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## Doctrinal and applied TQM in relation to dominant models of organisation: A comparative study

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**DOCTRINAL AND APPLIED TQM IN RELATION TO  
DOMINANT MODELS OF ORGANISATION:  
A COMPARATIVE STUDY**

by

Brad J. Moore

B.Bus (Management and Business Law)

A Thesis Submitted in Partial Fulfillment of the Requirements for the Award of  
Bachelor of Business with Honours at the Faculty of Business and Public  
Management, Edith Cowan University, Churchlands Campus.

Date of submission: August 2000



## ABSTRACT

Total Quality Management (TQM) is examined in five organisations in light of the assumption that its implementation is an ongoing negotiated order rather than an objective reality as often accepted by the literature. Guided by a theoretical framework identified by Spencer (1994) and a qualitative methodology suggested by Miles and Huberman (1994), the perceptions of a cross section of organisational members in five organisations are used to establish the nature of applied TQM in terms of mechanistic and organismic 'mental models' of organisation and the degree to which applied TQM varies from the basic doctrine. It is argued that both models influence the way in which TQM is applied in organisations, and the research aims to identify the strength and direction of the influence exerted towards a more mechanistic or a more organismic implementation. Further, this research is intended to make a positive contribution to the presently limited amount of empirical evidence on the implementation of TQM upon which theory building in the literature is based.

The results of the research indicate that TQM in three of the organisations studied is being implemented in generally organismic ways although in two organisations, strong influences by the mechanistic model were detected. Further, major differences between the basic doctrine of TQM, as identified in the literature, and the practical experience of TQM as applied in organisations were identified. These differences relate to organisational goal orientation, conceptions of quality and, to a lesser extent, the direction and pattern of organisational communication. Several possible explanations for these results are put forward, especially in the light of themes emerging from the evidence collected, although this exploratory research does not attempt to develop theory or propose explanatory relationships between possible variables.

It is argued that these results have significant implications, and recommendations for further research on a number of key themes indicated by this research are made. In particular, longitudinal research using the same or similar organisations is called for, as the application of TQM is an ongoing process and its full evolutionary nature can only be captured over time.

## DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

- (i) incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;
- (ii) contain any material previously published or written by another person except where due reference is made in the text; or
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Signature \_\_\_\_\_

Date \_\_\_\_\_

14/12/00

## ACKNOWLEDGMENTS

I have been told that producing a thesis is like having a baby. The gestation period seems interminable, it requires the support and cooperation of a number of people, it demands great personal endurance, and is accompanied throughout with not insignificant pain and hardship, especially towards the end.

I wish to gratefully acknowledge the involvement of a number of people in the gestation of my thesis. However, if any shortcomings in this thesis are apparent to the reader, they are entirely my own responsibility.

First, to my supervisor, Professor Alan Brown, I wish to express my special appreciation for his guidance, understanding and support in this long journey. In particular, his insightful comments, suggestions and devil's advocacy have added greatly to my knowledge and the confidence with which I submit this work.

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# CHAPTER 1

## Introduction

### Overview

In recent times, a dominant and persistent theme in management thinking throughout the business world has been Total Quality Management (TQM). Many proponents of TQM insist that it represents a complete mental revolution in the way organisations operate. On the other hand, critics argue that TQM is a flawed notion, and point towards its great lack of success in realising the benefits said to flow from implementation. Whatever the perception, TQM remains an influential force in the theory and practice of organisations today, and consequentially provides fertile ground for study.

This chapter provides an overview of the research into the implementation of TQM conducted pursuant to the Honours program in the School of Management at Edith Cowan University. The purpose of this chapter is to introduce the reader to important concepts and elements of the research which will be examined in greater detail in later chapters. Importantly, this chapter flags key issues relating to contemporary ideas about TQM, the theoretical framework and methodology used in the research, and potential limitations in the research, and is structured in terms of the six themes identified below.

First, a brief examination of the literature serves to provide a sketch of the contemporary thinking about TQM and to indicate the direction in which this research has gone and the theoretical framework used. Second, the purposes of the research are indicated in an outline of the research objectives. Third, the research questions, which emerged logically from the strands of the debate evident in the literature, are identified. Fourth, the appropriate means and methodology, through which answers to the research questions were sought, are delineated. Fifth, the potential limitations evident in the research are listed. Last, the chapter concludes with a summary of the issues and problems identified in the research.



## **Contemporary Views in the Literature**

Total Quality Management, as a managerial philosophy, has drawn praise and criticism since its first unequivocal pronouncements in the literature during the economic uncertainty of the West in the early 1980s (Dawson, 1998). Since that time, TQM has arguably achieved both a rare celebrity and notoriety afforded to few such ideas previously. TQM appears most palatable to the management literature and many practitioners as it encompasses many fundamental issues in understanding and managing organisations (Dean & Bowen, 1994). Indeed, the core tenets of TQM embrace current managerialist wisdom, especially systems and unitarist thinking (Spencer, 1994). Despite significant and ongoing debate in the literature about the precise boundaries within which this managerialist philosophy is confined, a general consensus does emerge from the literature as to its broad principles and dimensions. A key assumption evident in the TQM literature is that the total quality principles of continuous improvement, customer focus and teamwork are achieved through a committed management, the strategic integration of quality principles and empowered individuals working in teams.

However, TQM has drawn wide criticism in the academic literature, especially in relation to the absence of empirical and theoretical work into the key elements of the philosophy. In particular, proponents of TQM in the popular management literature have often projected the principles of TQM as axiomatic and to be accepted as articles of faith. A number of surveys undertaken in the 1990s have reported poor outcomes in the application of TQM. Criteria used to measure success or failure have often been vague and some pronouncements about the failure of TQM appear to serve more the need for 'good copy' than the advancement of knowledge. Beyer, Ashmos and Osborn (1997) have attacked this outcome based approach to the implementation of TQM. The authors noted that deficiencies in outcomes may be the result of poor conception or implementation and "it makes little sense to try to evaluate the outcomes of planned change programs [sic] if we do not know how well they have been implemented" (Beyer, et al., 1997, p. 4).

A cornerstone to both the positive and the negative arguments about the efficacy of TQM is that it is objective reality which is amenable to relatively precise measurement. According to this wisdom, organisations objectively discover TQM, choose either to implement it or not, and if they do implement it, clearly succeed or fail in the attempt. Spencer (1994) has provided an alternative possibility: that the implementation of TQM is continuously enacted by organisational participants and is informed by the frailties of human understanding and the biases of human perspectives. This alternative view moves away from an outcomes based assessment of TQM which pervades much of the literature, towards a focus on the implementation process as a worthwhile area of study *per se*. Here, notions of success or failure which rely on some objectively set criteria cease to have immediate relevance. The understanding and perspectives of members, according to Spencer (1994), are influenced by inherent models of organising. Further, Spencer (1994) has suggested that mental models, assumptions and preconceptions of the nature of organisations strongly influence the way people in fact organise. Such models are pervasive, and are as unquestioned as the air we breathe (Morgan, 1997).

However, it is one thing to suggest that the implementation of TQM in organisations is an enacted rather than an objective order, but quite a different prospect to show convincingly whether any given implementation reflects one model, or pattern of thinking, or another. Spencer (1994, p. 446) argued that TQM is a “comprehensive management practice that captures signals from established models of organisation and amplifies them by providing a methodology for use.” From a review of the TQM literature, Spencer (1994) observed that there are seven major dimensions of this methodology into which the basic tenets of TQM will fall: organisational goals; definition of quality; role and nature of the environment; role of the management; role of the employees; structural rationality and philosophy toward change. Each dimension allows the basic nature of TQM to be made explicit. For example, the definition of quality is seen as satisfying or delighting the customer (Spencer, 1994, p. 447). Further, the role of employees is, through empowerment, to improve quality within a system designed by management (Spencer, 1994, p. 447).

Spencer (1994) used the seven dimension framework to examine the contribution of three major models of organisation (organism, machine and culture) to the practice of TQM. Following from this, it is logical to propose that this framework is useful in revealing the way in which the fundamental principles of TQM are translated in a given organisational setting. Although Spencer (1994) contemplated three models of organisation, and conceivably many more are also equally useful in understanding organisations, this present research proceeded on the basis of dominant models of organisation, of which Morgan (1997) identified two: the machine or mechanistic model, and the organism or organismic model. Spencer (1994) proposed, for example, that the definition of quality under the mechanistic model related to a conformance to internally generated standards, whilst under the organismic model, customer satisfaction would be emphasised. Further, the role of employees under the mechanistic model would be interpreted in more passive and order following terms, whilst under the organismic model, greater use of self control and adjustment would be expected in carrying out tasks.

### **Research Objectives**

The review of the literature indicates an important direction for study into the nature of applied TQM. Accordingly, the research seeks to examine the extent to which key elements of the TQM doctrine are modified in the process of implementation towards a greater organismic or mechanistic emphasis. In this way, the research aims to identify the organic or mechanistic nature of applied TQM, and the relative importance of certain key doctrinal dimensions in the process of implementation. The seven dimension framework suggested by Spencer (1994) is used throughout the research to structure the collection, presentation and analysis of the evidence. Investigations into complex questions involving the influence of organisational culture or structure on the mode of implementation of TQM are beyond the scope of the research. Nonetheless, a further key objective of the research is to make an important contribution to the body of knowledge about the little known nature of applied TQM in contemporary organisations. Instead of a focus on the outcomes of TQM in objective terms, the research aims to advance the debate in a new direction through a better understanding of the subjective nature and differences inherent in the implementation process itself. Two specific research questions, which emerge from the consideration of the current literature and which occupy the central focus of this study, are briefly described below.

## **Research Questions**

Given the view that TQM is an ongoing and negotiated order, and that the nature of the implementation of TQM in organisations may conform to mental pictures or dominant models of organising, two strands of the debate emerge. The first strand relates to the supposed effect organisational models have on the nature of applied TQM. Thus, in which way, either organismic or mechanical, is TQM applied in organisations? The second strand relates to the possible variance between doctrinal and applied TQM. Thus, in which way(s) does applied TQM vary from doctrinal TQM? The answers to both of these questions are intended to provide insights into the dimensions and nature of applied TQM which go beyond the conventional wisdom concerning the effectiveness of an objective TQM reality. The means and methods by which answers to these questions are achieved are discussed below.

## **Method of Approach**

Notwithstanding the current ideological debate about the importance of a firm commitment by researchers to either a positivist or phenomenological frame of reference, the researcher sought to apply the most appropriate techniques in the circumstances for evidence collection, analysis and evaluation. Overall, the choice of methodological approach was guided by the basic assumption upon which the theoretical framework of this research has been anchored. That is, the implementation of TQM is not an objective reality but rather a continuous enactment in which social reality is a negotiated order, constructed by the organisational participants (Spencer, 1994, p. 448). The possible diversity of these constructed realities was viewed in a number of discrete organisational settings and in terms of the perceptions of a wide range of organisational members.

In all, the views of a total of 30 interviewees were sought at five medium to large sized organisations in the Perth metropolitan area of Western Australia, with between four and eight members from each of the five organisations contributing. For the purpose of anonymity, the organisations have been given the following pseudonyms: Truckco, Steelco, Electrico, Utilityco and Bevco. Interviewees represented a wide range of job titles and descriptions, including the following positions: operations management and other senior managerial roles; quality management, department/branch management, engineering and other middle managerial roles; production line supervisors and other

lower managerial roles; sales and distribution personnel, shop floor personnel and other production and administrative operatives.

Under ABS definitions, four of the five organisations are medium sized commercial organisations, the fifth (Utilityco) being a large public utility organisation (Foreign Affairs and Trade, 1996, p. 8). Two of the medium sized organisations (Electrico and Steelco) are semi autonomous divisions of much larger national and international parent entities. Electrico is principally a manufacturer of goods, whilst Steelco distributes products (manufactured elsewhere) and provides services. Of the other two, Bevco is the local franchisee of a very large worldwide food and beverage manufacturing operation and Truckco is a privately owned local commercial truck dealership. All organisations have well developed and structured quality assurance systems as well as long, continuous and apparently successful histories of operation.

For a detailed justification of the sampling approach used in the research, refer to Chapter 3 (pages 36-38). Additionally, Table 3.1 (page 39) provides a summary of the details of the subject organisations and interviewees. For a detailed account of the research findings for each organisation, refer to Chapter 4 (Truckco, pages 51-59; Steelco, pages 59-67; Electrico, pages 68-77; Utilityco, pages 78-89; and Bevco, pages 89-95).

As greater sensitivity was needed to detect the way individuals construct the reality of TQM, a qualitative rather than quantitative research strategy was selected (Morgan & Smircich, 1983). Qualitative research designs rely on a "broad variety of specific techniques" for evidence collection which range from the immersion-in-context of the researcher as a participant, through to observation, semi-structured and unstructured interviews, and documentary information (Martin, 1990. p. 31). The prime means of evidence collection in this research, in view of time and access constraints, were semi-structured interviews, with some limited participant observation and documentary examination. Informed by basic criteria on the nature of TQM and the experience and knowledge amenable to the collection of useful evidence, convenience sampling was used to select the organisations and interviewees within each organisation.

In keeping with the qualitative approach to evidence gathering, a non-quantifying general analytic methodology as described by Hussey and Hussey (1997) was used to analyse the evidence collected. During the analysis of the material, a thorough familiarity with the evidence and a focus on the research questions by the researcher were emphasised throughout. The overall approach was to first efficiently reduce the mass of evidence by careful reduction, then to structure the reduced evidence into a coherent form (see Chapter 4), and finally to abstract the structured material into a generalisable form within context (see Chapter 5). The procedures used to reduce, distil and abstract the evidence were informed by methods suggested by Miles and Huberman (1994) and involved the extensive use of coding, data displays and matrixes. The theoretical framework provided a template from which further structuring of the evidence was undertaken. Indeed, each of the seven dimensional aspects of the implementation of TQM provided an anchor point into which information could be logically sorted and labelled. From the structured information and through an iterative process, patterns of evidence emerged and these formed the basis for answers to the research questions.

### **Limitations of the Research**

Potential limitations identified in the research relate to possible shortcomings in the theoretical framework and concomitant assumptions, and in the methodology used in the research. Each limitation has been considered throughout the development and operation of the research, and the ways in which these shortcomings have been addressed or ameliorated are described in Chapter 5. The purpose of this section is to alert the reader, at an early stage, to certain limitations in the research considered important.

The basic assumption underlying the research is that the implementation of TQM is a continuous enactment rather than an objective reality awaiting clear definition and discovery. It can be argued that such a premise lends itself more to an interpretivist methodology rather than a more functional approach taken in this research. Further, the study examines the implementation of TQM in terms of the dominant models of organisation, although many alternative perspectives have been identified in the literature. Additionally, as all sampled organisations are commercial entities, the question of access was a primary concern. Although in all cases the researcher enjoyed the full cooperation of the organisational gatekeepers to ensure that the requested number and duration of interviews was achieved, additional access over and above this

proved difficult or impractical. With a broad cross-section of interviewees, varying degrees of quality in the responses during interviews were also apparent.

In terms of the theoretical framework, the research was informed by Spencer's (1994) thesis that the implementation of TQM is interpreted and modified in terms of organisational models. Although causation was not sought, this research may be seen as dependent on the existence of such a relationship. A further premise of the research was that variances between doctrinal and applied TQM move beyond the semantic or purist perspective. The semantic perspective would discount any putative implementation which does not exactly accord with the stated principles and practices of TQM.

