Woolven (1978) identified five major types of strategic decision-making systems used by construction firms. These categories have been applied in this research to architects' firms.

A firm must have aspirations and question 9.06 uses the framework the RIBA (1993, p.44) Study used to categorise firms into stages of development. Understanding a practice's positioning in terms of such stages of development appears to be a useful indicator of the key concerns likely to be facing it and is based on the work of Churchill & Lewis (1983).

The purpose of question 9.13, is to ascertain how much importance the firm places on client satisfaction. Question 9.01 recognises that research showed this to be a particular area of difficulty. The RIBA Strategic Study in 1993 identified the structure of the profession tended to confine itself to the Standard Form of Agreement and divergence from the SFA is discouraged.

Some common themes and useful lessons emerged from research by Schnider (1993) and were the basis for the following questions in the semi-structured interview. Question 9.03 notes practices in the survey by Schnider were generally receiving a low level of profit on the projects goal-(6), they undertake some quoting a level of 5-10%.
Question 9.05 recognises the need for firms to project an image if the practice is to generate work proactively.

The forward planning by most of the practices in Schnider's (1993) survey, due to economic pressures in 1993, were focused primarily on very short timescales for future development, often two to three months ahead. This may be limiting their strategic thinking and planning and is the focus of question 9.04.

The practices in the survey preferred to operate in the traditional architect's role. There was evidence that some were looking for new models of delivery which could incorporate some of their clients' key concerns without compromising a strong design ethic. This points to question 9.08 being about what does the firm consider is its strengths and question 9.09, is the firm considering changing its services.

The practices in Schnider's survey were demanding a high level of commitment from their staff, although they are not in a position to offer these staff high salaries or a speedy career progression and this forms the basis for question 9.07.

An interesting issue was raised by the President of the RIBA (speaking in 1995) about teaching architects to resist buying in work, and teaching clients to value quality and appreciate the add-on value architects bring. The concept of serving clients goal-(13) is therefore raised in the semi-structured interview. Architects have to learn that the so-called loss leaders
always lead to more losses, Luder (1995) went on to point out, and this point forms the basis for question 9.14 and underlining the firm's understanding about sales quota's goal-(18).

10.00 ENVIRONMENTAL EFFECTS - LOCATION OF THE FIRM

Managers in two different organisations in the same industry may have differing views of the environment their firms operate in. These perceptual differences help explain the variations in organisational design and managerial practices within the same industry or field (Duncan, 1972).

Miles and Snow (1978), suggest that managers respond to their environment by developing many alternative strategies and corresponding structures. However they suggest that patterns do emerge and that there are several archetypes that seem to exist in many different industries. The four major types they identified are **defenders, prospectors, analysers and reactors**. Question 10.01 has tabulated these categories.

The location a firm finds itself in has an influence on the firm. Question 2.01 identifies the firm by market sectors and question 10.02 identifies the firm by location in the UK, and question 10.03 why the firm is in this area.

Question 09.05 recognises that some firms realise the importance of location and in some cases create 'satellite' offices which provide the impression of being independent, but in reality are just a letter box for the firm.
11.00 ECONOMIC ENVIRONMENT CONSIDERATIONS OF THE FIRM

The economies of all countries in the world experience periodic surges in investment in the built environment, frequently described as boom and bust cycles. Question 10.01 recognises the importance of the firm being able to recognise and interpret this information.

Question 10.2 explores if the firm is aware of what economic reforms have taken place and any effect on the firm.

The capacity of the construction industry to attract adequate resources is partially determined by the business cycle. As such the firm is a supplier to the economy and question 10.03 identifies if the firm expands and contracts with the business cycle.

In the boom bust economic cycle, as the bust part of the cycle firmly grips the industry many resource providers remove themselves from the industry. Question 10.04 identifies if the firm has ever considered leaving the industry at this point.

During the onset of boom times, suppliers of resources may lack confidence to expand their activities. Question 10.05 identifies if the firm suffers from these fluctuations in labour and cannot expand easily.

During periods of shortages of skilled professional management firms may consider providing a reduced level of service to the clients. Question 10.06 identifies what level of information the firm considers appropriate.
and if the firm ever reduces the amount of information it provides in the early stages of a boom.

The type of client the firm has is changing as clients become more sophisticated. Question 10.09 recognises this. The separation of the design from the construction process and the diversity of specialists in the industry have contributed to the tradition of providing only an outline of the designer's intentions in the drawings.

Question 10.08 recognises the demand for housing will tend to follow (with a twenty-year lag) changes in the birth rate. This rise and fall in construction activity is known as the "building cycle" and has a length corresponding to one generation. A firm that is involved in housing will need to be aware of the effects of demographic change.

The large size of the public sector and the degree of government involvement in the economy have affected the normal market pattern such that fluctuations have become largely dependent upon governmental action. This can take the form of industrial policy, urban and regional policy, building control and most important demand management techniques. Question 10.10 identifies if the firm is aware of the effect of government action. The introduction of the private finance initiative by the government in the early 1990s is a development which encourages the construction industry to raise capital in order to develop projects.

Many industrial and commercial concerns will plan investment projects on a ten-year rolling programme, basing their viability calculations on the anticipated
average interest rate over the whole period. Question 10.11 explores if this is a factor affecting the firm.

12.00 SOCIO-POLITICAL EFFECTS ON THE FIRM

The socio-political environment is defined in this thesis as those matters of policy and political activity that establish a framework within which laws and regulations are administered and the environment in which they are administered.

The allocation of grants and subsidies by local and national government can affect the way firms are organised. Question 12.01 identifies if these external political goal-(10) factors have an affect on the firm.

Local action and protest groups can exert political pressure that may result in businesses reforming their strategies. Question 12.02 identifies if the firm is sensitive to these pressures.

The firm may be socially aware and questions 12.03-12.07 attempt to capture any broader objectives the firm may have regarding its role in society and serving the community goal-(14).

The Strategic Study by the RIBA (1993) found the central and overriding theme of its research findings is that there are fundamental difficulties in the relationships between architects and the clients that were surveyed, with each approaching the relationship with different aspirations and priorities. The concept of serve client's goal-(13) may be open to interpretation by the firm.
The employment of people in society today is a greater responsibility than before. Question 12.07 recognises the workforce is becoming more skilled and the power of these individuals in the market place is increasing.

Companies are developing a more corporate identity. Question 12.08 relates to change in the professional classes. They no longer leave to the professional institution they belong to the responsibility of marketing the business and the profession. Larger businesses are developing into broader areas of business. The Governments PFI initiative has given some businesses the opportunity to become involved in the provision of local authority services to communities in the UK. Architectural businesses are no longer bound by rules that forbade them to become limited companies, or to raise capital from shareholders. This change in regulation is enabling businesses to merge across the professions.

(End of Stage 1)

**Stage 2:** Hand the standard questionnaires to the firm's representative for distribution to the individual architects. Standard questionnaires are included in Appendix D.

13.00 THE DEVELOPMENT OF THE QUESTIONNAIRE GIVEN TO INDIVIDUAL ARCHITECTS (RIBA) WITHIN THE BUSINESS FIRM

Personality is analysed in question 13.03 and the spokesperson of the firm is given a standard questionnaire for the RIBA qualified interviewees to
complete. A copy of the shortened version of Bortener's self-rating scale is included in Appendix D.

Copies will be given to the representative of the firm following completion of the semi-structured interview with the representative of the firm. The representative of the firm will hand to the architects the questionnaires.

Notes to the researcher:

• The questions are not weighted and only give an indication of the personality types of individuals.

• The researcher should not refer to the questionnaire as a personality test.

• Self-appraisal by individuals is a potential problem. Notes should be made of any specific questions asked.

• The value of the test is limited to identifying patterns of personality types.

• This questionnaire supports the more sensitive information collected during the researcher's role in the firm as participant as observer.

Creativity is analysed in question 13.03. The spokesperson of the firm is given a standard questionnaire for the RIBA qualified interviewees to complete. A copy of the shortened version of Vecchio's questionnaire is included in Appendix D.
Copies will be given to the representative of the firm following completion of the semi-structured interview with the representative of the firm. The representative of the firm will hand to the architects the questionnaires.

Notes to the researcher:

- The questions require an answer marked ABCDE. Their choice is included in the column marked letter.

- The researcher should not refer to the questionnaire as a creativity test.

- Self-appraisal by individuals is a potential problem. Subjects familiar with creativity tests may try to bias their answers. Notes should be made of any specific questions asked by the individuals.

- The value of the test is limited to identifying the distribution pattern of creative individuals between the Case Studies.

- This questionnaire supports the more sensitive information collected during the researcher's role in the firm as participant as observer.

Locus of Control is analysed in question 13.01 and the spokesperson of the firm is given a standard questionnaire for the RIBA qualified interviewees to complete. A copy of the shortened version of Rotter's questionnaire is included in Appendix D.
Copies will be given to the representative of the firm following completion of the semi-structured interview with the representative of the firm. The representative of the firm will hand to the architects the questionnaires.

Notes to the researcher:

- The questions require an answer marked with a tick in the box provided.

- The researcher should not refer to the questionnaire as a locus of control test.

- Self-appraisal by individuals is a potential problem. Subjects familiar with locus of control may try to bias their answers. Notes should be made of any specific questions asked by the individuals.

- The value of the test is limited to identifying the distribution pattern of locus of control of individuals between the case studies.

- This questionnaire supports the more sensitive information collected during the researcher's role in the firm as participant as observer.

14.00 THE MANAGEMENT OF ARCHITECTS WITHIN THE BUSINESS FIRM

Leadership Style Profile is analysed in question 14.01 and the spokesperson of the firm is given a standard questionnaire for the RIBA qualified interviewees to
complete. A copy of the shortened version of the questionnaire is included in Appendix D.

Copies will be given to the representative of the firm following completion of the semi-structured interview with the representative of the firm. The representative of the firm will hand to the architects the questionnaires.

Notes to the researcher:

• The questions require an answer marked with a tick in the box provided.

• The researcher should not refer to the questionnaire as a leadership style profile.

• Self-appraisal by individuals is a potential problem. Subjects familiar with leadership style profile may try to bias their answers. Notes should be made of any specific questions asked by the individuals.

• The value of the test is limited to identifying the distribution pattern of management style of individuals between the Case Studies.

• This questionnaire supports the more sensitive information collected during the researcher's role in the firm as participant as observer.

(End of Stage 2)
Stage 3: Participant as observer. Note: undertake participant as observer role throughout the Case Study process.

15.00 THE DEVELOPMENT OF PARTICIPANT OBSERVATION BY THE RESEARCHER AND INTERACTION BETWEEN ARCHITECTS AND NON ARCHITECTS WITHIN THE BUSINESS FIRM

Observer as participant in the firm

Description of observer; include in the notes on the observations the following;

- description of the manner and dress of the observer

- location of the interview

- mood of the interview

Environment of the firm; describe the following;

- Location

- Building

- Layout of offices

- People flow around the building

Effect of researcher in the firm; describe how you were introduced into the firm and any reactions to your presence.
Process of observation; describe the different techniques of observation used and any reactions to your presence.

Method of collecting information;

- Semi structured interview, formal
- Snowball method, informal (note tabulate results discretely)

Problems to be studied;

- Language used, identify meanings
- Environment, identify of groups of people
- Phenomena in firm, identify incidents
- Phenomena based in social theory, identify power (interpersonal, sub-unit)
- Conclusions about single events
- Credibility of informants
- Volunteered statements
- The Observer-Informant-Group Equation
- Frequency of phenomena

Construct social system model
• Complex statements of the necessary and sufficient conditions for the existence of some phenomenon.

• Statements that some phenomenon is an "important" or "basic" element in the organisation.

• Statements identifying a situation as an instance of some process or phenomenon described more abstractly in sociological theory.

Participant as observer can carry on into next stage.

(End of Stage 3)

Stage 4: Refer to Appendix B for standard semi-structured interview, note questions to be asked, and subsequent trigger questions. Allow free flowing response from interviewee. Emphasise no right or wrong answers. Note interview to be in private. Emphasise to interviewee answers are strictly confidential. Ask permission to tape answers.

16.00 SEMI STRUCTURED INTERVIEW WITH THE INDIVIDUAL ARCHITECTS IN THE FIRM.

Follow interview procedure as outlined in Chapter 5.

The framework of the semi-structured interview is based around the typical goals of a firm, and comprises 25 questions including follow up questions. Standard form included in Appendix B. The questions are phrased in a chatty non-academic style and are not intended to imply
any right or wrong answer is required from the respondent, the process thus avoiding any characteristics of an examination or a test.

Carefully identify if the answers are motivator or maintenance goals and gauge how strong the individual's feelings are regarding these goals.

Allow the interviewee to wander freely but always bring them back to the sequence of questions in the standard questionnaire. Note, no answer will say more than a prompted answer.

When asking questions follow Vroom's sequence; expectancy this goal is possible, would you prefer this goal to happen and do you believe this would affect any secondary outcomes you may have. Do it in a relaxed chatty manner.

End of Case Study protocol

Conclusion and Summary

The discussion regarding qualitative and quantitative research methods led to a greater understanding of macro and micro sociological work. This was useful as it gave a deeper understanding of the requirement for a sensitive approach towards the Case Studies in the series of Case Studies.
The importance of the language used by the individuals in the Case Studies was one aspect which could have been easily overlooked and yet is vital in understanding the information collected in the Case Studies.

The interpretation of information collected in the Case Studies is to be by triangulation pattern matching and explanation building. In order to validate the information collected a research protocol was established. The apparent poor pedigree of sociological research was highlighted. As a consequence of this a strong research protocol was designed which means the research can be easily replicated. The research protocol was further strengthened by tape recorded interviews allowing interpretation of the results by others and further strengthened by obtaining diverse kinds of information which aided triangulation.

This battery of techniques was complimented by a sensitive approach to the research. It was understood that the researcher was dealing with human issues and should be prepared to withdraw from a situation that may be outside the boundaries of this research. A sense of fidelity between the interviewee and the researcher enabled a collection of rich and meaningful information but at the same time exposed the researcher to moral issues of confidentiality.
CHAPTER SEVEN

THE RESEARCH RESULTS: INTRA-CASE ANALYSIS

AND CONCLUSIONS

Introduction

The research strategy and methodology has been described and detailed in Chapters 5 and 6. This Chapter discusses the criteria for the selection of the Case Studies, develops the initial propositions, then presents the results and conclusions from the intra-case analysis.

The four Case Studies are presented in this Chapter. Initial analysis enables the propositions to be tested to strengthen the validity of the Case Studies selected when compared to the Case Studies described in the RIBA Strategic Study.

The process enables legitimate comparison with the Case Studies in this study and the Case Studies in the RIBA Strategic Study of the Profession. The establishment of validity of individual Case Studies enables broad analytic generalisations arising from the RIBA Study to be tested within each Case Study as propositions.
Independent Variables

The independent variables were identified from the summary of the description of the firms in the RIBA Case Studies. The variables were identified and tabulated in Chapter 4. These variables will be used as the basis for selecting the firms to be used in the Case Studies in this research. Table 7.1 shows the independent variables abstracted from the RIBA Study.

The Selection of Case Studies

Chapter 6 has explained the reasons for the Case Study strategy. Case Study D was chosen to enable theoretical replication. This was based on a hypothetical Case Study taken from the literature. Figure 7.2 summarises the variables for the four Case Studies. The Case Studies in the RIBA Strategic Study are brief and offer scanty detail but are sufficient to provide a framework for the selection of more detailed Case Studies included in this study. An explanation for the choice of the Case Studies is as follows:

Capital Value of Work: The RIBA Strategic Study gave a spread of firms between £3 to 6 million and was at 1993 prices in the depths of a recession in the UK economy. Prices have increased over the last 8 years and the economy is in a much stronger position. The requirement for a range of capital value of work from £8-20 million per financial year provides firms that are large enough to be classified as businesses.

Research Results Intra-case Analysis
Number of Staff: The requirement for a range of staff numbers between 7 and 50 is quite large, but is sufficient to exclude firms that are 'one man bands' and to the other extreme firms that are large employers like Building Design Partnership.

Location: The location of the firms in the RIBA Case Studies is not clear from the Report. The Case Studies in this study were in Cardiff or Manchester. Both cities have Universities that teach Architecture and are commercial centres in their respective regions. The local economies enjoy a good spread of both public and private spending and are known as cities that can provide rich cultural, sports and social life for the population in the region.

Development Stage: The development stages of the firms selected for inclusion in this study have been held constant at development stage Success 1 to better enable comparison in the cross Case Study analysis.

RIBA Directory Listed Firm: The study limits its scope to the study of RIBA qualified architects within RIBA Listed Architectural practices. It is a basic assumption of the research that RIBA qualified architects and architectural practices will have a comparable ability to perform the job well and a clear understanding of the ways in which it is appropriate to direct that effort.

Independent: The firms must be independent from influence from outside sources such as would be found in a local authority or a commercial business that was a franchise for a certain product or service. The object
of the research is to collect influences from the environment identified from the RIBA Study as 'Cherished but Obsolete Beliefs', any effect of such beliefs within a non independent firm may well be lost or drowned out by the noise because of the firm's dependence.

Fee Bidding: The firm must have to operate in the market place for architecture. A firm that was subsidised by a patron or institution would not be expected to behave in a manner that was comparable to firms that were operating under commercial pressures.

Staff Contracts: A firm must exist in the current accepted norm. In the future an architect's office may consist of staff existing in a 'virtual form' linked on a Web Site, connected by electronics, meetings and work taking place on the World Wide Web. This is not yet commonplace but will fundamentally change 'the firm'. The culture of such a firm would render the influence of local UK based professional institutions obsolete.

Date: It is important to undertake the Case Studies in the same point in the economic cycle in order to minimise economic and political influences on the research.

Dependent Variables

The dependent variables were abstracted from the RIBA Strategic Study of the profession. A brief description of the firms used in the RIBA Strategic Study is included in Chapter 4. The information contained in the RIBA Study was necessarily brief. It is considered
enough for the purposes of this research to select firms that are comparable. It would, however, be impossible to select firms that are exactly the same in order to replicate the results of the RIBA Study. The procedure strengthens the internal validity of the Case Studies in this research and enables the propositions to be drawn from the RIBA Case Studies and gives a longitudinal perspective to the psyche of the architects within the architectural businesses.

The dependent variables included in the Case Studies for this research were collected in an altogether more structured approach. The dependent variables were abstracted from the semi-structured interview with the firm's representative included in stage 1 of the research protocol as explained in Chapter 6. The main purpose of this structured approach is to enable in Chapter 8 comparison between the Case Studies.

The literal replications between the RIBA Case Studies and the Case Studies in this research are shown in blue in Table 7.3 based on the interpretation of the information in the RIBA Strategic Study.

The theoretical replications are shown in red in Table 7.4. The tables identify against each dependent variable where the answers are located in the semi-structured interview included in Appendix A. The full explanation for the literal replication is given in each Case Study. The predicted reasons for why the Case Study will be different from the Case Studies in the RIBA Study and the actual outcome of the Case Study is also included. The non-equivalent dependent variables in the Case
### Table 7.1: Showing Independent Variables Case Studies in this Research

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Value of work (1993 prices)</th>
<th>No of Staff</th>
<th>Location</th>
<th>Development Stage</th>
<th>RIBA</th>
<th>Independent Fee bidding</th>
<th>Fee bidding</th>
<th>Staff contracts</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>£3 Million</td>
<td>29</td>
<td>N/A</td>
<td>Success 111</td>
<td>N/A</td>
<td>yes</td>
<td>yes</td>
<td>100%</td>
<td>10/3/00</td>
</tr>
<tr>
<td>1993</td>
<td>£6 Million</td>
<td>50</td>
<td>N/A</td>
<td>Take off IV</td>
<td>N/A</td>
<td>yes</td>
<td>yes</td>
<td>100%</td>
<td>12/2/00</td>
</tr>
<tr>
<td>1993</td>
<td>£5 Million</td>
<td>52</td>
<td>N/A</td>
<td>Success III</td>
<td>N/A</td>
<td>yes</td>
<td>yes</td>
<td>100%</td>
<td>10/3/00</td>
</tr>
</tbody>
</table>

### Table 7.2: Showing Independent Variables taken from RIBA Strategic Study 1993

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Value of work</th>
<th>No of Staff</th>
<th>Location</th>
<th>Development Stage</th>
<th>Independent Fee bidding</th>
<th>Fee bidding</th>
<th>Staff contracts</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>£12m</td>
<td>25</td>
<td>Cardiff</td>
<td>Success I</td>
<td>N/A</td>
<td>yes</td>
<td>100%</td>
<td>7/9/98</td>
</tr>
</tbody>
</table>
Studies therefore become non-equivalent dependent variables but for predicted reasons.

Propositions Based on Dependent Variables

The propositions to be tested arise from the RIBA Strategic Study of the Profession. Initial propositions are to strengthen the internal validity of the Case Studies selected for the research. The propositions are tested against the findings of the RIBA Strategic Study by pattern matching. Differences are explained by theoretical replication and so become non-equivalent dependent variables. Where differences between variables in a Case Study could not be explained then the Case Study would be dropped from the research.

Theoretical replication based on literature was used in the case of the commercial firm included in the Case Study D. The RIBA Study was unable to include a commercial firm but drew some propositions about what such a firm would be like. A hypothetical Case Study was developed from the literature to strengthen the internal validity of the Case Study of the Commercial Firm in this research.
## Chapter 7: Management of Architects Within Architectural Businesses

**Literal Replications (blue), RIBA Strategic Stu (Table 7.3) and Case Stu (Table 7.4)**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Structure</th>
<th>Services offered</th>
<th>Strategic planning</th>
<th>Ownership</th>
<th>Decision making</th>
<th>Reward mechanism</th>
<th>Job costing</th>
<th>Marketing</th>
<th>Satisfaction (Maslow)</th>
<th>Philosophy (Cox, Winch)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td>Life</td>
<td>Money</td>
<td>Separate SKILLS</td>
<td>Reputations, decision</td>
<td>Partnership, consent</td>
<td>Separate SKILLS</td>
<td>Money</td>
<td>Interest, self-appreciation</td>
<td>Intrinsic, self-supplied</td>
<td>Architecture is a way of life profession</td>
</tr>
<tr>
<td><strong>Monetary</strong></td>
<td>Profitability</td>
<td>Separate SKILLS</td>
<td>Reputations, decision</td>
<td>Partnership, consent</td>
<td>Separate SKILLS</td>
<td>Money</td>
<td>Interest, self-appreciation</td>
<td>Intrinsic, self-supplied</td>
<td>Architecture is a way of life profession</td>
<td></td>
</tr>
<tr>
<td><strong>Monopoly</strong></td>
<td>Monopoly</td>
<td>Business plan</td>
<td>Different monents of market rate</td>
<td>Overheads allocated as a flat percentage</td>
<td>Reputations, decision</td>
<td>Partnership, consent</td>
<td>Separate SKILLS</td>
<td>Money</td>
<td>Interest, self-appreciation</td>
<td>Intrinsic, self-supplied</td>
</tr>
<tr>
<td><strong>Business plan</strong></td>
<td>Day to Day</td>
<td>Business plan</td>
<td>Different monents of market rate</td>
<td>Overheads allocated as a flat percentage</td>
<td>Reputations, decision</td>
<td>Partnership, consent</td>
<td>Separate SKILLS</td>
<td>Money</td>
<td>Interest, self-appreciation</td>
<td>Intrinsic, self-supplied</td>
</tr>
<tr>
<td><strong>Full agent / Traditional</strong></td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
<td>Full agent / Traditional</td>
</tr>
<tr>
<td><strong>Departmentalised / Traditional</strong></td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
<td>Departmentalised / Traditional</td>
</tr>
</tbody>
</table>

### Table 7.3: Literal replications

<table>
<thead>
<tr>
<th><strong>Management of Architects Within Architectural Businesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Results Intra-case Analysis</strong></td>
</tr>
<tr>
<td><strong>Table 7.3: Literal replications</strong></td>
</tr>
</tbody>
</table>

### Table 7.4: Case Studies (Table 7.3) and Case Studies (Table 7.4)

<table>
<thead>
<tr>
<th><strong>Case Study</strong></th>
<th><strong>RIBA Strategic Study (Table 7.3) and Case Studies (Table 7.4)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Architecture</strong></td>
<td>Study</td>
</tr>
<tr>
<td><strong>Traditional</strong></td>
<td>RIBA Case Study</td>
</tr>
<tr>
<td><strong>Multidisciplinary</strong></td>
<td>RIBA Case Study</td>
</tr>
<tr>
<td><strong>Named</strong></td>
<td>RIBA Case Study</td>
</tr>
</tbody>
</table>

*See Appendix A and Chapter 6 for interview results.*
### Table 7.4: Theoretical Replications

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Case Study C</th>
<th>Case Study B</th>
<th>Case Study A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>Architecture is a way of business</td>
<td>Philosophy (Cox, Winch)</td>
<td>*</td>
</tr>
<tr>
<td>Money</td>
<td>Design and architecture separate, separate skill</td>
<td>Design</td>
<td>*</td>
</tr>
<tr>
<td>Testing</td>
<td>Separate, separate skill</td>
<td>Design</td>
<td>*</td>
</tr>
<tr>
<td>Test percentage</td>
<td>Test percentage as a market ratio</td>
<td>Overheads allocated as a market ratio</td>
<td>*</td>
</tr>
<tr>
<td>Reward mechanism</td>
<td>Intangible, self supplied</td>
<td>Monetary reward mechanism</td>
<td>*</td>
</tr>
<tr>
<td>Monetary</td>
<td>Intangible, self supplied</td>
<td>Monetary reward mechanism</td>
<td>*</td>
</tr>
<tr>
<td>Direct control</td>
<td>Direct control</td>
<td>Direct control</td>
<td>*</td>
</tr>
<tr>
<td>Managing director was</td>
<td>Managing director was</td>
<td>Managing director was</td>
<td>*</td>
</tr>
<tr>
<td>Presidency</td>
<td>Presidency, single individual presidency</td>
<td>Presidency, single individual presidency</td>
<td>*</td>
</tr>
<tr>
<td>Business plan</td>
<td>Key to key</td>
<td>Business plan</td>
<td>Key to key</td>
</tr>
<tr>
<td>Specialisation</td>
<td>Full agent / traditional</td>
<td>Full agent / traditional</td>
<td>*</td>
</tr>
<tr>
<td>Architectural</td>
<td>Architectural</td>
<td>Architectural</td>
<td>*</td>
</tr>
<tr>
<td>Architectural / Architectural</td>
<td>Architectural / Architectural</td>
<td>Architectural / Architectural</td>
<td>*</td>
</tr>
<tr>
<td>Commercial firm (case study)</td>
<td>Commercial firm (case study)</td>
<td>Commercial firm (case study)</td>
<td>*</td>
</tr>
</tbody>
</table>

*See Appendix A and Chapter 6 for interviews.*
Propositions based on RIBA Study

The understanding of the 'world view' of the architects within the firms and the firms themselves is critical in understanding the behaviour of the firms and the architects within the firms. Predictions by the RIBA Study (in 1993) were of change varying according to the category of firm studied. These predictions were described in Chapter 3 briefly pointing to the psyche of architects moving away from cherished beliefs regarding design towards a more pragmatic specialist approach, design travelling from the signature architect, to the concept architect, and finally construction supervised by the executive architect in each category of firm.

The predictions in the RIBA Study provided a starting point. The research instrument developed in this study is sensitive enough to recognise change in thinking within architectural businesses driven by contemporary pressures for change in the 'design axiom'.

CASE STUDY A - TRADITIONAL ARCHITECTURAL PRACTICE

Introduction

The firm was initially chosen from the RIBA Directory of Practices 1998 in which it described the firm 'considers it provides clients a strong delivery of traditional architectural services to clients, based on sound architectural principles'. The firm's skills core is to provide small-scale generalist advice for a wide range of buildings, working in a variety of market sectors. Most important are public and private housing, previously being successful in the retail sector. The

Research Results Intra-case Analysis
legal entity of the firm is a partnership, comprising six partners, one of which is the financial manager partner. All partners share equal equity.

**Social Efficiency**

The social efficiency map appears chaotic (see Appendix E). The pattern of the goals in the firm is almost equally balanced between negative goals and positive goals. The motivator goals appear at secondary level within the firm, particularly with individuals having views and goals that are independent of the firm.

The lines on the map Appendix E Figure 29 illustrate goals 12, 14, 16, 17, 18 and 23 merit further investigation as follows:

Comparison of the perceptions (expectancy) by individuals of the firm's goals demonstrated conflicts between partners, between architects and between partners, and some negative goals which are of particular interest:

a) Develop employee's potential: the partners were in favour of training but felt threatened that the workforce would leave once trained. Lack of policy and structure in training within the firm led to dissatisfaction in the people giving the training and the people who were trained.

b) Serve community: one partner (a) derived satisfaction by his involvement in the community, his colleagues rejected any involvement (b & c). The architects (i & j) thought the firm did a lot in this area and were

Research Results Intra-case Analysis
enthusiastic about community links. No association was made with good architecture or good business behaviour - it was just a 'nice thing' to do.

c) Production quota: architects had too much work.
Nothing was being done to solve the problem.

d) Cost targets: the negative goal of accepting that job cost overrun in the office was normal, compounded by staff working overtime to mitigate feelings of guilt.

e) Sales quota: the negative goal of not being prepared to market, not identifying markets and unwilling to invest in new skills to exploit these markets.

f) Social: partners were family oriented, architects related to work team and social groups outside work.

Comparison of the preference of individuals for the goals of the firm demonstrates how much effort these individuals are prepared to contribute to the goal.

a) Develop employees' potential: training policy was not being implemented or leading to advancement in the firm, lack of commitment by partners is reflected by the architects getting what they can and then leaving.

b) Serve community: a conflict between the views of the partners about the importance of this goal. Most saw it as irrelevant to the business but something nice to do. The financial manager appreciated the possibility of raising the firm's profile this way.

c) Production quota: the negative belief was held by the firm that staff were working flat out and so the firm could not do any more. The alternative approaches of managing work differently were dismissed. The firm had one way of working and that was the right way.

d) Cost targets: staff had the negative view that costs could not be controlled in the firm. Furthermore,
costs had nothing to do with them. Excessive overtime working mitigated any feelings of responsibility.
e) Sales quota: only one architect (j) was interested in selling architecture. The partners had real problems with understanding the concept of selling and marketing; they were architects not salesmen.
f) Social: partners were family oriented. Architects related to the team and social groups outside work.

Comparison between an individual's secondary outcomes and the goals of the firm.

a) Develop employees potential: a conflict arose here. The partner responsible for training had enough, he wanted to design. One of the architects who had additional training was concerned that the firm was not recognising the architect’s goal for praise and reassurance was not being satisfied.
b) Serve community: there was a conflict between the partners and the architects. The view of the partners was this was a nice thing to do but not in the firm’s time. The architects got satisfaction from this work but it was costing them in unpaid overtime working.
c) Production quota: a negative goal is the idea that was accepted by the firm that working overtime increased production. Overtime working was unpaid and the norm. Staff worked overtime to mitigate feelings of guilt when some jobs in the office were making a loss.
d) Cost targets: negative goal predominant in the firm that costs could not be controlled. Basis of problem was ill-defined brief, secondary goal of staff was disassociate themselves by blaming poor management and so avoid their own feelings of responsibility.
e) Sales quota: negative goal was accepted, marketing is an anathema to architecture.

f) Social: partners liked to be architects and partners. Architects responded to praise from the team.

**Participant as observer**

Problems to be studied:

Language used by the interviewees: the table in Appendix E figure 30 illustrates pride in being an architect, a belief that the design has to be right, and 'it's better not to know' being universal amongst the architects in the firm. All the architects had a strong belief that the design had to be right. This seemed to imply a test of each architect's design abilities by the other architects in the firm. Architects would work overtime in order to pass this test without pay or other incentives. Areas such as cost, overtime working, were dismissed as better not to know.

Environment organisation operates in: all the architect's work is in an open plan environment with movement freely about the office, forming small groups chatting and drinking coffee in a free and open manner. The partners form part of the group, but are the leaders. The firm does not have a formal day with the architects free to work all hours and can wear what they like to.

Phenomena in the firm: it was a feature in the firm that new employees did not remain with the firm but moved on to other firms after gaining experience in architecture.
Phenomena based in Social Theory: the key factors in the power influencing the architects (i) and (j) came from the need for the architects to gain experience as architects. The architects felt affiliation with the partners, as they would like to be in that position in a few years' time, once they had gained experience. Other interpersonal categories were excluded for the following reasons: reward, pay was not an issue; punishment, the firm did not have any strict regime; legitimate power was not exercised by the partners.

The organisation had no identifiable sub units as it was not departmentalised and the use of the sub unit model did not seem relevant.

Conclusions about single events; the younger architects submit to and follow the partners as long as they consider they are improving their pride as architects in their own right. The partners consider it is important to get the design right, a judgement which is the partners. It would seem when the younger architects have gained enough experience to challenge when the design is right, they move on. Affiliation needs fall by the wayside as the younger architects own self-actualisation needs grow and come to the fore.

**Questionnaire results**

The results of the questionnaire are tabulated in Appendix E Figure 32.
The Determination of the Initial Case Study Propositions

The underlying ethos which motivates this firm means the firm falls neatly into Maister's framework as a practice centred business. The RIBA (1993) Study did identify a practice that offered a traditional service, and it found that such a firm would be a practice centred business strong service.

The reasons for the predictions in Case Study A are described in detail below. The predictions will then be confirmed or discarded through the Case Study process of the 'Traditional' firm in Case Study A and the results shown in Table 7.4, so become dependent variables or non-equivalent dependent variables for predictable reasons.

The predicted reasons for the similarities between the hypothetical Case Study based on the literature and Case Study A are as follows;

The structure of a firm is dependent on the business strategy the firm has. The firms in the RIBA Study (1993) functioned as partnerships with organisational decision-making by consensus. The owners shared similar professional capabilities and goals. The firm would tend towards an informal approach to task specialisation based on the natural skills and interests of the individuals involved. It is predicted the traditional firm in Case Study A will have an informal hierarchy. This provides an informal chain of command necessary for consensus decision making between the partners to exercise control. The firm will not be departmentalised in order to avoid co-ordination difficulties.
The Services offered tend toward offering a strong service. The firm would be organised to deliver experience and reliability especially on complex assignments. Their project technology is frequently designed to provide comprehensive services to clients who want to be closely involved RIBA (1993, p.47).

Strategic planning is predicted to be limited to operational project based planning. The firms in the RIBA (1993) Study were ill at ease with practice management and financial performance, many only having a core size they wished to maintain RIBA (1993, p.50).

The ownership of the firm is seen as critical in the formation of policy making within a firm. The RIBA (1993, p.52) identifies a broadly based consensus is exercised in a traditional firm by the partners, with decisions clearly oriented towards meeting the goal of sustaining this consensus. The industry may be regarded as a way of life and so the firm will remain in business despite earning low profits. It is predicted the goal of the major owners of a traditional firm would be strongly towards continuity - being a way of life for the owners.

The reward mechanisms in a traditional firm would be aimed at retaining and maintaining a low level of staff turnover. The firm recruiting local staff and offering security of employment (RIBA Strategic Study, 1993, p.52). Typically bonuses would not be offered to increase motivation the majority of architects are in full time employment on staff contracts and feel of secure in the firm.
Job costing in competition is haphazard the bid based on percentage fees. Jobs are judged in terms of average profitability and a percentage fee leading to the view that 'if it's a fee bid they cannot win'. The RIBA (1993, p.56) Study identified that most practices other than commercial firms judged projects in terms of average profitability, overheads allocated as a flat percentage.

Marketing is expected to be via one or two 'closer-doer' principals strong at finding and courting clients. Staff will be encouraged to sit on key committees, maintain regular lunches with key contacts and a good level of PR and winning awards. Firms relying on repeat work and recommendation from clients (RIBA Strategic Study, 1993, p.58).

Satisfaction, would be mainly towards a total commitment to building, by giving clients more than 'they'd ever thought they would get'. (RIBA Strategic Study, 1993, p.46)

The philosophy is that practice centred businesses tend to view what they do as a way of life (RIBA Strategic Study, 1992, p.126) and hence likely to imply a qualitative bottom line.

The dependent variables included in the hypothetical Case Study A are expected to be the same in Case Study A as predicted above. The Case Study found the following characteristics:-

The structure of a firm is dependent on the business strategy. This firm is operational and project based in...
their management and thinking, and has a core size in mind, which they achieved and wish to maintain. Top heavy in management it functions as a partnership with organisational decision-making by consensus. The owners shared similar professional capabilities and goals. Leadership was broadly based with partners playing facilitative and managerial roles. The firm offers a general service to clients tending towards an informal approach to task specialisation based on the natural skills and interests of the individuals involved.

The services offered tend to be 'strong service', organised to deliver experience and reliability especially on complex assignments. Their project technology provides comprehensive services to clients who want to be closely involved in the process.

Strategic planning is limited to operational project based planning. The firm appeared to be ill at ease with practice management and financial performance.

The question of ownership is critical in the formation of policy making. A broadly based consensus is exercised by the partners, with decisions clearly oriented towards meeting the goal of sustaining this consensus.

The reward mechanisms are aimed at retaining and maintaining a low level of staff turnover. The firm recruits local staff and offers security of employment. Bonuses are not used to increase motivation, the majority of architects are on staff contracts.
Job costing is haphazard, the bid based on percentage fees. Jobs being judged in terms of average profitability and a percentage fee.

Marketing is via one or two 'closer-doer' principals strong at finding and courting clients. Staff are encouraged to sit on key committees, maintain regular lunches with key contacts and a good level of PR. The firm relies on high levels of repeat work and recommendation from clients.

Satisfaction, is to a total commitment to building, in terms of getting the design right, trying to give clients more than 'they'd ever thought they would get'.

The philosophy is that they tend to view what they do as a way of life and hence imply a qualitative bottom line.

**Triangulation**

A process of triangulation will make use of the following information collected in this Case Study:

a) Participant as observer revealed the decoration and layout of the offices contributed to an atmosphere of freedom for workers to associate in small groups, the long hours made the workers feel this was their second home. The environment was conducive towards enhancing a strong sense of communal atmosphere in the firm. The power to make decisions was limited to the partners and on a compromise basis. The partners and architects all displayed similar language in the snowball method (see Appendix E figure 30) apart from the financial manager
partner (a). Common phrases being 'design has to be right' and 'better not to know' clearly understood by all. An interesting phenomenon was highlighted in the history of the firm. The power the partners derived from their expert knowledge over the younger architects reduced as the architects gained more experience and finally had confidence to leave. It seems when younger architects have gained enough experience to challenge when the 'design is right', that is when they move on. Affiliation needs fall by the wayside as architects own self-actualisation needs grow and come to the fore.

b) The social efficiency map (see Appendix E figure 29) indicated the firm contained no individuals with predominant motivator goals. The strongest motivator goals were the second preference outcomes. A cycle operates at architect level in the firm. The architects gain training in the firm but expectations are reduced as the training leads to little reward. The firm has no career structure or reward mechanisms. The fall in expectations experienced after completing training leads them to gain a reward for the additional skills by joining other firms. The partners' policy of keeping all the management at partnership level is limiting the growth of the firm. The social efficiency of the firm is poor. The firm contains a lot of conflicting goals operating inside it and a lot of negative goals have developed within the firm. The result is at partnership level: one partner has left due to stress, decision-making is inhibited due to the necessity for the partners to agree. Decisions tend to react to problems not anticipate problems. At management level in the firm no policies are communicated to the staff. Any goals of the staff are ignored or dismissed as irrelevant.

Research Results Intra-case Analysis
Management has allowed negative goals to develop and become predominant. The firm could have captured an extra potential source of effort if it had been sensitive to the architects' ideas towards community issues, design and marketing the image of the firm. The money did not motivate the architects in the firm, they were working excessive overtime, which was unpaid, and salary levels were modest. The architects expressed a view that the opportunity to design compensated for the financial problems. The architects in the firm could easily have got other jobs, but they identified with the partners who similarly expressed pleasure in designing.

c) Finally a formal questionnaire (see Appendix E Figure 32) is filled in by the interviewee. The individuals tested (with one exception) proved to be all Type A personality indicative of an impatient competitive individual who feel they are constantly under time pressure. Also tend to be aggressive trying to accomplish several things at once and have difficulty in relaxing. Apart from one partner (c) who was a B+. The remaining results showed all the individuals to have an external locus of control apart from again one partner (c) who was an internal locus of control. Externally oriented individuals tend to believe forces beyond their control are responsible for success and tend to prefer extrinsic rewards. Internally oriented are less likely to respond to group pressures preferring intrinsic rewards. All the interviewees were non-creative. Leadership style profile: the interviewees all scored as effective leaders on the management style profile, the architects had a better score than the partners. The results for all interviewees all demonstrated a
leadership style of 'high relationship high task' not giving a balanced management style.

Pattern Matching

There was a very strong sense of community within the firm with architects and partners able to freely move about the firm and associate into private groups. Although the partners and the architects all exhibited a similar language regarding architecture the partners maintained a barrier between themselves and the staff. This took the form of restricting managerial responsibility to partners only. There was a clear demarcation between the expert knowledge of the partners and the inexperience of the architects. The effect of this policy was to limit any potential for growth and development within the firm. The perception and ability of the partners and the requirement for a consensus further dampened any potential within the firm. The free and open working environment enabled the predominance of negative goals by individuals and within groups of individuals who may have challenged the partners but maintained an acceptance of the status quo as the only way to survive. The questionnaires indicated that the partners and architects were predisposed towards an aggressive hard work approach towards problem solving and a high relationship, high task management style. None were creative in their approach to problem solving.

A pattern is emerging of a firm that has one way of problem solving and will not change. The only way to compensate for reduced income is work harder.
Proposition

The literature review has provided this proposition which is being tested here. The proposition is that the perception of the RIBA (1993, p.61) is that of being driven by the ethos of wanting to practice architecture and to design. The challenge seems to be how to find ways of improving what they already did rather than to seek any more fundamental change. This will be a predominant perception held by the architects in Case Study A.

Explanation Building

Case Study A of the traditional firm confirmed the ethos of wanting to practice architecture but to find ways of improving what they already did rather than to seek any more fundamental change. Although this study was carried out seven years subsequent to the RIBA Strategic Study the Case Studies showed some striking similarities. The traditional firm's organisational values are as a practice centred business. The effect of the abolition of fee scales has not changed the organisational values in the firm either, but rather meant everyone in the firm has had to work under more stressful conditions of longer hours and little financial incentive. The valued goal of design and the congruence through the firm toward this goal is striking. Generally however, social efficiency in the firm is poor, with many conflicting
goals apparent, particularly between partners and staff. A 'master pupil' ethos seems to be an accepted norm within the profession, of 'young architects learning the craft' then moving on to set up their own practices.

The main proposition in this Case Study was supported by the information gathered in the interview, participant observation and questionnaire process. The interviewees displayed the characteristics of individuals who preferred to practice architecture and to design and not seek fundamental change preferring to do what they do but better.

CASE STUDY B - MULTIDISCIPLINARY ARCHITECTURAL PRACTICE

Introduction

The firm was initially chosen from the RIBA Directory of Practices 1998, in which it describes the practice philosophy of 'the practice is long established (1862) operates on a fully integrated, multi-disciplinary basis and is able to take total responsibility for any normal building project'. This includes providing a fully integrated in-house service using in-house specialists comprising project managing and co-ordinating the design of highly complex serviced buildings such as hospitals and providing structural and quantity surveying services. Main clients are the former public utilities and Local Authorities. They also try to convert their own projects into schemes acting as a developer. The legal entity of the firm is a partnership.
Social Efficiency

The social efficiency map contains a lot of negative motivator goals, in comparison to the majority of maintenance goals, which are positive (see Appendix E figure 29). The fact that the negative motivator goals appear at the preference and 2\textsuperscript{nd} level outcome is of interest. The overall picture is of a firm in trouble, the appearance of so many negative motivator goals, indicates that overt reaction to unacceptable goals is being suppressed. The only positive goals are maintenance goals, indicative of a wait and see attitude. If things get worse, the firm's potential problems will present themselves, and the positive goals will rapidly turn negative and a crisis or revolution will take place.

The lines on the map Appendix E figure 29 illustrate goals 6, 7, 11, 15, 16, 18, 21 and 25 merit further investigation as follows:

Comparison of the perception (expectancy) by individuals of the firm's goals demonstrated uncertainty between partners, and architects, and the development of some negative goals, which are of particular interest:

Negative Perception of Firm's Goals

a) Gross profits: a clash between the partners and the architects because of the policy about not telling staff if the firm makes a profit or not. Architects are not told about any financial matters in the firm.
b) Return on investment: clash between the partners and the architects through a policy of not telling staff...
about financial matters. Architects are under a misapprehension that the firm is doing well.

c) Meet aspirations of employees: the architects felt excluded from the business side of the firm.

d) Maintain reputation: the partners' perception of the image of the firm was of a solid reliable firm, the architects thought this was a negative image and felt uncomfortable with this old-fashioned approach.

e) Production quota: clash between the senior partner (a) and partner (b) supported by the architects (f) and (g). The established view is that of the senior partner they could not be more efficient. The popular view is that the firm would not change its established ways but would be more efficient if it did.

f) Sales quota: there was a clash between the senior partner (a) and the other partner (b) and the architects (f) and (g). The established view is that of the senior partner that the firm will solve its problems by moving into the new market of speculative developments and did not need to change. The popular view was that the firm had a 'fuddy duddy' image and would get more work if it were more contemporary.

g) Physiological: all comfortable with their environment apart from architect (f) who would not elaborate.

h) Self-Actualisation: the senior partner (a) is wrapped up in the firm; the partner (b) and the architects (f) and (g) realise their full potential outside work.

Comparison of the preference of individuals for the goals of the firm demonstrates how much effort these individuals are prepared to contribute to the goal.

a) Gross profits: the partners want the firm to make profits but do not know what to do. Partner (b) is
getting very worried. The secrecy means the staff is unaware of the situation and therefore cannot help.
b) Return on Investments: partner's view the firm was a poor investment and accepted 'being an architect' compensated for this. The architects thought being a partner would lead to financial success.
c) Meet aspirations of employees: partner (a) had fulfilled his aspiration, which was to be the head of the firm. Partner (b) made no comment, and architect (f) was frustrated. Architect (g) was happy only because his legal work meant he was independent.
d) Maintain reputation: the view was that the firm's reputation was unquestionable, apart from architect (f) who found it old fashioned and embarrassing.
e) Production Quota: senior partner (a) considered the firm was coping well with work. The view of the other partner (b) and the architects (f) and (g) was the opposite, the firm needed to change how it did things.
f) Sales quota: senior partner (a) considered the firm's sales would improve because of the decision to get involved in speculative developments. The other partner (b) and the architects (f) and (g) were worried that policies were not thought out, risky and that the firm had the wrong image and unable to adapt.
g) Physiological: all happy apart from architect (f) who would not elaborate.
h) Self-actualisation: the senior partner (a) felt fulfilled almost to the exclusion of the others.

Comparison between an individual's secondary outcome and the goals of the firm. A conflict can arise between competing goals of the firm and the individual.
a) Gross profits: poor financial performance hidden by partners cutting their personal income. Kept a secret, perhaps in order to maintain a secondary goal of the partners, which was that of maintaining the image of success by the partners in the eyes of the staff.

b) Return on Investments: the partners again expressed feelings of regret about being architects, but would not share these with the staff. Again perhaps the secondary goal of the partners was to maintain the image of running a successful architects' business.

c) Meet aspirations of employees: the partners were unaware of the resource available to them by the architects' help in the management of the firm. The suppression of any management ideas the architects may have, led to a lack of interest by the architects.

d) Maintain reputation: the secondary outcome of the partner (a) was to maintain the past reputation of the firm. Any question that this was out of date was dismissed as heresy. The policy seemed to be leading to disaster. Perhaps the other partner (b) was waiting to pick up the pieces when the current policy failed.

e) Production quota: no change to working practices under partner (a). Again the other partner (b) identified where the firm could improve production. These ideas challenged partner (a) in his goal of no changes.

f) Sales quota: senior partner (a) was enthusiastic about a policy which was poorly researched, badly funded and untested in the firm. The other partner (b) was cautious about the risk involved in a move to speculative developments. The reputation of partner (a) rested on the success of this untested policy and perhaps would affect the future of partner (a).

g) Physiological: all happy apart from architect (f) who would not discuss the situation.
h) Self-actualisation: partner (a) had achieved his goal in life and his secondary motive was to keep things as they were. The goal was in conflict with the rest of the firm as they saw the firm as out of date.

Participant as observer

Problems to be studied:

Language used by the interviewees: the table in Appendix E figure 30 illustrates language used in the firm that had a hidden meaning. The following expressions: 'architects are treated unfairly'; 'the firm should go on for another 100 years'; 'the control gained from solving problems is self fulfilling'; 'a course of action is decided by lots of meetings' and 'get the brief right before starting work' were of interest. The phrases fall into two categories. The first two phrases highlight the strong belief of the senior partner in the importance of the history of the firm and his perceived feelings of safety in Victorian values. Competition was seen as unfair and the firm had a 'right' to go on for another 100 years. The other partner and all the architects recognised the expressions but interpreted the meaning with trepidation that the institution that the firm had become might fail. The remaining three phrases highlight the senior partner's self-image as a patriarch, a need for the firm to work together in problem solving. Like a family, much discussion takes place before any course of action is decided upon, and once decided upon it is subsequently difficult to change direction. The other partner and all the architects
recognised this family approach to working but varied in their levels of frustration towards getting the job done quickly. Any attempt to go your own way seemed to imply a challenge to the patriarch and so became a test of loyalty. Areas such as cost and overtime working were kept away from the architects. The senior partner dismissed these issues as better for them not to know.

Environment organisation operates in: all the architects work behind closed doors giving an atmosphere of being in their rooms and they cannot move freely about the building without negotiating the large number of staircases and corridors. No common area was available for groups of individuals to get together in an informal manner. Meetings occur in formal meeting rooms and the partners are part of the group. Any free and informal conversations between staff occur outside the office. The firm has a formal day with the architects discouraged to work outside the prescribed hours, staff are required to comply with what is considered to be proper business dress code, there are strong unwritten rules about the behaviour of staff in the office.

Phenomena in the firm: it was a feature in the firm that employees remain with the firm all their working lives.

Phenomena based in Social Theory: The key factors in the power influencing the architects' (f) and (g) came from the need for the architects to avoid tension and conflict in the firm. The architects felt safe in the firm as it had been in existence for such a long time. The other interpersonal categories were excluded for the following reasons: reward, pay was not an issue;
punishment, the firm did not have any strict regime; legitimate power, was not exercised by the partners.

The organisation had no identifiable sub units within the architectural discipline, not departmentalised. The use of a sub unit model did not seem relevant. Any research into the effect of the other disciplines within the firm would have involved a much larger study and outside the scope of this research.

Conclusions about single events; The pride expressed by the senior partner that staff stay with the firm all their working lives seemed to represent an image in his mind of being the head of a family. Interpretation of the expressions noted supported this view and the partner and architects supporting this view but a hidden meaning laid behind their interpretation of the expressions. This fell into two categories, the history of the firm was seen as 'fuddy duddy' in the context of today's society and the need for lots of meetings as inhibiting individualism. The architects' strong need for security, was being undermined by the pressures of competition by other architectural firms in the area. It seems were the decline in the firm to continue the affiliation needs of the architects to be in a safe firm would rapidly fall away as they lose faith in the senior partner as patriarch.

**Questionnaire results**

The results of the questionnaire are tabulated in Appendix E Figure 32.
The Determination of the Initial Case Study Proposition

The reasons for the predictions in Case Study B were tested in this Case Study. The predictions were then confirmed or discarded through the Case Study process of a 'Multi-disciplinary' firm and the results shown in Table 7.4, so becoming dependent variables or non-equivalent dependent variables for predictable reasons.

The perception by the firm towards business was that of a business centred practice. 'the practice is seen as a way of making a living despite the profession in which we find ourselves in and a way of life. So it falls neatly into Maister's framework as a business centred practice. The predictions in Case Study B are taken from the RIBA Study and described in detail below. The predicted reasons for the differences between Case Study A and Case Study B are as follows;

The structure of a firm is a clear management structure and an effective decision-making process, tending towards offering a full range of services to clients. The firm will have separate reporting mechanisms to senior management about costs. The firm would have developed a major modification from traditional bureaucratic structures in the development of programme management and the matrix form. The major emphasis of these forms is to provide more effective integration of the activities necessary to complete a specific project.

The services offered would tend toward offering a strong service. The firm would be organised to deliver experience and reliability especially on complex
assignments. Their project technology is frequently designed to provide comprehensive services to clients who want to be closely involved (RIBA Strategic Study, 1993, p.47).

Strategic planning is predicted to be stronger in business led firms. The firms appeared in the RIBA (1993, p.50) Study to have clearer goals and objectives with regard to their size and financial performance.

The question of ownership of the firm is seen as critical in the formation of policy making within a firm. The RIBA (1993, p.52) identify a tough but caring management authority is exercised in a multidisciplinary firm by the owners. Decisions are oriented towards meeting the goals of these major owners. It is predicted the goal of the major owners would be strongly towards profit maximisation. Where firms operate on a fee system revenue is pre-determined, cost control is essential to ensure adequate profit, cost control goals would therefore predominate in a multidisciplinary firm.

The reward mechanisms in a multidisciplinary firm would be financial. Typically bonuses would be offered to increase motivation where the majority of architects are in full time employment and on staff contracts.

Job costing by a multidisciplinary firm to win jobs in competition is critical. It is expected in the case of a multidisciplinary firm that job costing will be more sophisticated than in a traditional firm.

Marketing is expected to be specific in a multidisciplinary firm. The RIBA (1993, p.57) identified
that the more business led service and procedure based firms tended to have the more structured marketing activities. This type of firm will have a specific sales / marketing department and highly systematic marketing, planning and monitoring procedures.

Satisfaction, it is postulated in this type of firm would be mainly financial.

The philosophy of the business centred practice is that business centred practices tend to view what they do as a commercial activity. The perception of the practice is seen as a business and a way of earning a living, the practice is seen as a way of increasing profits through its entrepreneurial approach to business.

The dependent variables included in Case Study A are expected to be different in Case Study B as predicted above and so become non-equivalent dependent variables but for predictable reasons.

Case Study B found the following characteristics;-

Structure; The partner will decide how many resources will be needed to undertake a job and if any freelance staff would be used. The architect partners always lead the projects in the office. It is the architects' responsibility to head up the project team and co-ordinate the other disciplines. The brief is developed in meetings, headed by the architect partners and attended by the partners of each discipline. The approach and resources required for the job are decided in these meetings. The firm is departmentalised in terms of profession but not in terms of the office layout or
the co-ordination of the work. The architects have overall management control, although this is achieved 'on the face of it' in a democratic manner via a process of meetings. The firm is departmentalised bureaucratic in nature and has retained its horizontal differentiation, usually indicative of a complex organisation with formal approach and a clear definition of the roles for the various positions within the structure. The major shareholder also being the Senior Partner at the top of a hierarchy plays an important role in the firm retaining its structure.

Services offered by the firm; the skills core is to provide a fully integrated in-house service using in house specialists. A lower fee is offered for this combined service and clients are attracted to this approach due to the lower overhead.

Strategic planning; a system of extended budgeting has evolved. Management's concerns are on operational matters rather than strategy, as a result planning is little more than half year financial budgeting exercise.

Ownership; a partnership, owned by the shareholders all of whom are partners. The senior partner is the major shareholder. The goal of the major owner is strongly towards maintaining the place of the firm in history. Although the firm operates on a fee system and revenue is pre-determined, cost control goals do not predominate, costs are hidden from employees. The poor financial performance being subsidised by the partners cutting their income. The major owner of the firm also is responsible for the day to day running of the firm.
Decision-making; the Senior Partner is responsible for developing the strategy the firm will follow. The Senior Partner may be in a difficult position at the moment because the firm's strategy of maintaining the firm's place in history by cutting the income of the other partners and reducing the size of firm almost to its critical mass, is beginning to be questioned.

Reward mechanisms; are mainly financial rewards and security of employment. The salaries the firm pays are equal to the market rate, but the firm retains a core of staff and augments this with freelance workers.

Job costing; a policy of buying work applies to a lot of jobs in the office. The Partner responsible for a bid calculates the fee based on the market rate.

Marketing; a marketing department in the form of two commercial managers who are responsible for marketing the firm and bringing in new work has been introduced.

Satisfaction; monetary and security of employment. The Senior Partner enjoys the authority of his position and being in control of a firm that has a place in history.

Philosophy of the firm; is towards a traditional practice in that what they did was a way of life.

Triangulation

A process of triangulation will make use of the following information collected in this Case Study:
a) Participant as observer indicated the decoration and layout of the offices contributed to an atmosphere of a museum. The power to make decisions was made by a lengthy process of meetings and any initiative that may be taken, could be immediately undermined by the senior partner. The partners all displayed a similar language in the snowball method. Common phrases being 'architects are treated unfairly' was used by both partners and was clearly understood by all. But the phrases 'the firm should go on for another 100 years' and 'a course of action has to be decided by lots of meetings' by the snowball method (see Appendix E Figure 30) had a double meaning. The hidden meaning by the partner (b) and the architects being that the firm was 'fuddy duddy', out of touch and old-fashioned in its management. This second meaning was a private view not discussed in the open or between individuals. An interesting phenomenon that was identified in the firm was that employees remain with the firm for all of their working lives. The power the senior partner exercised over the firm was that he was a patriarch figure and seemed to satisfy the affiliation needs of the architects. The architects also wished to avoid tensions and conflict in the firm. Architect (f) had some difficulties he would not discuss. The figure of the senior partner as a patriarch relieved the architects of responsibility.

b) The social efficiency map (see Appendix E Figure 29) highlighted the senior partner's policy of keeping all financial information a secret. The architects had no involvement with any aspects of cost of the jobs they were responsible for. The result was a distortion in the perception of the financial goals of the firm by the architects and feelings of exclusion experienced by the
architects. This explained the architects' lack of interest, particularly towards contributing in an imaginative way to the management of jobs within the firm. The firm also contained several conflicting and negative goals, particularly that the firm could not be more efficient because it was old-fashioned. The history of the firm played an important part in the way the firm was operating and the resulting apathy. Only the senior partner considered he had reached his life's ambition, whereas the remainder of the individuals gained satisfaction outside the firm. The secondary outcome of the remaining interviewees displayed a strong association with job security and pay rewards. The interviewees did not get any higher level motivation from the firm: it was just a job.

c) Finally a formal questionnaire filled in by the interviewees (see Appendix E, Figure 32). The individuals filled in questionnaires in order to categorise various aspects of each individual. The individuals tested all proved to be all Type A personality apart from one architect who was B+. The remaining results showed all the individuals to have similar characteristics, non-creative, internal locus of control and a high task high relationship and high task low relationship management styles. Interestingly, partner (b) scored very well on the effective management style, much better than the others did.