### **Structure of the Study**

The material in this work is presented in five chapters. Chapter 2 follows this introductory chapter, and accomplishes two tasks. First, the TQM literature is reviewed to provide an appropriate theoretical foundation for the development of the study and to identify important but little understood areas of the subject worthy of exploratory investigation. From the literature review, an alternative approach to studying the implementation of TQM, derived from Spencer (1994), is proposed as a potentially useful means of overcoming conceptual limitations apparent in many of the articles in the literature. Second, a theoretical framework by which the development of the study and the collection and analysis of evidence can be usefully structured is discussed and adopted. The theoretical framework results from an alternative approach to investigating the implementation of TQM indicated by Spencer (1994) and is a logical derivation of the key assumption that the application of TQM is a continuous enactment rather than an objective reality. From the development of the theoretical framework, two basic research questions suitable for the exploratory nature of this study are posed.

Chapter 3 develops, explains and justifies the methodological approach taken in this study to collect, collate, analyse and present the evidence in order to answer the two research questions posed in Chapter 2. The pragmatic, non-ideological stance taken and the qualitative design adopted in this research are described and justified. Further, the use of a multiple case study strategy, the type of sampling technique, the means of evidence collection and the specific analytical procedures employed in the research are

discussed in detail, and where appropriate, supported with references to approaches taken by conceptually similar studies in the literature.

Chapter 4 presents the major findings of the research. Within the categories provided by the theoretical framework, the general findings, including common or recurring themes and dissenting views apparent in the perspectives of the interviewees, are presented in a general narrative for each organisation studied. The presentation of the findings of the research is guided overall by the two research questions, and is structured to allow ready reference in regard to each of these lines of enquiry. To support the general narrative, and in keeping with the basic research assumption that the implementation of TQM is to be viewed through the eyes of the participants, significant use is made of the rich dialogue from the interviews.

The final chapter in this study, Chapter 5, considers two concluding aspects. First, the findings in Chapter 4 are analysed in detail and the results interpreted in relation to the two research questions. The analysis is arranged according to categories provided by the theoretical framework. Responses to the research questions are proposed and justified, and possible explanations for the results, especially in terms of themes emerging from analysis of the evidence, are offered. For the second and last aspect of Chapter 5, a summary of the study is made and overall conclusions are drawn. The thesis ends with a detailed discussion of possible theoretical and practical limitations in the study, as well as important recommendations for future research.



## Summary

Although there is an ongoing struggle to establish its precise limits, Total Quality Management is generally seen as a philosophy which embraces much of current managerialist thinking. Proponents espouse the need to integrate quality into every step of the process, and engage every internal and external organisational constituent through the use of teamwork and a customer focus. Essential to this is the full and continuing commitment from top management in facilitating the implementation of TQM throughout the organisation. By coordinating collective action, including decision making, improvement occurs continuously rather than in fits and starts.

Despite a generally favourable treatment of TQM as a concept, it has been criticised in the literature for not achieving the improvements to key organisational outcomes that are said to flow from its implementation. However, many writers and practitioners appear to make an underlying assumption that TQM is an objective reality awaiting discovery and adoption. Ultimately, such an assumption must logically limit the debate about TQM to matters concerning the effectiveness of the doctrine itself or the implementation of TQM in achieving the desired organisational outcomes.

An alternative approach emerges when TQM is seen as an enacted and negotiated order rather than one capable of objective and authentic replication. Such a view opens the way for research to proceed in new and productive directions. Freed from the need to investigate significant mutations in applied TQM as pathologies or to seek endless refinements in definition, research can seek a better understanding of the nature of the TQM actually applied in organisations and the relative importance of key aspects of TQM during implementation.

As mental models and metaphors arguably influence our patterns of thought in particular ways (Morgan, 1997), a possible approach to studying the enactment of TQM is through a framework suggested by Spencer (1994) using the two dominant models of organisation, the organism and the machine. If each model has an important role to play in the way we collectively and individually organise, then each may exert a significant influence, whether consciously or not, not only on the nature of TQM as a doctrine, but also in the way TQM is enacted and negotiated.

In keeping with the assumption that the implementation of TQM is continuously enacted, a qualitative approach to research and a non-quantifying analytical methodology is appropriate. Such approaches are not without limitations, and possible shortcomings in terms of the theoretical framework and methodology are acknowledged and contemplated throughout the research.

## CHAPTER 2

### Literature Review and Theoretical Framework

#### Introduction

The purpose of this chapter is twofold. In the first part of the chapter, a review of the literature is undertaken to determine the extent of current thinking and practice on the subject of Total Quality Management, with specific emphasis placed on the implementation of TQM. The literature review seeks to establish the generally agreed vision of the nature and scope of Total Quality Management from which to develop the research. From the review of the literature, the application of the principles of TQM, through various practices and techniques, can be seen in terms of seven doctrinal dimensions. An alternative approach, based on the notion that TQM is socially constructed, is identified as a means by which certain limitations apparent in much of the literature can be overcome. In this way, attention is drawn away from the performance outcomes of TQM and refocussed on the essential nature of TQM implementation.

From the assessment of the literature, the second part of the chapter establishes a useful theoretical framework with which to conduct the research. The framework is developed by synthesising the alternative implementation-based view of TQM with the notion that TQM is continuously enacted and its implementation is influenced by mental models of organisation, the dominant two of which are the machine and the organism. From the review of the literature and the development of the theoretical framework, two key issues emerge with regard to the strength and direction of the influence of each mental model in the implementation of TQM. Research questions derived from these issues are then posed, and serve to inform and guide the development of the research.

## Total Quality Management

In recent times, business has experienced a remarkable growth in the implementation and operation of Total Quality Management (TQM), to such a degree that Benson (1993, p. 48) claims that it has become "as pervasive a part of business thinking as quarterly financial results." Proponents of TQM have urged its adoption by organisations because of the variety of positive outcomes it can bring, including improved business results, customer satisfaction and employee involvement and participation (Anderson, Rungtusanatham & Schroeder, 1994; Shea & Howell, 1998). Further, Dean and Bowen (1994, p. 393) stated that TQM is important to management theory and practice because it encompasses issues, such as leadership, strategy and information processing, which are "fundamental to understanding and managing organisations."

However, hand in hand with the growth of TQM practice has come controversy over exactly what is its form, content and purpose (Gehani, 1993; Korukonda, Watson & Rajkumar, 1999; Miller, 1996; Reeves & Bednar, 1994; Waldman, 1994; Witcher, 1995; Wruck & Jensen 1994). Indeed, there appears to be an ongoing struggle for a clear definition of TQM, and it has been discussed variously as a business-level strategy (Reed, Lemak, & Montgomery, 1996); a shift in organisational thinking and culture (Sashin & Kiser, 1993; Waldman, 1994); fundamental organisational change (Reger, Gustafson, Demarie & Mullane, 1994); and a "science based, non-hierarchical, and non-market-oriented organising technology that increases efficiency and quality" (Wruck & Jensen, 1994, p.248). Larson & Sinha (1995, p. 54) similarly struggle with the various definitions of TQM offered by academics and practitioners alike, but note that "common themes emerge across the definitions" including the continuous improvement in organisational process, service and product quality. For example, the issue of quality, despite some difficulty in an agreed definition of the notion (Garvin, 1986; Reeves & Bednar, 1994), is seen by TQM advocates as the key to competitive advantage, rather than the more traditional price or delivery factors (Wilkinson, Allen & Snape, 1991).

Witcher (1995) identifies no less than eight possibly overlapping theoretical categories in which TQM is discussed in the literature: TQM as a program; as human resource, quality or business process management; as a concept and a toolbox of quality methodologies; as marketing; as a postmodernist manifestation; and as a paradigm. Witcher (1995, pp. 9-10) notes that these categories illustrate the nature of TQM as a “developing story with changing and continuing interpretations.” Nonetheless, it is as a philosophical approach to management that the notion of TQM is used with the most conviction in the literature (for example, Brown, 1992; Fisher, 1990; Korukonda, Watson & Rajkumar, 1999; Powell, 1995; Spencer, 1994). The view that TQM is a philosophy significantly broadens the horizon in which the subject may be understood, and embraces Witcher’s categorisations of TQM both as a concept and as a paradigm (1995, pp. 17-19, 21-23).

Definitions provided by official sources also provide support for this broader view. For example, Dale, Boaden and Lascelles (1994, p. 3) cite BS4778: Part 2 (1991) which states that TQM is a “management *philosophy* [italics added] embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organisation are satisfied in the most efficient and cost effective way by maximising the potential of all employees in a continuing drive for improvement.” Further, Dale and Boaden (1994, p. 514) note that the “development of people, and their involvement in improvement activities both individually and through teamwork, is a key feature in a company’s approach to TQM.” Here, TQM is seen in the broad sense as a system of belief which is characterised by the mutually reinforcing and interlinked principles of customer focus, continuous improvement and teamwork, which in turn are implemented through a set of specific practices, which in turn are supported by a range of problem solving tools and techniques (Dean & Bowen, 1994, pp. 394-395). Quality assurance, as a prevention based system that is often closely associated with TQM in the literature, is seen as a useful and supportive, but non-essential complement to the implementation of TQM (Dale, Boaden & Lascelles, 1994, p. 10). However, both an integrated strategic approach to quality and a strong and committed leadership which fosters and drives TQM throughout an organisation are seen as indispensable conditions to successful implementation (Dean & Evans, 1994, p. 14).

The principle of customer focus directs organisational attention towards designing and delivering goods and services that satisfy customer needs (Dean & Bowen, 1994; Dean & Evans, 1994; Spencer, 1994). The principle is implemented by practices which foster close relationships with customers and suppliers (both internal and external), and information gathering and feedback techniques such as customer surveys and focus groups (Dean & Bowen, 1994, p. 394). Complementary to the notion of customer focus is the principle of continuous improvement, which serves to foster a “relentless” search for better methods and process improvements in order to satisfy customer needs (Dean & Bowen, 1994, p. 395). Continuous improvement is applied through practices which embrace the use of collective problem solving efforts, and simple decision making and analytical techniques such as flow charts and cause-and-effect diagrams (Dean & Bowen, 1994, pp. 394-395). Customer focus and continuous improvement are achieved through the third principle, teamwork. Dean and Evans (1994, pp. 17-18) have described teamwork in broad terms, including the cooperation between management and lower level employees, across functional departments and within work groups, and through organisational partnerships with suppliers and customers. The practices of teamwork require employee empowerment within managerially set boundaries and encompass the formation and maintenance of functional, cross functional and inter-organisational teams, with members given training in team skills and problem solving techniques (Dean & Bowen, 1994, p. 17).

Importantly, the literature is not entirely limited to efforts at honing a definition and developing a better understanding of the doctrine of TQM. As the conceptual origins of TQM lie in managerial practice rather than in pure academic theory (Dean & Bowen, 1994; Miller, 1996; Spencer, 1994), the development of theory in the literature must be logically supported by empirical research and the eventual implementation of those ideas in organisational settings. Here, the implementation of TQM by any organisation embraces the practical aspects of putting TQM into effect. Remarkably though, there is only limited evidence of any significant academic research into TQM generally (Dean & Bowen, 1994; Korukonda, Watson & Rajkumar, 1999; Spencer, 1997; Wruck & Jensen, 1994). Further, although many writers acknowledge the need for a better understanding of applied TQM (Dean & Bowen, 1994; Reger, Gustafson, DeMarie & Mullane, 1994), there has only been limited authoritative empirical research

conducted into the process of the implementation of TQM to date (for example, Beyer, Ashmos & Osborn, 1997; Boon & Ram, 1998; Wruck & Jensen, 1994; Zbaracki, 1998). Nonetheless, some useful frameworks for understanding the process of implementation have emerged as a result of both theoretical development (for example, Spencer, 1994), and empirical research (for example, Beyer, Ashmos, & Osborn, 1997; Zbaracki, 1998).

Spencer (1994, pp. 446-447), acknowledging the contributions of Olian and Rynes (1991) and Seraph, Benson and Schroeder (1989), suggested that the implementation of TQM, in terms of a “methodology for use”, can be viewed along seven basic doctrinal dimensions, as shown in Table 2.1 below. These seven dimensions arguably provide not only a useful heuristic device, but also an effective framework for collating and analysing evidence garnered from the actual experience of TQM. As Spencer (1994) based her theoretical work on the assumption that TQM is a continuous enactment, implementation is accordingly to be seen through the eyes of the participants.

Table 2.1  
Seven Dimensions of TQM Doctrine. Adapted from Spencer (1994, p. 447).

<b>TQM doctrinal dimension</b>	<b>Doctrinal content</b>
Goal	TQM establishes quality enhancement as a dominant priority and one that is vital for long term effectiveness and survival. Improving quality can decrease rather than increase costs and facilitate attainment of other demands and objectives
Definition of quality	Quality is satisfying or delighting the customer. All quality improvement initiatives must begin with an understanding of customer perceptions
Role/nature of environment	TQM blurs the boundaries between the organisation and the environment. Entities previously regarded as outsiders (eg suppliers, customers) are now considered part of organisational processes
Role of management	Management's role is to create constancy of purpose for improvement of product and service, and to create a system that can produce quality outcomes. Managers and the system, not the workers, are held responsible for poor quality
Role of employees	Employees are empowered to make decisions, build relationships, and take steps needed to improve quality within the system designed by management. Additional training and educational opportunities provide necessary skills for this broader role
Structural rationality	The organisation is reconfigured as a set of horizontal processes that begin with the supplier and end with the customer. Teams are organised around processes to facilitate task accomplishment
Philosophy toward change	Change, continuous improvement and learning are encouraged. Ideally, all organisational members are motivated to improve the status quo

Research by Beyer, Ashmos and Osborn (1997) and Zbaracki (1998) has acknowledged the contribution made by Spencer, and through qualitative methodologies both studies examined aspects of the implementation of TQM as a social construction. However, the approach taken by both in the analysis of the evidence is based on practical frameworks using models of change, although Beyer, et al. (1997) identify five key issues (dominant ideology v agnosticism; means focus v ends focus; dictatorial v facilitative leadership; predetermined v emergent change; and modes of learning) emerging from their analysis which bear some alignment with Spencer's dimensions.

For their longitudinal study of two firms in the US semiconductor industry, Beyer, et al. (1997) chose the adoption-implementation-institutionalisation model of change developed by Beyer and Trice (1978). The researchers structured their analysis of the case study evidence collected primarily in semi-structured interviews (Beyer, et al., 1997). Similarly, the five case studies of Zbaracki (1998) were analysed using an evolutionary framework of variation-selection-retention inspired by Weick (1979) and Miner (1994). Zbaracki (1998) sought to identify the relationship between technical practices and the rhetoric of TQM and its effect on the implementation of TQM. On the other hand, Beyer, et al. (1997, p. 3) cited Burns and Stalker (1961) and found that one of the two firms in their study implemented TQM in a mechanistic manner through "ritualistic use of specific TQM methods, procedures, and language."

However, the use of the terms 'mechanistic' and 'organic', especially in relation to descriptions set by Burns and Stalker (1961) (as Beyer, et al. (1997) have done), introduces into the debate the issue of the consistency between organisational structure and mode of implementation. Beyer, et al. (1997) do not appear to fully address or control for this in their research. A matrix or network structure may possibly exert an influence on the implementation of TQM towards the organic. Conversely, a machine bureaucratic structure may influence implementation towards the mechanistic end of the implementation spectrum.



## Problems with TQM

Despite the generally favourable treatment that TQM receives in the literature as a doctrine or managerial philosophy, a number of writers cite commercial surveys which indicate a high failure rate in TQM implementation, variously put at 80% (Fisher, 1994; Harari, 1993; Katz, 1993) and 66% (Brown, 1993, cited in Korukonda, Watson & Rajkumar, 1999). Failure criteria, however, are often vague and relate variously to a lack of “significant or even tangible improvements in quality, productivity, competitiveness or financial returns” (Harari, 1993, p. 33).

Nonetheless, criticism in academic articles has been often specific, with TQM impugned in terms of inappropriate organisational implementation or focus (Powell, 1995; Sirota, Usilander & Weber, 1994; Sitkin, Sutcliffe & Schroeder, 1994; Whalen & Rahim, 1994), the lack of effective measurement (Whalen & Rahim, 1994), the lack of proper training (Katz, 1993), the premature expectations by management of quick results (Grant, Shani & Krishnan, 1994), the lack of an empirical or theoretical basis for teams and empowerment in TQM (Korukonda, Watson & Rajkumar, 1999), the human costs of TQM (Connor, 1997) or the failure to see the quality ‘woods’ for the TQM ‘trees’ (Harari, 1993). Even in articles not specifically relating to TQM, key principles underlying the philosophy have been called into question. For example, Argyris (1998, p. 98) has likened empowerment to the fable of the “emperor’s new clothes” and noted that empowerment is praised in public but its use and effectiveness are questioned in private. Further, both Sinclair (1992) and Barker (1993) have argued that the use of teams can lead to dysfunctional outcomes and unanticipated consequences for team members.

However, whilst TQM practitioners and academics alike preach that the success or failure of the implementation of TQM must be viewed in long term measures such as organisational survival, Spencer (1994, p. 455) observed that “most managers continue to focus on annual performance measures and dividends.” The author cited research evidence which indicated that there is no trend away from incentive packages for top executives which relate exclusively to financial performance (Spencer, 1994, p. 456). Perhaps more tellingly, Spencer (1994, p. 456) suggested that “many companies drop quality programs [sic] if these do not improve bottom-line results within a year or two.”

## Alternative Perspective

Clearly then, TQM has both trenchant critics and equally enthusiastic proponents. However, both sides of the mainstream debate appear to make fundamental assumptions about the nature of TQM. First, the literature generally assumes that TQM is an objective reality which organisations discover and then choose either to implement or not. This is perhaps not surprising, because, as Spencer (1994, p. 465) observed, TQM is “essentially a functionalist doctrine that structures individual behaviour to fit the demands of the larger system.” Second, that observed differences between doctrinal TQM and applied TQM relate either to its inefficient or ineffectual implementation (for example, Powell, 1995; Sirota, Usilander & Weber, 1994; Sitkin, Sutcliffe & Schroeder, 1994; Whalen & Rahim, 1994), or fundamental flaws in the philosophy itself which preclude efficacious implementation *ab initio* (for example, Harari, 1993). The reasons for this second assumption appear to relate to both theoretical and practical aspects. In terms of theory, TQM falls within the orthodoxy of Organisational Behaviour, in which the chief variable of interest is organisational effectiveness or performance (Robbins, Waters-Marsh, Cacioppe & Millett, 1994; Lussier & Poulos, 1998). Whilst organisational effectiveness is seen in terms of a wide variety of criteria (Campbell, 1977), the accomplishment of goals rather than the means of achieving those goals is the most widely accepted measure (Robbins & Barnwell, 1998). If Spencer’s (1994, p. 455) observation that, in practice, managerial attention remains fixed upon annual performance measures is right, bottom line results would logically be the final arbiter of the degree of effectiveness in the implementation of TQM.

However, Spencer (1994) noted that much of the literature has failed to account for differences between theory and practice in terms of the limits and nature of human interpretation and understanding. Indeed, Spencer (1994, p. 448) has argued that TQM is an “amorphous philosophy” of continuous enactment where the choices of participants and researchers are based “not only on their understanding of the principles of TQM but also on *their own conceptual frameworks concerning the nature of organisations* [italics added]” According to Spencer (1994, p. 466), constituents who are more at ease with mechanistic concepts may be more likely to interpret and enact TQM in mechanistic ways. Similarly, “systems thinkers” may tend to emphasise a more organic approach to TQM (1994, p. 466). Indeed, the two dominant theoretical models for organisations are

the organismic (systems theory) and mechanistic (classical theory) approaches (Morgan, 1980; Morgan, 1997; Spencer, 1994). According to Morgan (1997), the importance of these two dominant models or metaphors to organisational theory and practice cannot be overstated. The often implicit and unquestioned use of metaphors and mental models “pervades how we understand our world generally” and leads us to “see, understand, and manage organisations in distinctive yet partial ways” (Morgan, 1997, p. 4).

Based on this outlook, the dominant organisational model acts as a ‘prism’ in which doctrinal TQM is ‘refracted’ during implementation within each organisation (the use of the terms metaphor and model are used in this research synonymously). Arguably, the doctrinal elements of TQM have a strong affinity with the organismic model of organisation (Spencer, 1994). However, Spencer (1994, p. 453) suggests that TQM can be applied mechanistically, especially if those implementing TQM “treat it as a set of principles, use the chain of command to audit and control static activities, pay more attention to processes than customers, or place undue emphasis on organisational efficiency.”

Spencer (1994) also used a third comparative model, organisations as cultures, and could have conceivably used others, such as the political model, in developing her framework. The cultural model, according to Spencer (1994), “highlights the philosophical components of TQM” and, amongst other things, is helpful in “evaluating the enactment process.” Arguably, however, this approach does not have the status of a *dominant* model of organisation from an organisational viewpoint and represents more of an approach to researching organisations than in applying TQM. Although Spencer (1994) does not attempt to empirically support the framework she develops, the author calls strongly for research, especially of a phenomenological nature, to “explore the links between the conceptual frameworks held by members who are implementing TQM practice” (Spencer, 1994, p. 466).

However, such a call does not yet appear to have been taken up by the academic research community. Further, no evidence appears to exist in the literature of the direct use of Spencer’s seven dimension framework (refer Table 2.1, above) to examine the nature of TQM implementation in relation to the dominant models of organisation. The

potential exists, therefore, for bellwether exploratory research into the implementation of TQM using Spencer's (1994) formulation.

### **Models and TQM: Relationship between TQM Theory and Practice**

As established earlier in this chapter, Spencer (1994) has suggested that TQM is not an objective reality awaiting discovery but an enacted domain in which elements are interpreted and reinterpreted according to the dominant organisational frame of reference. It is conceivable, therefore, that the application of the fundamental principles of TQM (continuous improvement, teamwork and customer focus) is affected by those implementing TQM according to their biases and assumptions. It is also conceivable that such biases and assumptions are influenced by dominant models, mental pictures or archetypes of the way we should organise.

However, Spencer (1994) does not establish or identify the mechanisms and processes through which these biases and assumptions arise and become effective. Further, the author does not explore the nature and operation of the collective organisational mind capable of such interpretation or the extent to which the TQM doctrinal blueprint is likely to be varied, in different circumstances, as it passes through organisations. However, the determination of such relationships need not be a precondition to the acceptance of the basic idea that doctrinal TQM is varied in accordance with organisational perspectives. Research which makes the underlying premises and assumptions explicit and focuses on variations in the shape and nature of the implementation of TQM would arguably avoid entanglement. Indeed, a focus on the application of TQM stems logically from the assumption that TQM is an enacted rather than objective reality.

From this foundation, therefore, it can be argued that organisational perspectives shape the translation of doctrinal TQM into organisational practice. Figure 2.1 displays the possible relationship between TQM doctrine and applied TQM, as suggested by Spencer (1994).

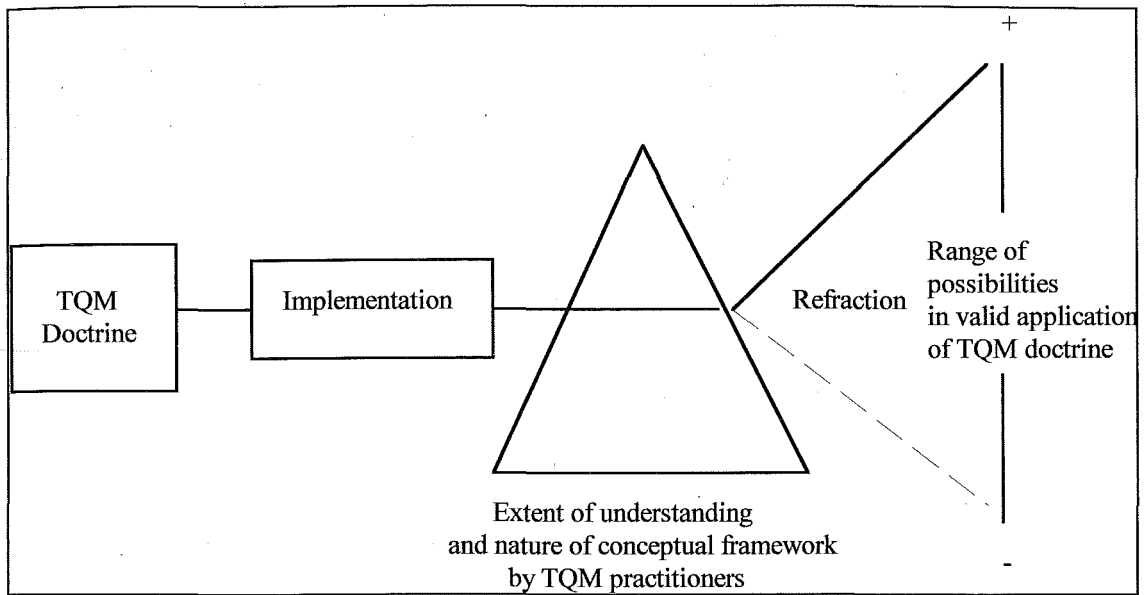


Figure 2.1. Possible Relationship Between TQM Doctrine and Applied TQM in Organisations

Spencer (1994) suggested that the interpretation of TQM relative to organisational models can be studied in accordance with the seven key doctrinal dimensions of TQM discussed above. Each model represents a range of possibilities rather than an end point, and conceivably there are dominant models which may exert a greater influence in each given dimension. Clearly, there are many viable models of organisation (Morgan, 1997, identifies and discusses no fewer than eight). However, two main models of organisational thought are evident in the literature: the organismic, or systems model, and the mechanistic, or classical model (Morgan, 1980; Morgan, 1997; Spencer, 1994)). That is, assumptions about the nature of organisational reality are made as if organisations were either organisms open to their environment, or as machines, where internal processes are emphasised. The seven doctrinal dimensions and the key organismic model and mechanistic model focus for each dimension are shown in Table 2.2 (refer also to Table 2.1 above which identifies the key features of the TQM doctrine in each dimension).

Table 2.2

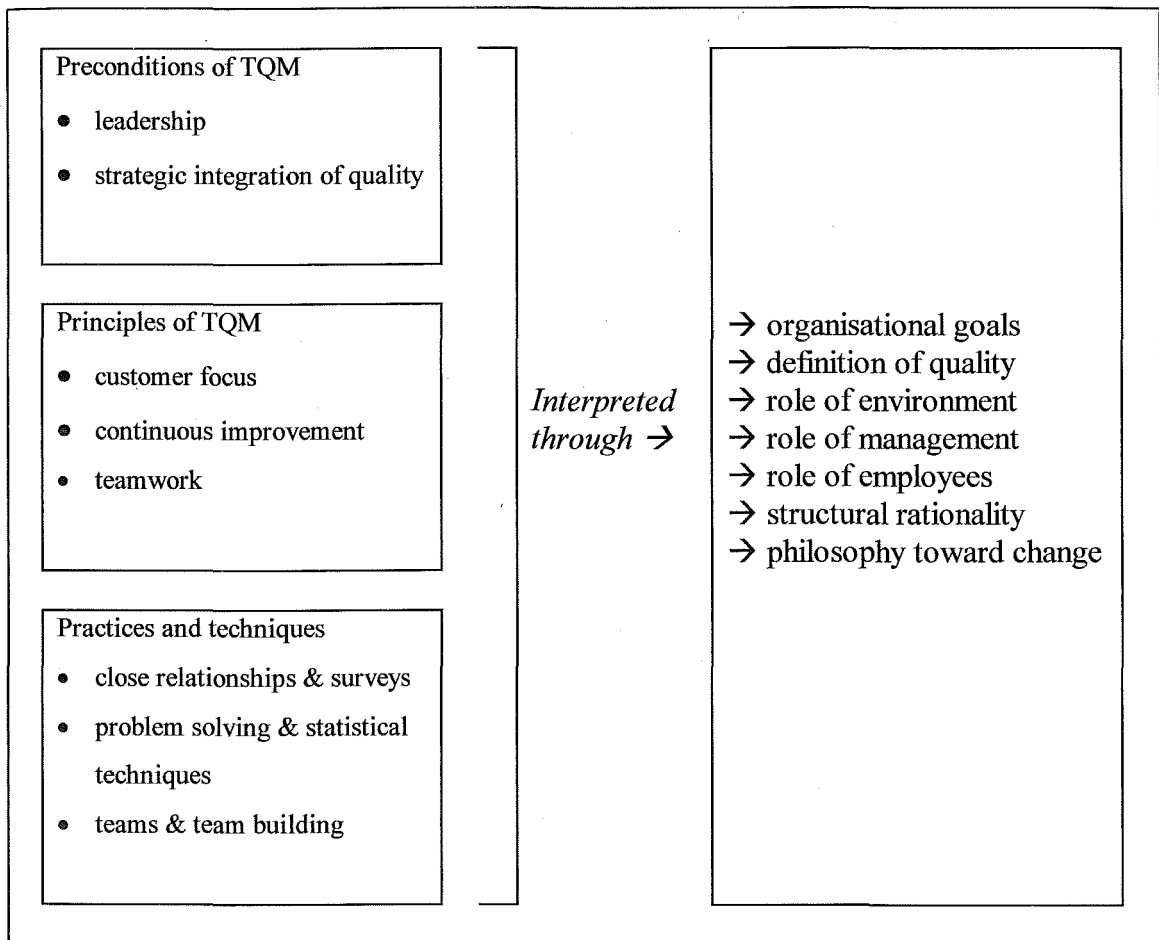
Comparison of Organisational Models in Relation to the Seven Doctrinal Dimensions of TQM. Adapted from Spencer (1994, p. 459).

<b>Dimension</b>	<b>Mechanistic Model</b>	<b>Organismic Model</b>
Organisational goals	Efficiency/performance goals	Organisational survival (requires performance)
Definition of quality	Conformance to standards	Customer satisfaction
Role/nature of environment	Objective/outside boundary	Objective/inside boundary
Role of management	Coordinate and provide visible control	Coordinate and provide invisible control by creating vision/system
Role of employees	Passive/follow orders	Reactive/self control within system parameters
Structural rationality	Chain of command (vertical communication)	Process flow (horizontal and vertical communication)
Philosophy toward change	Stability is valued but learning arises from speculation	Change and learning assist in adaptation

### Theoretical Framework

A theoretical framework by which the nature and course of the implementation of TQM may be observed and interpreted emerges when the doctrine of TQM, the notion that implementation of TQM is a continuous enactment, and the assertion that implementation is influenced by mental models, are all synthesised. In terms of doctrine, Total Quality Management is a managerial philosophy incorporating much of contemporary thinking, and outwardly reflects systems theory (and hence the organismic model of organisation) but does retain some classical notions (Spencer, 1994). The principles of continuous improvement, teamwork and customer focus are achieved through practices and techniques, and all are seen, along with a strong leadership commitment and the strategic integration of quality, as the bedrock of TQM. To a varying extent, each is reflected in the content of the seven basic TQM doctrinal dimensions identified by Spencer (1994). Each of these seven dimensions provides a window through which the application of the principles of TQM can be viewed

individually and collectively. Figure 2.2 synthesises the principles and practices of TQM with the seven dimensions identified by Spencer (1994) in which to view the application of TQM in an organisational setting.