**Pattern Matching**

The firm is like entering a museum. This Victorian image is mirrored by the bureaucracy around which the firm operates. The management is based around numerous large
meetings. The interference of the senior partner in day-to-day activities being pervasive. The effect is to encourage a passive attitude by the architects who readily relinquish any responsibility preferring to yield to the senior partner. The same architects were supposed to be heading up jobs including providing project management, which is not recognised as a separate skill by the senior partner. A sub culture exists of humble faultfinder critics, all to ready to offer feigned devotion to the senior partner.

The historic tradition of the firm was reflected in the way jobs were run in the office. The architects are the leaders and the senior partner is patriarch. The inability of the firm to evolve incrementally was reflected in spasmodic revolutions that occurred through its history where a strong group would emerge to overthrow a weak leader by coup d'etat.

The questionnaires (see Appendix E Figure 32) identified one of the partners as a contender, who had a much more effective management style than the others in the firm.

Comparison with the firm identified in the RIBA study in 1993 showed some striking differences. Both firms operated as multi-partner practices but their convictions were completely different. The multi-disciplinary practice in the Case Study was revealed to conduct itself more or less as a traditional architectural practice, with each architect heading up a project. The practice in the RIBA study was at 'take off' in the framework identified by Churchill and Lewis but the practice in the Case Study had regressed to success rest. The partners in this Case Study combined
the activities of managing the firm and being the owners. The firm in the RIBA study appeared to have separated the activities of owner and practice manager. The inability of the senior partner to let go of running the firm led to management by a sort of consensus via a large number of meetings rather than a chain of command one would expect to see in a well-managed firm.

**Proposition**

The literature review has provided this proposition which is being tested here. The proposition is that the perception of the RIBA (1993) that the right project manager with a sound understanding of the building process could assist architects to 'concentrate on what we are good at', will be a predominant perception held by the architects in Case Study B.

**Explanation Building**

Case Study B of the multi-disciplinary firm did not support the proposition. Although the firm was multi-disciplinary the architects retained control of the project management which was not seen as a separate responsibility. It was considered necessary for the architects to retain control over the project. This Case Study had many similarities with the traditional firm in the previous Case Study. The dominance of the architects in the multi-disciplinary firm was perhaps a reflection of the firm's historical past and the institutionalised approach towards work. A family atmosphere existed with staff remaining with the firm throughout their working lives. The proposition was not supported and indeed the
detailed Case Study revealed few similarities to the firm in the RIBA Strategic Study. The organisational values in the firm had not changed but the advantage the firm had enjoyed by cost savings through the multi-disciplinary approach were offset by reduced income from fees. The goal to retain its place in history was perhaps particular to this firm. This goal was not universally accepted but seemed to reflect the strong family ethos and patriarch figure of the senior partner.

The proposition in this case study was not supported by the information gathered in the interview participant observation and questionnaire process. The interviewees were not interested in new methods of working but preferred to retain total control over the job. Project management was not seen as a separate responsibility.

CASE STUDY C - NAMED ARCHITECTURAL PRACTICE

Introduction

The firm was initially chosen from the RIBA Directory of Practices 1998. It described the practice philosophy as 'the approach of the practice is characterised by the quality and clarity of its architecture and by its insistence on quality of service through a close working relationship with both clients and contractors.' 'It is considered at all scales with a close attention to detail.' The practice was established in 1983 and operates along traditional lines. Their skills core is to provide highly innovative specialist designs. The firm spends a lot of time designing and co-ordinating the design of highly complex serviced buildings such as
swimming pools, doctors' surgeries and private houses. Main clients are Local Authorities and private clients.

**Social Efficiency**

The social efficiency map includes a large number of positive motivator goals noticeably at the higher levels in the firm (self-actualisation) and fewer or even no goals at the lower levels in the firm (see Appendix E). The motivator goals are understood by the architects and are fully supported by them. The secondary goals of the individuals within the firm conform to the goals of the firm. The unanimity is striking giving a strong horizontal line across the social efficiency map (see Appendix E Figure 29). A number of goals are positively understood but have negative outcomes, these are completion deadlines and physiological goals.

The lines on the map (Appendix E Figure 29) illustrate goals 3, 8, 19 and 21 merit further investigation as follows:

Comparison of the perception (expectancy) by individuals of the firm's goals demonstrated uncertainty between partners and architects and the development of some negative goals, which are of particular interest:

a) Market Share: all were initially positive about the firm getting more work. They were very specific about doing good quality work and would not consider working on anything they considered below this standard.
b) Utilise resources: all agreed the firm did not use its resources to get maximum profits. All knew that the way they approached work was costly to the firm.
c) Completion deadlines: all the architects knew the firm had to hit deadlines and worked very hard to achieve this, working excessive overtime in order to achieve deadlines particularly during design competitions.
d) Physiological: all happy and accepted 'this was what architecture is all about' but were tired.

Comparison of the preference of individuals for the goals of the firm demonstrates how much effort these individuals are prepared to contribute to the goal.

a) Market share: the associate (b) and architect (d) were concerned that the firm could not sustain its current way of working and would have to lower quality standards. Workload was increasing (along with stress levels) as an attempt to do more but maintain quality without introducing more resources to the firm. Architect (e) considered the supply of good quality work was unlimited, the firm specialising even more.
b) Utilise resources: all were positive about the way the firm worked and would not compromise quality. All thought that the firm should introduce changes without jeopardising quality. Various suggestions were made, all positive. The present situation had to change and the staff were ready to welcome change.
c) Completion deadlines: the need to win competitions was taking a toll on the associate (b) and architect (d). They realised winning these competitions was the only way the firm had to survive. The adrenaline rush after winning the competition was addictive but the requirement for the architects to be personally
responsible for the job right the way to completion of the building was very demanding. They accepted this as the only way a quality building can be achieved, but were aware it is a time-consuming process. Architect (e) relies on the principal to organise his work.

d) Physiological: all experience lack of sleep and long hours so are taking action to get some balance in their lives. The associate had not thought how he was going to change his lifestyle but knew he had to as his partner was expecting a baby.

Comparison between an individual's secondary outcomes and the goals of the firm.

a) Market share: The associate (b) and the architect (d) were very worried that the firm could not go on with the policy it had regarding design quality. The amount of work necessary for them to achieve these levels of quality was very time-consuming. The level of fees and the lack of profitable jobs in the office to subsidise the high quality jobs and the tighter monitoring of costs on jobs were putting a strain on them. The future health of the interviewees could be an issue for the firm in the future. They would very probably leave the profession if the situation did not improve. Architect (e) did not appreciate the situation.

b) Utilise resources: interviewees all agreed that there was only one way to achieve high quality work. The architect had to do most of the work and manage the project from inception through to completion. This was the rule in the office, which they all supported. The strain on the architects who had this responsibility was huge. The job was their life. The architects had no capacity to do other jobs or handle crisis.
c) Completion deadlines: all the interviewees felt the strain attached to meeting deadlines. The effect was to reduce their capacity to work effectively after a competition due to exhaustion. They had no social lives and were beginning to redress the balance between work and private life. Architect (e) was not experiencing exhaustion as he was not yet in the situation of being in total control of a job.

d) Physiological: this lack of sleep and addiction to work would eventually affect their health and so were beginning to make lifestyle changes.

**Participant as Observer**

Problems to be studied:

Language used by the interviewees: the table in Appendix E Figure 30 illustrates language used in the firm that had a hidden meaning. The following expressions: 'likes working for the principal because of his reputation for good design'; 'the firm is set up properly'; 'all the clients for this firm are enlightened clients'; 'good design' and 'this is how you get the quality' were of interest. The phrases fall into two categories. The first phrase highlighted the strong belief in the principal as being a master at the craft. The remaining four phrases indicate a philosophy within the architects of the right way of doing things. The implication is that they are all working toward a common goal, that of creating a beautiful building. This course of action was unanimous and the existence of beauty unquestioned. Everything in the office was structured around this objective. A sort of romanticism flowed through the
firm, perhaps reliving past memories from University. There was only one way of achieving this and that was by the architects doing all the work themselves. This is what the firm 'being set up properly' meant. The judgement of what was a beautiful building was in the judgement of the architects. It was therefore essential that they had a passive client, one who would follow the architect's guidance. This is what 'an enlightened client' meant. 'Good design' meant the architect had complete control over the whole process of providing a building. Finally 'this is how you get the quality' refers to the architect doing everything on the job, down to the last detail, no delegation. The implication was of the architect as a ruler rather than a designer and the effect of the architect's ego and personality seem to play an important factor in creating a good building in terms of how the firm defines 'good'.

Environment organisation operates in; the architects work in one large room that is situated on the top floor of an office block. The atmosphere is very much that of being in a studio in a University. The practice manager sits towards the back of the room and supervises the office. The more important are the architects in the firm, the nearer they are to the windows. Interestingly, the room was not decorated other than plaster and paint on the walls. A common area was available in the centre of the room for groups of individuals to get together in an informal manner. Meetings occur in one formal meeting room located opposite the office. As all the architects share one room free and informal conversations between people occur easily, but it is very noticeable that the practice manager is continually listening to everything that occurs in the office and contributes to the
conversations at will, and with authority. Any controversial conversations necessarily occur outside the office or in whispers between staff. An informal day means architects are encouraged to work as much as they can, people regularly have been known to work through the night and even sleep in the office. Individuals are not required to comply with any dress code but there are strong but unwritten rules about the behaviour of staff.

Phenomena in the firm: The practice manager told the researcher that the architects had not completed the questionnaires. On leaving the office the interviewees (b), (d) and (e) told the researcher that the questionnaires had been completed by every architect in the office but the practice manager had hidden the completed forms under her desk and would not let anyone see them. The interviewees asked the researcher privately for another questionnaire. The completed questionnaires were returned to the researcher by post.

Phenomena based in Social Theory: the key factors in the power influencing the associate (b) and architects (d) and (e) came from the need for the architects to be associated with a famous name in architecture. The architects felt they were pupils of a master learning great architecture, and were privileged to work on fantastic buildings. The other interpersonal categories were excluded for the following reasons: reward, pay was not an issue; punishment, the firm did not have any strict regime; legitimate power, was not exercised by the partners.
The organisation had no identifiable sub units as it was not departmentalised and the use of the sub unit model did not seem relevant.

Conclusions about single events: the practice manager seemed to exert considerable control over the architects in the office. This was unusual because the practice manager had no qualifications and little experience in managing other architectural practices. The secrecy surrounding the completed questionnaires and the practice manager's refusal to return the completed forms was initially inexplicable. Given the nature of the questions based around management of firms and the practice manager's lack of experience in management, it would seem the practice manager may have felt threatened that the questionnaires were some sort of test. Her worry was the architects may have proved to be better at management than she was. This insecurity by the practice manager and the power she had over the architects was a paradox which was resolved by a private conversation with one of the architects. Apparently the practice manager and the principal were involved together in a personal relationship. The affiliation needs of the architects were satisfied by the master pupil relationship with the principal. This meant that they would not jeopardise this relationship by upsetting the practice manager in any way. The opportunity to be involved in fabulous architecture was so important to the architects that they were prepared to accept the situation in the office without question.
Questionnaire results

The results of the questionnaire are tabulated in Appendix E Figure 32.

The Determination of the Initial Case Study Proposition

The reasons for the predictions in Case Study C were tested in detail in this Case Study. The predictions were then confirmed or discarded through the Case Study process of a 'Named' firm and the results shown in Table 7.4, and so becoming dependent variables or non-equivalent dependent variables for predictable reasons.

The practice is seen as a way of building the reputation of the principal as a designer. This underlying ethos which motivates this firm means it falls into Maister's framework as a practice centred business.

The RIBA (1993) Study identified a practice that offered a design oriented service like the one found in this Case Study. It predicts a practice centred business strong on ideas. The predicted reasons for differences between Case Study A and Case Study C are as follows;

The structure of a practice led strong ideas firm is expected by the RIBA (1993) to focus on the design ideas and creativity of their owners, the practice would be dominated by a single individual in leadership terms. The design-oriented practice would be under the control of the owner who was the strong ideas person. Activities not controlled directly by this individual would be secretarial, accounts and technical work.
The services offered would tend to offer strong ideas and be organised to deliver singular expertise or innovation on unique projects; the project technology flexibly accommodating the nature of any assignment, and often depending on one or a few outstanding experts or stars to provide the last word RIBA (1993, p.47).

Strategic planning is not strong in practice centred firms. Firms in the RIBA (1993, p.50) Study were operational, project based in their management and thinking and core size they wished to achieve.

The ownership of the firm is seen by the RIBA (1993, p.51) as a practice dominated by a single individual, with decisions oriented toward meeting their goals. The goal of the owner would be towards design excellence.

The reward mechanisms would be intrinsic self supplied, feelings of accomplishment and sense of achievement.

Job costing would tend to be based on percentage fees up to the development of the cost plan, then changing to a lump sum. Fees are typically decided and endorsed by the partner although worked out by others including the finance people / project team. It is expected in the case of a named architectural firm that job costing will be less sophisticated than in a traditional firm.

Marketing is expected to be less specific. The RIBA Study (1993, p.58) identified that in the more practice led design oriented firms marketing was primarily based around building a reputation via published work,
articles, awards, recommendations, teaching, and speeches.

Satisfaction was provided by self supplied feelings of accomplishment.

The philosophy of the practice centred business tends to view what they do as the exercise of the profession or occupation as an architect.

The dependent variables in Case Study A are different in Case Study C as predicted above so become non-equivalent dependent variables for predictable reasons.

Case Study C found the following characteristics;

Structure; a very flat hierarchy, the principal and one architect are concept architects and the rest job architects. Secretarial, wages, and administration is by the practice manager and the architecture by the job architects. The requirement for the principal’s involvement in every job gives a flat structure.

Services offered by the firm; the firm is set up toward offering strong ideas. It is organised to deliver singular expertise or innovation on unique projects. Project technology flexibly accommodates the nature of any assignment, and often depends on one or a few outstanding experts or stars to provide the last word.

Strategic planning; is more operational and project based in their management and thinking. A core size in mind they wish to achieve and maintain, based around the amount of involvement of the principal in every job.
Ownership; a sole trader the principal is responsible for running the firm, enjoying monopoly power.

Decision-making; there is no business plan other than entering larger design competitions. The principal wishes to do larger jobs especially on the Continent of Europe. The firm is limited in the amount it can grow because of the firm's strategy of only employing qualified architects and non-delegation of work.

Reward mechanisms; intrinsic self-supplied rewards, feelings of accomplishment and achievement.

Job costing; percentage fees up to the completion of the job but not on a lump sum basis. Fees are decided by the principal on the RIBA scale with a bit knocked off.

Marketing; Clients approach the firm directly because of the reputation of the principal as a leading name. The firm wins larger projects by design competitions.

Satisfaction; is derived from feelings of accomplishment gained from designing beautiful buildings.

Philosophy of the firm; the principal was trying to make a statement about his architecture to the world.

**Triangulation**

A process of triangulation will make use of the following information collected in this Case Study:
a) Participant as observer revealed the decoration and layout of the offices contributed to an atmosphere of school classroom with everyone located in one big room. The architects' desks were in rows, the window desks occupied by the senior architects. The practice manager's desk was in a commanding position at the back of the room, and gave the appearance of authority 'seeing but unseen'. The power to make decisions, allocation of resources and monitoring of performance was under the control of the principal. Interviewees all displayed similar language in the opportunistic 'snowball' method (see Appendix E Figure 30) expressing the following phrases, "the firm is set up properly to do good design"; "this is how you get the quality"; "the principal's reputation" and "you have to have enlightened clients" being clearly understood by all. An interesting phenomenon in the firm was highlighted by the behaviour by the practice manager regarding the questionnaires. The situation exposed the vicarious power the practice manager exercised over the architects was vested in her relationship with the principal. The architects accepted her dominance, by the potential threat to their own affiliation toward the principal.

b) The social efficiency map (see Appendix E Figure 29) indicated some interesting predominant motivator goals. The strongest motivator goal showed up a very strong principle held by the architects. One architect was expected to control the implementation phase as well as providing the initial concept and design for a scheme - the 'cherished belief'. The objective of this intensive way of working was to produce a quality building. Only architect (e) considered any alternative way of working was acceptable. The phenomena was unusual because the
architects realised there was a more efficient way of undertaking the work but the same architects would not entertain change as this was challenging the view that good architecture is only done one way the 'proper way'.

The result was a lack of sleep and long hours worked by architects as they attempted to shoulder all the responsibility for the jobs they were involved in. The architects accepted this burden and were adamant that they would leave the firm if it attempted to change the way of working. All the individuals exhibited strong higher goals, which were relevant to the firm. The overriding secondary goal of the associate and the architects was to produce good quality buildings. The associate pointed to a need to be in control, he was aware of his ego and the need to fulfil this by being the focal point or the whole process. The firm had captured this extra source of effort, but although the architects lived the job they were beginning to show signs of exhaustion and were taking the initiative themselves by beginning to get more balance in their lives by outside activities divorced from architecture.

c) Finally a formal questionnaire was filled in by the interviewees to measure their perceptions (see Appendix E Figure 32). They were all Type A personality. The associate (b) was average creativity with (d) below average and (e) non-creative. All had an external locus of control, only the associate had an effective management style and none a balanced management style.
Pattern Matching

The architects worked in a closed environment, their actions closely monitored by the practice manager. As a result the language used by the architects was the same, as was a common view about architecture and a strong affiliation towards the principal. The result was a lack of sleep and long hours worked by the architects as they tried to shoulder all the responsibility for the jobs they were involved in, in an attempt to live up to these design principles. The questionnaire results (see Appendix E Figure 32) pointed to a similar group of individuals, competing for the praise of the principal rather than an independent group of creative individuals and a firm limited in size because of the requirement for the principal to be involved in every job.

Proposition

The literature review has provided the proposition being tested here. The proposition is that the perception of the RIBA (1993) "architects are perceived to have a distinctive competence in design. However this is not always recognised by clients as being of much value. This was in any case effectively given away for free as an enticer by many in the profession" is a predominate perception of architects in Case Study C.

Explanation Building

Case Study C of the Named architectural firm confirmed the very strong goal of producing good design, to the extent that the firm would not entertain any prospective
client who was not 'enlightened' in this respect. The architects all believed in this philosophy to the point where it was a fundamental belief engrained, designing was a rite or ritual type procedure, which dominated the life of the firm. Within this belief was a hidden paradox. At the initial stage the two leading architects conceived the design and continued to delineate the boundaries of 'good design' throughout the life of that project. The architects only admirers undertaking schooling by their principal than creative individuals.

The proposition in this Case Study was not supported by the information gathered in the interview, participant observation and questionnaire process. The interviewees displayed the characteristics of individuals whose overriding goal was focused on good design, whilst at the same time recognising the requirement for an enlightened client, to the extent of turning away potential clients who were considered not enlightened.

CASE STUDY D - "COMMERCIAL" ARCHITECTURAL PRACTICE

Introduction

The firm was initially chosen from the RIBA Directory of Practices 1998 in which it described the practice philosophy as a 'one stop' professional service for projects including development management, project management and construction management in addition to 'the core design skills'. The client base is commercial type clients, the largest commission being as project managers and architects for a supermarket chain store. The firm has four directors and is a Limited Company. As
this was the only identifiable commercial practice in
the RIBA Directory in the correct location the Case
Study was of particular interest.

### Social Efficiency

The social efficiency map initially appears to be of
little use due to only one respondent. The firm only
employs two architects, one of which refused to
participate in the study. It was considered important in
the Study to research a commercial firm. The question
why does the firm contain so few architects being of
particular interest. The social efficiency map (see
Appendix E) illustrates the architect is not happy by
the large number of negative motivator goals.

The lines on the map Appendix E Figure 29 illustrate
goals 2, 3, 7, 11, 12, 14, 19 and 23 merit further
investigation as follows:

Comparison of the perceptions (expectancy) by
individuals of the firm's goals demonstrated conflicts
between the manager (f) and the firm and some negative
goals were of particular interest:

a) Earnings: the firm could not be any more efficient.
The firm does not employ competent staff at a lower
level so could not give them more responsibility. The
firm will not pay decent wages to get better staff.
b) Market share: the client is cutting down on work they
give us, we cannot get work from other clients due to
our strong association with one client.
c) Return on investment: I would not invest money in the firm. The bosses work hard to keep the firm going.
d) Meet aspirations of employees: people work here for the money.
e) Develop employees' potential: makes money out of staff, not spending money on staff.
f) Serve community: in business for profits nothing else.
g) Completion deadlines: the managing director is very particular about hitting deadlines - time is money, and it does not matter if the product suffers, we must finish jobs on time and within our budget.
h) Social: it is a place to work, not to contribute anything of yourself to. Life begins outside work.

Comparison of the preference of individuals for the goals of the firm (valence) demonstrates how much effort individuals are prepared to contribute to the goal.

a) Earnings: the firm's policy of cutting overheads in order to maintain profit in a falling market was seen by staff as making them work harder for no reward. Commitment of staff to low fee paying work is low.
b) Market share: staff knew of the association with one client and that other clients in the supermarket sector would keep away and were demoralised considering their skills were of no value.
c) Return on investment: the firm was seen as a poor investment. The firm was not a winner. This created feelings of denial by staff. Any commitment or responsibility to the firm was thus avoided.
d) Meet aspirations of employees: firm is 'just a place to work'.
e) Develop employees' potential: feelings of disassociation with the firm were increased by the firm's policy of not training the staff.

f) Serve community: the policy of working for money was seen as creating a bad image for the firm, and the staff felt guilty being associated with this image.

g) Completion deadlines: This is what the firm is good at, they always hit deadlines. It is clever to be able to cut corners on jobs: this is the only time you get praise from the managing director.

h) Social: the firm is just a job nothing special, not what we trained for, we feel like we are under-achieving. It is best to have a social life outside work, if you're to survive at work.

Comparison between an individual's secondary outcomes and the goals of the firm (instrumentality).

a) Earnings: the goal of the firm to move into new markets was supported, but the idea that the firm was able to compete in this new market was questioned. The new work would be difficult to learn and the firm was not geared up to train people. Initially this would cause earnings to drop. Management would then cut overheads, not invest more capital in retraining staff and the firm would be back in crisis mode. It is best to wait and see what happens at the moment, if things don’t improve it is best to leave the firm.

b) Market share: supermarket work is very boring and repetitive. It is best to leave the firm after a while otherwise you get too specialised.

c) Return on investment: the big hope is that the firm will be able to pay more wages if we get this new
work, the firm has not paid a bonus for years and I cannot see any bonus being paid in the future.

d) Meet aspirations of employees: the main thing is to make a bit of money here and then move on, possibly to build up your own business.

e) Develop employees' potential: It is very demoralising when people are checking your work all the time and you cannot make decisions on your own. So you don't accept any responsibility and don't use your initiative, best to leave the firm after a while.

f) Serve community: people know the reputation of the firm for cutting costs. It is embarrassing.

g) Completion deadlines: we are good at hitting deadlines. You get praise from the managing director if you can save on the costs by cutting corners too.

h) Social: it is a grim place to work. You need a very active social life outside work to survive. The best thing is only to think about the job in the office.

Participant as observer

Problems to be studied:

The following is an incident, which happened in the office discreetly observed by the researcher. The managing director (a) was noted shouting to a secretary "Type what I tell you not what you think you should type" in a very loud and aggressive manner. The secretary did as she was ordered without comment.

Language used by the interviewee: the table in Appendix E Figure 30 illustrates the language used in the firm, reflecting the submission of the staff to the firm.
Following the semi-structured interview with the manager (f) the interviewee offered privately his views about the following:

"The firm does not consider that one individual in the firm can carry a job right through. People have to play to their strengths. Individuals do not have all the skills necessary to run a job from marketing through feasibility and on to construction."

"One problem identified by the firm of this approach is avoiding too much specialism by the staff. People employed by the firm still have to be willing to be flexible about their jobs. Typically a designer may be required to visit site, if the firm is going through a quiet period."

"The firm operates strict discipline in the office e.g., Fridays are tidy up days and all documents are to be returned to the proper files each day. Part of the manager's duties are to ensure discipline is maintained."

"The managing director exercises complete control over the firm by close supervision achieved by weekly meetings with managers and monthly board meetings."

"The managing director acts as a policeman making sure jobs are run properly."

"The architects hold no power in the firm. All the decision making lies with the managing director."
"The firm has suffered splits in the past. The history of the firm shows that after 5 years managers become directors. The majority of the equity of the firm lies with the managing director, and in the past directors who have challenged the managing director have left."

Environment the organisation operates in: the firm was located in the centre of the city in a four-story building. On the ground floor is a nicely decorated presentation area for clients to examine pictures and models of the firm's work. Access to the reception area on the first floor and offices on the second floor are generally via a sparsely decorated staircase. A reasonably decorated lift and lift-lobby areas on the first and second floors were provided for the use of clients and maintained the image of a successful firm to clients as they travel to the nicely decorated suite of directors' offices and boardroom on the third floor.

The second floor is divided up into offices and meeting rooms by means of obscured glazed timber partitions. The layout of the offices mirrors the departmentalisation of the firm. Each office is sparsely decorated with a vinyl floor and painted plaster walls.

The overall impression given was that the firm was very hierarchical. As you moved up in the firm the surroundings became more plush and comfortable and the individual's status in the firm increased. The layout of the offices on the second floor reflected the firm's production line attitude towards work.
Phenomena in the firm: it was a feature in the firm that employees do not stay long with the firm and keep their work separated from their private life.

Phenomena based in Social Theory: the key factor in the 'power' influencing the architect (f) was somewhat confused. An inner conflict was apparent in architect (f) between his Christian belief and the uncaring approach he considered the firm had towards people.

The other interpersonal categories played a large part in influencing how the firm operated: reward, pay was an issue as the firm rewarded all staff with above average wages; punishment: the firm had a strict regime; legitimate power, exercised by the managing director.

The organisation had identifiable sub-units within the architectural discipline which was departmentalised. The use of a sub-unit model did not seem relevant, as the firm only included two architects, one of whom was a director. Any research into the effect of the other disciplines within the firm would have involved a much larger study and outside the scope of this research.

Managers exercise little power, the managing director retains, reward punishment and referent power, through his hands on approach to management. The only power the managers have is legitimate power, and the expert power they have through their skills as designers etc. The effect of any expert power is limited through the specialisation of tasks restricting managers from using all their skills. They tended not to take decisions without referring to the managing director for approval.
Questionnaire results

The results of the questionnaire are tabulated in Appendix E Figure 32.

The Determination of the Initial Case Study Proposition

The reasons for the predictions in Case Study D are tested in detail in the Case Study. They were then confirmed or discarded through the Case Study process of the 'Hypothetical Commercial' firm taken from literature. The results shown in Table 7.4 became non-equivalent dependent variables for predictable reasons.

The perception by the firm towards doing business was that of a commercial practice 'the practice is seen as a business and a way of earning a living, the practice is seen as a way of increasing profits through an entrepreneurial approach to business'. This underlying ethos which motivates this firm means the firm falls neatly into Maister's framework as a business centred practice. The RIBA (1993) Study did not identify a practice that offered an integrated design and management service like the one in this Case Study, but it predicted such a firm would be a business led practice strong on service, strong on delivery (RIBA Strategic Study, 1993, p.48).

The predicted reasons for the differences between Case Study A and Case Study D are as follows:
Structure; management entrepreneurial in style with an emphasis on leadership. A clear management structure and an effective decision-making process, tending towards offering a specialist service to clients with separate reporting mechanisms to management about costs. It is predicted the commercial firm in Case Study D will have a formal hierarchy, providing a strong chain of command necessary for the entrepreneur to exercise control. The firm will be departmentalised to maximise productivity.

Services; strong delivery characterised by a highly efficient service often involving repeat design or prior solutions to its clients.

Strategic planning; is predicted to be stronger in business led firms. In the RIBA (1993) Study firms had clear goals and objectives with regard to overall size and financial performance.

Ownership; the major owners of a commercial firm would be strongly in favour of profit maximisation, where these owners manage a firm.

Reward mechanisms; in a commercial firm these would be financial. Bonuses increase motivation, the architects are in full time employment and on staff contracts.

Job costing; in the case of a commercial firm job costing will be much more sophisticated.