**Figure 2.2.** The Principles and Practices of the Doctrine of TQM Interpreted Through the Seven Dimensions Identified by Spencer (1994).

Furthermore, according to Spencer (1994), TQM is not an objective reality but an enacted domain which is socially constructed by organisational members and their strategic constituencies (such as suppliers, shareholders and customers). A key feature of this assumption is that the communication and interpretation of the doctrinal essentials of TQM is a precarious, changing and uncertain process. In this, the perceptions of the participants, rather than any objective quantification, are central to an understanding of the implementation of TQM. Such a viewpoint, which encourages a focus on the process of TQM implementation rather than on the evaluation of TQM outcomes, has gained some important empirical support from Beyer, Ashmos and Osborn (1997) and Zbaracki (1998).

Spencer (1994) has further posited that organisations and their key constituents implement TQM according to the dominant organisational perspective and will select, graft or interpret the elements of the TQM doctrine in harmony with that belief system. For example, in an organisation with a dominant mechanistic perspective, Spencer (1994) argued that quality will tend to be defined more in terms of conformance to an internal standard than customer satisfaction, and organisational goals will emphasise technical efficiency and shorter term performance rather than longer term organisational survival. As noted earlier in this chapter, Spencer's stance is supported by the theoretical work of Morgan (1997), who argued that mental models, the dominant two of which are the mechanistic and organismic models, unconsciously guide the way people in fact organise. Further, Beyer, Ashmos and Osborn (1997) have added empirical support to Spencer's argument by identifying certain mechanistic as well as organismic traits in the implementation of TQM in organisations. Figure 2.3 (below) identifies the key elements of the theoretical framework used in this research.

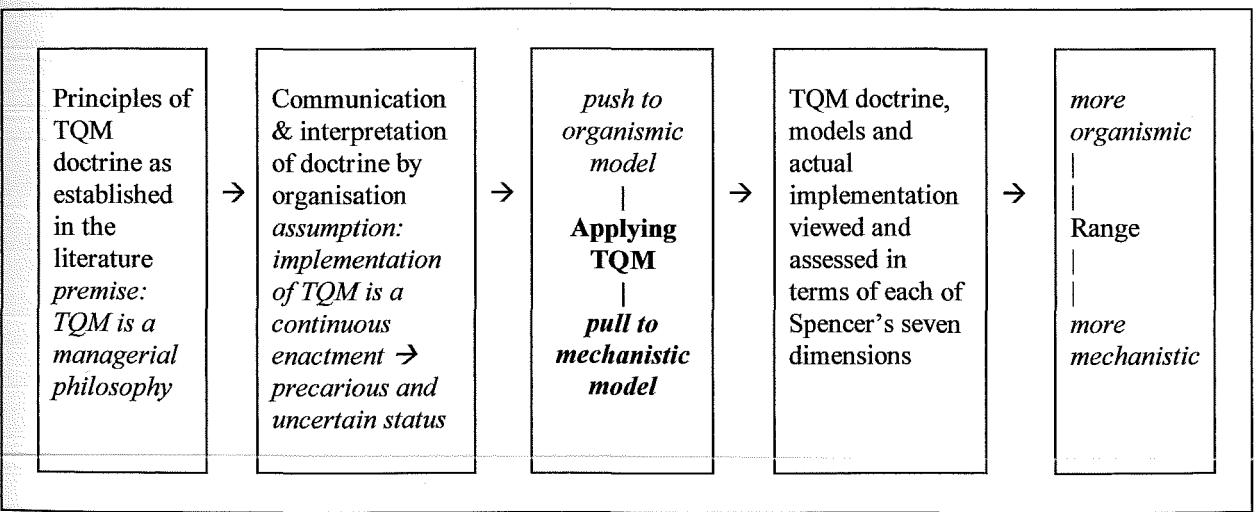


Figure 2.3. Key Elements of the Theoretical Framework used in this Research

The use of the theoretical framework derived from Spencer (1994) appears to confer at least two important advantages over the schemes used by Beyer, et al. (1997) and Zbaracki (1998) described earlier in this chapter. First, the seven dimensions identified by Spencer (1994) can be seen clearly to relate directly to the implementation of the principles of TQM. Indeed, the seven dimensions arguably provide windows through which the application of the principles of TQM may be seen and assessed. This



use of identifiable dimensions of TQM contrasts with Beyer, et al. (1997) and Zbaracki (1998) who used general models of change for their studies. Indeed, as noted above, the five key issues (dominant ideology v agnosticism; means focus v ends focus; dictatorial v facilitative leadership; predetermined v emergent change; and modes of learning) which emerged in the analysis by Beyer et al. (1997) of their evidence arguably bear kinship with Spencer's *a priori* dimensions. Second, within each of the seven dimensions, Spencer (1994) conveniently provides a descriptive scheme of the doctrine of TQM and the predicted form of applied TQM as influenced by the models of organisation (see, for example, Tables 2.1 and 2.2 above, and the detailed discussion in Chapter 5). This 'one-stop-shop' feature provides a readily useable framework without further recourse to additional models. Further, it also confers an apparent seamlessness upon the internal logic of the framework (see especially Table 2.3, below) and obviates problems of compatibility that may arise with additional theoretical overlays. For example, Beyer, et al. (1997) were obliged to seek out an additional scheme (Burns & Stalker, 1961) with which to interpret their evidence.

Nonetheless, the key assumption in all three sources discussed above (that is, Spencer, 1994, Beyer, et al., 1997 and Zbaracki, 1998) that TQM is a continuous enactment allows investigation into the implementation of TQM to proceed along new and productive paths. On one hand, the specific focus on TQM as an enacted reality removes epistemological and ontological distractions caused by a broader phenomenological assumption that all of organisational reality is socially constructed. On the other, it permits explanations to move beyond the treatment of significant variations of actual TQM from doctrinal TQM as a pathology, which is the logical limitation of the assumption that TQM is an objective reality. In this light, observed differences between doctrinal and applied TQM achieve new relevance as a means of understanding how TQM is implemented, rather than as mere indicia of ineffectual implementation. A summary, in logical sequence of the key premises, explanations and implications relating to the theoretical framework, is provided in Table 2.3 (below).

Table 2.3

Summary of Key Premises, Explanations and Implications in the Theoretical Framework

<b>Premise or assumption</b>	<b>Explanation</b>	<b>Implication</b>
1. The implementation of TQM is a continuous enactment rather than an objective reality	Implementation varies from organisation to organisation and from time to time; perceptions of participants are central to understanding implementation	This view encourages a focus on the process of implementation rather than the outcomes of TQM as a worthwhile field of study
2. The implementation of the key principles of TQM can be seen in terms of seven dimensions identified by Spencer (1994): goal orientation, definition of quality, the role of the environment, management and employees, structural rationality and philosophy toward change	The seven dimensions provide recognisable features of the implementation of TQM and place in readily operational terms the key principles and pre-conditions of the doctrine of TQM: continuous improvement, customer focus, teamwork, strategic integration of quality and strong leadership commitment to quality	The seven dimensions form the basis of an appropriate framework for investigating the implementation of TQM
3. Implementation of TQM is influenced by 'mental models' of the way in which to organise	Mental models, preconceptions or metaphors unconsciously guide the way we in fact organise (Morgan, 1997; Spencer, 1994)	Mental models are often unspoken and unquestioned, but can be uncovered by research using an appropriate framework
4. The dominant 'mental models' of organisation in both theory and practice are the mechanical and organismic models	The pervasive images of organisations are organisations as machines or organisms (Morgan, 1997)	Implementation will be more influenced by the mental model which, for whatever reasons, is the strongest in organisational thinking
5. By using each of the seven dimensions, a more mechanistic or organismic implementation of TQM in an organisation can be better seen and assessed	The seven dimensions allow for an efficient structuring of evidence so that mechanistic or organismic traits in the implementation of TQM can be compared and seen with greater clarity and specificity	Opens possibility of valid implementation of TQM in a mechanistic way - runs counter-intuitive to TQM doctrine which is strongly organismic and allows TQM debate on implementation to escape from a focus on outcomes or pathology

## Research Questions

From the above discussion, two distinct strands of the debate emerge. The first strand relates to the supposed effect organisational models have on the nature of applied TQM. The second strand relates to the variance between doctrinal and applied TQM. Therefore, the research is directed towards answering the following two primary questions:

1. In terms of the major dimensions of TQM identified in the literature, is TQM applied in an organismic or mechanistic way ?
2. In terms of the major dimensions of TQM identified in the literature, in which way(s) does applied TQM vary from doctrinal TQM ?

The first question seeks to uncover the overall mechanistic or organismic nature of TQM applied in organisations in terms of the seven basic TQM dimensions (organisational goals, definition of quality, role of environment, management and employees, structural rationality and philosophy towards change). The nature of each dimension as specified in Table 2.2 above is used to identify the trends towards either the mechanistic or organismic model in accordance with the evidence. The second question extends this line of investigation further by seeking a better understanding of the extent of variation between doctrinal and applied TQM. The seven basic doctrinal dimensions provide a useful means of comparing the research findings with the doctrine of TQM. Through this approach, important points of departure between theory and practice can be identified.

The research questions serve to provide insights into the dimensions and nature of applied TQM which transcend the conventional debate about the effectiveness of an objective TQM reality. In particular, the questions seek a better understanding of organisational members as active agents in the interpretation of TQM within the relevant organisational perspective. Accordingly, the perceptions of organisational participants in relation to the implementation of TQM are an important source of evidence in answering the questions.

However, the research questions do not seek to address the effect of organisational structure or culture, or to establish the identity or origins of the dominant perspective in each organisation. Similarly, the research questions do not set a task which requires the examination of the underlying and ongoing interactive social processes moulding and influencing each of the dimensions of applied TQM. For example, a fusion of Zbaracki's (1998) adaptation of institutional theory in his notion of 'rhetorical TQM' with the Beyer & Trice (1978) model of change of adoption / implementation / institutionalisation (as used by Beyer, Ashmos and Osborn (1997)) could potentially yield insight into, amongst other things, the interactive effect on organisational goal setting and the interpretive nature of the social and political transactions between those who chose to adopt TQM initially and those who actually implement TQM. However, such investigation is beyond the scope of this cross-sectional and exploratory research.

The questions also do not seek to provide any empirical support for Spencer's thesis in terms of the supposed relationship between models of organisation and applied TQM. Nonetheless, this exploratory research into the mechanistic or organismic nature of the implementation of TQM is intended to provide a stepping stone for future studies. By using a theoretical framework and a methodology which together are capable of detecting mechanistic and organismic traits in the implementation of TQM, the study is intended to contribute to the limited but growing field of empirical research on the modes of applied TQM in organisations.

## Summary

Despite a continuing struggle for a clear definition, there appears a consensus in the literature in relation to the doctrine of Total Quality Management. In the broad sense, TQM is a management philosophy encompassing all activities through which customer expectations and organisational objectives are satisfied in the most effective way by maximising employee potential in a continuing drive for improvement. The important principles of TQM are a customer focus, continuous improvement and teamwork, all of which are fostered by managerial commitment at strategic level and achieved through empowered individuals working in teams. Spencer (1994) provides a useful framework of seven doctrinal dimensions with which to view the application of TQM in organisational settings.

Notwithstanding TQM's intuitive appeal, a number of writers have reported very high failure rates in the implementation of TQM by organisations. Although the definition of failure is very broad, criticism mainly centres around either the inefficient implementation of an otherwise sound TQM doctrine, or inherent doctrinal flaws which reduce or prevent the realisation of the intended benefits of implementation.

However, an alternative view, which is emerging from the literature with some empirical support, does not seek to criticise or crown TQM as a philosophy, but to account for the difference between theory and practice in terms of the interpretation of TQM by those who are implementing it. According to Spencer (1994), differences between theoretical and applied TQM may result from the influence of mental models of organisation, the dominant two of which are the mechanistic model and the organismic model. Spencer's (1994) approach assumes that the implementation of TQM is continuously enacted rather than an objective reality, and arguably such a view can overcome some conceptual limitations apparent in the mainstream literature.

From the debate, two research questions are proposed which aim to establish the nature of applied TQM in organisations in terms of the seven doctrinal dimensions of TQM identified by Spencer (1994). Within the theoretical framework, the first question probes the mechanistic or organismic nature of applied TQM, and the second seeks the ways in which doctrinal TQM varies from applied TQM.

## **CHAPTER 3**

### **Methodology**

#### **Introduction**

This chapter identifies, describes and justifies the choices made in the selection of the methodology used to collect, collate, structure and analyse the evidence. The methodology provides the means by which answers to the research questions posed in Chapter 2 may be found. In the selection of each aspect of the methodology, the research questions, underlying assumptions and the theoretical framework were all taken into consideration to ensure a logical and internally consistent basis to the research.

In the first part of the chapter, the overall research stance is described and the pragmatic methodological approach taken in this research is justified. Further, the qualitative research strategy, case study design, and convenience sampling technique used in the research are discussed and justified. These aspects of the methodology identify the approaches taken to the collection and collation of the evidence.

The second part of the chapter deals with the methods used to structure and analyse the collected evidence. In keeping with the overall qualitative strategy, a general non-quantifying analytical methodology was chosen. To enhance the reliability and confirmability of the research, a detailed description is made of the procedures used to structure, reduce and make sense of the evidence.

The development of the appropriate methodology, as described in this chapter, has proceeded mindfully of the ultimate need to handle, process and present a large volume of qualitative evidence logically and coherently. Accordingly, in Chapter 4, the findings of the research are presented in the form of a narrative, supported by extensive use of the words of the research participants. The narrative is a distillation of the evidence, and serves to provide the reader with essential background material and a familiarity with the perceptions and views of the interviewees. In Chapter 5, the findings are discussed and interpreted in relation to the two research questions, from which overall conclusions are drawn.

## Research Stance

Remenyi, Williams, Money and Swartz (1998, p. 120) emphasize the importance of approaching business research with a clear idea of both the frame of reference to be taken (either phenomenological or positivistic) and the nature of the evidence (either qualitative or quantitative) to be collected. Nevertheless, this research acknowledges Martin's (1990) plea for 'methodological open-mindedness' and does not seek to contribute either to the ideological debate or the closely associated arguments relating to the inherent superiority of one methodology over another. To the contrary, it aims to apply the most appropriate methodology in the circumstances for the research subject matter. This notion is also endorsed by Miles and Huberman (1994, p. 310) who, in developing useful procedures for qualitative research, have sought to avoid "polarisation, polemics and life at the extremes" by urging all researchers to adopt "hybrid vigor." As this research aims to acquire a better understanding of the implementation of TQM by using a framework derived from Spencer (1994), the basic research assumptions made herein should be consistent with those made and declared by that author. That is, according to Spencer (1994, p. 448), TQM is not a "cut and dried reality" but one that is "continuously enacted" by organisational constituents.

Hence, the basic assumption upon which this research is founded appreciates reality, in terms of the implementation of TQM, as a subjectively and socially constructed phenomena. Indeed, as noted in Chapter 2, the qualitative (but non-phenomenological) studies by Beyer, Ashmos and Osborn (1997) and Zbaracki (1998) into the implementation of TQM both proceeded on the assumption that TQM is a social construction. Further, a number of writers (Evered & Louis, 1981; Golden, 1992; Gregory, 1983; Morgan & Smircich, 1980; Smircich, 1983) have argued that a qualitative 'thick descriptive' approach to understanding social and cultural phenomena in organisations is to be preferred. Miles and Huberman (1994, p. 10) have noted that 'thick descriptions' from qualitative research have the advantage of being "nested in a real context" with a "strong potential for revealing complexity." Accordingly, a mode of enquiry consistent with the qualitative method has been selected to sample, collect, analyse and evaluate the evidence in this research.

## **Research Design and Strategy**

This research seeks to explore important but little understood aspects of the implementation of TQM, and hence is exploratory in nature. Marshall and Rossman (cited in Remenyi, Williams, Money & Swartz, 1998, p. 109) suggest that the case study is a useful approach to exploratory research, and accordingly, a case study design was selected as the overall approach taken to collect evidence. Indeed, the research design utilised a multiple case study approach in which evidence was collected from five separate organisations. Remenyi, et al. (1998, p. 182) argue that evidence from multiple case studies “is more compelling and the results are more robust.” The use of five organisations provided a significant base from which to examine differences in the experience of TQM amongst organisations, whilst not defeating the overall case study philosophy of limited organisational sampling (Remenyi, et al., 1998, p. 182).

Yin (1994, p. 13) defines a case study as an empirical enquiry which utilises multiple sources of evidence and “investigates a contemporary phenomenon within its real life context.” Such investigations are made in situations where the “boundaries between [a] phenomenon and [its] context are not clearly evident” (Yin, 1994, p. 13). The multiple sources from which evidence is derived fall into a number of categories (Remenyi et al., 1998, p. 175), although interviews, document examination and observations are the main techniques used in practice. These categories accord with the overall qualitative methodology adopted in this research (Martin, 1990; Smircich, 1983). The contemporary phenomenon under investigation in this research is, in the broad sense, Total Quality Management. Similarly, the ‘real life’ context which encompasses the phenomenon is the organisational setting in which TQM is being implemented.

More specifically, the research is directed towards answering two primary questions as stated in Chapter 2. The first relates to whether TQM is applied in a more organismic or more mechanistic way. The second question seeks the ways in which applied TQM varies from doctrinal TQM. Both questions seek answers in terms of the seven dimensions identified in the literature. The seven dimensions, as part of the overall theoretical framework, provide a useful way of interpreting the implementation of TQM in organisations. Accordingly, evidence was sought which identified member perceptions



of the goals of the organisation, meaning of quality, role of the environment, management and employees, patterns of communication and philosophy towards change.

The key elements of the doctrine of TQM and the organismic and mechanistic models were used in the analysis of the evidence as benchmarks against which the evidence was compared. From these comparisons, assessments of the effect of each model on the implementation of TQM and the variances between applied and doctrinal TQM were made. These assessments provided the basis for answering the research questions. As this research proceeded on the assumption that the implementation of TQM in any organisation is a negotiated and subjective order rather than an objective reality, the perceptions of organisational members were central in establishing the nature and character of the quality management that is being implemented in each organisation.

Indeed, the actual objective reality of the how and the why of TQM, if it could be reliably ascertained at all, recedes from central stage in this research, given the underlying research assumptions made. In their qualitative research into modes of effective TQM implementation, Wruck and Jensen (1994, p. 252) state that they used the "employees' words when possible to communicate their experiences with TQM . . . . because their statements not only present the facts, but provide verifiable data on their views of whether and how TQM affected their actions and decision-making." Clearly, these experiences embrace both off-the-cuff comments and long contemplated views which reflect the uncertainty, satisfaction and doubt of any process of change.

Furthermore, Remenyi, Williams, Money and Swartz (1998, p. 169) argue that a pervasive problem in case studies is in gaining unbiased testimonials from participants. The authors argue that responses in business case studies may be affected by a limited recollection of events, difficulties in disclosing personal feelings, and by a natural reluctance in providing information that may impugn the actions of the interviewee (Remenyi, et al., 1998, p. 170). However, the validity and reliability of the research can be significantly improved by "studying every phase of the problem from as many aspects as possible, and by using different sources of evidence" (Remenyi, et al., 1998, p. 170). Whilst not seeking to strictly objectify the views of people, the advice of Remenyi, et al. (1998) and Wruck and Jensen (1994) highlight the need to ensure verifiable evidence of

the experience of TQM across a reasonably broad cross section of organisational members.

Importantly, the methodology used in the study does not reflect an interpretivist approach, and further does not consider all responses and reflections as equal in merit or as 'gospel'. A truly interpretivist approach would arguably search for the deeper sociological meanings in an interviewee's words, and acknowledge a variety of possible or changing interpretations (Burrell & Morgan, 1979). As noted earlier, this study acknowledges Martin (1990) and takes a pragmatic and methodologically 'open-minded' approach to answering the research questions. Accordingly, only evidence which is supported by alternative sources, observations made or through the reasoned arguments of the interviewee can be regarded as convincing.

Remenyi, Williams, Money and Swartz (1998, pp. 165-166) note that case studies can be effective in yielding a "full picture of the actual interaction of variables or events" by focusing "carefully at a practical, real-life instance." The authors note that the case study design allows researchers to "concentrate on specific instances in an attempt to identify detailed interactive processes which may be crucial to understanding, but which are transparent to other research tactics such as the large scale survey, . . . experiments and analysis of archival evidence" (Remenyi, et al., 1998). Therefore, guided and informed by the seven dimensions in the theoretical framework provided by Spencer (1994), this research used case studies to concentrate on the implementation of TQM in practical, real life instances in order to identify the nature and extent of interactive organisational processes. The overall character of these processes, it is argued, can be interpreted in terms of an organic or mechanistic model. By such an abstraction, a better understanding of the mode and nature of applied TQM in organisations is sought through answers to the research questions posed.

## Sample

Remenyi, Williams, Money and Swartz (1998, p. 193) state that permissible sampling techniques for qualitative research include non-probability samples. In view of time and cost constraints, convenience sampling was used in which “samples comprise those individuals or organisations [satisfying basic selection criteria] that are most readily available to participate in the study” (Remenyi, et al., 1998, p. 193). The target sample size consisted of a total of 30 interviewees at five medium to large sized organisations in the Perth metropolitan area of Western Australia. The target sample size was set to ensure a comprehensive coverage of member perceptions whilst being achievable and practical given time, economic and accessibility constraints. Organisational size is relevant to the extent that the incidence of smaller organisations implementing TQM appears less than in larger ones, and hence more organisations were potentially available for selection.

During the preparation stage of the research, a list of potential organisations was drawn up from the respondents to a survey conducted by Brown and van der Wiele (1994) into Quality Assurance certification and TQM. The 1994 researchers had sent questionnaires out to all 500 ISO 9000 certified (at the time) companies in Western Australia and had received 160 complete responses (Brown & van der Wiele, 1994). In the present research, a review of responses was made, and locally operating organisations indicating an intention to continue with or commence the implementation of TQM were selected for the short list. In this way, the total of 160 respondent organisations from the original survey was narrowed to a short list of 45 potential subjects. From a review of industrial publications, the Internet and various directories, a further 8 organisations, which did not have an accredited third party certified quality system but which advertised themselves as ‘TQM companies’ or equivalent, were added to the short list.

Initial contact was made with each of the 53 organisations in the form of a letter of introduction (refer Appendix 2) addressed to the Quality Manager in which an outline of the nature and objectives of the research project was provided. A request was made in the letter to interview six organisational members. Whilst several organisations responded to the letter by phone or email without further prompting, most required a

follow up phone call to establish direct contact. Of the 53 organisations, a total of 11 were either prepared to allow access when required, or were too busy at the time but did not rule out later access when 'quiet'.

Telephone discussions with the gatekeepers (generally quality managers) in each of the eleven organisations indicated that six organisations satisfied basic sample selection criteria in terms of TQM implementation and organisational structure. Five of the six organisations permitted access as required, and these became the organisations used in the research. To help ensure organisational and personal anonymity, the five organisations are henceforth individually identified by their respective pseudonyms: Truckco, Steelco, Electrico, Utilityco, and Bevco. The implementation criteria which provided basic conditions for inclusion in the research sample consisted of the following:

- (i) an espoused belief by the organisation that it is implementing the principles of TQM (or a recognisable equivalent);
- (ii) the apparent active use of teamwork; and
- (iii) the belief by management that teams, work-groups or other cooperative collective entities have a customer focus and are being used for the purpose of continuous improvement.

This approach proved efficacious in the earlier Pilot Study to the main research, involving a medium sized organisation not included in this research, and appeared apposite given the need to locate organisations implementing TQM. In effect, the implementation criteria also set the level of tolerance for a recognisable negotiated order of TQM. For the purposes of this research, any purported implementation of TQM by organisations in the sample which did not reach this standard was assumed to relate to an 'XYZ' rather than a TQM implementation. The structural criteria, drawn from Mintzberg (1983), required structural characteristics in organisations to be of a similar type, and all short-listed organisations were found to have generally mechanistic structures involving either machine bureaucratic or divisional forms.

Four of the final five organisations can be classified under the ABS definition as medium sized commercial organisations, the fifth (Utilityco) as a large public utility organisation (Foreign Affairs and Trade, 1996, p. 8). A medium sized enterprise employs from 100 to 500 people in manufacturing, and between 20 and 500 people in services (Foreign Affairs and Trade, 1996, p. 8). Electrico and Steelco, two of the medium sized organisations, are semi autonomous divisions of much larger national and international parent entities. Electrico is primarily involved in manufacturing large electrical equipment and components, whilst Steelco supplies finished steel products (manufactured elsewhere) and provides related services. Of the other two medium sized organisations, Bevco is the local manufacturing franchisee of a very large worldwide food and beverage producing operation, whilst Truckco, the smallest organisation in the sample, is a privately owned local commercial truck dealership. All organisations have well developed and structured quality assurance systems, with all except Bevco and Utilityco maintaining an accredited third party certified system. Both Bevco and Utilityco, however, are currently working towards certification. Further, all organisations had long and continuous histories of operation and appeared successful in their particular fields.

Approximately six members from each of the five organisations were interviewed to acquire first hand evidence of organisational member perceptions and attitudes. The sampling of organisational members was done as broadly as possible to reduce possible bias of results, although the availability, knowledge, and experience of members were major deciding factors in the choice of interviewees. Wherever possible, team members and leaders from multiple teams or sections as well as higher management in each organisation were interviewed. This aligned with the approach taken by Zbaracki (1998) and Beyer, Ashmos and Osborn (1997) where balanced cross-sections of knowledgeable organisational members were used. Details of the subject organisations and interviewees are listed in Table 3.1 below.

Table 3.1  
Details of Subject Organisations and Interviewees.

<b>Pseudo- nym</b>	<b>Type</b>	<b>Inter- views</b>	<b>Other</b>	<b>Job roles of respondents</b>
Truckco	medium size; truck dealership	8	observation during operations tour, documents	quality manager, department heads, shop floor operatives
Steelco	medium size; division of very large national company	6	observation during plant tour, documents	quality manager, operations manager, branch manager, office and warehouse floor operatives
Electrico	medium size; division of very large international company	4	comprehensive observation of quality audit at plant, documents	quality manager, operations manager, engineers, shop floor operatives
Utilityco	large size; public utility corporation	6	documents	quality manager, middle managers, plant and administrative operatives
Bevco	medium size; franchisee of very large worldwide franchise operation	6	observation during plant tour, documents	quality manager, production line supervisors and operatives, quality department operatives

## **Evidence Collection**

Martin (1990, p. 31) notes that qualitative methods rely on “high-variety research languages” utilising verbal and non-verbal modes of communication through a “broad spectrum of specific techniques” including participant observation, formal and informal interview techniques and documentary analysis. Given the scope and constraints of this research, evidence was collected through semi-structured in-depth interviews, and to a lesser extent, by examination of documents and participant observation between interviews, in plant inspections and in one case, during a quality audit. The approach taken was in keeping with the case study design (Remenyi, Williams, Money & Swartz, 1998), and aligned with the research of Zbaracki (1998) and Beyer, Ashmos and Osborn (1997) where the primary source of evidence was the semi-structured interview.

The use of multiple sources of evidence, especially in the broad cross section of interviewees, facilitated the triangulation of evidence. Triangulation is seen as an important tactic to facilitate construct validity (Remenyi, et al., 1998, pp. 178-179). The use of semi-structured interviews aligned with the requirements of the qualitative research design chosen (Bryman, 1989, p. 149) and avoided the lack of direction often associated with unstructured interviews (Easterby-Smith, Thorpe & Lowe, 1991, p. 75). Further, the use of semi-structured interviews as the main evidentiary source struck a balance between constraints imposed on the research by time, money and organisational accessibility on one hand, and the need to ‘get inside’ the collective organisational mind on the other.

### **Interviews**

A total of thirty in-depth on-site semi-structured interviews, each of approximately 45 minutes duration, were used to collect evidence. Informed by the overall research questions, more specific and open ended questions were asked to plumb organisational member perceptions and experiences and to keep interviews on track (refer Appendix 3). Within this framework, interviewees were allowed to express their perceptions, attitudes, opinions and ideas in response to the general questions. The use of a framework of interview questions assisted in keeping the recording of responses uniform, which Remenyi, Williams, Money & Swartz (1998, p. 171) have noted

facilitates the highlighting of similarities and differences in the evidence. To aid efficient recall of evidence and to facilitate the construction of a case study electronic database (Remenyi, et al., 1998, p. 178), all interviews were tape recorded without objection (refer Ethics Statement in Appendix 1).

The basic interview questions and prompts were developed along the seven dimensions identified by Spencer (1994) and across three aspects which emerged from the Pilot Study to the main research: subjective / normative, objective / descriptive and reflective / prescriptive (refer Appendix 3). The first question relevant to each of the dimensions sought interviewee perceptions on the way things are, followed by examples of the way things are, and then views on the way things should be, or could be, according to the interviewee. Often, the second and third questions did not need to be formally asked as discussions led from the initial normative question, to descriptive examples in support of the perceptions of the interviewee, and thence to a 'having said that' reflection on suggested improvements, limitations or problems with the current situation. This approach also found alignment with Zbaracki's (1998, pp. 607-608) "two theme" interview strategy, where that researcher used one line of questioning to plumb the subjective thoughts and feelings of the interviewee about an aspect of TQM, whilst the other line was used "to go beyond the informant's claims and ascertain the [objective] basis for those claims."

The use during interviews of sub questions seeking objective and reflective responses, or later identification of these components during the analysis stage, provided at least two benefits. First, the additional information from the interviewees gave further insights into the individual's personal experience of TQM and facilitated the emergence of themes that were possibly not evident in the interviewee's subjective assertions. Second, supporting practical examples or reflective expressions of dissatisfaction with the status quo served to verify the internal consistency (or otherwise) of the assertions made. Additionally, the comments of an interviewee were triangulated with other sources of evidence, including interviewees in the same organisation, documentary review and any observations made by the researcher of organisational activities and processes.