Marketing; is expected to be specific in a commercial firm. The RIBA Study (1993, p.57) identified business led service and procedure based firms have more structured marketing activities. The firm will have a
specific sales / marketing department and highly systematic marketing, planning and monitoring procedures.

*Satisfaction;* in this firm would be mainly financial.

*Philosophy;* business centred practices view what they do as a commercial activity. The perception of the practice is seen as a business and a way of earning a living, the practice is seen as a way of increasing profits through its entrepreneurial approach to business.

The dependent variables established in Case Study A are expected to be different in Case Study D as predicted in the hypothetical Case Study above and so become non-equivalent dependent variables for predictable reasons.

Case Study found the following characteristics; -

*Structure;* a very formal approach with a clear definition of the roles for the various positions within the structure. The firm considers that its structure is the most efficient way of undertaking the work.

*Services offered by the firm;* limited to its one stop philosophy, and reflect the client the firm dealt with in the past, supermarket developers have a standard brief, which succinctly defines their requirements. The nature of these clients has had a big effect on the way the firm has approached its work. The relatively simple briefing process has resulted in the firm being able to develop an inflexible standard approach to the work.
Strategic planning; the firm has evolved a system of partly formalised strategic planning, although the planning is formal it is still irregular, reacting to trigger signals i.e. to solve one particular problem.

Ownership; is a company owned by the managing director. The owner is responsible for the day to day running of the firm. Other directors are appointed by him as a reward for long service. The owner enjoys monopoly power.

Decision-making; managing director is responsible for developing the business plan and is in a difficult position at the moment. The strategy of maintaining profitability by cutting overheads in a falling market has reduced the firm's size to its critical mass.

Reward mechanisms; are financial, salaries the firm pays are equal to the market rate, but the firm tends to attract what it considers to be low-grade staff who probably consider the salary level sufficient.

Job costing; managing director calculated all the bids for work and used a sophisticated method of monitoring expenditure on jobs on a weekly basis.

Marketing; The firm was moving to a new market and employed a marketing manager to develop contacts.

Satisfaction; is based on financial rewards in the firm.

Philosophy of the firm; to employ people who fit into the structure of the firm and to be profitable.
**Triangulation**

A process of triangulation will make use of the following information collected in this Case Study:

a) Participant as observer revealed the decoration and layout of the offices contributed to an atmosphere of workers and bosses like a production line, factory process. The power to make decisions in the firm was limited to the managing director and any initiative that may be taken, could be immediately undermined by the managing director. The allocation of resources and monitoring of performance was strictly under the control of the managing director. Individual (f) expressed the following: "the firm does not consider that one individual in the firm can carry a job right through" interestingly "people have to play to their strengths" and "the architects hold no power in the firm, all the decision-making lies with the managing director."

b) The social efficiency map (see Appendix E Figure 29) indicated interview with individual (f) in the Case Study to look at the interviewee's perception of the firm. The interview looked at the interviewee (f) perceptions of the firm's goals. The interviewee had a clear understanding of the goals of the firm. The preference by the interviewee reflected a lack of interest in the goals of the firm, particularly with respect to exclusion from the business side of the firm, tight cost control and an atmosphere like working in a factory; these were all predominant feelings. The secondary outcome of the interviewee (f) had a strong
association with job security and pay but did not get any higher level motivation; it was just a job.

c) Finally a formal questionnaire (see Appendix E Figure 32) filled in by the interviewee (f) in the Case Study to measure the interviewee's perceptions. Interviewee (f) was a Type A personality, competitive and typical personality characteristics of a manager (persistence, fanatic observation of deadlines and the like). The interviewee exhibited none of the characteristics of a creative thinker and seemingly had an external locus of control indicating a tendency of believing in forces beyond his control and a preference for extrinsic rewards such as increased pay and job security. The interviewee did not have a balanced management style.

Pattern Matching

The firm analysed in this Case Study has become efficient by departmentalisation of skills. The skills exploited of the architects it employs were limited to their design skills. The firm depended on one client and grew with and developed systems to suit this client. The firm had turned work into a mass production process. The effect of this approach was reflected in the perceptions of the architect "the firm does not consider that one individual in the firm can carry a job right through". The architect had accepted fact that he was merely one part of a process but had strong feelings of exclusion. The architect disassociated himself from architecture - in fact became a technician and an effective manager.
The philosophy of the firm depends on a one stop standardised construction service. The firm sees itself as re-educating clients in the health sector to accept this new approach and reap the rewards of lower cost buildings. The firm is, however, beginning to encounter the problems a multi-headed client can pose to an architect. The time spent on redesigning schemes, providing models and concept designs necessary to communicate the design issues to the various client bodies was already beginning to reflect in additional overhead costs to the firm that are not recoverable.

**Proposition**

The literature review has provided the proposition being tested here. The proposition is derived from the RIBA Study (1993); "that the financial, job costing and programming/project management skills are seen as an integral part of architecture, will be a predominant perception held by the architects in a Commercial Firm".

**Explanation Building**

The RIBA Strategic Study did not include a commercial firm but did predict that financial, job costing and programming/project management skills, would be seen as an integral part of the architects' competence. The Case Study D firm was departmentalised in order to restrict the amount of control each individual had over the whole process. The architect was limited to the design function within the design department. The owner who had been an architectural technician and founded the
original firm in partnership with an architect (since retired) is in complete control of the firm and was the only person who followed a job right through. The owner was only interested in jobs meeting cost targets and production schedule. The firm was set up to avoid one individual being in control of the job from beginning to the end. The staff acquiesced to this domination as they were motivated by money. Interestingly, the firm employed what it considered lower grade staff and paid them well but experienced difficulty retaining them over a period of time.

The proposition in this Case Study was not supported by the information gathered in the interview participant observation and questionnaire process. The interviewee (f) displayed the characteristics of an individual who preferred to leave the cost control and financial skills to others in the firm, preferring to be seen as a specialist in the design part of the process within the firm with management limited to the management of designers.

Summary and Conclusion

The research has selected four firms similar to the firms selected in the RIBA Case Studies. Chapter 3 identified the RIBA Studies strong predictions that these firms would have to change their way of thinking if they were to survive. Propositions were taken from the RIBA Study and tested against the firms selected in this study. Surprisingly, change was not evident in the thinking of the firms.
The findings cannot be connoted to the wider population of practices but they are sufficiently strong to confirm the Case Studies are suitable for further study within the context of this research. Given the pressure for change predicted by the RIBA in 1993 and the subsequent contemporary pressures identified in Chapter 3 it would appear that the cherished beliefs contained within the firms included in this study towards resisting change are very strong. The firms are, therefore, suitable for inclusion in Chapter 8 and a cross case analysis study of the boundary layer of the firm between the goals and values system and the wider environment. This boundary layer between the firm and the environment will be investigated in Chapter 8.

The design axiom is a fundamental in the thinking of architects in all the Case Studies. The exception being Case Study D. A theme runs through all the Case Studies: the more the firms are influenced by RIBA qualified architects the greater the tendency toward higher level goals. A perception that quality is produced by an architect who is the designer following the project through to completion is a strong in all the firms.

The exception is Case Study D, the opposite to all the other firms, departmentalised and no person in overall control of a project. Design is part of the building process, with a distinct and absolute cut-off point. Of particular interest is the fact that the owner of the firm is not an architect, but has knowledge of architecture being an architectural technician. The firm deliberately set up this structure and sees this as its competitive advantage over other firms.
The following broad analytical generalisations will be drawn from the intra-case study analysis and discussed further in Chapter 9. The architects, apart from Case Study D, had a strong belief that a quality building meant that the architect was responsible for design implementation as well as concept and design stages. There was an acceptance that no cut-off point was possible. The force behind the strength of this belief will be discussed in Chapter 9.

All the architects focused on design, the anticipated change in the psyche of architects predicted in the RIBA Study in 1993 had not occurred in the firms included in this study. Architects remaining unwilling to embrace the financial and cost control skills, or accept help from a project manager but preferring to concentrate on design and tending towards adopting the traditional approach towards architecture but attempting to improve what they do already.
CHAPTER EIGHT

THE RESEARCH RESULTS: CROSS CASE ANALYSIS AND CONCLUSIONS

Introduction

The literature review has identified the importance of design in the architects' 'world view'. The RIBA Strategic Study of the Profession in 1993 pointed to some drastic changes, namely the separation of architecture into signature, concept, executive, and construction architects. This provides a challenge to the 'design axiom' found in the 1993 RIBA Study and evidential in the Case Studies included in this work.

The cross Case Study will enable theoretical generalisations to be drawn. The process comprises testing of propositions derived from the literature and propositions that have arisen from the Case Studies in the field. The propositions will be explained by triangulation and pattern matching between the phenomena identified from the analysis of the semi-structured
interviews, social efficiency map, participant as observer and results of the questionnaires in the Case Studies in this research. Explanation building will strengthen the propositions.

This Chapter falls into two halves. The first half (Part 1) identifies the permeability of the firm at its boundary between itself and its environment. Analysis of the answers given in the semi-structured interview with the representative of the firm identifies patterns of behaviour by the firm. These results are triangulated with the results from the categorisation of the firm, indicative of typical patterns of behaviour. Where differences occur explanation based on theory and the results of the Case Studies is used to identify any distinctive goals that explain singular behaviour patterns by the firm.

The second part of the Chapter (Part 2) examines the effect of distinctive goals as they pass through the firm. The relationship between identifiable patterns of behaviour by the firm and the conceptual model of a firm (based on Arnold) is used to explain causal efficacy found in management style, structure, personality types and creativity, actualising towards greater Social Efficiency within the business as a whole.
PERMIABILITY OF THE BOUNDARY BETWEEN THE FIRM AND THE ENVIRONMENT (Part 1)

Proposition

The proposition was introduced in Chapter 5. The ease by which forces from the environment can influence the behaviour of the firm is affected by the predisposition of cherished beliefs within the RIBA members of the firm. These predispositions directly affect the goals and values system at corporate level in the firm.

The proposition will be tested by triangulation between the categorisation of the firms into business strategy, design technology, business structure and development stage and how the firm perceives itself with the goals identified in the analysis of the interview with the firm's representative.

Triangulation

Triangulation between semi-structured interview and categorisation of the firm.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Categorisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth of turnover</td>
<td>Perception (Miles and Snow 1978)</td>
</tr>
<tr>
<td>Mission or purpose</td>
<td>Ditto</td>
</tr>
<tr>
<td>Stability of annual turnover</td>
<td>Stage of development (Woolven 1978)</td>
</tr>
<tr>
<td>Cost targets</td>
<td>ditto</td>
</tr>
<tr>
<td>Utilise resources</td>
<td>Design technology (Maister 1987)</td>
</tr>
<tr>
<td>Serve Clients</td>
<td>Ditto</td>
</tr>
</tbody>
</table>

Table 8.1: Comparison between firms' goals and categories of firms

Research Results Cross-Case Analysis
The table in Table 8.1 identifies the comparison between representative goals of the firm taken from the semi-structured interview (Figure 11 blue) and the results of the categorization of the firm detailed in Chapter 4 and identified in the Case Studies for the following reasons:

- Growth of turnover (1) and Mission or purpose (20) will be compared with perception because both equate the elaboration and application of strategy.

- Stability of annual turnover (5) and Cost targets (17) will be compared with stage of development because both equate to the growth of internal elaboration.

- Utilise resources (8) and Serve clients (13) will be compared with design technology because both are indicative of a holistic approach within the firm.

Categories of firms are expected to have common goals. The differences between the expected goals and the actual goals identified in the interview will be used to explain the characteristics which have led to the particular structure the firm has adopted.

The results have been tabulated to enable pattern matching across the Case Studies. The words in red in Table 8.2 are the goals that are being compared with the expected goals in Table 8.3.
Traditional Firm Case Study A

The firm considers it provides a strong delivery of traditional architectural services to clients, based on sound architectural principles. The legal entity of the firm is a partnership comprising six partners. All the partners share equal equity in the firm.

Identification and Categorisation of the Goals of the Firm as interpreted from the interview with the Firms representative.

Goals of the firm:

Growth of turnover: the partners' goals were strongly towards sustaining the current position of the firm. The reason for this is the policy that the partners' income is drawn entirely out of the profits. The predominant goal of the partners was to increase earnings through increasing turnover. The partners were cautious about any further investment in the firm. (This has been identified as goal 1 in Table 8.2)

Stability of Annual turnover: costs are not controlled actively and no attempt is made to predict costs or budget, the firm preferring to rely on experience and gut feeling of the partners which is based on similar work undertaken in the past. The firm has no strategic planning capability. The location of the firm means it is in an area which benefits from additional government and EEC funding, and is involved in schemes that are funded by government and the EEC. The firm is aware of the importance of its location to the success of the business and the effect future cuts in spending in
capital investment could have. *(This is identified as goal 5 in Table 8.2).*

Utilise Resources: the firm retains most responsibility and power at partnership level, staff act as enablers. *(This has been identified as goal 8 in Table 8.2).*

Serve Clients: the assumption is made that the client is happy if there is no bad response after the job. The client gets what the firm thinks the client needs and what the firm knows it can provide. *(This has been identified as goal 13 in Table 8.2).*

Cost Targets: labour cost was a problem combined with the fact that no monitoring of resources was carried out in the firm is an area for real concern. The partner considered the only area for improving margins on current work was by invoicing clients for extras. *(This was identified as goal 17 in Table 8.2).*

Mission or Purpose: the firm has limited aspirations other than to sustain the firm and bring on new partners to who they can pass on the mantel. *(This is identified as goal 20 in Table 8.2).*

Categorisation of the Firm:

Business Strategy: was identified as having an ad hoc stage of development in Table 8.3 and no formal structure. A way of working had developed because of the requirement in the partnership that each partner ran his own jobs. The management structure is weak and relies on a hierarchy. The firm can be classified as bureaucratic hierarchical, and retains most responsibility and power.
at partnership level. Each partner takes the resources needed to complete the work as and when required. The financial manager partner acts as the umpire. The firm does not use financial data such as ratios to monitor its performance or that of its competitors. Financial matters are generally swept under the carpet.

Design Technology: is identified in Table 8.3 as having a strong service. The firm considers it provides traditional architectural services to clients, based on sound architectural principles. Their skills core is to provide small-scale generalist advice for a wide range of buildings. The firm has an advantage over its competitors through its strong relationship with a core of key clients and the efficiency of their operations. The firm has a practice centred approach to working.

Development Stage: The firm has limited aspirations in Table 8.3. It has gone through the survival stage in the 1980s and now perceives itself to be successful. The partners have no aspirations beyond this other than to sustain the firm and bring on new partners to whom they can pass the mantel.

Perception of the firm: the firm's perception in Table 8.3 of itself is as a defender, defending its patch, looking to get better clients, but only through haphazard methods. 70% of the firm's work is repeat business. Their strengths are as a traditional architectural practice. It perceives itself as solid.
Triangulation Case Study A

Comparison of tables in Table 8.2 and Table 8.3.

Growth of turnover (1) and mission or purpose (20) compared with the perception of the firm categorised as defender; comparison between tables illustrates the strong similarity with the emphasis of the firm toward sustaining its current position by working harder.

Stability of annual turnover (5) and Cost targets (17) compared with the stage of development of the firm categorised as ad hoc, comparison between tables illustrates strong similarities decisions based on gut feelings, a lack of direction and no monitoring of costs.

Utilise resources (3) and Serve clients (3) compared with the design technology of the firm categorised as strong service, comparison between tables illustrates a difference in emphasis, strong service is usually indicative of a firm with established management processes. The goals identified in this firm indicate a simplistic approach to business, the main emphasis of management directed towards keeping the firm together.

Structure: the main concern of the firm is keeping the firm unified. The fact that all the partners have equal shares in the firm influences the behaviour of the firm. The structure of the firm enables each partner to be independent and so the firm is split into individual fiefdoms with each partner at the head.
Conclusion: the firm is chaotic internally. The main preoccupation of the firm at corporate level is to hold itself together. This is achieved by 'ignoring' bad news and 'carrying on' as before. This is possible by retaining power at partnership level, where they have a strong bond. The firm's preoccupation with itself prohibits any corporate views regarding environmental forces.

Multidisciplinary Firm Case Study B

The practice is long established since 1862 and operates on a fully integrated, multi-disciplinary basis able to take total responsibility for any normal building project. The legal entity of the firm is a partnership.

Identification and Categorisation of the Goals of the Firm as interpreted from the interview with the Firms representative.

Goals of the firm:

Growth of turnover: the firm concentrated its efforts on very complex hospital buildings. The reduction in profitability on these jobs was drawing the firm towards working on less complex buildings. The firm was moving towards a construction management approach to building and moving towards being a developer in its own right. The firm was adamant that jobs had to be done properly by properly qualified people. In practice, this means the firm has a very rigid approach to working on jobs. (This has been identified as goal 1 in Table 8.2)
Stability of Annual turnover: the firm does not have a strategic plan, but prefers to have a conference where it looks at this problem from time to time. The firm is organic, everyone does a little bit of everything, the cyclical nature of the industry means there is no consistency in the workload. Budgetary control mechanisms are necessarily therefore precarious in their effectiveness. The firm has a large variation in workload and type of client; one year it may be one big client, the next year several small clients. (This is identified as goal 5 in Table 8.2).

Utilise Resources: the firm's competitive advantage is its diversity of projects and the multi-disciplinary nature of the firm enables good and efficient co-ordination of disciplines within the firm. (This has been identified as goal 8 in Table 8.2).

Serve Clients: the firm survives by its good relationship with clients concentrating all its efforts towards attempting to satisfy all the needs of the client. (This was identified as goal 13 in Table 8.2).

Cost Targets: the policy of buying work applies to a lot of the jobs in the office, but this does have limits. (This was identified as goal 17 in Table 8.2).

Mission or Purpose: the perpetuation of the firm is considered to be more important than the partners or anyone who works in the firm and the policy is to protect the name and reputation of the firm. (This is identified as goal 20 in Table 8.2).
Categorisation of the Firm:

Business Strategy: the firm was identified as having reached an extended budgeting stage of development in Table 8.3. Work within the firm is the responsibility of each partner. Project architects are responsible for the co-ordination of a job. The architects have overall management control although this is achieved 'on the face of it' in a democratic manner via a process of meetings. The strength of the partnership overcomes any departmental problems through a process of partners' meetings where all decisions are taken unanimously by the partners. If there is a serious dispute the senior partners decide. The firm produces quarterly financial reports. Budgetary control mechanisms within the firm are precarious in their effectiveness. The firm does not have a strategic plan but prefers to have a conference where it looks at this problem from time to time.

Design Technology: is strong service in Table 8.3. The firm never promotes new ideas preferring tried and tested techniques. They survive by a good relationship with clients concentrating all effort towards attempting to satisfy all the needs of the client.

Development Stage: the firm went through a crisis point in the late 1970s and staff levels have gradually been reduced from 90 in the late 1970s to 40 people in the late 1990s, with the probability that employee numbers will continue to fall. The firm is identified in Table 8.3 as having gone backwards; being at development stage success 1 at the moment but was in danger of regressing further towards survival. Its background is as a multi-disciplinary firm that gives a traditional service. The
perpetuation of the firm is considered to be more important than the partners or anyone who works there and the policy is to protect its name and reputation.

Perception of the firm: is identified in Table 8.3 as a defender. They get work because of location and the fact that they have been around a long time, winning most of its work through competing on price with other architects. The firm's competitive advantage is its diversity of projects and the multi-disciplinary nature enabling good and efficient co-ordination of disciplines within the firm.

Triangulation Case Study B

Comparison with tables in Table 8.2 and Table 8.3.

Growth of turnover (1) and mission or purpose (20) compared with the perception of the firm categorised as a defender. The mission or purpose focused on the 'perpetuation' of the firm but the paradox was that the emphasis on improving the efficiency of the current operations was not effective. Growth of turnover is not providing profitability and the current position of the firm is uncertain because of the historical perspective of the management style adopted by the firm.

Stability of annual turnover (5) and Cost targets (17) compared with the stage of development of the firm categorised as extended budgeting, comparison illustrates strong similarities, decision-making based on what was done before and an acceptance of the present situation.
Utilise resources (3) and Serve clients (3) compared with the design technology of the firm categorised as strong service. Comparison between illustrates strong similarities.

Structure: the fact that the senior partner has a major stake in the firm strongly influences the goals of the firm. Maintaining the place in history that the firm occupies is an overriding concern of the senior partner. The firm has reduced in size considerably over the years, but retains its structure from the past.

Conclusion: environmental pressure for change is beginning to effect the firm in the form of falling profits. The senior partner's pre-occupation with the past glories of this historic firm is beginning to be questioned by the other partners. The first signs of a revolution being planned to overthrow the senior partner are apparent.

Named Firm Case Study C

The practice was established in 1983 and operates along traditional lines. The firm's skills core is to provide highly innovative specialist design. The firm's legal entity is a sole trader.

Identification and Categorisation of the Goals of the Firm as interpreted from the interview with the Firms representative.
Goals of the Firm:

Growth of turnover: the predominant goal of the principal was to win bigger design competitions; the additional fees would enable the firm to spend more time on designing more great designs. Turnover is measured in the quality of the buildings produced and not the number. The firm has a very rigid design philosophy, to produce greater and greater designs. *(This has been identified as goal 1 in Table 8.2)*

Stability of Annual turnover: the flow of work into the office depends on the number of design competitions the firm wins. There is a rigid way of running jobs in the office, which means the principal is involved in every job in the firm. This limits the turnover the firm can achieve to the number of jobs the principal can cope with. *(This is identified as goal 5 in Table 8.2).*

Utilise Resources: the firm wants to enhance its reputation for design by larger jobs of really good quality. The firm is focused on architecture not business. *(This has been identified as goal 8 in Table 8.2).*

Serve Clients: the client has to like what the principal does otherwise they will not come to the firm. *(This was identified as goal 13 in Table 8.2).*

Cost Targets: the firm always uses the RIBA fee scale then knocks a bit off, where a job is overrunning on costs the client is asked to pay more. *(This was identified as goal 17 in Table 8.2).*
Mission or Purpose: the firm is set up to do design oriented building work. This is the goal of the firm. (This is identified as goal 20 in Table 8.2).

Categorisation of the Firm:

Business Strategy: The firm has reached an ad hoc stage of development in Table 8.3. Work in the firm is the responsibility of the principal. The job architects are responsible for the co-ordination of a job right through. The brief is necessarily loose and follows the design. The principal decides the approach and resources required for the job and informal financial reports provide the costs of the jobs in the office. The firm has had significant problems with jobs but this does not mean large changes are made in the way jobs are run. The principal has a very good relationship with the clients and can go back to them for more money. Budgetary control mechanisms are non-existent. There is no strategic plan other than to enter more prestigious design competitions.

Design Technology: the firm in Table 8.3 works in great detail through the projects it is involved in, preferring to provide strong ideas to clients but in terms of what it considers to be good design. The firm will promote new ideas preferring to be at the forefront of design. The firm survives by its good reputation as a leading designer.

Development Stage: the firm went through a crisis point in the 1990s when 2 partners left and the principal set up trading as a sole trader. The staff has gradually been reduced to 7 in the Manchester office, with the

Research Results Cross-Case Analysis
sign that the firm has reached its core size. The firm is identified in Table 8.3 as having gone through survival and reached development stage success 1 at the moment. It cannot progress further as the direct involvement of the principal in every job in the office limits the number of jobs the firm can cope with at any one time. The reputation of the firm as a great designer is considered to be more important than making money or clients' happiness. The policy of the firm is to create ever more fantastic buildings and so enhance the name and reputation of the firm.

Perception of the firm: the firm has been identified in Table 8.3 as a prospector, having found itself winning more and more design competitions in the last few years. Most work is won through design competitions. They cannot compete on price with other architects. The firm's competitive advantage is its design excellence.

Triangulation Case Study C

Comparison between tables in Table 8.2 and Table 8.3.

Growth of turnover (1) and mission or purpose (20) compared with perception of the firm categorised as prospector. Comparison between tables illustrates a strong similarity with emphasis on 'better quality' buildings.

Stability of annual turnover (5) and Cost targets (17) compared with the stage of development of the firm categorised as ad hoc. Comparison between tables
illustrates a strong similarity with the goals of the owner at the centre of the firm.

Utilise resources (3) and Serve clients (3) compared with the design technology of the firm categorised as strong ideas. Comparison between tables illustrates strong similarities, but critically with the point that the client has to like what the firm does. The firm will not compromise on architecture preferring to turn away unenlightened clients.

Structure: work within the firm is the responsibility of the principal who is directly involved in all jobs. An architect is allocated to a job and follows it right through working under the direction of the principal as master/pupil. The practice manager is responsible for the administration of the business. The principal has little to do with this part of the business.

Conclusion: people in the firm are convinced the principal is a master architect and consider they are there to learn from him. The principal is strongly influenced by the outside environment of architectural design. Staff read architectural magazines for the latest innovations in architecture and a lot of discussion is engaged in regarding developing the firm's signature designs.

Commercial Firm Case Study D

The firm offers a one stop standardised construction management service to clients from project inception
through to project completion. The firm has four
directors and the legal identity of a limited company.

**Identification and Categorisation of the Goals of the
Firm as interpreted from the interview with the Firms
representative.**

Goals of the firm:

Growth of turnover: the firm in the past has
concentrated its efforts on control of internal costs to
maintain profitability. The rigid structure of the firm
enabled it to expand and contract turnover as the market
ddictated. No consideration had been given how to
increase turnover by its own efforts until very
recently. This new approach was due to the reduction in
work supply by the main client. The established policy
in the firm of cutting staff in proportion to turnover
remained predominant within the firm. (*This has been
identified as goal 1 in Table 8.2)*

Stability of Annual turnover: financial planning methods
are used to project the current position forward. The
process has identified a new business strategy is
needed. The stability of the supermarket work was
uncertain and the impression was given that the
supermarket work alone would no longer keep the firm
going. (*This is identified as goal 5 in Table 8.2).*

Utilise Resources: the firm considers that it is very
efficient and that this is the main edge the firm has
over its rivals in the industry. (*This has been
identified as goal 8 in Table 8.2).*
Serve Clients: the firm gave the impression that it had no identifiable goals in the area. *(No goal was identified as goal 13 in Table 8.2).*

Cost Targets: the firm does not waste money on developing a scheme it does not think will be profitable. A scheme will be dropped at feasibility stage if it will not make a profit. Where the job has progressed too far and this is not possible the firm will cut the level of service it gives to the client. *(This was identified as goal 17 in Table 8.2).*

Mission or Purpose: its image is to be more than an architectural practice, being a lean and commercial multi-disciplinary organisation that acts as a developer and builder. *(This is identified as goal 20 in Table 8.2).*

Categorisation of the Firm:

Business Strategy: the firm has reached a partly formalised stage of development in Table 8.3. Work within the firm is the responsibility of each department. No one person is responsible for a job right through. The managing director maintains discipline through a strict schedule of meetings within the firm, which are headed by the managing director. The firm is departmentalised and bureaucratic. The firm produces weekly and monthly financial reports and is quite ruthless in its approach to maintaining profits. Loss making jobs are cut or dropped if early enough in the scheme. Costs are monitored closely on every job in the office and action taken to mitigate any losses very quickly. The firm has a cash flow forecast and uses
financial planning to project the situation forward. The firm considers it has a strategic plan and a business plan which are used to monitor the actual performance of the business. The strategy and business plans are regularly updated in the light of developments in the industry and the performance of the business and its rivals in the market.

Design Technology: this firm was identified in Table 8.3 as having a strong delivery. The firm is not willing to provide individual services approaching work as a departmentalised process rather than any separate individual skill. The firm considers its competitive advantage is its efficient production facilities and its one stop package philosophy.

Development Stage: The firm was identified in Table 8.3 as having gone backwards being at development stage success 1 at the moment but was in danger of regressing further towards survival. Redundancies in the past have reduced the size of the firm by 50% over the last 3 years due to the fluctuations in the workload.

Perception of the firm: the firm has been identified in Table 8.3 as a prospector. Its image is more than an architectural practice, being a lean and commercial multi-disciplinary organisation that acts as a developer and builder. It has repositioned itself in the market place. The firm has moved from dependence on one specialist client and now markets itself as a firm that can provide a unique service to the Health Sector.
Triangulation Case Study D

Comparison between tables in Table 8.2 and Table 8.3.

Growth of turnover (1) and mission or purpose (20) compared with the perception of the firm categorised as a Prospector. Comparison between tables illustrates a similarity but with a strong emphasis toward efficient operation through repetitive designs. This philosophy may lead to conflict as the firm moves toward new markets.

Stability of annual turnover (5) and cost targets (17) compared with the stage of development of the firm categorised as partially formalised. Comparison between tables illustrates strong similarities with the firm highly oriented towards cost control within the business but lacking the sophistication to employ an integrated marketing strategy.

Utilise resources (3) and Serve clients (3) compared with the design technology of the firm categorised as strong delivery comparison between tables illustrates a strong similarity between the two with a strong bias towards maintaining an efficient operation.

Structure work in the firm is departmentalised. No one person is responsible for the job right through. The managing director continually monitors staff performance.