## Documentary evidence

Documentary evidence was used in this research as a means of supporting and complementing the information gleaned from the semi-structured interviews. Documents reviewed included company profiles, TQM policy statements, web site background information and miscellaneous publications made available by the organisation. From the additional information provided by documentary review, valuable interview time was saved by not having to enquire about the objective features of the organisation, including details about the numbers of employees, organisational size and basic histories. Further, where this information was known before interviews were conducted in a particular organisation, which was often the case, the extra knowledge helped the researcher to better comprehend the viewpoints of the interviewees. Information provided by a review of organisational documents was reduced and coded using a similar system to that used for interview transcripts (refer Data Analysis, below), and integrated with the rest of the evidence during the analysis stage of the research.

## Observation

With the exception of Electrico, participant observation was limited in this research, in view of time, access and cost constraints, to gaining additional knowledge in between or during interviews and plant tours. Observations made at these times were used to support or call into question evidence derived from the interviews. At Electrico, and at the invitation of the Operations Manager (who felt that more could be gained from observing and talking to shop floor operatives in this setting than in formal interviews), the researcher was permitted to accompany the quality auditor in a scheduled audit of the manufacturing process system in the organisation. During and after the audit, which lasted approximately three hours, extensive field notes were made concerning the behaviour and responses of the plant floor operatives in relation to quality issues. This information provided important insights into the practical aspects of the implementation of TQM, and aided in the triangulation of evidence taken from the Electrico interviews. The field notes were reduced and coded using a similar system to that used for interview transcripts (refer Data Analysis, below), and later incorporated into the balance of the evidence during the analysis stage of the research.

## Data Analysis

A non-quantifying general analytic methodology was used to analyse the evidence. Hussey and Hussey (1997, p. 256) note that non-quantifying methods are often appropriate in the analysis of qualitative evidence. Indeed, non-quantifying methods, which seek not to reduce the data to numerical values or frequencies but to assist in ‘understanding the coherence of meaning’ (Lindlof, cited in Hussey & Hussey, 1997, p. 256), appear consonant with the basic assumptions in this study. The overall analysis of the evidence has been guided throughout by two key principles:

1. the research questions to be answered must always be at the forefront of the researcher’s mind, and
2. the researcher must be very familiar with his data.

Further, Hussey and Hussey (1997, p. 256) identify three main problems which need to be resolved in analysing any collection of data: reduction, structuring and detextualisation. For the procedural development of the analysis, these three problems can be operationalised into the following key themes:

- (i) distilling the data to a manageable form, volume and content;
- (ii) structuring the distilled material in readily coherent form; and
- (iii) abstracting the structured material into generalisable form (within context) in order to better understand the phenomena under study.

With these problems and principles in mind, the important procedural aspects of the analysis are now discussed.

### Procedure

The non-quantifying analytical methodology was adopted in accordance with the basic formula suggested by Miles and Huberman (1994). Hussey and Hussey (1997, p.257) note that the Miles and Huberman procedure is a useful means of managing the “considerable volume of material” generated by qualitative data collection methods, and the approach was used by both Zbaracki (1998) and Beyer, Ashmos and Osborn (1997).

The audio recordings of each interview were first replayed and contexts visualised. The recordings were replayed again and carefully transcribed into a Word document by the researcher only. The transcripts formed an extended narrative of 82,000 words. This initial narrative was then reduced by careful re-reading and screening of the material by the researcher to remove areas of discussion that could not contribute to the research in any conceivable form (for example, '*non sequiturs*' and inefficient use of language which do not in themselves appear to provide any meaningful insights).

The distilled text was then structured and coded according to emerging themes, informed and guided by the theoretical framework and the seven basic dimensions. For example, the direction of organisational communication and decision making (i.e. vertical and/or horizontal) emerging from member perceptions about the degree of empowerment conferred within team processes provided key evidence in terms of structural rationality. Similarly, evidence of a strong influence in goal orientation towards either short term organisational performance (for example, financial or productivity goals) objectives or long term (for example, survival goals) objectives was categorised in terms of organisational goal codes. Therefore, the seven theoretical dimensions provided an armature upon which further categorisation of interview responses proceeded. The *a priori* categories provided by the seven dimensions, and the subjective, objective and reflective classifications from the interview questions, greatly facilitated the structuring and coding of the evidence.

Coding of the evidence was based on general principles identified by Miles and Huberman (1994) and proceeded in accordance with the formula developed from the experience of the Pilot Study to this research and as specified in Table 3.2 (below). The application of codes to sections of text, important points and key ideas was an iterative process during the analysis phase of the research. Codes allowed certain unchanging labels to be applied to the evidence for identification purposes (for example, identification of the interviewee and the organisation). However, suffix details used for each coded piece of information allowed recurring themes to develop, change and be classified in a coherent and efficient manner.

Table 3.2  
Coding Scheme used to Identify and Label Evidence

Example

Reference	1	2	3	4	5	6	7	8	9
Code entry	B	1	Pc	S	1	c	o	n	t

Where

Reference	Code entry	Explanation of code entry
1	U, B, E, S, or T	Letter denotes organisation (eg B = Bevco)
2	1 onwards	Interviewee identifying number per organisation (eg 1 following B = first interviewee at Bevco)
3	Go, Dq, Rne, Rm, Re, Sr or Pc	Dimension identifier (eg Pc = Philosophy toward change)
4	S, O or R	Interviewee response classification (eg S = subjective view)
5	1 onwards	Response classification identifier (eg 1 following S following Pc is the first subjective response under Philosophy toward Change)
6-9	a group of up to 4 letters	Free form identification of emergent themes within a priori categories (eg 'cont' indicates an emergent theme of continuous improvement within the Pc category)

As part of the structuring and reducing process, data display charts and matrices were generated to systematically present information so valid conclusions can be drawn and action taken (Miles & Huberman, 1994, p. 11). The process of constructing matrices further condensed the text, and at regular intervals, summaries of findings to date were made to facilitate the development of the analysis and to assist in case comparisons. Within each matrix, key words or phrases (identified by the code system, described above, for cross-referencing purposes) relevant to answering each of the questions were highlighted in bold print. The use of charts and matrices aligned with the approach taken by Beyer, Ashmos and Osborn (1997) who followed procedures suggested by Miles and Huberman. Beyer, et al. (1997, p. 7) noted that the graphical displays were used “to summarise the data in a way that facilitated detecting overall patterns and comparisons.”

Both during and after the collection and analysis phases, the evidence, in coded and cross-referenced form, was stored in an electronic database to ensure an effective research 'audit trail' was in place. Detailed written procedures for the coding, structuring and analysis of the evidence, as described in this chapter, also assisted in the creation of a research 'audit trail'. According to Marshall and Rossman (cited in Remenyi, Williams, Money & Swartz, 1998, p. 115), an 'audit trail' is essential for the reliability of qualitative research in which, through the transparency of the procedure, research conclusions can be seen clearly to be justified.

From the data displays and theoretical summaries, emerging patterns of evidence were abstracted into generalised observations, descriptions and specifications within context. These in-context generalisations provided the base from which answers to the research questions were generated and promising areas for further research highlighted. For the first question, the elements and features of an organismic and mechanistic implementation of TQM, in relation to each of the seven dimensions, were used as comparative benchmarks both within each case and across the five cases. The content of each benchmark was constructed from Spencer's (1994) descriptions of the mechanistic and organismic implementation of TQM in terms of the seven doctrinal dimensions. For the second research question, the result in each dimension was compared to the others and weighed in relation to the impact and emphasis it had in the implementation of TQM both within each case and across the five cases.

The final assessment of the strength of the influence by either model and the variance of applied TQM from the doctrine was subjectively ascertained by the researcher. Importantly, there was no attempt to reduce the results to mere frequencies, majorities or numerical values in order to derive the conclusions, as any attempt to do so would have been in conflict with the analytical methodology chosen in this research (Hussey & Hussey, 1997, p. 256). Instead, the apparent pattern or consensus emerging in each of the dimensions was carefully 'weighed' against dissenting views and the objective and reflective statements of the interviewees to achieve overall impressions, which then formed the final results of the research. Dissenting or 'outlier' views were valued as timely 'reality checks' when an otherwise strong consensus in a particular area

appeared. Indeed, Miles and Huberman (1994, p. 270) have suggested that in many cases effective “outlier analysis strengthens an original conclusion.” Particular care was shown in identifying ‘stronger’ and ‘weaker’ evidence relative to the nature of the source, circumstances in which the evidence was collected and whether the evidence was supported by other sources (Miles & Huberman, 1994, p. 268). Table 3.3 (below) provides a summary of the specific work procedures used for the analysis of the evidence.

Table 3.3  
Summary of the Key Procedural Steps in the Analysis of the Evidence

<b>Procedural Step</b>	<b>Action by Researcher</b>
1	Key in interviews into Word document (done over a four week period) <ul style="list-style-type: none"> <li>• some intuitive analysis at this stage</li> <li>• interviews are arranged by organisation / interviewee / dimension</li> </ul>
2	Print interviews, and read and re-read to fully familiarise
3	Establish code scheme (see Table 3.2 above)
4	Bracket comments in terms of S, O, or R <ul style="list-style-type: none"> <li>• may consist of a few words, sentences or a paragraph per bracket</li> </ul>
5	Allocate numerical suffix (eg S2 , O3 etc)
6	Use highlighter to identify emergent key words and themes within bracketed comments
7	Cut and paste highlighted comments into prepared data displays, using the existing categories (by dimension and interview classification) as the X and Y labels
8	Reduce each comment further by an iterative ‘panning and washing’ process, repeating steps 6 and 7 if necessary; adjust coding and display labels as necessary
9	Make connections and abstract the comments
10	Compare results with the predictions made by Spencer (1994) in terms of whether implementation more organismic or mechanistic, and assess importance of each dimension in relation to importance to implementation (by organisation and overall)
11	Review, repeating steps 6 through 10 if necessary

Table 3.4 (below) provides a summary of the overall methodological approach taken by the researcher in the thesis research.

Table 3.4  
Key Elements of Methodology in the Research.

<b>Methodology</b>	<b>Category</b>	<b>Comments</b>
Research stance	Non ideological, but research assumption resembles phenomenological approach	assumption of the social construction of a TQM reality
Research design	Qualitative	seeking to understand and describe the why, how and who of little understood phenomena
Research strategy	Case Study	exploratory research to learn about organisational processes
Research sample	Convenience	5 medium to large sized privately or publicly owned organisations
Prime evidence source	Semi structured interviews	30 interviews (approximately 6 per organisation)
Evidence input	Narrative construction	vehicle into which collected evidence is assembled and distilled for analysis
Analysis method	Non-quantifying - general analytic method	reduction of the narrative using codes, data displays and matrices

## Summary

This chapter has addressed the methodological approach taken in this research. In keeping with the assumptions made by Spencer (1994), whose theoretical framework was utilised in this research, a qualitative research strategy was employed for the collection and analysis of the evidence. The research design was based on case study principles and involved thirty semi-structured interviews, across five organisations, as the primary means of evidence collection. From a short list of organisations developed in an earlier research program, organisations satisfying a basic set of criteria were selected on a non probability convenience basis. Within each organisation, sampling was also conducted on a convenience basis, with the choice of interviewees guided by basic criteria involving personal availability, and certain minimum levels of experience and knowledge. Although semi-structured interviews were the primary collection means, documentary and observational techniques were also used to support and complement the main evidence gathering.

Once collected, the evidence was analysed by a non-quantifying general analytical methodology suggested by Miles and Huberman (1994) and further delineated by Hussey and Hussey (1997). This procedure involved firstly the distillation of the evidence into a readily manageable electronic form, then the structuring of the distilled material in a coherent and workable form, and finally an abstraction of the structured material into a generalisable form. The process of reducing the material was aided by the use of codes, data displays and matrices as suggested by Miles and Huberman (1994). From these arrangements of the evidence, emerging patterns were abstracted into generalised observations within the contextual boundaries. The generalisations were used to establish answers to the research questions, highlight important emerging themes and indicate areas for further research.



## CHAPTER 4

### Findings

#### Introduction

In this chapter, the evidence collected in the semi-structured interviews and supporting information sourced from the documentary evidence and field notes is arranged by organisation and presented in narrative form. The analysis and interpretation of these findings in relation to the two research questions are undertaken in Chapter 5.

As each organisation is a discrete entity with a different set of properties and features to the other organisations, the scheme used in this chapter provides convenient categories in which the findings can be placed. To provide additional clarity and to assist in answering the research questions, each organisation section has been further divided into the seven theoretical dimensions, identified by Spencer (1994), which have guided this research throughout.

In order to capture the richness of the perceptions and beliefs of interviewees and to support the narrative, extensive use of quotations has been made in this chapter. This attention to the words of the interviewees is in keeping with the primary assumption underpinning this research that the reality of the implementation of TQM is a subjective and negotiated experience rather than an objective fact. Square bracket insertions in normal print are used to clarify words and terms for the reader, and bracketed italicised entries denote prompts or additional questions asked by the researcher. Quoted words in italics without square brackets indicate a particular emphasis made by the interviewee.

The interviews sought to identify the thoughts, feelings and beliefs of a cross-section of members in each organisation about the implementation of TQM in their organisation. As noted in Chapter 3, additional questions in the interviews sought to identify whether or not the actual experience of TQM in the organisation matched these views, and to explore any aspects which fell short of the interviewee's expectations of TQM. In this way, a picture of what the doctrine of TQM actually meant to the interviewees, and the way in which the implementation of TQM was experienced in each respective organisation, became apparent. The contemplation of the total effect, whether

mechanistic or organismic, of the implementation of TQM under each of the seven doctrinal dimensions assists in answering the first research question. Similarly, an examination of the key differences between the theory and actual experience of TQM in the organisations studied, again in terms of the seven dimensions, serves to provide answers for the second research question. Themes and issues emerging from the findings are dealt with in the discussion and interpretation sections of Chapter 5, in which answers to the research questions are offered and explored.

## Truckco

### Organisational Background

Truckco is a small to medium sized commercial truck dealer in Western Australia which is locally owned and operated, and has several branches in Perth. Interviews were conducted at the head office, which is also the main sales location. The organisation is developing its quality system towards maturity, and has third party certification to ISO 9002. It has been active for several years in the implementation of TQM by that name.

### Organisational Goals

A recurring theme amongst interviewees was the goal of maintaining leadership in the market. Truckco is the market leader in Western Australia for the type of trucks it sells and services, and it is understandable that retention of that lead is the paramount organisational goal. Closely allied to and supportive of that goal is the aim of retaining and gaining customers, which requires a strong focus on external customers. In accordance with this logic, the interviewees conceded that meeting or exceeding customer expectations was essential to retaining and gaining customers. The mission statement of the organisation, often cited by interviewees, supported this view. For example, the following exemplifies the general consensus:

I'd like to think I run my business [that is, department] through the company's mission statement and mission policy. I believe the first sentence of our mission statement sums it up without going on too long: that together as a team our aim is to surpass all others in providing the highest level of service in the WA motor industry by *exceeding* customers' expectations. Today, it is not good enough to satisfy people, we need *delighted* customers for whom we go the extra mile.