Conclusion: the firm operates like a factory mass-producing buildings. Job satisfaction is very low within the firm which has a high turnover of staff. The main
Concern of the firm is efficient production and the firm is very concerned to split the process of design from construction. The firm is structured into departments and information is not passed from one department to another. The structure of the firm is designed to prohibit any environmental influences, which may interfere with the process.

Pattern Matching across the Case Studies

The proposition is that "the ease by which forces from the environment can influence the behaviour of the firm is affected by the predisposition of 'cherished beliefs' within the RIBA members of the firm." These predispositions directly affect the goals and values system at corporate level in the firm. Some firms are more permeable at the boundary between the firm and the environment than others to 'cherished beliefs'.

Pattern Matching

A pattern can be identified across the Case Studies. Case Studies A and B are inward looking with the main concern of the business concentrated on holding the firm together. Very little notice is taken regarding outside environmental influences. Case Study C and D are
Chapter 8

Goals Category

25 Self Actualisation
24 Esteem
23 Social
22 Security
21 Physiological
20 Mission or Purpose
19 Completion Deadlines
18 Sales Quota
17 Cost Targets
16 Production Quota
15 Maintain Reputation
14 Serve Community
13 Serve Clients
12 Develop Employees Potential
11 Meet Aspirations of Employee
10 External Political
9 Internal Political
8 Utilise Resources
7 Return on Investments
6 Gross Profits
5 Stability of Annual Turnover
4 Number of Markets Firm in
3 Market share
2 Earnings
1 Growth of turnover

Case Study A Traditional Firm

No
No
No
No
Policy has fallen by the wayside
Sustain the firm bring on new partners
Rely on key clients
Local Authority list
No monitoring of costs
Gut feeling
Stay in present location
Important
Best not to know
Bring on partners
EEC funding vital to the area
Compromise
Retain power at partnership level
Firm makes a profit
Falling
Gut feeling unstable
New markets possible if lucky
Invoice clients for extras
Sustain current position

Case Study B Multidisciplinary Firm

Breeding ground for new firms
No
No
No
Maintain core staff
Perpetuation of the firm
Job has to be done properly
Maintain existing and develop new
Policy of buying jobs
Cannot manage this accurately
Protect name and reputation of the firm
Modest about its involvement
Satisfy all the clients needs
Provide excellent training
Breeding ground for new firms
Government regulations unfair
Senior Partner in control
Efficient co-ordination of disciplines
None
Falling
Unstable
Maintain involvement in all markets
Maintain
Make a loss on some jobs
More development work needed

Case Study C Named Firm

Project principals image of architecture
Project image of architecture
Design skills
Reputation of the principal
Pupil and Master
Design oriented buildings
Better quality buildings
Do architecture not make money
Client pays more
Firms touch on jobs
No
Firms touch on jobs
Client likes what the firm does
Participate in design
Learn the craft from the master
Very independent
Firm is a sole trader
The firm is focused on architecture
Reward is not financial
Firm is not out to make a huge profit
Limited to the number by the principal
Break into the continental market
Win design competitions
Do architecture not make money
Better quality buildings

Case Study D Commercial Firm

No
No
No
No
None
Sell its new philosophy of building
Maintain strong delivery
Exploit new markets
All jobs make a profit
Tight cost control of jobs
Competence
Learn the craft from the master
Better quality buildings
Do architecture not make money
Client pays more
Firms touch on jobs
No
Firms touch on jobs
Client likes what the firm does
Participate in design
Learn the craft from the master
Very independent
Firm is a sole trader
The firm is focused on architecture
Reward is not financial
Firm is not out to make a huge profit
Limited to the number by the principal
Break into the continental market
Win design competitions
Do architecture not make money
Better quality buildings
### Table 8.3 Categories of Firms Included in Case Studies

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Traditional Organisation</th>
<th>Extended Organisation</th>
<th>Perception of Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Traditional Firm</td>
<td>Management process is formal and involves coordination and cooperation</td>
<td>Management process is informal and lacks coordination</td>
<td>Defender, devote</td>
</tr>
<tr>
<td>B Multidisciplinary Firm</td>
<td>Management process is informal and lacks coordination</td>
<td>Management process is informal and lacks coordination</td>
<td>Defender, devote</td>
</tr>
<tr>
<td>C Named Firm</td>
<td>Management process is informal and lacks coordination</td>
<td>Management process is informal and lacks coordination</td>
<td>Defender, devote</td>
</tr>
<tr>
<td>D Commercial Firm</td>
<td>Management process is informal and lacks coordination</td>
<td>Management process is informal and lacks coordination</td>
<td>Defender, devote</td>
</tr>
</tbody>
</table>

**Research Results Cross-Case Analysis**

- **Ad hoc**
  - Partially structured, formal
  - Traditional Firm
  - Case Study A

- **Traditional**
  - Structured, formal
  - Traditional Firm
  - Case Study A
opposites and of much more interest. Analysis of Case Study C illustrates an analogous relationship between the principal and the architects forming a master/pupil relationship. This enables the firm to be very sensitive to the environment and continually updating itself with architectural innovation. The opposite is very apparent in Case Study D where the firm is organised to prohibit any one architect from controlling the job right through. Information from the environment is restricted with the emphasis on repeat design solutions to problems. Any innovation from outside is discouraged.

Explanation Building

The reason for the inward-looking philosophy of Case Study A is because all the partners have an equal share in the firm. The requirement for consensus between the partners uses up a lot of corporate effort within the firm. The compromise is that each partner is head of his own particular fiefdom and so has a free hand running his particular self-contained part of the firm.

The reason for the inward-looking philosophy of Case Study B is the inexplicable concern the senior partner has with the historical context of the firm, this unusual perspective prohibiting any change. The power the senior partner derives from his major shareholding is becoming threatened by the continuing decline the firm is experiencing. As the shares in the firm become less valuable the other partners will be better placed to challenge the senior partner.

The organisation of the firm in Case Study C is explained by the philosophy of the firm to project the
principal's image of architecture. The direct involvement of the principal in every job is considered fundamental in producing the quality of the buildings that the principal and the architect demand. This philosophy of producing a quality building dominates the firm. The firm is very outward-looking and influenced by design innovations. The very permeable boundary between the firm and the environment is guarded from vulnerability by the devoted relationship of the architects to the principal.

The firm in Case Study D is the opposite to Case Studies A, B and C. The firm is departmentalised and work broken down into activities. No department has overall control of the project. The emphasis is on repetition and cutting costs and no innovation is encouraged. The firm is only influenced by economic considerations. The interface between the departments is very formal with hand-over of the job to the next department. No communication takes place between the departments.

The proposition is supported by this analysis: some firms are more permeable to environmental influences. The firm in Case Study C was deliberately organised to enable one architect to run the job from beginning through to completion. This approach is considered essential in producing a quality building. Of greater interest is Case Study D which was the opposite of Case Study C being organised to discourage any influence from the environment. Rewards were given to staff for cutting corners and using repeat designs. The firm clearly recognised the effect of environmental influences and developed an organisation to prevent this. The boundary between the firm and the environment was impermeable.
HOW GOALS TRAVEL THROUGH THE FIRM (Part 2)

Introduction

The permeability of the boundary layer between the firm and the environment has been analysed in Part 1 of this Chapter, differences in patterns of behaviour between the Case Studies have been explained by the differing effect the 'world view' the firms have towards architecture.

It follows, therefore, if the firms are affected at the boundary layer, using Arnold's model introduced in Chapter 4, the sub systems within the firm will be influenced. The perceptions or 'world view' of goals will explain patterns of behaviour within the firm.

The results of the Case Studies have been tabulated and included in the Appendix E. Figure 29 is a comparison of the social efficiency maps for each of the Case Studies. The goals that merit further investigation are identified and summarised in the Case Study summary in Chapter 7. Figure 30 in Appendix E is a table indicating the results of the Snowball method of collecting information regarding the language used by the individuals in the firm. Figure 31 in Appendix E indicates the results of observations based on a simple eclectic model of personality described in Chapter 6. Figure 32 included in Appendix E indicates the results of the questionnaire.
A brief summary of the Case Studies is included in Part 1 of this Chapter. Part 2 goes on to include a brief description of the pattern of goals on the social efficiency map, and identify the effect of goals as they pass through the subsystems in a firm. The participant as observer and questionnaires are also summarised.

A process of triangulation is carried out to identify any patterns that may emerge from the Case Studies and a summary and general conclusion about each Case Study is made. The propositions are then introduced into the Chapter and the same sequence is followed. Pattern matching and explanation building are used to support or question the validity of the propositions.

Part 1 and Part 2 of the Chapter are combined in the summary and conclusion and general observations are made about the possible influence the findings may have on the influence of the RIBA on architectural practices and the effect this may have on the industry as a whole.

General Proposition

Chapter 5 adapts the model developed by Arnold. An established goal in the environment typically may be 'good design can only be achieved by one architect working on his own on a scheme' becomes accepted by architects as a cherished belief. This has been developed as the following proposition:

An architectural business susceptible to a cherished belief, allows this belief to influence the subsystems
(goals and values, psychosocial, management, technology and structure) within the firm.

Triangulation

Case Study A

General observations of the social efficiency map Appendix E Figure 29, indicate the motivator (green) goals are distributed unevenly between positive and negative goals at the higher levels of goal-seeking behaviour. The maintenance level goals (yellow) predominate at the lower levels of goal-seeking behaviour.

The brief analysis in Chapter 7 of the social efficiency map described the firm as chaotic internally with a lot of negative goals held by the architects within the firm. Deeper analysis illustrates the firm thrives on this chaos but contains the stresses and strains generated by the conflict through a high staff turnover. This continual churning of staff at the level of 'architect' within the firm draws new ideas into the firm. The hold the partners have on the definition of 'good design' acts as a barrier preventing the architects winning any challenge they may have to the partners' supremacy. The consequence of this uneven battle is the high staff-turnover, as increasingly confident architects become frustrated with the partners' attitudes and move on. The overall result is positive to the firm. It draws in new ideas from the environment through the churning of staff, rather than by any strategic thinking by the partners. The effect of
the partner acting as umpire at partnership level strengthens the social efficiency between the partners but this social efficiency is not allowed to over-spill into the remainder of the firm because management is strictly retained at partnership level.

Case Study B

General observations of the social efficiency map Appendix E Figure 29, indicate the motivator (green) goals are distributed predominantly negatively and occur at the higher levels of goal-seeking behaviour. The maintenance level goals (yellow) only occurring as positive goals.

The brief analysis in Chapter 7 of the social efficiency map described the firm as approaching a crisis or revolution point in its life. The senior partner's position is becoming undermined by a lack of belief by the staff in the successful outcome of the firm's goals and a strong secondary belief that the firm should change. The unanimity amongst individuals anticipating forthcoming change constrained individuals acting independently and leaving the firm en masse, so much so that the phenomena of a special language had developed amongst this growing clique. The phrases used by them when copying phrases commonly used by the senior partner held the opposite meaning to what was intended by the senior partner. The language had grown out of the stifling of individual expression within the firm through a large number of meetings and an inability to make decisions independent of the meeting. The senior partner keeping secret any financial matters from the
rest of the firm compounded this practice of cosseting the staff. The trigger to initiate change is the situation of falling profits. The policy of partners subsidising the firm by continually reducing their earnings from the firm was undermining the partnership's faith in the senior partner's abilities. The focus for change fell on the partner (b) who interestingly had the most effective management style and very different goals to the senior partner. The pattern of the social efficiency map indicated a firm that was not very socially efficient in terms of a business. The individuals did not feel the goals of the firm were achievable or resulted in a secondary outcome that they wanted. But the very unanimity of this negative perception of the firm's goals meant that within firm was a very Socially Efficient clique particularly with respect to the need to sanction change within the firm. The firm in effect was negatively very Socially Efficient.

Case Study C

General observations of the social efficiency map Appendix E Figure 29, indicate the motivator (green) goals are distributed predominantly positively and occur at the higher levels of goal-seeking behaviour. Few maintenance level goals (yellow) are apparent in the firm.

The brief analysis in Chapter 7 of the social efficiency map described the firm as very united regarding the higher level self-actualisation goals in the firm while the more common business goals seen in a firm were
ignored. The beliefs of the architects appear to be copied from the principal but are congruent with the wider beliefs of architecture in the supra-system. The language used in the firm meant phrases used like 'quality building' had definite meanings. The principal was considered to be a master architect and the architects were learning the craft from him. All the architects exhibited strong affiliation needs. The questionnaires identified all the architects as Type A competitive individuals but with an external locus of control. This indicated they believe forces beyond their control are responsible for success. The combination of these forces mixed to form a powerful cocktail of united thought and actions. This unanimity was reinforced day to day by the controlling influence of the practice manager in the workplace.

Case Study D

General observations of the social efficiency map Appendix E Figure 29, indicate the motivator (green) goals are distributed predominantly negatively and occur at the lower levels of goal-seeking behaviour. Few maintenance level goals (yellow) occur positively at the higher levels of goal-seeking behaviour within the firm.

The brief analysis in Chapter 7 of the social efficiency map described the firm's goals as contrary to those of the architect's secondary goals. The architect had developed a coping mechanism to divorce himself from the dehumanising environment of the workplace. Only an active life outside work enabled him to survive in the workplace throughout each day. The architect's higher level needs seemed to be satisfied by his Christian
beliefs and involvement with the Church, and indeed this may have substituted completely the architect's original motivation to be an architect. The deconstruction process of the architect's skills being almost complete, he had neither the confidence nor the independence of thought to enable him to move on to another firm. In reality, any secondary goals he had were now daydreams or perhaps the memories of the youth he had not yet fully discarded.

Pattern matching

A pattern across the Case Studies is evident. The table included in Table 8.4 identifies the structure, technology, management, psychosocial and goals and values sub systems in each firm abstracted from the Case Study Summaries in Chapter 7.

<table>
<thead>
<tr>
<th>Sub System</th>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals and Values 'design axiom'</td>
<td>Evident but used to control</td>
<td>Evident but considered the right way</td>
<td>Evident and Fundamental</td>
<td>Not evident and considered the wrong way</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>Free association open plan</td>
<td>Formal meetings individual rooms</td>
<td>Supervised association communal room</td>
<td>Departmentalised individual rooms</td>
</tr>
<tr>
<td>Management</td>
<td>Limited to Partners</td>
<td>Bureaucratic</td>
<td>Limited to Principal</td>
<td>Bureaucratic</td>
</tr>
<tr>
<td>Technology</td>
<td>Traditional</td>
<td>Specialist</td>
<td>Traditional</td>
<td>Specialist</td>
</tr>
<tr>
<td>Structure</td>
<td>Multi partner Individual fiefdoms</td>
<td>Hierarchical</td>
<td>Hierarchical</td>
<td>Hierarchical / departmentalised</td>
</tr>
</tbody>
</table>

Table 8.4 Abstract of subsystems to be analysed for each Case Study

The pattern matching is focused around the goal of 'good design' which is found in the environment as described as the design axiom in Chapter 3.
In Case Study A, the goal of 'good design' was evident but was used by the partners to control younger architects. The firm was inward-looking, the main occupation of management being holding the firm together and meant the firm was impermeable at the boundary between the firm and the environment. The equality of shareholding by the partners gave the firm an unusual structure. The result was chaotic but the power the partners had by judging 'good design', meaning the goal of good design, was drawn into the firm through the churning process of young architects entering and leaving the firm.

In Case Study B, the goal of 'good design' was held by the senior partner as a traditional historic value essential to maintaining the present structure of the firm and justification for the firm's way of working. The firm was inward-looking, the main occupation of management being to maintain the historic nature of the firm and meant the firm was impermeable at the boundary layer between the firm and the environment. The majority shareholding of the senior partner gave him considerable control over the firm, the senior partner preferring to run the firm as a patriarch rather than a hierarchy. The result was falling profits and the firm nearing crisis point in its future existence. The goal of 'good design' had a double meaning in the firm and was indicative of a 'fuddy duddy' way of doing things by a growing clique within the firm uneasy about the unusual views of the senior partner.

In Case Study C, the goal of 'good design' was dominant. Its definition was closely guarded and reinforced by the
practice manager continually underpinning the role of the principal, the master architect, towards achieving good design. Although the firm was permeable at the boundary layer between the firm and the environment the phenomena of group-think protected the master architect from any challenge to the accepted way of achieving 'good design'. The result was an exhausted workforce and the necessity for the principal's involvement in every scheme.

In Case Study D, the goal of 'good design' was not evident, structure was used to eliminate its influence. The firm was departmentalised and there was a distinct 'cut-off point' between each department. Design was standardised and repetitive.

**Explanation Building**

In each Case Study the influence of the design axiom was present in the subsystems in the firm. The acknowledgement of this cherished belief was recognised by all the firms included in the Case Studies. Evidence was found of the design axiom being manipulated by management to justify actions of the partners or directors and subsequently control the architects' behaviour. Case Study D was the exception where the influence of the design axiom was present but by its absence, the structure of the firm was developed specifically to eliminate any influence it may have on the firm.

**Literature Based Propositions**
A process of pattern matching and explanation building will be used to carry out an analysis of the following propositions across the series of Case Studies:

**Proposition A: firms split up because forces acting between design oriented architects and business oriented architects.**

Deeper analysis of the Case Studies has identified the efficacy of the design axiom as the predominant enduring sovereign predisposition or force, maintaining practice centred behaviour within a firm:

**Pattern Matching**

A pattern can be seen across all the Case Studies identifying the relationship between strategy and structure. The firms with a focused strategy have a very simple structure and are run by a single dictatorial principal or managing director.

<table>
<thead>
<tr>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional; professional oriented / Practice Centred</td>
<td>Multidisciplinary; professional oriented / Business Centred</td>
<td>Named; design oriented / Practice Centred</td>
<td>Commercial; business oriented / Business Centred</td>
</tr>
<tr>
<td>Partnership (equal shares run firm- by agreement between partners)</td>
<td>Partnership (major shareholder runs firm- but by agreement)</td>
<td>Sole Principal (runs firm- dictator)</td>
<td>Private Limited Company (major shareholder runs firm- dictator)</td>
</tr>
</tbody>
</table>

Table 8.5: Strategy and structure of Firms in Case Studies
The Social Efficiency of the firms reflects their business strategies.

The traditional firm in Case Study A was described as having a very chaotic social efficiency map and most of the firm's effort at strategic level was taken up in keeping the firm together. The firm was impermeable to the environment at strategic level, but new ideas came from the flow of young architects into and out of the firm. The continual challenge from these young architects towards the concept of 'good design' partnership kept the partners up-to-date with new ideas. The partners remained united and safe behind an invisible barrier they called 'their experience', based in fact on their interpretation of the design axiom, and seemingly justification for their failure to offer managerial responsibility to the architects. The result was a split evident in the firm between the young architects and the partners, in effect a horizontal split across the firm, rather than the vertical split between the partnership anticipated in the proposition.

The multi-disciplinary firm in Case Study B was described as having a social efficiency map indicating the firm was approaching a crisis or revolution point in its life. This was the only firm where all the architects had an internal locus of control, and characteristically the staff remained with the firm all their working lives. This combination explains why although impermeable to change from its supra-system, a flow of established business centred ideas circulated within the firm that were contrary to the more practice centred goals of the senior partner. Their effect fuelled a growing lack of belief in the senior partner
and the elaboration of a common set of achievable goals by a growing clique within the firm. The growth of this clique ensured the increasing isolation of the senior partner. At the first sign of weakness there would be a direct challenge to the position of the senior partner. The split in the firm would occur at partnership level through an abandonment of the practice centred views introduced by the senior partner and a re-centring of the firm around previously established business centred views. The superiority of the established business culture as the controlling force over-riding any new perceptions held in the design axiom as sovereign.

The Named firm in Case Study C was described as having a social efficiency map indicating the firm was very united regarding the higher level goals in the firm while the more common business goals were ignored. The personal relationship between the practice manager and the principal gave her considerable power in the firm. The practice manager dominates the architects, to the extent that she corrected the words and language used in the room even in overheard private conversation. The compliance by the architects with the beliefs of the principal is necessary in order to satisfy their own affiliation needs to be with the principal, a person they considered a brilliant designer. Their belief in the goals of the firm had to be absolute. This meant the only outlet for pressure of work was the physical exhaustion of the architects. The result was bizarre behaviour like architects sleeping overnight in the office in order to achieve goals. The design axiom being the sovereign force uniting this practice centred firm in thought and actions.
The commercial firm in Case Study D was described as having a social efficiency map which was of interest. Although only one architect could be included it gave a meaningful insight into how the secondary outcomes of the architect were completely separate from the goals of the firm. Impermeable to the environment, the only flow of ideas came into the firm through the managing director. In effect the skills of the architect were being deconstructed by the business centred culture of the firm, turning the architect into an operative. The secondary level outcomes of the architect were now little more than dreams. There could be no splits as the strength of the structure of the firm over-rode any influence of the design axiom as a sovereign force. The frustration in the workforce revealed itself in a high turnover of staff.

Explanation Building

The firms in Case Studies A and B were multiple-goal seeking and had developed mechanisms that coped with the pressures involved in multiple goal-seeking behaviour. In Case Study A all partners had an equal share but with one partner acting as an umpire to enable decision-making to be effective. In the firm in Case Study B the conflict between the senior partner and the growing need for change within the firm was coming to a head. The senior partner's position was gradually becoming open to being challenged. The performance of the business under his leadership was not a success.
The Case Studies C and D are in effect the same. Both firms are dominated by one individual. Staff are confronted with a situation of take it or leave it. In the case of both firms splits have happened in the history of the firms and the present structure of both firms is the result with a very strong dictatorial boss.

The proposition is supported that firm's split up because of forces acting between design oriented architects and business oriented architects although in the case of firm D the director was not an architect. The firms C and D have each experienced splits in the ownership of the firms in their past histories, and now are left with a remaining single dictatorial boss. A consequence of this is both firms tend to be incapable of exhibiting multiple goal-seeking behaviour and are focused on a specialist part of the market. The lines of cleavage in the proposition are not necessarily vertical and the definition of design is loose and open to interpretation. Coxe suggests a continuum exists from practice centred towards business centred culture and the natural cultural shift towards business centred behaviour within firms. The presence of the design axiom has discriminated a powerful restraining influence maintaining the balance of existing forces around a practice centred business thus inhibiting any gradual shift along this continuum. It is not, however, a sovereign force that can over-ride a business culture moving it back along the continuum.

**Proposition B:** firms that superposition, are more efficient than the firms that stay in the centre ground.
Pattern Matching

A pattern can be seen across all the Case Studies identifying a relationship between market position and Social Efficiency. Chapter 5 introduced Systems theory which has been used here as a model to describe the result of this behaviour.

<table>
<thead>
<tr>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional service</td>
<td>Traditional service</td>
<td>Specialist in design</td>
<td>Specialist in design construct</td>
</tr>
<tr>
<td>Practice centred Strong Service</td>
<td>Business Centred Strong Delivery</td>
<td>Practice Centred Strong Ideas</td>
<td>Business Centred Strong Delivery</td>
</tr>
<tr>
<td>Multiple goal (Chaotic Negative Entropy)</td>
<td>Multiple goal (Revolutionary Negative Entropy)</td>
<td>Single goal (Entropic)</td>
<td>Single goal (Entropic)</td>
</tr>
</tbody>
</table>

Table 8.6: Abstract of Goal-seeking behaviour and Service offered

The firms that exhibited multiple goal-seeking behaviour had a very different pattern of goals than those with single goal-seeking behaviour. The input transformation output model is used to explain the process in each Case Study. The outputs are considered as services and identified in terms of strong service, strong delivery or strong ideas. The Professional or business culture of the firm is considered as located within the transformation process. The inputs are the jobs that come into the firm.

In Case Study A, the firm has varying inputs but maintains the output of a strong service by retaining
the transformation process of a professional culture. This leads to chaos internally and a lot of negative goals held by the younger architects. The firm thrives on this chaos containing the stresses and strains generated by the conflict through a high staff turnover. This continual churning of staff at the level of 'architect' draws in new ideas which equips the firm to undertake varying inputs but retain its professional culture giving a strong service to clients.

In Case Study B the senior partner is attempting to shift the outputs from strong delivery to strong service and move from a business to a professional culture. The result is a firm approaching a crisis or revolution. The lack of belief by the staff in the successful outcome of the firm's new goals supports a strong secondary belief that the firm should return to its established business culture. The situation is manifest in the unanimity amongst the staff anticipating change at the top rather than acting independently and leaving the firm en masse.

In Case Study C inputs are limited to those from enlightened clients necessary in order to guard the professional culture which the firm believes enables its output of strong ideas. The firm was very united regarding the higher level self-actualisation goals, while the more common business goals were ignored. The strong beliefs of the architects appear to be copied from the principal but are uniform with the wider beliefs of architecture in the supra-system. The firm was totally committed to this way of working, with architects preferring to leave architecture altogether rather than entertain change.
In Case Study D the managing director is attempting to shift the outputs from strong delivery to strong service but retain the existing business culture. The inability of the firm to attract more of its established inputs is driving the firm towards accepting varied inputs. The staff are sceptical about the firm's ability to learn a new type of work because of the rigidity of the existing transformation process. The architect had disassociated himself from gratifying any higher level goals through work and had developed a coping mechanism to divorce himself from the dehumanising environment of the workplace concentrating his satisfaction on 'making money'.

Explanation Building

In the traditional firm in Case Study A, examination of the Social Efficiency of the firm reflects their position in the market. The firm attempted to provide a traditional service to a broad client base. The partners were committed to multiple goal-seeking but limitations in their management skills meant goals were capped to a goal to tackle any job that comes along. The firm avoided entropy because of new ideas drawn into the firm by the continual churning of staff. Social Efficiency of the taken in isolation partners is good. All the partners have the same beliefs and goals. The firm seemingly harmonised its professional culture with its concentration on strong service.

The multi-disciplinary firm in Case Study B was better organised and more defined in the market. The advantage gained by its multi-disciplinary service was being eroded by the senior partner's reluctance to modernise
the firm's working practices. The firm did not appear to be socially efficient and moving towards entropy. Closer examination of the social efficiency map however identified a negative Social Efficiency at secondary level within the firm. The Social Efficiency of this group in isolation is good: the entire group has the same beliefs and goals. The firm has a history of coup d'état and it would appear this is part of a long-term cycle. The conflict between the firms established business culture and the introduction of a professional culture by the senior partner, was compounded by a confusion in output between strong on service and strong on delivery.

The named firm in Case Study C was very united regarding the higher level self-actualisation goals, while the more common business goals were ignored. The firm was incapable of displaying the internal elaboration required in a growing firm because of the principal's involvement in every scheme. Inputs were limited to those obtained from 'enlightened clients' and the transformation process was rigid the firm incapable of multiple goal-seeking behaviour. The firm being very much a professional culture strong on ideas.

The commercial firm in Case Study D was very defined in the market place but the effect of the social efficiency map was limited as only one architect was employed by the firm. The internal elaboration of the firm was complex but had grown around a specialist input by the requirement for a specialist output. The firm had become entropic because of its overspecialisation and inability to exhibit multiple goal-seeking behaviour. The result was that the architect had disassociated himself from
work. The firm was the opposite of Case Study C. All the goals were at the lower levels and none at the higher levels. The firm was desperate to move towards a strong service output but retain its business culture but the inflexibility of its transformation process was becoming apparent.

The proposition is not supported. Firms may appear on the basis of one measure to be more efficient if they superposition towards strong service, strong ideas or strong delivery. Examination of the social efficiency maps and analysis using the systems theory indicate that those firms that do superposition do not have an even spread of goals preferring to concentrate on higher level goals or lower level goals. The effects of a concentration on higher level goals, typically design, has an effect on stress levels, typically excessive working and fatigue in the staff, an avoidance of multiple goal-seeking behaviour and resulting in a move towards entropy. The effect of a concentration on lower level goals is boredom and a disassociation from work by the employees. The resulting deconstruction of their skills' base combined with an avoidance of multiple goal-seeking behaviour compounds this move towards entropy.

An important factor when assessing management skills is a firm's development stage. All the Case Studies selected in this study were chosen at development stage 1. The pressure on management is readily apparent as firms resist the pressure to move along the continuum identified by Coxe towards a business culture. All the firms chosen included in the Case Studies seemed to be crippled by management's inability to exhibit multiple
goal-seeking behaviour and this may have had a large influence in these firms remaining at development stage 1 and explain their distorted business strategies and fragmented structure.

**Proposition C: paradox, why do architects who spend their lives organising buildings planning and controlling the building process cannot run their own businesses effectively.**

**Pattern Matching**

A pattern can be seen across all the Case Studies identifying the relationship between social efficiency and culture.

The firms that allow the staff to express themselves freely have different pattern on the social efficiency map than firms that attempt to control the amount of freedom staff have to express themselves.

In Case Study A, the partners were fully occupied in the role of managing the firm but the unanimity required in decision-making limited management's effectiveness. The limitation of any flexibility in management style was readily apparent. The provision of a traditional service and the apparent chaos in the firm had a beneficial effect on the firm and generated a constant new challenge to the partners. The firm was run as a way of life rather than a business.
Case Study A | Case Study B | Case Study C | Case Study D
---|---|---|---
**Pattern of goals is chaotic** | Negative motivator goals apparent | All high level goals (self actualisation) | Large number of negative secondary goals
**Limited to Partners** | Bureaucratic | Limited to Principal | Bureaucratic
**Free open environment** | Closed formal environment | Open controlled environment | Closed formal environment
**Turnover of staff - high (gain experience)** | Turnover of staff - minimal (security) | Turnover of staff - low (affiliation needs) | Turnover of staff - high (downgrading of skills)
**Staff have Independent views** | Staff have formed a clique | Staff have strong association needs | Staff have disassociated themselves

Table 8.7: Pattern Matching across Case Studies

Case Study B was better managed with its original bureaucratic structure remaining intact. The influence of a dominant senior partner was diverting the firm's efforts towards a 'way of life' rather than a 'business' culture. The social efficiency map identified a movement for change growing within the firm. The intransigence of the senior partner would be his downfall as the organisation transformed itself back towards a 'business' culture. The firm had a history of coup d'état.

Case Study C had a simple management structure. The principal managed the firm supported by the practice manager. The lack of individualism within the firm meant
that although the firm was open at the top to the environment, all the people in the firm thought the same way. The firm was moving towards entropy and tended towards the phenomena of 'group-think'. The firm was a 'way of life' rather than a business culture.

In Case Study D the firm was closed to the environment and operated a very strict regime. The lack of freedom meant that the architects were being de-skilled, the firm was failing to capture the higher levels of motivation. The rigid structure of the firm and standardised method of working meant the firm was focused on one type of building and inflexible to any change. The firm was a 'business' culture.

Explanation Building

As the firms move away from traditional service the structure of the firms changes. The traditional firms contain a greater variety of skilled architects and this is reflected in their chaotic Social Efficiency. As the firms move towards greater specialisation the diversity of skills the architects have reduces, the firms in Case Studies C and D having a single dictatorial owner. This pattern is reflected in the social efficiency maps of these firms. All the architects had little variety in management skills focussing on high task high relationship management styles. The result is that where an architect boss is responsible for the management of a firm the goals of the firm become more focused. The firm suffers from entropy. All the firms tended towards entropy, but where the firms had a more diverse individual management the tendency towards entropy was
reduced. The result of a less diverse management is the phenomena of group-think.

The proposition is not a paradox. Architects display the characteristics of inflexible managers with a limited management style. In the context of their own businesses flexible management is not required as most architects display similar views with a tendency towards group-think. This leads to the normal business goals being overlooked or ignored by management.

In a construction project more diverse members are included in the management team and push architects further away from the phenomena of group-think.

**Proposition D: creative architects are difficult to manage.**

<table>
<thead>
<tr>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non creative 100%</td>
<td>Non creative 100%</td>
<td>Non creative 66%</td>
<td>Non creative 100%</td>
</tr>
</tbody>
</table>

Table 8.8: Comparison of Creativity in architects between Case Studies

A pattern can be seen across all the Case Studies identifying a lack of creativity in the architects. All the firms contain a majority of architects who are non-creative.

**Explanation Building**

The measure of creativity was based on a standard questionnaire described in Chapter 5. This measure
covers the broader range of creative attributes. The key to understanding the findings is the term 'broader range of creative attributes'. Architects may be creative regarding design solutions to problems but the overall approach by architects to problem solving may explain their lack of creativity. The way architects manage their businesses is generally high task high relationship and the goals of the firms are generally chaotic.

A creative individual would have a more flexible management style and more diverse business goals than was found in any of the Case Studies included in this research. The results may indicate that architects learn through modelling with a bias towards symbolic retention, relating more to visual rather than verbal images as is explained in Chapter 4.

Summary and Conclusion

The research uses systems theory to provide a framework for understanding the firm. This framework extends into the wider environment and provides the beginning of a model to understand the boundary layer between the firm and the environment. The propositions explore the effect of cherished beliefs within the firm and the permeability of this boundary layer between the firm and the environment to beliefs in the wider environment. The effect of the propositions is to identify and give a deeper insight into parts of the 'system' described in the model. Although systems theory is one of many different models available the framework this approach
gives links the interrelated parts and thus overcomes the disadvantages of a single measure of performance.

The propositions examined the effect of the design axiom in the form of a cherished belief held by the architects.

- The proposition is that the expression 'good building' means that 'the architect' has to run the job right through from inception to hand-over. This is a cherished belief of the profession. Some firms are more permeable at the boundary between the firm and the environment than others to this belief.

Across the board all the firms followed an iterative approach towards design. The only exception being the commercial firm. It was noticeable that the commercial firm produced very standard designs. The effect of this approach may be considered to lead to very standard and boring built environment for individuals to inhabit.

The final group of propositions looked at the approach of architects towards strategy.

- Winch and Schneider (1993) identified a strain between the financial success size and market share and how to achieve them are not always the goals of the partners in architectural practice and indeed at times will be in conflict with success on the aesthetic dimension. The proposition that firms split up because of forces acting between design oriented architects and business oriented architects.
Of greater concern was the predominance of the design axiom as sovereign force biasing the business strategy of the firms. Its influence had a distorting effect shifting the natural balance of goals within a firm.

- Coxe (1980) et al’s suggestion based on the work of Maister that firms that superposition are more efficient than firms that stay in the centre ground.

This shift inhibited the natural tendency of firms maturing and moving along the continuum identified by Cox towards a business culture. Analysis of the spread of goals from the social efficiency maps of the firms included in this study gave firms the appearance of mutations of firms rather than the well balanced well managed firms one would expect to see.

- Paradox identified by Winch (1993). Paradox: why architects who spend their lives organising buildings planning and controlling the building process cannot run their own businesses effectively.

The research identified a tendency towards group think evident. The greater diversity of the construction team negates this tendency towards group think.

- Creative architects are difficult to manage.

Architects are not creative. It would seem that architects relate more to solving visual problems than towards management problems. According to the definition of creativity included in the research architects are not creative thinkers.
The effect of these propositions is to give an insight into thinking at the strategic level in a firm and the permeability of the boundary between the firm and the environment. The impression given by comparing the position of the RIBA Strategic Study and the thinking of architects from 1993 onwards was that they had not changed and were not going to change. The architects prefer to follow the still very strong English Tradition. It would seem that architects' cherished beliefs were still very strong. Any frontal attack by government on architects' cherished beliefs would be met by strong resistance, architects' firms remaining impermeable to economic change imposed by government in the 1980s. They were not open to change.

Architecture remains a strong professional class separate from the remainder of the construction industry. This group exhibits strong signs of projecting its own goals into the wider environment in the form of beliefs. Many architectural practices are open towards these wider views and this directly influences the strategy and structure of these firms. The influence is reinforced by the tradition of design competitions as a method of allocating work within the industry. The initial selection of architectural firms in this way reinforces architects' expectancy of approval from their peers in the world of architecture.
The effect of these propositions is to point towards a group of individuals who provide an essential service to the industry, but are a group of like-thinking individuals. A tendency toward group-think by the profession may be evident.
CHAPTER NINE

DISCUSSION AND IMPLICATIONS

Introduction

The thesis began with an introduction to the research problem drawn from the wider context of the construction industry entire. The qualitative approach (adopted by the research) described in Chapter 6 enables a sensitive investigation regarding the problem of the design axiom and its influence as the sovereign force acting on a firm.

The thesis has divided the research problem by segregating architects’ businesses from the whole industry. The problem was further sub-divided by focusing on architectural businesses that are identified as a particular culture (according to the work of Maister) as interpreted in the RIBA Strategic Study. This subdivision has led to this research focusing on four specially selected architectural firms. These firms form the basis for the Case Studies. Any broad conclusions in the wider context of the industry entire can only be analogous to these Case Studies. Any implications drawn in the wider context of the industry in its entirety can
only be considered anecdotal unless further research is carried out by others to support the conclusions arrived at here.

Given this qualification when attempting to draw any wider conclusions about the construction industry, Chapter 3 identified the urgency governments have experienced over the years to effect change within the construction industry. The literature review has described a pattern of intervention by government varying from 'free market economics' to the introduction of a 'corporate managed' approach in its attempts to by-pass the established character and traditions of the construction industry.

The entire construction industry is often overburdened by the bewilderment experienced by government in its inability to implement wider governmental policy. This wider miss-match of goals between government and the construction industry can be seen in the regularity of and typically critical government-sponsored reports.

A multitude of critical reports have thrown up many and varied solutions to 'the problem' with the construction industry, but all in assorted ways have criticised the industry as outdated and inefficient. A pattern of strong language emerges from all these studies feeding the bewilderment of government and generating an even stronger reaction from government towards legislating for change within the construction industry.

Given this complexity Chapter 5 constructed a framework drawing upon systems theory and social learning theory to understand and explain the patterns of behaviour by some
of the bewildering array of groups and firms that form the construction industry entire. A potential threat to the research was realised, as that of being overwhelmed by the complexity. This was overcome by 'ring fencing' the research problem. The research was thus limited to an exploration of expectations influencing patterns of behaviour of qualified architects: individually, as a group (as interpreted by the RIBA Strategic Study) and as a business.

This framework modelled the emerging propositions, drawn from the RIBA Strategic Study, and enabled the qualitative collection of information in the Case Studies. Chapter 3 recognised that the RIBA Strategic Study identified a need for architects to change their 'way of thinking' in fact to think more strategically. The RIBA Study was brave enough to suggest the USA model for the industries' future, where architects were developers closing the circle from design through to build. The Study also cited Abbot's theory to explain why change was inevitable. Written in 1993 the RIBA Study predictions seem naive in 2002. Nevertheless, the recognition of the problem between the design process and the construction process was made clear.

The fundamental point of interest to this research is this 'problem' between the design process and the construction process. The following propositions were identified in Chapter 1 and were drawn directly from the RIBA Study further 'ring fencing' the research problem:

- That the conflict between creative and management aspects of the work is so great that they must be separated.
• That the process of design is linear rather than
  iterative and that it is possible to introduce a well-
  defined cut-off point.

• That an adequately coherent design can be created by
two different firms despite their having different
design philosophies.

These propositions were considered in the RIBA Study to
be the main influences directing architects' behaviour
towards their architecture. A 'design philosophy' was
traced back through a review of the literature in Chapter
2 to what was identified as the 'English Tradition'
towards design. This approach produced a perception of a
'quality building' 'properly designed' by architects,
forming what is described in this thesis as the design
axiom.

Rather than the predictive approach used in the RIBA
Study using a theory relating to the behaviour of
markets. This theory identifies a continuum running from
the practice centred business (strong ideas) towards the
business centred practice (strong delivery) (Maister,
1987), along which firms are expected to migrate. A
diagnostic approach was preferred by this research.
Chapters 4 and 5 were used to construct a model of a firm
based in Social Learning Theory and described as a human
activities system. The object of the model was to explain
patterns of behaviour found in firms. The approach of
this research, therefore, was to collect the perceptions
of the firm and the perceptions of individual architects
within the firm. The model was based around a matrix,
drawn from the application of a fulfilment model of human behaviour and of business behaviour based in the literature. The vertical axis of the matrix was adapted by this research to include a hierarchy of typical goals. The horizontal axis is the expectancy of achieving these goals.

From this simple model the social efficiency of a firm can be represented graphically. Analysis of the map reveals the effect of multiple goal-seeking behaviour within the firm and points to reasons for initially inexplicable behaviour by and within firms. This model was then extended in Chapter 5 and systems theory was used to represent the wider environment, which forms the habitat the firm finds itself in.

It becomes apparent that the bewildering complexity of the wider environment describing the construction industry entire is beyond the scope of this research. The research problem was therefore further 'ring fenced'. Barrett's approach was used to pictorially describe the boundary between the firm and the environment. The firm is perceived in systems theory as divided from its environment by its boundary layer, identified by Barrett as at the strategic level in the firm. This research models this boundary layer in Chapter 5, and Chapters 7 and 8 go on to include the results of the Case Study analysis. The boundary layer is considered in this research as a skin permeable to some ideas from the environment and impermeable to others. The model in Chapter 5 takes the form of a matrix of typical goals. The matrix is theoretically laid over the boundary layer between the firm and the environment. The model can be considered as acting like a net, which will capture the
goals that pass through the permeable parts of the firm's theoretical skin.

Systems theory explains behaviour patterns of firms, which are open to environmental influence, and firms, which are closed to environmental influence. This is therefore the starting point for further research to understand why the wider goals of government are not always acted upon by the industry in the way that governments expect and predict. Within each firm Expectancy Theory flourishes and in this microenvironment of the firm perceptions can turn positive goals to negative outcomes. Outside the firm group efficacy explains how in this macro environment goals can turn from positive to negative outcomes. The permeability of a firm's boundary layer to ideas in the macro environment indicates how group efficacy can be a powerful force in the environment, effecting the behaviour of firms within the industry entire.

Barrett (1991) describes a force field around a firm maintaining that the balance within a firm is difficult. Barrett identifies this is a problem for management and points to the need for managers to recognise a natural tendency for a shift in the balance of forces around a firm towards more business oriented behaviour.

One source of influence in the environment was identified in this research as maintaining traditional behaviour patterns exhibited by architectural businesses and individual architects is described in this research as the sovereign force. This was the 'English Tradition' founded in the arts and crafts movement in the early part of the 20th century and identified in the RIBA Study as
representing an important cherished belief held by architects in 1993. The RIBA Strategic Study advised that architecture should move away from these historical perspectives.

The intangible nature of this research problem requires a sensitive approach by the researcher to correctly interpret the information collected. Social learning theory was therefore used to identify patterns of beliefs within a firm. A process of triangulation and pattern matching was used to interpret the results captured on the social efficiency map.

It became apparent during the research that the language used by individuals was an important guide towards identifying beliefs. What was said was not necessarily as plain as what was meant. The interviewees were speaking in a coded language. Of particular interest were the phrases, 'designed properly' and a 'quality building'. From this simple beginning the bewilderment of governments failing to understand the construction industry can be charted. Latham (1994) in his report had completely different interpretation of what quality meant, and later Egan (1998), in the report Rethinking Construction, the term quality had a clearly defined definition that was completely different to that of the architects' view of quality seen in the RIBA Study (1992).

Systems theory once again was used to picture the workings of the construction industry in its entirety. The construction industry comprises groups of firms, professional institutions, academic institutions, clients, pressure groups and all the other necessary
Management of Architects Within Architectural Businesses

Chapter 9

baggage of the modern world. All have beliefs and goals, group efficacy points to the way that beliefs travel about this environment called the construction industry entire, waves of opinions crashing about this environment. What separates these groups from the environment is their boundary layer. If this boundary layer is open to some beliefs and closed to others this in part explains why the industry entire does not perform in a predictable way.

From the detail of the Case Study analysis in Chapter 7 and the Cross Case Study analysis in Chapter 8, a wider anecdotal view will be presented in Chapter 9 relating to the construction industry entire. Governments attempting to effect change in the construction industry will not succeed by simple changes in legislation effecting the market or introducing a corporate managed re-education of how the construction industry should think. The permeability of the boundary layers of groups and associations that form the macro environment comprising the construction industry entire must be taken into account.

The purpose, therefore, of this Chapter is to apply the implications of the propositions in the wider sense of the construction industry entire. The systems theory model is extended to facilitate a discussion and recommendations to the wider problem of perceptions in the industry and the permeability of firms towards change introduced into the environment.
The Problem of the Design Axiom

The Case Studies identified that 'design' was of concern amongst all the architects included in the Study. This concern was not limited to the private feelings of the architects but was reflected in the way the firms in the Study behaved and were structured. It is possible to further the discussion regarding the theoretical split between design and production following this research.

The main proposition regards the management of design and implies that there is a particular way to approach design and that there can be no 'cut-off point to design'. This is contrary to the recommendation of the RIBA Study and points to an area for distortion in the Barrett's (1991) force field around a firm. It would, however, be too easy to dismiss the arts and crafts tradition from which the iterative approach towards quality design draws much of its legitimacy. Chapter 4 has identified special characteristics that are applicable to architectural businesses. Social Learning Theory asserts that individuals learn behaviour and choose to engage in it on the basis of their expectations and the value they place on the outcomes they expect. This approach towards understanding architects' cognition is of interest, they have given an indication in this research that they attach powerful response consequences, expectations towards what 'being an architect' means.

It may be implied that learning through modelling is also a powerful component in forming architects' cognition. Chapter 4 has identified modelling is governed by four component processes. The first is the attention process; many of the architects in this research had an external
locus of control, which may indicate a tendency for their attention to be influenced by the group or the individuals with which the architects deal. Of more interest is the second component of modelling, which is symbolic retention. Observed activities are transformed into visual or verbal images that serve as guides to performance. It may be that architects use visual images as guides to performance. The third component complements the second component and involves the conversion of symbolic representation into appropriate behaviour. The fourth process is the motivational process, information about response consequences is obtained through observation and is used to form efficacy expectations and outcome expectations. Consequently a belief in the proper way to design is reinforced in an architect by the praise of the other architects around them, and supported by a tendency towards achieving satisfaction through the transformation of activities into visual images.

The researcher during the Case Study process saw the establishment of various approaches towards self-regulation, the third process in Social Learning Theory. Examples of the following; establishment of specific and sub goals, establishment of standards of performance, establishment of environmental conditions, self-control of thought processes, provision for the evaluation of the adequacy of behaviour and self-reinforcement, were all seen by the researcher during the Case Study process. They manifested in the form of architects transforming their environments by decorating their individual work space, excessive overtime working to mitigate feelings of guilt etc. This research has deliberately avoided investigation of the process of cognition preferring to model expectations based on a framework of standard
questions. The further investigation of self-regulation by architects and the manifestation of causal patterns of behaviour would be of interest in explaining the general health and welfare of architects and is worthy of further research.

Expectations were examined in detail in Chapter 5 and a framework used to model expectations based around the social efficiency map. The process of designing, however, may be more complex than Social Learning Theory can identify. The complexity of the human behaviour is not fully understood. It seems that individuals are usually better at thinking up new ideas but that group meetings are better at evaluating them (Argyle, 1989). This view supports the work of Thorndike (1938) who illustrated by conducting a simple experiment showing that groups are vastly superior to individuals in solving crossword puzzles, but that individuals are superior to groups in constructing them. The significance of his findings is relevant to the problem of design. This research has identified strong similarities in the personalities of architects who work in firms. It may be that the difficulties identified by Thorndike for groups to construct crossword puzzles, are reduced in firms by forming a group of like-minded individuals to solve the 'construct' problem of design.

The main proposition regarding the design axiom defines the problem of communication between individuals or firms. If the individuals have the same cognition or are of a like mind, communication may be easier. As Janis (1982) identified the effect of like-minded groups of individuals can be disastrous. He likens groupthink to a disease that impairs group decision-making. Janis sees
the disease as particularly characteristic of highly cohesive groups and of groups in which members share the same values and beliefs. Diversity in group members is consistent with analytical thinking, as is a set of group norms that legitimises intellectual challenge, disagreement and dissent in the search for answers to difficult problems. It may be that the diversity of group members is essential to analytical thinking and so avoid entropy in an organisation or group. The problem is the set of group norms within which the group performs.

Barrett (1989) points out, based on the results of his research into related professions, that it is essential to include soft or people factors as well as hard task focussed factors if a full understanding of organisational performance is to be achieved.

Systems, Culture and Beliefs

The research has tentatively linked patterns of behaviour; in individuals based on personality, groups of individuals based on Social Learning theory and professional groups based on group efficacy. The model, which has been used to understand the tentative link between all three, is systems theory.

The importance is the relationship between all three. This research has been limited in scope to the business firm and modelling the effect of expectations within the firm especially between individual expectations and the firm's expectations through the development and extension of a fulfilment model. The research has explored the boundary layer between the firm and the environment, superficially, by the development of a matrix of standard
questions. The object was to explore the permeability of this boundary layer to outside beliefs that may influence the behaviour of the firm. The results were speculative but a strong relationship was identified between cherished beliefs in the environment and the way a firm behaved in the limited study that was undertaken in this research.

This approach towards modelling the firm can be extended to encapsulate the whole industry. The permeability of boundaries between firms and the environment and their susceptibility to ideas is capable of extension. The concept of group efficacy providing a pathway for beliefs opens the door for the exploration of other professions and groups within the industry. This research was necessarily limited as the consequence of using a fulfilment model is that the group of individuals selected must have similar abilities and understanding of architecture. The advantage of using RIBA members is at least, in theory, they are all of similar ability and have an understanding of what architecture is.

This approach has been extended by only including firms included in the RIBA directory of practices, and further refined by choosing firms with a particular culture based on Maister’s work. The research has necessarily, therefore, ring fenced the individuals and the firms, by using the RIBA Strategic Study as a source for cherished beliefs in the environment.

The effect of environmental complexity is much greater than can be modelled in this research. Although the culture and beliefs of the RIBA members can be ring fenced, they are not exclusive drivers in forming the
architects' perceptions of the environment. The environment is changing all the time, more so in this modern age and this change is compounded by the fact that architects are intelligent and sophisticated individuals well capable of independent thought and actions. The context of this research may already be dated, and the medium-sized architectural practice considered here may be on the road to extinction.

The situation is compounded by the wider effect socio-technical forces may have on firms. This is limited in this research by the selection process of the Case Studies. Nevertheless, the influence of new technology as a force effecting the future structure of all firms described by Argyle (1989) is of interest.

The study of this broader environment is more suited to the approach used in anthropology and in a much broader context than this research is capable of. As paraprofessionals nibble at the edges of the traditional architect's role, and governments introduce sweeping changes that throw out the traditional way of doing things traditional architects' businesses are under threat.

In the wider global environment, increasingly multinational businesses are changing the rules. They may undertake scheme design on one continent and working drawings on another and implementation on another continent, modern technology, the globalisation of labour, and the globalisation of knowledge has empowered international businesses to sweep away local beliefs and culture in their drive to become more efficient. The
world may have already left the medium-sized architectural businesses included in this study behind.

The recognition of a sovereign force will have a direct effect on the delicate balance of forces around and within the medium-sized traditional firm. One consequence will be their inability to migrate along the continuum identified by Coxe towards greater efficiency and potentially greater social efficiency. In effect the remains of broken and failing firms lay by the wayside of the continuum, rather mutations of firms unable to function as efficient businesses as a result of their distorted pattern of goals. This is a product of weak management and is manifest in the presence of stressed employees, high labour turnover, frustrated clients, low profitability, etc, within these firms.

In the increasingly competitive market, strategic market oriented companies will lay in wait to cherry pick the remains of failing firms.

Social Efficiency and Patterns of Behaviour

The concept of Social Efficiency has been developed in this research based on the work of Georgopoulos (1973) and applied in the form of a map which provides a matrix of goals and expectations. The map collects the beliefs of the individuals who take part in the semi-structured interview. The concept of mapping social efficiency allows the expectations of individuals to be tracked as they travel from beliefs to expectations to outcomes. This is, in effect, a pattern of behaviour. Individual behaviour and group behaviour combine to form complex patterns, which can be mapped, and the careful
interpretation of these patterns can identify the causal links between expectations and outcomes.

The effects of complex patterns of expectancy are outcomes at individual, business and group levels. The outcomes may take many forms and all affect the efficiency of the firm.

At individual level the concept of social efficiency was beginning to reveal the limitations in using single measures of performance to assess the efficiency of firms. The analysis of social efficiency maps revealed the complexity of the problem of design, eg, firms that were efficient at producing quality designs, had to carry the burden of stressed employees.

The sensitive nature of the research model and the utilisation of social learning theory enables the tracking of goals as they turn from positive to negative goals and the strengthening of the findings by triangulation with other methods. The concept of social efficiency overflows into the project team. Curious behaviour driven by needs to mitigate feelings of guilt or other complex needs relating to the individual's personality can over-spill from the firm into the construction team and negative goals affect project performance across disciplines and consequently the industry as a whole. Other examples of this complex behaviour were seen in the Case Studies by architects 'punishing' a bad client because they don't deserve a 'good building', and failure to work in a team because of 'game playing', avoiding 'the blame' for not hitting deadlines by passing 'the blame' onto another consultant.
The culture, strategy and structure of firms are all indicators of identifiable patterns of behaviour within a firm at business level. The firms included in this Study were carefully selected so that the independent variables between the Case Studies were as constant as possible. This led to a narrow group of firms included in the Study, where firms were dominated by one individual or a group of like-minded individuals. The observation identified by Woolven (1978) that some contractors felt contracting was a way of life was replicated in this Study of architects and architecture being a way of life. Strategic thinking was necessarily blurred and firms often overlooked business goals. This biasing of goals was readily identifiable by analysis of the social efficiency map. Goal congruence should therefore be vertical as well as horizontal on the map. The map also identifies the flow of goals around the firm and highlights potential future problems for the firm.

This is a dynamic process and was seen in the multidisciplinary firm where all the elements were in place for a coup d'etat, the social efficiency map identifying the strength and unanimity between the architects towards a negative goal contrary to the policy of the principal. The effect of instability within a firm and its effect on the performance of the firm will necessarily over-spill into the performance of the construction team. The firm may be more or less vulnerable at strategic level to outside influences. A shift in the permeability of the firm at the strategic level may take place and subsequently the culture of the firm and the strategy and structure of the firm will all shift. A dramatic change can have an effect on the clients especially where policy changes influence
service. This instability may be a healthy sign. Systems theory points to negative entropy in an organisation that is maintaining a steady state.

Group goals occur both inside the firm and in the external environment. This formation of a group within the firm generates its own efficacy through the group having its own perception. Group efficacy has not been studied in this research or its effect on the firm. The social efficiency map collects the perceptions individuals have about a standard set of goals and compares the answers with the firm's goals. Any collection of perceptions is a cumulative collection of individual views rather than the group. Efficacy uses a different approach and would complement the research carried out here.

Application of Social Efficiency

The technique of mapping social efficiency and the careful analysis of the map provides a framework, which unifies various existing management theories, the integration of which leads to a greater understanding of the behaviour of the firm as a whole. The most obvious example of this is work by Shapero (1990) on the expectations' cycle. The triangulation of results from various techniques enables an even wider understanding of the effect of individual behaviour and the interpretation of the behaviour of the firm as a whole.

The use of social efficiency mapping by management may lead to the better design of firms by management and the better selection and integration of individuals within the firm. The concept of congruence between the goals of
the individual and the goals of the firm is expected to lead to greater efficiency in the form of a more effective workforce with more balanced goals. The social efficiency map also indicates the biasing of goals within a firm at strategic level. This situation occurs where the goals of the firm are not congruent with each other and is reflected by an over concentration by the firm on one particular goal.

The movement away from competition and towards partnering is becoming more accepted norm within the construction industry. Clients who consider selection of a consultant is more complex than by lowest price use this partnering approach. The utilisation of social efficiency is applicable to organisations other than business firms. The goals may change but the framework used to map the goals in a firm remains valid for all organisations. The goals for a partnering organisation would be different and beyond the scope of this work. The basic tenets of systems theory are justifiable in explaining patterns of behaviour for all organisations. A problem would arise however because of the greater complexity in understanding and modelling of a more open organisation.

The principle behind Social Efficiency is applicable to all organisations. The problem is overcoming the overwhelming complexity of organisations. In the wider context whole industries could be mapped if this problem of complexity can be overcome.

Effect of the Propositions

The propositions use a methodological approach towards answering problems that have previously been the subject
of speculation and commonsense solutions. It is better to use a scientific method to gain a greater understanding of a problem than to rely on commonsense solutions or rely on a single measure of performance.

Single measures of performance do not incorporate other theories and explain the development within the firm. The application of benchmarking and other techniques of performance monitoring rely on a fixed goal and do not take into account the effect of multiple goal-seeking behaviour within firms. The consequence of a narrow measure of performance that is compared with an average for the industry can result in a reduction in Social Efficiency. The consequence of a single measure of performance used by management can result in an increase in negative goals by individuals in the firm, typically higher staff turnover, more sickness etc.

The first group of propositions are taken from the Case Studies and based on the RIBA Strategic Study in 1993. It may have been expected that architects’ views would have changed in the intervening years. This was found not to be the case. In fact the situation described in 1993 was the same in 2001 in the Case Studies. Little change has occurred in the architects’ perception of the world. Architects were a group of individuals with a similar approach particularly towards design.

A reminder of the propositions beginning with the inter Case Study analysis is as follows;

The proposition is that the perception of the RIBA (1993, p.61) is that of being driven by the ethos of wanting to practice architecture and to design the challenge seems
to be how to find ways of improving what they already did rather than to seek any more fundamental change. This will be a predominant perception held by the architects in Case Study A.

The results of Case Study A supported this proposition.

The proposition is that the perception of the RIBA (1993): that the right project manager with a sound understanding of the building process could assist architects to 'concentrate on what we are good at', will be a predominant perception held by the architects in Case Study B.

The results of Case Study B did not support this proposition.

The proposition is that the perception of the RIBA (1993): "architects are perceived to have a distinctive competence in design. However this is not always recognised by clients as being of much value. This was in any case effectively given away for free, as an enticer, by many in the profession" will be a predominate perception held by the architects in Case Study C.

The results of Case Study C did not support this proposition.

The proposition is derived from the RIBA Study (1993): "that the financial, job costing and programming / project management skills are seen as an integral part of architecture . . . will be a predominant perception held by the architects in a 'Commercial Firm'". 
The results of Case Study D did not support this proposition.