However, the issue of profitability did warrant a mention from one of the interviewees, the spare parts manager, who placed it in the following perspective:

I believe that I exist and my company exists for three reasons: profit, people and quality. I try to live that personally. [*is there an emphasis in those three?*] Yes, people. Whilst it is in that order [that is, profit first] and I have a responsibility to the person who employs me to make a profit. To do that I need the people, who are my assets, as well as the nuts and bolts of the parts out there that I then turn into money. But underlying that must be quality in a broad sense. Quality of the product, quality of the service, quality of the people. To go even further into that, developing the people's attributes only strengthens the team, strengthens the department and can only be good for the dealership. [*do you see these three elements as overlapping?*] Yes, absolutely. Especially in the sales area which is possibly eighty percent of our business, the focus is on sales. However, making people embrace quality makes them better salespeople, which in turn helps them make a better living. So it helps in terms of dollars and cents.

### Definition of Quality

In keeping with the views expressed under organisational goals, Truckco interviewees generally assessed quality as something which exceeds the norm. The need to stand out from the competitors is acutely felt at Truckco, and this pervades the general perceptions of quality. The sales manager put the definition in the following terms:

Quality is at the very least achieving what the customer is expecting. That is the absolute minimum level. Quality to us means the following. When the customer comes in, knowing that they are entering into a contract with the market leader, they have an expectation that they are going to get the very best product, and receive a service level done with a minimum of fuss, and the final product is going to be exactly what they expect. So that is our minimum task. We try and improve on that by innovation, and that may be additional after sales service or the servicing of the vehicle.

The spare parts manager took a more holistic approach to the definition. To him, quality is “an integral part of the company’s being.” All interviewees, regardless of position in the company, noted that Quality Assurance was a key part of the implementation of Total Quality Management in the organisation. The QA procedures were perceived by the interviewees as allowing processes and work flows to be conducted consistently and confidently, and problem solving to be carried out effectively. For example, the sales manager noted that:

everyone at Truckco is drilled in the quality procedures that we [all members] have laid down, and there has never been any question as to the adherence to them. The quality rules and procedures are a reflection of the things we do.

However, the spare parts manager noted that one of the greatest stumbling blocks separating the lived reality from the ideal of quality is the perception by people of the reality:

Quite often, there are problems or processes which are real and there are hurdles. But a lot of the time, it is peoples’ perceptions, and that is very hard to fix or identify. And people perceive things differently. So reality is in the eye of the beholder.

### Role of Environment

An enduring theme emerging from the interviews at Truckco is that the organisational members are closely knit and strongly identify with the goals of the organisation. Not surprisingly, most employees of Truckco have long service records with the organisation. The community of customers within which Truckco markets its products is similarly close knit. Consequently, strong relationships based more on personal trust and friendship rather than the law of contract often develop between customers and Truckco as the supplier. Typical of this is the view of the service manager:

We like to get to know our clients as best we can. For some of our bigger clients, we are dealing with specific people all the time. You build up a personal relationship.

That's the way it works best. If you can build the relationship, even if you do something wrong, they will look at the overall picture. If you've done something wrong they'll say, "I know you'll put it right."

In terms of external suppliers, the relationships are somewhat more qualified:

We like to narrow our list of suppliers down to preferred suppliers, body builders for example. We buy a cab chassis from [the name of the manufacturer] and then deal with a handful of body builders in the main. The reason we don't deal with one is we don't want to put all our eggs in one basket - one builder couldn't supply all our needs. We don't necessarily play one off against another, but we like to keep them honest. But by the same token, we don't want seven or eight. We want three or four with whom we can develop a relationship built up over time where we can trust their supply ability and ethics. We do like to 'get into bed' with two or three preferred suppliers. [*do you require your suppliers to have a certain commitment to quality?*] Yes, they have to have a commitment to quality, and preferably QA certification, but as long as we can satisfy ourselves that they can supply our needs and we are satisfied with their quality, then we will use them.

### Role of Management

Interviewees consistently identified an active and indeed proactive role played by Truckco's management at all levels in the implementation of quality management. This again is a reflection of the close knit and 'hands on' character of the organisation. Given the nature of the business and the pervasive need for a strong customer focus, dysfunctional bureaucratic tendencies are clearly suppressed, but arguably not eliminated, at Truckco. As a result, even senior management maintain a high profile in the day to day operations at Truckco, including the quality management efforts. The sales manager believes that his role, "in the broadest sense as a manager, it is to support and make the tasks of the people working with [him] that much easier." However, the service manager believes that the main responsibilities for quality management fall on the department managers. Although it is often difficult to balance the demands of everyday work with the paperwork requirements of the QA system, the department managers are,

nonetheless, the people “on the spot.” In relation to the role played by the heads of each department, the business manager made the following observations:

The role played by management is very active. For example, each department manager is very much a part of the QA system for his department and for the overall company. We have three-monthly QA review meetings. The management team is supposed to meet weekly but we average a meeting once every two weeks. Quality assurance is certainly an agenda item in regard to any problem reports and Key Performance Indicators [KPIs] that we also review

Of course, the active role of management is measured more than in just the number of meetings attended. The spare parts manager put the general role of management in the following way:

I believe in total management, which must involve senior management, middle management and supervisors. They are the driving force. They must at all times identify the needs of the departments. Whilst again we talk about teamwork, we are fragmented somewhat. We have a number of departments, with each doing a specific task in the supply of vehicles to customers. There is a lot of differentiation. So it is important that the management coordinates or synchronises each department's needs. The focus must be on driving a user friendly plan to oversee any plans or projects those departments have to keep the dealership as a group working together - it is all about *teamwork*. I don't believe we can be as effective or efficient if we don't do that.

### Role of Employees

A consistent theme emerging from the Truckco interviews relates to the importance of adhering to quality procedures by employees. Having been involved in the development of these procedures, organisational members are expected to follow them to the letter. This view is reflected in the following comments made by the sales manager:

The role of employees is active to the extent that they are a part of the procedures and quality programs in place. The procedures are a living and fluid thing and are constantly being looked at and adjusted. And that is done as a result of the way we are doing things and the way we are doing business is changing. This is mostly as a result of what the customer is thinking - everything is customer driven. The customers' wants and needs are changing and we are having to keep up with them. The employees of the organisation see that. They embrace the overall notion of quality management, and they are feeding information into us. This ensures that there is an overall standard to which everyone is working. From the bottom up.

These observations were reinforced by the service manager's comments:

Primarily, all employees have got quality procedures to work to. That's where it all starts from. If they are not working to the procedures in the first place, and writing up what they do, it is going to have an effect on the end result.

Truckco employees work in teams within each of the departments. The main collective forum for team discussion is through regular team meetings, in which the team members can air grievances, suggest improvements to work processes and discuss problems arising. These meetings can be under a number of guises:

Each department has their own informal toolbox meetings. We don't call them quality meetings, because it brings in other aspects. In the service dept, it might be a lack of tools, which is not directly a quality item, but indirectly affects the quality of their job. We have different levels of meetings. We have management meetings, QA meetings, informal toolbox meetings and Occupational Safety and Health meetings where health and safety issues are brought up with representatives of every department and every branch. Further to that, we have informal meetings where the department manager will get his staff in over lunch or fifteen minutes after work, and he will let the staff know what is on the agenda. Any particular things they need to know about will be discussed. Afterwards, the manager will open the floor to any staff members who wish to raise any problems they might have in their department or with other departments.

At the operational level, the most frequent type of meeting is the weekly 'toolbox meeting'. The spare parts manager provided the following explanation of the purpose and effect of these meetings in relation to quality management:

When we hold a toolbox meeting, I take my manager's 'cap' off, and in doing that I'm no longer the manager. Everyone is free to have their input. Quite often we're discussing issues that have cropped up during the week or during the month that haven't come to a quick conclusion and are still ongoing as a problem in the QA report system. Quite often, if there has been a problem overcome during the week, it has been because we have the people empowered to fix the problem. The matter is highlighted and praised publicly. I hold the belief that should someone need a little bit more encouragement, or coaching, that is done on a one-on-one basis in private. This gives me the opportunity to praise them. It helps them not only feel they've done the job correctly but also everyone likes a pat on the back - being recognised by their peers. That gives them the confidence to look forward to the next challenge.

### Structural Rationality

There was some disagreement as to the direction in which communication flows within the Truckco organisation. This can be explained in part by the organisational level at which each interviewee assessed the direction. The sales manager suggested that the communication was mainly horizontal, with significant degrees of mutual adjustment evident between departments and even individuals. On the other hand, the business manager and some other interviewees suggested the overall pattern of formal communication was essentially top down in nature. This perception related to the way in which ideas tended to flow from the top of the organisation, with only the most specific work related issues flowing from the bottom upwards. At first glance, the comments suggest a surprising hierarchical approach, in view of the use of teams and the close knit nature of the business, to the way orders and information flow within the organisation. However, from the supporting questions asked in the interviews and other evidence sources, the conclusion that communication at Truckco follows both vertical and horizontal directions appears more compelling. For example, the business manager made the following observations:



My door is always open. My staff can come to me whenever they need me but I certainly trust their abilities and their capabilities so I don't have to instruct them on a daily basis. There may be odd tasks that I would instruct them on, but after training has taken place, people are usually left to get on with their own job. That really stems from the philosophy of the managing director. He allows the senior managers to operate in their own way, and respects their own common sense and knowledge. This attitude flows through the organisation.

The spare parts manager also noted another way in which communication occurs:

We are as guilty as any company where communication is passed on by word of mouth, sometimes by gossip. It would be very good if you could harness it, to document a process to utilise it because it is so powerful.

### Philosophy Towards Change

There was general agreement amongst most interviews that the overall approach to change at Truckco was evolutionary, incremental and adaptive. Employees are encouraged through teamwork to identify where and when change is necessary, and to be involved in the implementation of the required changes. The nature of the market in which Truckco operates is stable, with changes in products and product technology set at only a very sedentary pace. The comments of the business manager exemplify this general view:

We are a stable organisation. The thing that struck me when I first came here was the number of long term employees. I always find it to be a good sign of a stable environment. It comes downwards from the approach taken by the managing director. As long as people do their job, he believes people should have fun. His philosophy permeates through the organisation. We would react to change if necessary but we are not a volatile organisation and we don't need to change very quickly.

However, the spare parts manager took an alternate view:

I always believe that there is nothing as constant as change. We have certain factors within our system that allow us to monitor change, or at least to identify change. Because change happens so quickly, I couldn't say that we are a steady as you go company. Specifically, monitors like KPIs [Key Performance Indicators] are maintained on a weekly basis. They are vital to our short term and long term planning. Again, quite often we identify change after it has happened. We do then see the need, and once seen we do provide resources and put things into place. Our action is pretty quick, even though it is after the event. The focus is to identify change as quickly as possible. It would be nice to know change before it happened.

## **Steelco**

### **Organisational Background**

Steelco is a medium sized merchandising division of a large Australian manufacturing and supply company, which is itself part of a very large Australian owned international mining and manufacturing entity. Steelco does very little manufacturing of goods, and its business is mainly the sales and warehousing of general and specialist steel products made overseas or in the eastern states. Steelco has branch locations throughout the state. Interviews were conducted at three locations in Perth. These locations have a total staff of approximately one hundred people. All but one of the interviews were conducted at two branch locations, Steelco East and South. The remaining interview was conducted with the quality manager at the head office location. Steelco has a very mature quality system, and has third party certification to ISO 9002. The organisation was one of the many initial adopters of TQM about ten years ago. There is, currently, an energetic debate amongst senior management within organisation as to the utility of TQM and QA. However, the evidence suggests that TQM is still actively implemented although the use of the term by the company has waned.

### **Organisational Goals**

Perceptions of organisational goals ranged from meeting and surpassing customer expectations, to safety, to the company vision of being the preferred supplier. However,

evidence emerging from the interviews and corporate documents of the actual experience of organisational goal accomplishment revealed the main sub-text. Indeed, the quality manager noted that the overarching goal of the organisation must be to “provide shareholder wealth, opportunities for employees, and maintain employees functions, so there is a job there for them. At the end of the day, the goal is to be the best steel supplier in the industry.” Nonetheless, a branch manager made a more differentiated assessment in the following terms:

We actually split goals from corporate, to division, to site. Effectively, we want to be a successful distributor of steel products that is seen to be a leader in the market place, both in the way we are professional and successful in what we do. We deliver a quality product, and it has to be in a safe environment as well. In the end, we give money back to the shareholders.

The link between safety, quality and the main goal of the organisation was explained by a warehouse supervisor accordingly:

The main goal here [in the organisation] is safety. Safety is the first priority, closely followed by customer service and satisfaction. These two things are closely connected. If someone hurts themselves, then the workload is shifted from five people to four people, so customer service then deteriorates because four people can't do the work of five people. It doesn't matter how long they work.

However, without impugning in any way the integrity of the clearly genuine and commendable concern by management for well being of employees at Steelco, the goal of safety needs to be placed in the context of the overarching goal of a return on investment to shareholders. A senior manager noted the following:

Safety is one goal, but I guess we have a number of mission statements. It revolves around that classic one where people want to work, people want to buy and people want to invest. So you have got to balance out those three organisational goals. There are always conflicts with those aims and they conflict in a number of ways. We have a minimum return on funds that we have to get from the business. That satisfies

the investors who have got money in the business. At any time, capital is extremely scarce to get hold of, and particularly hard at the moment . . . . but we can get any capital we need for safety . . . . We self insure in employee compensation matters . . . . I guess the company order is this: 'give us a bottom line result whilst keeping people safe'.

### Definition of Quality

Interviewees again provided a variety of observations without any apparent general consensus at first glance. Notions of quality at Steelco ranged from "doing it right the first time", "meeting customer expectations" to "the best of one's ability", to the presentation of goods and services to the customer, to conformity to a given standard. However, it was the last view, conformity to a given standard, which appears to prevail overall. One interviewee, a branch manager, attempted to synthesise conformance to a standard with customer expectations in the following terms:

Effectively speaking, quality can be perceived by tolerances. Is it the right length, is it flat? That is, conformity to a given standard. In reality, quality is a perspective. The customer has an expectation of what he is going to get. And we should meet that expectation. And for different customers, it might be different. Horses for courses. So part of the whole process of getting to know the customer and understanding what they are making and how they are handling it, is making sure they get the right type of product, the right grade and condition and delivery time frame. It's all part of that quality service. It is not just the quality of the product, it is the whole quality system. It is a state of mind. I think if expectations are met, if perceptions are met, then quality is right.

### Role of Environment

A general consensus emerged from the interviews that suppliers and customers were perceived to be an essential and integral part of organisational processes. Relationships and linkages between external entities and the organisation were relatively close and in many cases relied on personal rather than strictly contractual bonds. However, a number of interviewees emphasised that local conditions, such as the personality of the local site managers and branch cultures, were important qualifications

to this organisational feature. A quality manager's comments are representative of this belief:

Internal or external, our culture and philosophy has been that our internal customers are as important as our external customers. That gets a little bit lost at different levels of the organisation. Basically, it depends on the manager and the management team at different sites as well. I guess the culture we want to develop and we would like to have is that we have partnerships with our suppliers. Gone are the days when you'd screw the best price out of them you could. Let's get the right price, the right delivery, the right package. And in doing that, do the same with our customers. Our philosophy is now to work with customers and see if we can form partnerships with them. If we do the right thing by them they'll do the right thing by us. The same with our suppliers.

A senior manager at Steelco South identified an additional perspective in terms of the 'quality industry' as an important environmental feature to Steelco:

Where does the environment fit in? There is a very simple answer to that. What happened is that the 'quality industry' imposed quality standards at the highest level on everybody. We also had our own part of the quality industry - the quality corporate officer, and our own quality corporate people imposed these highest standards on us. We had quality officers everywhere. So the quality that a large manufacturer gets, which is obviously very high, will be the same as a gold mine with a twelve month life. However, this is very expensive. Every product needs a test certificate, with five copies, and every copy needs to be certified, and every part needs to be numbered, the whole lot. This is a huge problem right now.