The effect of these propositions indicates that in the broader sense architects’ perceptions have not changed from the RIBA Study in 1993.

The main proposition looked at the cherished beliefs of the architects.

The proposition is that the expression 'good building' means that 'the architect' has to run the job right through from inception to handover. This is a cherished belief of the profession. Some firms are more permeable at the boundary between the firm and the environment than others to this belief.

Across the board all the firms followed an iterative approach towards design. The only exception being the Commercial Firm (Case Study D). It was noticeable that the Commercial Firm produced very standard designs. The effect of this approach, if universally accepted, may be considered to lead to very standard and boring built environment for the general population.

The final group of propositions looked at the approach of architects towards strategy.

Winch and Schneider identified a strain between the financial success size and market share and how to achieve them are not always the goals of the partners in architectural practice and indeed at times be in conflict with success on the aesthetic dimension. The proposition that firms split up because of forces acting between
design oriented architects and business oriented architects.

The proposition was partially supported that firms split up because of 'forces' acting between design oriented architects and business oriented architects. This was found to be more because of the effect of the management style of the principals, as identified by the structure of the firms, rather than any clash about the design capability of the firm; the 'forces' that cause the split coming from the dictatorial style of management adopted by the principal. This gives a deeper insight into the personality of architects and the extent some principals will go to fulfill an individual need. This bias can be extreme even to the extent of principals wrecking their firm in order to satisfy individual needs. The potential for extreme actions within such individuals is apparent. The subsequent consequence of a poor decision-making by principals and their businesses and the knock-on effect on the industry in general is of concern.

Coxe et al suggestion based on the work of Maister that firms that superposition are more efficient than firms that stay in the centre ground.

The firms were efficient by a single measure of performance. Analysis of the Social Efficiency however identified characteristics that were of concern. Principally amongst which was a move towards entropy and a single dominant manager with a simple management structure were obvious in the firms that superposition. The effect was compounded where these firms attempted to change technologies from strong delivery to strong on
service (Case Study D) or change cultures from a business culture to practice culture (Case Study B).

Paradox identified by Winch: paradox why do architects who spend their lives organising buildings, planning and controlling the building process cannot run their own businesses effectively.

The results of the Cross Case Study demonstrated the phenomenon of group-think was strong inside the firm as most of the individuals within an architectural practice were the same types. When the architects were in the construction team they were amongst a more diverse group of individuals and therefore the architects' tendency toward the phenomenon of group think was subdued.

Creative architects are difficult to manage

The proposition implied fundamental conflict between creativity and managerial ability within architects. This was found not to be the case in the research. Surprisingly, architects were not found to be creative thinkers in the broader sense of the word. The architects preferred to concentrate on 'being architects' and were very proud of the status attached towards 'being architects'. The proliferation of externally oriented individuals in the firms combined with the results from the snowball method and eclectic models of personality supported the pride that architects have in 'being architects'. It may be that architects consider creative individuals should not be good managers and so they do not take this part of the job seriously, seeing themselves as projecting an image of being creative by not being good managers. This view is supported by the
architects' lax approach towards management and their distorted patterns of business behaviour which are towards entropy, the architects preferring to avoid upset and change relying on a repetitive and traditional approach towards decision-making. The wider effect on industry is of a group of firms, which comprise architectural businesses that are inflexible in their thinking and not open to change.

The effect of these propositions is to give an insight into thinking at the strategic level in a firm and the permeability of the boundary between the firm and the environment. The impression given by comparing the position of the RIBA Strategic Study and the thinking of architects from 1993 onwards was that they had not changed and were not going to change. The architects preferred to follow the still very strong English Tradition regarding design. It would seem that architects' cherished beliefs were still very strong and any frontal attack by government on 'architecture's cherished beliefs' would be met by strong resistance. Architects’ firms remaining impermeable to economic change imposed by government in the 1980s, would resist the onslaught of rethinking construction in the 2000s.

Architecture remains a strong professional class separate from the remainder of the construction industry. This group exhibits strong signs of projecting its own goals into the wider environment in the form of beliefs. Many architectural practices are open towards these wider views and this directly influences the strategy and structure of these firms. The influence is reinforced by the tradition of design competitions as a method of allocating work within the industry. The initial
selection of architectural firms in this way reinforces architects' expectancy of approval from their peers in the world of architecture.

The effect of these propositions is to point towards a group of individuals who provide an essential service to the industry, but are a group of like-thinking individuals. A tendency toward group-think by the profession may be evident.

Education and Training

The initial source of beliefs about architecture must come from the Universities where architects are trained. This is an essential stage in the formation of beliefs. The source of beliefs should be carefully identified and justified before being taught at Universities. Basic research needs to be carried out into how to design but the education system must not rely on a perceived commonsense approach to design based on tradition as the one best way to arrive at a good design.

The continuous process of testing and selection of individuals by Universities over a long period of time is commonplace in architecture. This tends towards the formation of a group of like-thinking individuals emerging from training and entering the industry. The filtering out of individuals by Universities who do not conform to the norm may explain why so many similar personality types were seen in the Case Studies. It may be that this is the norm for the industry exacerbated by the natural behaviour of individuals entering the industry to find the groups they fit into and conform to the expected behaviour of the group.
The overwhelming concern of architects is towards design, to the detriment of management and other skills.

Benefits of this research

The research has pointed the way to future quantitative research into the way architects design buildings.

A fulfilment model of the firm has been established by this research, which encompasses individual and business patterns of behaviour within the firm. This model can be used as a basis to model other types of businesses.

The mapping of social efficiency has provided an integrative framework for the application of many general theories in management to the business firm directly. A model for the understanding of multiple goal-seeking behaviour within firms has been introduced into the framework. This incorporates the effect of individual beliefs and expectations on the goals of the firm. The framework also provides an indication to management where the goals of the firm are not congruent with the normal expected goals of a firm. The benefit of the social efficiency map is that it guides management towards any bias towards goals and identifies areas where additional motivation can be captured from the individuals in the firm. The analysis of the social efficiency map and the justification of the map by triangulation with other more established techniques enable a profile of the individuals in the firm to be established.

The methodology used in this research and in particular the use of social learning theory is applicable to the
construction industry generally and may provide a framework for other researchers. The application of sociological methods into the problem of construction is not used enough in the industry. The sensitivity of the work done by Banwell in the 1960s has been lost in the 2000s in favour of a more strategic managed approach by Egan (1998). If the government is to understand the complexity of the industry before attempting to introduce change a more sensitive approach must be adopted. The very language used by government is often misinterpreted by the industry. The perception of groups within the industry toward change is very inflexible. The possibility of initially positive goals generated from well-meaning government sponsored reports turning to negative outcomes because of expectations within the industry is always at the forefront of any change desired by government. If change is not introduced sensitively an initially positive goal will have a negative outcome.

Further Research

The thesis has intimated at areas within the study of management that further research is possible. The suggested field spans the gap between qualitative and quantitative research. The problem may be viewed as micro and macro.

Micro research into the problem of design would lend itself to a quantitative approach. The propositions in this research regarding creativity and design approach could be tested in a closed monitored environment. Teams of designers can be selected based on a defined set of characteristics and each team confronted with a designed, design problem. The behaviour and performance of each
team can be assessed and quantitative method used to test
firm hypotheses based around the way to design, rather
the more flexible approach taken by this work carried out
in the field and based on a qualitative approach relying
on propositions.

Macro research needs to be carried out to substantiate
this work. The disadvantage of the qualitative approach
used here is that of justification. The methodology
incorporated into the research approach allows for a
logical and rigorous testing and justification of the
research approach and propositions utilising the RIBA
Strategic Study (1993). Without independent replication
by others, the findings of this research must remain
analytical generalisations to a broader theory utilised
by the RIBA Strategic Study (1993).

The use of systems theory provided a useful and broad
framework in which to model the behaviour of a business.
The research interestingly broadened outside the firm and
extended systems theory into the wider environment.
Limitations placed on the research in order to obviate
the potential complexity involved in modelling the wider
environment necessitated the narrowing of the research
problem to RIBA qualified architects, and particular
cherished beliefs of this group regarding design.
Nevertheless the systems theory approach and the
application of Barrett’s (1991) force field could be
developed and used by others to model the wider
environment that forms the construction industry entire.

The commonsense solutions towards solving design problems
by architects within the construction industry have been
questioned in this research. The cherished beliefs and
established methods of problem solving used by architects in the industry have been acquired during the lengthy education of architects. The poor management ability and tendency for unimaginative approach towards business management all derive from the selection and education of potential architects. Educational establishments must question the methods and techniques they intend to teach before they are taught. The government should direct research into these areas with the same gusto as government sponsored reports applicable direct to the construction industry.

Summary and Conclusion

The construction industry comprises a disparate set of competing groups. This research has looked at the beliefs and culture in the UK Construction Industry and in particular architectural practices.

The nature of this research approach has necessitated the in-depth analysis of four architectural businesses. This narrow yet deep study has identified reasons for apparently inexplicable patterns of business behaviour described in the literature concerning architectural businesses.

In the wider context of the construction industry entire if a tendency for professionals toward entropy is established as a correct inference from this work the future of the professional class in UK construction is under threat.

A shift in power from this professional class of educated individuals may have already taken place as knowledge has
moved from individuals, groups and associations within the construction industry to firms and corporations outside the UK Construction Industry. The English Tradition may well have been left on the shelf of history superseded by Japanese, USA, and European Contractors and Consultants for clients wishing to undertake large building works for predetermined budget built around a strict time scale.

The RIBA may well take note of the findings of their RIBA Strategic Study undertaken in 1993 as pertinent to the profession in 2002.

The RIBA Strategic Study identified a need for architects to change their 'way of thinking', in fact to think more strategically. The implications on an unwillingness to consider change could have a profound effect on the future of the profession.

The indication given by comparing the position taken by the RIBA Strategic Study in 1993 and the thinking of architects from 1993 onwards was that they had not changed and were not going to change.

It would seem that architects' cherished beliefs towards the design axiom remained very apparent. Strong resistance would meet any frontal attack by government towards architecture's cherished beliefs.

This seemingly unchallenged acceptance of the design axiom is reinforced by the tradition of design competitions as a method of allocating work within the industry. It may be that architects use visual images as guides to performance. The conversion of symbolic
representation into appropriate behaviour reinforces a tendency towards visual images affecting cognition because of the glory attached to winning a design competition.

A tendency toward group-think by the profession may be evident. This can have a serious consequence for the profession representing a further narrowing of the architects' cognition driving them further away from the non-visual area of management based skills. It may well be the RIBA could consider widening its professional base in time drawing into its number other skills and adopting a federal structure.
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APPENDIX A

DESCRIPTION OF THE FIRM

1.00 DETAILS OF THE FIRM

1.01 What is the volume of work in the firm?

<table>
<thead>
<tr>
<th>Number of Projects</th>
<th>Total Value</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1st April 1997 - 1998)</td>
</tr>
</tbody>
</table>

1.02 What is the volume of work in this office?

<table>
<thead>
<tr>
<th>Number of Projects</th>
<th>Total Value</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1st April 1997 - 1998)</td>
</tr>
</tbody>
</table>

Does the office appear to be

<table>
<thead>
<tr>
<th>Very Busy</th>
<th>Busy</th>
<th>Normal</th>
<th>Quiet</th>
<th>Very Quiet</th>
</tr>
</thead>
</table>

1.03 Complexity of the design work?

<table>
<thead>
<tr>
<th>Very Complex</th>
<th>Slightly Complex</th>
<th>Neutral</th>
<th>Simple</th>
<th>Very Simple</th>
</tr>
</thead>
</table>

1.04 What types of employment contracts are in place and typical wage?

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Name of employee</th>
<th>Salary £k</th>
<th>Temp</th>
<th>Staff</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-20</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>20-25</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>25-30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>35-over</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.05 What is the sick leave of the office expressed as a ratio?

<table>
<thead>
<tr>
<th>No of RIBA qualified in the office</th>
<th>Amount of sick leave (per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>395</td>
<td></td>
</tr>
</tbody>
</table>

Semi structured Interview part 1
1.06 What is the training policy of the firm?

<table>
<thead>
<tr>
<th>Planned formal</th>
<th>Planned informal</th>
<th>Informal</th>
<th>None</th>
</tr>
</thead>
</table>

Planned formal = in house CPD lectures. Planned informal = external courses paid by the firm. Informal = RIBA meetings outside the firm’s time. None = firm has no interest in supporting training

1.07 What is the ratio of male to female staff in the office?

<table>
<thead>
<tr>
<th>No of Male staff in the Office</th>
<th>No of Female staff in the Office</th>
</tr>
</thead>
</table>

1.08 & 1.09 What is the office policy re personnel issues?

<table>
<thead>
<tr>
<th>Issue</th>
<th>Formal Policy</th>
<th>Informal policy</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording accidents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating VDUs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of mobile phones in the office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breaks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea/coffee making</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tidying office</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Formal policy = written. Informal = verbal, managers interpretation. None = laissez-faire

1.11 Type of firm?

<table>
<thead>
<tr>
<th>Traditional architect</th>
<th>Commercial architect</th>
<th>Multidisciplinary architect</th>
<th>Named architect</th>
</tr>
</thead>
</table>

Traditional = gives the full service. Commercial = concentrates on making a profit. Multidisciplinary = gives a range of skills single point service to client. Named = famous named

1.12 & 1.13 History of the firm Brief history of the firm including how it coped through the recession in the early 1990s

2.00 DETAILS OF WORK THE FIRM UNDERTAKES
## 2.01 Which sectors of the market is the firm involved in?

<table>
<thead>
<tr>
<th>Sector</th>
<th>Client</th>
<th>Design brief</th>
<th>Level of service required</th>
<th>Approach required</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>public housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>public offices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private offices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>public leisure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private leisure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>public educational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private educational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>public health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>factories</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>warehouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>retail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Design brief: 1 = standard brief developed by the client, 2 = arraigned at a meeting recorded, 3 = no formal brief from client.

Level of service required: S = specialist skill G = general skill.

Approach required; 1 = strong service, 2 = strong delivery, 3 = strong ideas

## 2.03 What is the skills core of the firm?

<table>
<thead>
<tr>
<th>Service</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specialist firms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>highly specialised design for one particular building type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>efficient production facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>highly innovative specialist design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>design management services co-ordinate other designers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>construction management services to cover the whole process</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Generalist firms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a fully integrated in-house service using individual specialists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>small scale generalist advise for a wide range of buildings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.04 What is the firm's competitive advantage?

<table>
<thead>
<tr>
<th>Feature</th>
<th>probably</th>
<th>possibly</th>
<th>never</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>a strong relationship with clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a strong relationship with other consultants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>efficiencies of the firm's operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>particular design skills of the firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.05 Categorise the firm by design technology

- Strong delivery
- Strong service
- Strong ideas

See table 2.01 for a breakdown by client.

2.06 Is the firm practice centred or business centred?

2.07 Categorise the firm by how it gets work?

<table>
<thead>
<tr>
<th>Process</th>
<th>vital</th>
<th>important</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Stage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market sector experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographic location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience of the work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2nd Stage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design solutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design approach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price the firm offers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record of the practice</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.00 STRUCTURE OF THE FIRM

3.01 Complexity of the organisation
### Management of Architects Within Architectural Businesses

<table>
<thead>
<tr>
<th>Activity</th>
<th>Director/Partner</th>
<th>Manager</th>
<th>Architect</th>
<th>Assistant</th>
<th>Junior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define brief</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project feasibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning approval</td>
<td></td>
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<tr>
<td>Programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-ordinate design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advise on contract</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheme design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production of information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tender/contractor select</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issue of certificates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities 1 = meetings with client, 2 = design outlines, 3 = detailed design, 4 = specification writing, 5 = production drawings, 6 = report writing

#### 3.02 Differentiation of the firm?

**DIFFERENTIATION**

<table>
<thead>
<tr>
<th>VERTICAL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Horizontal: 1 = meetings with clients, 2 = design outlines, 3 = detailed design, 4 = specification writing, 5 = production drawings, 6 = report writing

Vertical: 1 = director/partner, 2 = manager, 3 = architect, 4 = assistant, 5 = junior

#### 3.03 Organisation of the firm?

<table>
<thead>
<tr>
<th>organisation</th>
<th>departmentalised</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureaucratic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

399

Semi structured Interview part 1
### Matrix

<table>
<thead>
<tr>
<th>3.04 &amp; 3.05 Does the system have a mix of structures?</th>
</tr>
</thead>
</table>

### 4.00 STAFF

#### 4.01 Does the firm have a high turnover of staff?

<table>
<thead>
<tr>
<th>total staff 97-98</th>
<th>staff left 97-98</th>
<th>difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ratio of staff : staff left = <80% high, 70% average, >60% low

#### 4.02 What types of employment contracts are in operation?

<table>
<thead>
<tr>
<th>contract type</th>
<th>number of people (RIBA)</th>
<th>method of payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>per hour (day to day)</td>
<td></td>
<td>per hour</td>
</tr>
<tr>
<td>fixed term contract</td>
<td></td>
<td>lump sum / per week</td>
</tr>
<tr>
<td>staff salary basis</td>
<td></td>
<td>per month</td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.04 What is the market like for labour in the area?

<table>
<thead>
<tr>
<th>Keen</th>
<th>normal</th>
<th>weak</th>
<th>poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.05 What hours are expected from the staff (RIBA)?

<table>
<thead>
<tr>
<th>Personnel</th>
<th>basic</th>
<th>overtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>partner/director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>staff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.06 What system is used to monitor performance, who is responsible?

<table>
<thead>
<tr>
<th>Method</th>
<th>day to day</th>
<th>weekly</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>time sheets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>computer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Semi structured Interview part 1
Management of Architects Within Architectural Businesses

4.07 What method is used to cost jobs and allocate overheads?

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>formal system</th>
<th>informal system</th>
<th>Overheads % on each job</th>
<th>overheads on a contribution basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner/Director</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.00 TRAINING

5.01 What is the firm's attitude to training?

<table>
<thead>
<tr>
<th>view</th>
<th>yes</th>
<th>no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>we have all the training we need</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>we train staff in house</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>we buy in specialist skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.02 Does the firm support research and development?

5.03 Does the firm select staff for their current skills or future potential?

5.04 Does the firm actively develop the potential of in-house staff?

5.06 Is the firm actively developing a skills base?

<table>
<thead>
<tr>
<th>skill</th>
<th>in house</th>
<th>Courses</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>information technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adjudicator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>partnering</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.00 PERSONNEL AND ADMINISTRATION DETAILS

6.01 Has the firm a strategic plan?

<table>
<thead>
<tr>
<th>question?</th>
<th>yes</th>
<th>no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>has the firm a strategic/ business plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>is this plan known throughout the firm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.02 Has the company a personnel policy?

<table>
<thead>
<tr>
<th>responsible</th>
<th>formal</th>
<th>informal</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner/Director</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architect</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.03 How does the firm recruit staff?

<table>
<thead>
<tr>
<th>responsible</th>
<th>partner/director</th>
<th>personnel officer</th>
<th>manager</th>
<th>architect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CV's</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aptitude tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial period</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.04 Does the firm keep records of staff?

<table>
<thead>
<tr>
<th>record</th>
<th>written</th>
<th>informal</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance at interview</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aptitude tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sick leave taken</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.05 Does the firm have off the shelf policies developed for emergencies?

6.06 Has the firm a method of communicating policy to the staff?

<table>
<thead>
<tr>
<th>method</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notice board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff meetings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.07 Is the personnel management formal or informal?

7.00 FINANCIAL STRUCTURE OF THE FIRM

7.01 What is the legal entity of the firm?
<table>
<thead>
<tr>
<th>legal entity</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>sole trader</td>
<td></td>
<td></td>
</tr>
<tr>
<td>partnership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>private company</td>
<td></td>
<td></td>
</tr>
<tr>
<td>public company</td>
<td></td>
<td></td>
</tr>
<tr>
<td>co-operative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**7.02 What methods does the firm use to raise capital?**

<table>
<thead>
<tr>
<th>type of capital</th>
<th>short term</th>
<th>medium term</th>
<th>long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overdraft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bank loan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortgage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained earnings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debentures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shares</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal sources</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**7.03 Capital structure of the firm?**

<table>
<thead>
<tr>
<th>variable</th>
<th>% of total</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>work in progress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>materials</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**7.04 Firm's attitude to Yield and risk**

<table>
<thead>
<tr>
<th></th>
<th>return on</th>
<th>investment</th>
<th>stock</th>
<th>ent</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>low</td>
<td>medium</td>
<td>high</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>medium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>high</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**7.05 Does the firm offer shares to the staff?**

**7.06 Does the firm have a budget and control plan over a time period?**
7.07 Is the firm's income fixed and does the budget monitor expenditure adequately?

7.08 Does the firm produce internal financial reports to check it is realising its objectives?

7.09 Does the firm have identifiable written objectives?

7.10 What are the financial ratios of the firm?

<table>
<thead>
<tr>
<th>type</th>
<th>ratio</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

current ratio = current assets/current liabilities, operating ratio = turnover/capital employed, productivity ratio = turnover/number of employees

7.11 Does the firm use financial data to monitor its progress and competitors?

8.00 PERKS

<table>
<thead>
<tr>
<th>perk</th>
<th>manager</th>
<th>architect</th>
<th>assistant</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus pay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea and biscuits in office</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexitime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit sharing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company car</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and pension scheme</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.00 THE FIRM'S PERCEPTION OF WHY IT EXISTS?

9.01 Type and content of agreements with clients

<table>
<thead>
<tr>
<th>agreement</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIBA standard form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clients standard form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>firms standard form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-off agreement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9.02 Stage of development of the firm

<table>
<thead>
<tr>
<th>stage</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad hoc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended budgeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially formalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formalised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.03 What are the profit levels of the firm?

<table>
<thead>
<tr>
<th>profit level %</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

profit is defined as.......

9.04 What period does the firm use for its forward planning?

<table>
<thead>
<tr>
<th>planning</th>
<th>short term</th>
<th>medium term</th>
<th>long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-6 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-12 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.05 What does the firm do to create a company image?

9.06 What are the aspirations of the firm?

<table>
<thead>
<tr>
<th>stage</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>existence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>survival</td>
<td></td>
<td></td>
</tr>
<tr>
<td>success</td>
<td></td>
<td></td>
</tr>
<tr>
<td>success</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9.07 What level of commitment is expected from staff?

9.08 What are the firm's strengths?

9.09 How is change occurring in the firm?

<table>
<thead>
<tr>
<th>change</th>
<th>yes/no</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>incremental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fundamental</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.10 How much time is spent on non-fee earning work?

<table>
<thead>
<tr>
<th>activity</th>
<th>office hours</th>
<th>over time</th>
<th>own time</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>design competitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>preparing advertising</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>letters of introduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>corporate entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.13 What is the firm's perception towards client satisfaction of service?

<table>
<thead>
<tr>
<th>system</th>
<th>formal</th>
<th>informal</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>written feedback from clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>verbal feedback from clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.14 What is the firm's policy regarding calculating the fee for work?

<table>
<thead>
<tr>
<th>policy</th>
<th>never</th>
<th>maybe</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>buy jobs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIBA list less a %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>calculate the cost plus a %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>assess the market rate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10.00 ENVIRONMENTAL

10.01 Type of firm - perception of the firm?

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<table>
<thead>
<tr>
<th>type of perception</th>
<th>strength of perception</th>
<th>comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>defender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prospector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>analyser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reactor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10.02 Adaptation of the firm towards its environment?

<table>
<thead>
<tr>
<th>Location</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td></td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td></td>
</tr>
<tr>
<td>East Midlands</td>
<td></td>
</tr>
<tr>
<td>East Anglia</td>
<td></td>
</tr>
<tr>
<td>Greater London</td>
<td></td>
</tr>
<tr>
<td>South West</td>
<td></td>
</tr>
<tr>
<td>West Midlands</td>
<td></td>
</tr>
<tr>
<td>North West</td>
<td></td>
</tr>
<tr>
<td>Wales</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td></td>
</tr>
<tr>
<td>Northern Ireland</td>
<td></td>
</tr>
</tbody>
</table>

9.03 Why is the firm in this area?

<table>
<thead>
<tr>
<th>reason</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>local client</td>
<td></td>
</tr>
<tr>
<td>availability of labour</td>
<td></td>
</tr>
<tr>
<td>local grants</td>
<td></td>
</tr>
<tr>
<td>Partners’/directors’ home</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

9.04 Does the firm have a stake in the area?

9.05 Is the office in this area independent?

11.00 ECONOMIC ENVIRONMENT

10.01 What levels are the fiscal economy indicators?

Semi structured Interview part 1
10.02 & 10.03 Which point on the building cycle has the economy reached?

10.04 What are the cost barriers of the firm to change?

10.05 What is the labour availability of architects?

10.06 What level of information does the firm consider appropriate?

<table>
<thead>
<tr>
<th>stage</th>
<th>level of information</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility</td>
<td></td>
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<tr>
<td>Planning</td>
<td></td>
<td></td>
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<tr>
<td>Scheme design</td>
<td></td>
<td></td>
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<tr>
<td>Production of information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10.07 & 10.08 Influence of government policies on the firm

10.09 Type of clients the firm has?

<table>
<thead>
<tr>
<th>type</th>
<th>importance</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market oriented</td>
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<tr>
<td>One off</td>
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</table>

10.10 Government economic policy

10.11 Investment plans of clients

<table>
<thead>
<tr>
<th>client</th>
<th>affected by government policies</th>
<th>positive/negative</th>
<th>comments</th>
</tr>
</thead>
</table>

12.00 SOCIO POLITICAL EFFECTS

12.01 Planning and legislation

<table>
<thead>
<tr>
<th>type</th>
<th>local government</th>
<th>national government</th>
<th>European</th>
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</thead>
<tbody>
<tr>
<td>Grants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subsidies</td>
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<td></td>
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</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
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</tbody>
</table>

12.02 & 12.03 Is the firm affected by outside groups or interests?

Semi structured Interview part 1
12.04 Does the firm acknowledge any professional code of ethics?

12.05 Has the firm a view about the following issues?

<table>
<thead>
<tr>
<th>issue</th>
<th>yes/no</th>
<th>firms policy</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>work for no fee on charity projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>advise consumer council</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>assist green-peace on architectural issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>give aid and advice to overseas groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>specifying tropical hardwoods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>specifying eco friendly waste systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>address moral issues of design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>care for the end users of its designs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.06 & 12.07 Does the firm draw labour from a wide area?

<table>
<thead>
<tr>
<th>issue</th>
<th>yes/no</th>
<th>View</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dress code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sex discrimination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>working with VDU's</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>working with mobile phones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible working</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family friendly working</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.08 Is the firm actively working to develop its own image of architecture in the public’s mind?

END OF INTERVIEW

13.00 THE INDIVIDUAL AND THE FIRM

13.01 Is the individual internal or external oriented?
Management of Architects Within Architectural Businesses

<table>
<thead>
<tr>
<th>individual</th>
<th>internal</th>
<th>External</th>
<th>comments</th>
</tr>
</thead>
</table>

13.02 Test for creativity

13.03 Test for personality type

<table>
<thead>
<tr>
<th>individual</th>
<th>A</th>
<th>B</th>
<th>comments</th>
</tr>
</thead>
</table>

14.00 FIRM'S MANAGEMENT

14.01 Test for management style

14.02 Have the manager's access to records about staff in order to customise reward systems and provide opportunities or do they use gut feeling or nothing at all?

14.03 Has the firm gone through any crisis and revolution points, and experienced the consequent change in management style?

<table>
<thead>
<tr>
<th>point</th>
<th>effect on management</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.04 Has the firm used facilitators (e.g. outside management consultants)

15.00 THE INTERACTION BETWEEN ARCHITECTS AND OTHERS IN THE FIRM

15.01 Have the architects (RIBA) power over the others in the firm?

15.02 How is this power perceived by the firm?

<table>
<thead>
<tr>
<th>power</th>
<th>reward</th>
<th>coercive</th>
<th>Legitimate</th>
<th>Referent</th>
<th>Expert</th>
<th>comments</th>
</tr>
</thead>
</table>

15.03 Is this power derived from a perception ability by the firm that these architects can reduce uncertainty in the firm?
### Semi Structured Interview Part 2 & Rating Sheet

<table>
<thead>
<tr>
<th>Growth of turnover</th>
<th>(1) Do you think the firm should put more work through the office?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) Could not cope with more work at the moment</td>
</tr>
<tr>
<td></td>
<td>b) Firm would have to make big changes and increase investment</td>
</tr>
<tr>
<td></td>
<td>c) Firm would have to take on more staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Earnings</th>
<th>(2) Do you think the firm could make more money out of the work it does?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) The firm could improve on the way it works, i.e. it's too slow</td>
</tr>
<tr>
<td></td>
<td>b) The firm could make more money out of the work it does</td>
</tr>
</tbody>
</table>

### Social Efficiency Map

<table>
<thead>
<tr>
<th>Category of firm</th>
<th>Development stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business strategy</td>
<td>Social efficiency Map</td>
</tr>
<tr>
<td>Interviewee name</td>
<td>Personality type</td>
</tr>
<tr>
<td>Management style</td>
<td>Instrumentality</td>
</tr>
<tr>
<td>Management style</td>
<td>Expectancy</td>
</tr>
</tbody>
</table>

#### Expectancy

- **Valence**
  - Possible
  - Not possible
  - No doubt
  - No doubt
  - Positive
  - Negative
  - Neutral

#### Instrumentality

- **Value**
  - High
  - Medium
  - Low

#### Personality Type

- **Behavioral Style**
  - Assertive
  - Affable

#### Development Stage

- **Business Name**
  - Early
  - Growth
  - Mature

#### Social Efficiency Map

<table>
<thead>
<tr>
<th>Category of firm</th>
<th>Development stage</th>
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</thead>
<tbody>
<tr>
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</tbody>
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#### Instrumentality

- **Value**
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  - Medium
  - Low

#### Personality Type

- **Behavioral Style**
  - Assertive
  - Affable
Management of Architects within Architectural Businesses

Too much work already

Do you think the firm makes a profit?

a) The firm could get more work if it was better at marketing
b) There is a lot of competition from other architects doing the same work

c) The firm could get more work from these clients if it was better

Do you think the firm can get more of the same type of work?

a) The firm could get more of the same type of work if it was better at marketing
b) There is a lot of competition from other architects doing the same work

c) Not much work already

Do you think the firm should be doing other types of work, in different sectors of the market say leisure?

a) The firm does not have the experience to do this
b) The firm is not prepared to change

c) I would not be happy changing

Do you think the firm coped well through the recession?

(a) Has changed to better clients

(b) Has got better managed

(c) Has cut jobs

(d) Has improved training

(e) Has improved turnover

(f) Has improved marketing

Do you think the firm makes a profit?

a) What happens to the profit is it invested in the firm

b) Where else is a lot of competition from other architects doing the same work

It was better in the office of could it get more of the same type of work?
Management of Architects within Architectural Businesses

Return on investments
(a) they would get a better return on investments by keeping the money in the bank
(b) it's a lot of risk for the investors
(c) it's a gold mine

Utilise resources
(a) invest more in training
(b) invest more in marketing
(c) invest more in technology
(d) it's a gold mine

Internal political
(a) the firm is very effective
(b) the firm is efficient
(c) it's a gold mine
(d) they would get a better return on investments by keeping the money in the bank

External political
(a) do you think the firm is a good business investment?
(b) do you think the firm is a good business investment with
the coming of this business?
(c) do you think the firm could be taken over?
(d) do you think there could be a staff buy out?

Do outside firms have a link and involvement with
the firm or the owners will keep control of the firm?
(a) do you think the firm will split up?
(b) do you think there will be a staff buy out?
(c) do you think the owners will keep control of the firm?

Can the firm make the most of what it's got?
(a) invest more in technology
(b) invest more in training
(c) invest more in marketing
(d) firm is very efficient

(c) the firm is influenced by the image in the press
(b) do you think the firm has a strong influence on how
the firm works
(a) do you think the firm could be taken over?
Management of Architects within Architectural Businesses

Meet aspirations of employees

(11) Do you think the firm does enough to help you get what you want out of life

(a) improve your opportunity to design better
(b) more chance of promotion
(c) opportunity to have more responsibility
(d) help you to become a famous designer

Develop employees potential

(12) Does the firm do enough to get the most out of its staff?

(a) more training
(b) make work more interesting

Serve clients

(13) Does the firm put the client first in all its decisions?

(a) we believe it is important to design a good building whether the client wants it or not
(b) cost and time issues are not as important as getting the design right

Serve community

(14) Do you think the firm will do more to help the local community?

(a) help with planning advice for local community issues
(b) contribute to local charities
(c) participate in local councils and parish councils
(d) help with community issues

Maintain reputation

(15) Does the firm do enough to project its reputation and image as an architect?

(a) more advertising
(b) contribute to local charities
(c) participate in local councils and parish councils
(d) enter awards for good design

Semi-structured Interview Part 2 & Rating Sheets
Management of Architects within Architectural Businesses

- More competitions
- More flair in design work
- Better service to clients - quality of information and detail
- Develop more skills in house - e.g., cost planning etc.

Production quota

- Is the firm getting through the work in the office effectively?
  - Staff are working too much overtime to get the work finished on time
  - Not enough work for all the people in the office
  - Not monitoring output of individuals sufficiently
  - Individuals spent too much time on design
  - We need a more flexible workforce - temps to help us get over the peaks in workload
  - Staff spend too much time on a learning curve when doing new work

Cost targets

- Is the firm ensuring all the jobs in the office are profitable?
  - All the jobs in the firm have to make a profit
  - The firm buys in some work as loss leaders
  - Costs are increasing all the time. Jobs start out at a profit but end up making a loss

Sales quota

- Is the firm marketing itself successfully?
  - There is not enough different work coming in to the office
  - Better service to clients - quantity of information and detail
  - More time in design work
  - More competitions

Completion deadlines
Does the firm keep the client happy about delivering the goods on time?

(a) We are always late but it is not our fault, the brief is always changing.

(b) We have too much work in the office and need more staff if we are to complete on time.

(c) We always complete on time.

Mission or purpose

(20) The firm always tries to design a beautiful building.

(a) Profit is paramount.

(b) Keep the client happy.

(c) Gain admiration from other architects.

(d) Keep the client happy.

(e) Profit is paramount.

(f) The firm always tries to design a beautiful building.

(g) We always complete on time.

(h) We are always happy about delivering the goods on time.

Philosophical

(21) Are you happy that you are getting enough sleep, food, and can look after the basics in life?

(a) No, work is killing me.

(b) Never felt better.

(c) I am happy that you are getting enough sleep, food, and can look after the basics in life.

Security

(22) Are you happy that you are in a safe environment?

(a) Where I live is not dangerous.

(b) Travelling to work is not dangerous.

(c) Work itself is not dangerous.

(d) Never felt better.

Social

(23) Do you feel that you belong?

(a) You feel part of a team at work.

(b) Do you feel that you belong?
Management of Architects within Architectural Businesses

(b) you have strong family

Esteem

(24) Do you think it is important to have the self respect of

(a) to maximise your self development
(b) to maximise your self expression
(c) to maximise your creativity

Full potential within you needs

Self actualisation

(25) Does the firm give you the opportunity you need to fulfil your

(a) as a member of the firm
(b) as an architect
(c) as a designer

others around you

(24) Do you feel the profession instills a sense of belonging

(a) you have strong family
(b) you have strong family

Semistructured Interview Part 2 & Rating Sheets
Management of Architects within Architectural Businesses

Semi-structured Interview Part 2 & Rating Sheets

Expectancy

Reasons for the interviewees belief

1 Expectancy

Question number 1 2 3 4 5 6 7 8 10 11 18 20 21 22 23 24 25

Factors

Maintenance

RATING SHEET
### Rating Sheets

#### Maintenance Factors

<table>
<thead>
<tr>
<th>Question Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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#### Motivator Factors

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</tbody>
</table>

#### Questionnaire

1. **Maintenance Factors**
   - More pay
   - Better working conditions
   - More holidays
   - Flexible working
   - Working with more people
   - Team working
   - More social interaction
   - Promotion
   - More training
   - Increased respect from colleagues
   - Sense of inner fulfillment
   - Job security
   - Sense of letting yourself down
   - More stress
   - More fatigue
   - Layoff
   - Wage cut
   - Demoted
   - Criticism from colleagues
   - Criticism from the RIBA
   - Sense of letting yourself down

2. **Motivator Factors**
   - More pay
   - Better working conditions
   - More holidays
   - Flexible working
   - Working with more people
   - Team working
   - More social interaction
   - Promotion
   - More training
   - Increased respect from colleagues
   - Sense of inner fulfillment
   - Job security
   - Sense of letting yourself down

---

*Management of Architects within Architectural Businesses*
Management of Architects within Architectural Businesses

Question number
3

In instrumentality, the person believes the outcome of (2) will lead to a secondary outcome (3)

The attainment of the second outcome (3) is certain if the first outcome is achieved (positives):

- a. more pay in the future
- b. better chance of promotion
- c. good report in the annual review
- d. win a prize in the firm
- e. gain a sense of achievement
- f. improve your CV, portfolio, etc.
- g. increase your self-respect
- h. demonstrate your design talent to others
- i. increase your self-esteem
- j. enhance your image and reputation
- k. give you some of the attributes of a designer
- l. make work interesting to others
- m. gain respect from your family
- n. make your mark on the world
- o. demonstrate your design talent to others
- p. make your mark on the world
- q. gain a sense of fulfillment
- r. improve your CV, portfolio, etc.
- s. make work interesting to others
- t. make work boring and repetitive
- u. reduce your sense of fulfillment
- v. reduce your self-esteem
- w. reduce your self-esteem

Negatives:
- a. make work boring and repetitive
- b. reduce your self-esteem
- c. lose your sense of fulfillment
- d. expose you to criticism from the world
- e. expose you to criticism from the world
- f. lose your sense of achievement
- g. demonstrate your design talent to others
- h. gain respect from your family
- i. make your mark on the world
- j. enhance your image and reputation
- k. give you some of the attributes of a designer
- l. make work interesting to others
- m. gain respect from your family
- n. make your mark on the world
- o. demonstrate your design talent to others
- p. make your mark on the world
- q. gain a sense of fulfillment
- r. improve your CV, portfolio, etc.
- s. make work interesting to others
- t. make work boring and repetitive
- u. reduce your sense of fulfillment
- v. reduce your self-esteem
- w. reduce your self-esteem
APPENDIX C

27th April 1999

TO ALL ON ATTACHED LIST

Dear Mr

Re: Doctoral Research Programme – The Management of Architects within Architectural Practices

We are currently seeking access to firms for data in support of the above doctoral study. The research is conducted by Robert Thompson a part-time researcher in the School of Construction and Property Management.

The Study is an attempt to further some aspects of the R.I.B.A. Strategic Study of the Profession (published in 1992). Robert is conducting a series of case studies; we hope that you will agree to your firm becoming one of these.

The case studies are undertaken in complete confidence and analyse the structure, strategy and financial control of the firm. The process involves some brief interviews with senior staff in the firm.

Firms that contribute to the research will be given a summary of the results when the work is completed.

My researcher Robert Thompson will telephone you in the next few days to follow up this request and to answer any questions that you may have.

I do hope that you will be able to contribute to this interesting research. If you have any further questions please do not hesitate to Robert (tel; 07931 723 122) or contact me at the University.

Thank you

Yours sincerely

Dr Peter McDermott
## APPENDIX D

Name........................................
Position in Firm .........................

**PLEASE CIRCLE THE NUMBER THAT BEST REPRESENTS YOUR OWN BEHAVIOUR**

<table>
<thead>
<tr>
<th>AM CASUAL ABOUT APPOINTMENTS</th>
<th>1 2 3 4</th>
<th>5 6 7 8</th>
<th>AM NEVER LATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM NOT COMPETITIVE</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>AM VERY COMPETITIVE</td>
</tr>
<tr>
<td>NEVER FEEL RUSHED, EVEN UNDER PRESSURE</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>ALWAYS FEEL RUSHED</td>
</tr>
<tr>
<td>TAKE THINGS ONE AT A TIME</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>TRY TO DO MANY THINGS AT ONCE, THINK ABOUT WHAT I AM GOING TO DO NEXT</td>
</tr>
<tr>
<td>DO THINGS SLOWLY</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>DO THINGS FAST (EATING WALKING ETC)</td>
</tr>
<tr>
<td>EXPRESS FEELINGS</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>SIT ON FEELINGS</td>
</tr>
<tr>
<td>HAVE MANY INTERESTS</td>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
<td>HAVE FEW INTERESTS OUTSIDE WORK</td>
</tr>
</tbody>
</table>
Management of Architects Within Architectural Businesses

AFTER EACH STATEMENT INDICATE WITH A LETTER THE DEGREE OR EXTENT WITH WHICH YOU AGREE OR DISAGREE.

A = Strongly agree  
B = Agree  
C = In between or don't know  
D = Disagree  
E = Strongly disagree

Mark your answers as accurately and frankly as possible

1) I always work with a great deal of certainty that I’m following the correct procedures for solving a particular problem. 

2) It would be a waste of time for me to ask questions if I had no hope of obtaining answers.

3) I feel that a logical step by step method is best for solving problems.

4) I occasionally voice opinions in groups that seem to turn some people off.

5) I spend a great deal of time thinking about what others think of me.

6) I feel that I may have a special contribution to give to the world.

7) It is more important for me to do what I believe to be right than to try to win the approval of others.

8) People who seem unsure and uncertain about things lose my respect.

9) I am able to stick with difficult problems over extended periods of time.

10) On occasion I get overly enthusiastic about things.

11) I often get my best ideas when doing nothing in particular.

12) I rely on intuitive hunches and the feeling of rightness or wrongness when moving toward the solution of a problem.

13) When solving a problem I work faster when analysing the problem and slower when synthesising the information I’ve gathered.

14) I like hobbies which involve collecting things.

15) Day dreaming has provided the impetus for many of my more important projects.

16) If I had to choose from two occupations other than the one I now have, I would rather be a physician than an explorer.

17) I can get along more easily with people if they belong to about the same social and business class as myself.

18) I have a high degree of aesthetic sensitivity.

19) Intuitive hunches are unreliable guides in problem solving.

20) I am much more interested in coming up with new ideas than I am in trying to sell them to others.

21) I tend to avoid situations in which I might feel inferior.

22) In evaluating information the source of it is more important to me than the content.
23) I like people who, follow the rule business before pleasure. 
24) One's own self respect is much more important than the respect of others. 
25) I feel that people who strive for perfection are unwise. 
26) I like work in which I must influence others. 
27) It is important for me to have a place for everything and everything in its place. 
28) People who are willing to entertain crackpot ideas are impractical. 
29) I rather enjoy fooling around with new ideas, even if there is no practical payoff. 
30) When a certain approach to a problem doesn't' work I can quickly reorient my thinking. 
31) I don't like to ask questions that show ignorance. 
32) I am able to more easily change my interests to peruse a job or career than I can change a job to peruse my interests. 
33) Inability to solve a problem is frequently due to asking the wrong questions. 
34) I can frequently anticipate the solution to my problems. 
35) It is a waste of time to analyze one's failures. 
36) Only fuzzy thinkers resort to metaphors and analogies. 
37) At times I have so enjoyed the ingenuity of a crook that I hoped he or she would go scot free. 
38) I frequently begin work on a problem which I can only dimly sense and not yet express. 
39) I frequently tend to forget things, such as names of people, streets, highways, small towns etc. 
40) I feel that hard work is the basic factor in success. 
41) To be regarded as a good team member is important to me. 
42) I know how to keep my inner impulses in check. 
43) I am a thoroughly dependable and responsible person. 
44) I resent things being uncertain and unpredictable. 
45) I prefer to work with others in a team effort rather than solo. 
46) The trouble with many people is that they take things too seriously. 
47) I am frequently haunted by my problems and cannot let go of them. 
48) I can easily give up immediate gain or comfort to reach the goals I have set. 
49) If I were a college professor, I would rather teach factual courses than those involving theory. 
50) I am attracted to the mystery of life.

TICK WHICH OF THESE ALTERNATIVE STATEMENTS YOU MOST AGREE WITH
A) In the long run, people get the respect they deserve in this world.

AGREE

OR

B) Unfortunately, an individual's worth often passes unrecognised, no matter how hard he tries

AGREE

A) In my case, getting what I want has little or nothing to do with luck

AGREE

OR

B) Many times we might just as well decide what to do by flipping a coin

AGREE

A) By taking an active part in political and social affairs, people can control world events

AGREE

OR

B) Many times I feel that I have little influence over things that happen to me

AGREE
IF YOU WERE A MANAGER GIVE YOUR RESPONSE, OR ASSUME WHAT YOUR IMMEDIATE MANAGERS BEHAVIOUR WOULD BE, TO THE FOLLOWING SITUATIONS. CIRCLE THE LETTER OF THE ALTERNATIVE THAT WOULD MOST CLOSELY DESCRIBE THEIR/YOUR BEHAVIOUR IN THE SITUATIONS PRESENTED.

**Situation 1** The employee's in your programme appear to be having serious problems getting the work done. Their performance has been going downhill rapidly. They have not responded to your efforts to be friendly or to your expressions of concern for their welfare.

a) Re-establish the need for following programme procedures and meeting the expectations of task accomplishment.

b) Be sure that staff members know you are available for discussion, but don't pressure them.

c) Talk with your employees and then set performance goals.

d) Wait and see what happens.

**Situation 2** During the past few months, the quality of work done by staff members has been increasing. Record keeping is accurate and up-to-date. You have made sure all staff members are aware of your performance expectations.

a) Stay uninvolved.

b) Continue to emphasise the importance of completing tasks and meeting deadlines.

c) Be supportive and provide clear feedback. Continue to make sure that staff members are aware of performance expectations.

d) Make every effort to let staff members feel important and involved in the decision making process.

**Situation 3** Performance and interpersonal relations among your staff have been good. You have normally left them alone. However, a new situation has developed and it appears that staff members are unable to solve the problem themselves.

a) Bring the group together and work as a team to solve the problem.

b) Continue to leave them alone to work it out.

c) Act quickly and firmly to identify the problem and establish procedures to correct it.

d) Encourage the staff to work on the problem, letting them know you are available as a resource and for discussion if they need you.

**Situation 4** You are considering a major change in your programme. Your staff has a fine record of accomplishment and a strong commitment to excellence. They are supportive of the need for change and have been involved in the planning.

a) Continue to involve the staff in the planning, but you direct the change.

b) Announce the changes and then implement them with close supervision.

c) Allow the group to be involved in developing the change, but don't push the process.

d) Let the staff manage the change process.

**Situation 5** You are aware that staff performance has been going down during the last several months. They need continual reminding to get tasks done on time and seem unconcerned about meeting objectives. In the past redefining procedures and role expectations has helped.

a) Allow your staff to set their own direction.

b) Get suggestions from the staff, but see that objectives are met.

426 Standard Questionnaires
Situation 6 You have just been appointed director of a programme that had been running smoothly under a previous director. She had a reputation of running a tight ship. You want to maintain the quality of the programme and the service delivery, but you would like to begin humanising the environment.

a) Do nothing at the present time.

b) Continue with the administrative pattern set by the previous director, monitoring the staff and emphasising the importance of task accomplishment.

c) Get the staff involved in decision making and planning, but continue to see that objectives are met and quality is maintained.

d) Reach out to staff members to let them feel important and involved.

Situation 7 You are considering expanding your unit’s responsibilities. Your staff members have made suggestions about the proposed change and are enthusiastic. They operate effectively on a day-to-day basis and have shown themselves willing to assume responsibility.

a) Outline the changes and monitor carefully

b) Reach consensus with the staff on the proposed changes and allow the staff members to organise the implementation.

c) Solicit input from the staff on proposed changes, but maintain control of the implementation.

d) Let the staff handle it.

Situation 8 Staff members have been working well. Interpersonal relations and morale are good. The quality of service delivery is excellent. You are somewhat uncomfortable with your apparent lack of direction of the group.

a) Be careful not to hurt your relationship with the staff by becoming too directive.

b) Take steps to assure that staff members are working in a well-defined manner.

c) Leave the staff alone to work as they have been.

d) Discuss the situation with the staff and then initiate the necessary changes.

Situation 9 You have been appointed to replace the chairman of a task force that is long overdue in making requested recommendations for certification requirements. The group is not clear on its goal. Attendance at meetings has been poor. Frequently, the meetings are more social than task oriented. Potentially, they have the knowledge and experience to complete the task.

a) Let group members work out the problem.

b) Solicit recommendations from the group, but see that the objectives are met.

c) Redefine and clarify the goals, tasks, and expectations, and carefully supervise progress toward task completion.

d) Allow the group involvement in setting goals, but don’t push.

Situation 10 Your employees are usually able to take responsibility. However, they are not responding well to your recent redefinition of performance standards.

a) Supervise carefully to ensure that standards are met.

b) Solicit input from staff on performance standards. Incorporate their suggestions and monitor their progress toward meeting the standards.

c) Allow staff involvement in the redefinition of performance standards, but don’t push.

d) Avoid confrontation. Apply no pressure and see what happens.
Management of Architects Within Architectural Businesses

Situation 11 You have been promoted to the position of manager. The previous manager appeared to be uninvolved in the affairs of the staff. They have adequately handled their tasks and responsibilities. Their moral is high.

a) Become active in directing the staff toward working in a clearly defined manner.

b) Involve your staff in decision making and consistently reinforce good contributions.

c) Discuss past performance with your staff and then examine the need for new procedures.

d) Continue to leave the staff alone.

Situation 12 You have recently become aware of some internal difficulties on your staff. They had been working well together for the past year. The staff has an excellent record of accomplishment and staff members have consistently met their performance goals. All are well qualified for their roles in the programme.

a) Allow your staff members to deal with the new problem themselves.

b) Tell the staff how you propose to deal with the situation and discuss the necessity for these procedures.

e) Make yourself available for discussion, but don’t jeopardise your relationship with the staff by forcing the issue.

f) Act quickly and firmly to nip the problem in the bud.
LEADERSHIP STYLE PROFILE

SCORING

1. Circle the letter you chose for each situation in both charts below labelled flexibility and effectiveness. For example, if you answered alternative C for situation 1, circle the C in row 1 of the flexibility chart and the C in row 1 of the effectiveness chart.

Flexibility

<table>
<thead>
<tr>
<th></th>
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<th>S2</th>
<th>S3</th>
<th>S4</th>
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<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>C</td>
<td>B</td>
<td>D</td>
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<tr>
<td>2</td>
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<td>7</td>
<td>A</td>
<td>C</td>
<td>B</td>
<td>D</td>
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<td>8</td>
<td>B</td>
<td>D</td>
<td>A</td>
<td>C</td>
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<tr>
<td>9</td>
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<td>12</td>
<td>D</td>
<td>B</td>
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Effectiveness

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<td>B</td>
<td>C</td>
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<tr>
<td>12</td>
<td>D</td>
<td>B</td>
<td>C</td>
<td>A</td>
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</tbody>
</table>

TOTAL

2. Add the total number of letters you circled in each column of the flexibility chart and enter these totals in the boxes labelled S1, S2, S3, and S4.

3. Still focusing on the flexibility chart, place the total of each column in the corresponding quadrant of the style matrix shown below. That is, the S1 score goes in the Style 1 box (high task, low relationship), the S2 score goes in a Style 2 (high task, high relationship), the S3 score goes in the Style 3 box, and the S4 goes in the Style 4 box.

4. Add the total number of letters you circled in each of the Effectiveness Chart and enter these totals in the boxes below each column.

5. Multiply each number in the boxes by the number directly under it (be sure to indicate + or - as appropriate). Put the answer in the next box below that.
Management of Architects Within Architectural Businesses

6 Add the four numbers and enter the total in the box labelled Total. Again, be sure to include the + or - sign.

7 On the Effectiveness scale below find the number in the Total box and mark it with an arrow.

Effectiveness scale

<table>
<thead>
<tr>
<th>-24</th>
<th>-21</th>
<th>-18</th>
<th>-15</th>
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<th>-3</th>
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<th>+3</th>
<th>+6</th>
<th>+9</th>
<th>+12</th>
<th>+15</th>
<th>+18</th>
<th>+21</th>
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<tbody>
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</tr>
</tbody>
</table>

Ineffective ^ Effective

What does your style matrix tell you? How balanced are your scores? Do you have one predominant quadrant (this is not uncommon)? Do you have the potential flexibility to use all four leadership behaviours? In terms of Effectiveness, how well did you do? The most appropriate behaviour in each situation is indicated in the +2 column of the Effectiveness chart. You may want to go back to each situation and attempt to discover why that leadership behaviour was best.
Figure 29: Social Efficiency Maps illustrating goals identified for investigation.

Key: blank = no goal, green = maintenance goal, brown = motivator goal, green line = congruence across map. Letters a, b, c, d, e = interviewees.
### Appendix E

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Language used by interviewees</th>
<th>Individual</th>
<th>Language used by interviewees</th>
<th>Individual</th>
<th>Language used by interviewees</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Proud to be an architect</td>
<td>Firm a way of life</td>
<td>Normal to subsidise jobs</td>
<td>Design has to be right</td>
<td>cot nothing to do with me</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Architects are treated unfairly</td>
<td>Firm should go on for another 100 years</td>
<td>The control gained in solving problems is self fulfilling</td>
<td>A course of action is decided by lots of meetings</td>
<td>Get the brief right before starting work</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Principals reputation set up properly</td>
<td>Enlightened Clients</td>
<td>Good design</td>
<td>Property Set up</td>
<td>Firm should go on for another 100 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>People have to play to their strengths</td>
<td>People have to be flexible about their jobs</td>
<td>Strict discipline in the office</td>
<td>Close supervision by the Managing Director</td>
<td>Don't question the Managing Director</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 30:** Participant as Observer 'Snowball Method' illustrating 'language used by the interviewee's' Questionnaire results.

**Appendix E**

<table>
<thead>
<tr>
<th>Study D</th>
<th>Case Study A</th>
<th>Individual</th>
<th>Language used by interviewees</th>
<th>Language used by interviewees</th>
<th>Language used by interviewees</th>
<th>Language used by interviewees</th>
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</thead>
<tbody>
<tr>
<td>(d)</td>
<td>(e)</td>
<td>(f)</td>
<td>(g)</td>
<td>(h)</td>
<td>(i)</td>
<td>(j)</td>
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</table>
### Appendix E

<table>
<thead>
<tr>
<th>Case Study A</th>
<th>Case Study B</th>
<th>Case Study C</th>
<th>Case Study D</th>
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<tr>
<td><strong>Features</strong></td>
<td><strong>Features</strong></td>
<td><strong>Features</strong></td>
<td><strong>Features</strong></td>
</tr>
<tr>
<td>Human needs hierarchy</td>
<td>Human needs hierarchy</td>
<td>Human needs hierarchy</td>
<td>Human needs hierarchy</td>
</tr>
<tr>
<td>To be superior to others' needs, and affiliation needs</td>
<td>To be superior to others' needs, and affiliation needs</td>
<td>To be superior to others' needs, and affiliation needs</td>
<td>To be superior to others' needs, and affiliation needs</td>
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<tr>
<td><strong>Observations</strong></td>
<td><strong>Observations</strong></td>
<td><strong>Observations</strong></td>
<td><strong>Observations</strong></td>
</tr>
<tr>
<td>No avoidance of tensions observed in (a) and (f)</td>
<td>No strong needs observed in (a) and (d,e)</td>
<td>Strong needs observed in (a) and (d,e)</td>
<td>Strong needs observed in (a) and (d,e)</td>
</tr>
<tr>
<td>Need to be affiliated with a famous designer observed in architects (a) and (d,e)</td>
<td>Need to be affiliated with a strong firm, feel safe observed in architects (f) and (g)</td>
<td>Need to be affiliated with a strong firm, feel safe observed in architects (f) and (g)</td>
<td>Need to be affiliated with a famous designer observed in architects (a) and (d,e)</td>
</tr>
<tr>
<td>No strong needs observed in (f) and (g)</td>
<td>Need to improve as an architect very strong (i) and (j)</td>
<td>Need to improve as a Christian (f) very apparent</td>
<td>Need to improve as a Christian (f) very apparent</td>
</tr>
<tr>
<td>Strong needs observed in (a) and (d,e)</td>
<td>To be superior to others' needs, and affiliation needs observed in (t) and (j) in architects</td>
<td>To be superior to others' needs, and affiliation needs observed in (t) and (j) in architects</td>
<td>To be superior to others' needs, and affiliation needs observed in (t) and (j) in architects</td>
</tr>
<tr>
<td>Reduction of tensions observed in (a) and (d,e)</td>
<td>Tension conflicts occur in concern for function French (t) and (j)</td>
<td>Tension conflicts occur in concern for function French (t) and (j)</td>
<td>Tension conflicts occur in concern for function French (t) and (j)</td>
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<td>Reduction of avoidance of tensions observed in (a) and (d,e)</td>
<td>Reduction of avoidance of tensions observed in (a) and (d,e)</td>
<td>Reduction of avoidance of tensions observed in (a) and (d,e)</td>
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<td>Reduction of exceedance of tensions observed in (a) and (d,e)</td>
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<td>Avoidance of exceedance of tensions observed in (a) and (d,e)</td>
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<td>Observations</td>
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<td>Observations</td>
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<td>Participant as observer (eclectic model of personality)</td>
<td>Participant as observer (eclectic model of personality)</td>
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<tr>
<td>Questionnaire results</td>
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| Behavior} 

Figure 31: Observations of observers (eclectic model of personality)
### Appendix E

<table>
<thead>
<tr>
<th>Case Study A</th>
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<td>vc cc oc - nc</td>
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<td>Efficiency</td>
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Figure 32: Standard Questionnaire Results of Questionnaires (continued on next page)
## Appendix E

Table 3.2: Standard Questionnaires Results (Cont'd from previous page)

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<thead>
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<th>Case Study C</th>
<th>Case Study D</th>
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Note: Case Study C and Case Study D are compared in terms of their effectiveness, personality traits, creativity, leadership, and overall performance.