### Role of Management

A number of interviewees, regardless of organisational position, saw the role of management in the implementation of quality management, and indeed generally, as one of coaching. The general belief is that management provides the quality road map, but lets the teams do the driving and navigating. One interviewee, a manager at Steelco

East, placed the management role as a coach into the practical example of developing quality procedures:

We try hard not to say, "Here is a set of rules, go and do it." We work hard to ensure that our procedures match what we do. We don't do what the procedure says, the procedure says what we do. Steelco is certified to the ISO 9002 standard. We did all our procedures in long hand, and now we have flow charts for everything. And we have work instructions and SOPs [Standard Operating Procedures] for things that need to be a little bit more explicit. So all crucial tasks, like operating a machine, have step by step instructions, including safety issues and operating tips. All of those things are drawn up by the operators. Nowhere in the organisation is the boss going to say, "now this is how you do it." In fact if we wanted to draw up a SOP, every operator in that job task would have input into it.

A supervisor at Steelco South remembered the early experiences of team based problem solving in the following terms:

When we first started with TQM, the operations manager was very good. He got us going. If I or the team was stuck, then I would go to him as the team leader and say, "we are having this problem, how do we overcome it?" If he didn't know, we'd go and see the senior manager and he would help us. But he wouldn't come down and take over the team. Instead, he would say "look, here are some ideas," and would shoot them up on the board. He would tell us the way he thought we should go, but would say these are only ideas. Like a coach.

Further, a senior manager at Steelco South provided some insights into the evolution of TQM at his location:

From TQM, there was consensus management. So we worked through the issues and involved everyone, and that was good, and we still tend to do that. But the economy now is just flat. We are in the bottom of the cycle in WA at the moment, and everyone in the engineering field is in the same boat. We just don't have time to talk to people. Now, it is "I'm the manager, and you will do as I say". And that is

causing problems. We have shifted from a full consensus approach where everybody is involved to “this is the way we are going to do it”. We’ve lost a couple of people because of it. Now, it is not a discussion group. Sure, I’m making mistakes, but we don’t have time because everything is changing around us.

### Role of Employees

Within the boundaries set by management, employees are expected to work to quality procedures which they themselves have set. Although the trend at Steelco is presently away from cross functional teams, and to a lesser extent, empowerment, organisational members are expected to make efforts to improve the quality of products and services, and safety in the work environment. An illustration of this is provided in the comments of a warehouse manager at Steelco:

There is an expectation that people work to our procedures. Whether it be safety or quality. And we do a series of audits to ensure that on a regular basis. Certainly, with quality, we have KPIs which will indicate if we are on or off track. The expectation is that the employees will contribute to the procedures. To be involved with the procedures. Management empowers. It delegates and gives authority, but hand in hand with this comes accountability. People at all levels have the ability to make decisions on things, within a reasonable scale, around their immediate area. So they don’t have to sit there and wait for the boss to come down and say “do this or that”. They are taught to have some accountability and responsibility for the job. If people feel greater responsibility for the job they are doing, they are more likely to approach the job with the right attitude. If they know they can make a difference to the final result, they are more keen to ‘put in’ and do something correctly. So it’s all about employee involvement and ownership at Steelco.

However, a quality manager noted a limitation to empowerment at Steelco:

Ideally, we’d like to give our people the ability to make decisions that affect, in a more significant way, the way they do their job, and how their job is done. It works reasonably well at mid level management, but as you get lower down, a lot of people are more and more reluctant to want to take that power and make decisions for

themselves. Certainly at shop floor level, we get a lot of resistance to giving people too much freedom.

Additionally, a quality manager reflected on the issue of managerial personality as it affects the implementation of TQM:

We've got [a significant number] of different managers and they are not all the same. They are quite a diverse group of people!! We are talking human nature here. Ideally, our belief is that our people should be involved in some of the process. But they haven't got the skills to go and get quotes or understand exchange rates, so their involvement in financial decisions is limited. But they know more about the operational side of it. In the past, we probably made some bad decisions. The bad decisions were probably made when we did not involve the people. They were the ones who had to implement it.

### Structural Rationality

A number of interviewees agreed that communication and information about work processes flowed significantly in both the horizontal and vertical directions. It was not always like this. A long serving employee provided the following comparative insight:

If you went back ten years, the organisational structure was very much like a pyramid. Today, it is a much flatter line than it has been. There are ripples, as with any company, in that line.

In terms of the day to day operation, there is a perceived greater emphasis placed on horizontal patterns of communication between employees. For example, a manager at Steelco East noted that:

the real communication is horizontal - people just talking and coordinating and adjusting their actions to get the job done. Of course, we also have notice boards and formal meetings and such, but the amount of communication that goes through them is minimal. So there's an official announcement of something that is going to happen.



But most of the communication is done through the process of working with people, day to day and as required.

Reinforcing this were the comments of a salesperson at Steelco East:

The pattern of communication is generally open and frequent. At this branch, we don't actually have structured meetings. Rather, they are more informal. The guys in the warehouse have tool box meetings. For the people on the sales floor, it is informal. If you need to say something, you say it. So it is very informal from where I'm sitting.

However, a quality manager provided the following insight, again in relation to local differences:

In respect to quality management, safety or the way we implement anything, there is a mix of both horizontal and vertical communication. Again, probably because of the people and the individuals involved, some of our locations are still quite hierarchical. Our [Steelco South] business is still very much like that.

### Philosophy Towards Change

There is consensus amongst interviewees that Steelco responds well to changes in its environment. Typical responses noted are the use of internal and external benchmarking, employee training schemes (especially in terms of quality and safety issues), and organisational learning strategies involving the use of technology. A salesperson at Steelco East put the philosophy towards change in practical terms:

We have an error and waste measurement system, so we can continually improve by reducing wastage which you can plot over time. So the idea of change here is more of a 'small wins' thing. You can get the feeling of continuous improvement. You can see what you are working towards. If all of a sudden there is a big drop you can ask "Why has this happened?" It may be something simple such as a new person starting.

However, a quality manager provided some qualification to this:

We've tried some revolutionary moves. The belief is, and what we espoused earlier on, was that it was all evolution. But there had to be some revolution in the way our business was run. I think our big gains have certainly been revolutionary. Evolution wise, we've improved our profitability in most of the businesses. People are willing to change and try new ways. If they don't they probably won't stay around very long, because things are always changing within our business. Technological change, the global village, the whole thing, our competition. If we stay still, we'll get run over.

Further, a senior manager at Steelco South saw the philosophy towards change in the Steelco organisation in the following terms:

Steelco operates very much as a stand-alone business within the parent group. We are given a chunk of money, some premises and are asked to give shareholders a return on their money while keeping people safe. Investors and senior management like to see change and things happening because they know that you are trying to do something. Change is totally embraced, but not always by some of the people changed . . . . Historically, we have had periods where we were all 'warm and fuzzy'. At meetings now, we all check in emotionally as to how we feel. Years ago at our strategic planning meetings we would go away and do meditation. So we've had all these ups and downs in the way we manage the business. It has been interesting the way we have moved from the introduction of TQM, to the 'warm and fuzzies' of managing people, to quality assurance, to 'do what I tell you'.

## Electrico

### Organisational Background

Electrico is a medium sized Western Australian based manufacturing division of a larger Australian operation which itself is a part of a very large worldwide group of companies. The organisation in Western Australia is involved in the design, manufacture and supply of specialist electrical power equipment to a variety of customers, although one customer in particular purchases much of the factory's output. Electrico employs several hundred people in its manufacturing operation in Perth. It has a mature quality system and has third party certification to ISO 9001. Furthermore, the organisation actively implements the principles of TQM by that name, and has done so for several years.

### Organisational Goals

At Electrico, the general consensus amongst interviewees is that the goal of the organisation is the meeting or exceeding of a standard which is objectively set to customer expectations. For example, an engineer saw Electrico's goals in the following terms:

What we are trying to do is to deliver a quality product to the customer, on time, and also meeting their specifications. To give them what they want. I suppose we do this by reading their specifications, which can be fifty pages long, and from that you've got to interpret what the writer actually wants. As a result, we are a customer driven organisation. Some people will say too much so!! Some might say we should be selling them standard products rather than what they actually want. Or what they think they want.

One interviewee, a technical officer, saw goals ultimately in a bottom line perspective, with a subsidiary link to satisfying customer needs and wants. This interviewee suggested that at Electrico, a move away from Six Sigma and towards ABC costing, where a reduction in process cycle time is seen to lead to a reduction in costs, reveals a bottom line focus. The officer observed that "the gurus say that you can forget costs as quality will reduce costs, but the ABC costing approach requires you to keep

quality in mind but focus on costs.” However, another interviewee, a design engineer, made the following observations which revealed a more long term view :

If you go to the roots, the object of the company is to be financially viable or in other words to make money and to provide a service. If you stop making money, you no longer exist. [*how does one ensure one continues to make money?*] You have to establish rapport with customers. They must have faith in your quality system. Your customer has to believe that this company is not here for the short term, but here for the long term and not just a quick quid thing. You’ve got them coming back because they know you are solid and reliable, and that’s very important.

Importantly, interviewees made references to Electrico’s mission and vision statements and the organisation’s quality policy in formulating their responses. These statements clearly form the major means of communicating and inculcating Electrico’s goals and objectives, and are less bottom line and more overtly customer oriented. For example:

Our quality policy is quite a good statement of our organisational goals in that ‘each dealing with a customer should result in a recommendation for further business.’ So it says something about the way your customers perceive your product, the service you provide and the basic dealings you have with them.

Further, the operations manager noted that:

As far as TQM is concerned, we have vision, mission and quality statements out there as part of our organisation. Our vision statement is to be the most trusted supplier globally. Electrico as an international group has that reputation over in Europe, and we are trying to do the same sort of thing in Australia. The mission statement behind me on the wall is to be the best provider of products and services in Australia.

### Definition of Quality

Interviewees made a number of attempts to establish a working definition of ‘quality’, and two viewpoints emerged in this process. On one hand, some interviewees

saw quality at Electrico in quite specific terms relating to meeting customer expectations through conformance to objectively set standards. In this view, attempts to delight customers sometimes resulted in disappointment for both parties. For example, a design engineer made the following observations:

I'm in the design department so quality to me is what is designed into the product. The product must meet the customers' expectations and also must pass the Australian Standards tests we do. If the product fails, you will have to rebuild the machine and you throw away a lot of money. So, quality here is to design in something that will pass every time, rather than something that might pass. In that way we are very conservative. We don't get any plaudits for just passing. If you just meet the standard, nine times out of ten, and the tenth time you fail, people don't say "well done, you've got nine out of ten", they'll say "what are you doing wrong?" Failing once is unacceptable.

Alternatively, others saw quality in far broader terms, encompassing everything that the organisation does. The quality manager saw quality as "being the end result of a series of quality processes." The operations manager put the definition into an even larger context:

To me, quality is all encompassing. It is not just quality control, it is the quality way in which the organisation is perceived by its employees and by its customers. For example, one of our measures is the cleanliness of the factory, which is directly geared to the pay rise. That aspect of quality is measured by customer feedback - whether customers thought there was an improvement from their last visit. So it comes back to quality being something into which everybody has an input.

Similarly, an engineer made the following observations:

The first [historical] concepts were of quality of the product, but now it is more the quality of the whole organisation. What springs to mind is that there are certain systems in place in the company that will ensure certain procedures are followed, whether it be getting an order, or order processing, or testing in the assembly lines, or

the quality of the work environment for employees at the workstation, or the quality of the product. All encompassing, I think. However, I don't think delighting the customer is part of it. Quality to me would mean that if we are talking about an object, it is reliable. It is fit for use.

The operations manager further emphasised the importance of not going too far in 'delighting' customers. This interviewee noted that "you can delight the customer in something you give him that may not be a quality product in the sense of the nuts and bolts quality . . . . in the long term, it might be something that delights him now but it may be a hindrance later."

### Role of Environment

The close fit of the organisation's external customers with the organisation is well identified and clearly seen by interviewees. The organisation has developed strong supply partnerships with major customers, with regular on-site meetings to discuss product performance and continuous improvement issues.

However, relationships with the organisation's own suppliers have not evolved to a similar extent. The quality manager noted that, apart from the regular supplier assessment required by the ISO standards and a few exceptional suppliers, very little in the way of close and trusting relationships are apparent. Indeed, the quality manager reflected on the situation in the following way:

I think it is unfortunate that we haven't stressed our rights as a customer with our suppliers as we probably should do. I think being located where we are, and having international suppliers, we've had the unfortunate need to take what they give us. We feel the isolation. The supply base is quite some distance away. Unfortunately, that has consequences as far as the practicality of saying "no this isn't good enough, we need replacement or we need you to do better." The consequences for rejecting material is a wait of six weeks. And this possibly sends a signal to the shop floor that they have to make do with that item or modify it.

Nonetheless, the notion of 'us and them' in the supplier / customer relationship is generally rejected. The design engineer noted that "the philosophy of beating your suppliers down in price until he goes bankrupt is out as it is in everybody's interest that a fair deal is struck." However, it was also noted that some suppliers, and indeed customers, are more amenable to this approach than others.

The status of the internal customer within Electrico is, according to one of the interviewees, "a little bit blurry." The issue is regularly discussed, but in practice, divisions and departments are often less than cooperative in sharing resources and information. Indeed, the operations manager noted that "the factory staff will definitely know when something isn't up to standard coming from another internal customer. But they don't call it internal customer relationships, it's just that the other section has 'stuffed up again'."

### Role of Management

The direction in which responses of interviewees tended to take in terms of the role of management depended on the position of the person in the organisational chain. The operations manager viewed the role of management in the implementation of quality management in more normative terms:

I believe that the management should be totally involved in it, because unless you have the management commitment up the top, the systems just won't operate or people will find ways to get around it. There is also the other end of it, that after giving people the authority to do all that, you will still have to audit the system to make sure procedures are being followed and things are being repeated. So that is where the role of the quality auditor becomes a bit grey. He's trying not to be a policeman but trying to find out ways in which the system is falling down. This, in theory, should be a positive thing and lead to ways to improve that system, not negatively by the big stick approach. So it is the total involvement by managers from the top down. If you haven't got that, then the process is doomed.

The justification for total involvement of managers in the implementation process is the belief that senior managers are ultimately responsible for quality in the

organisation. Drawing clearly from the writings of W. E. Deming, an interviewee noted that eighty percent of the problems on the shop floor are generated within the management system. The interviewee, a design engineer, observed that:

you can say that the process worker hasn't done his job properly. Well, okay, but if you look at why, it might be because he is not trained, didn't have the right materials or the right machinery, and has been pressurised to get something done. It is the responsibility of management to get these settings right.

The operations manager attributed the success of any leadership role to the proactivity of the leader in the pursuit of quality. In particular, small victories on a day to day basis and keeping in touch with the core of the operation, such as through 'management by walking around', were essential.

Similarly, the quality manager, identified the personal traits of a manager as important in the practical consequences of implementing quality. The interviewee made the following observations:

When you get to the upper management range, personality, approach and style become important. And if the style of the upper manager or leader is one that prefers to delegate or abdicate, then that obviously has an impact on the organisation. I think we've had the situation here that the implementation has been delegated to probably people around my level - plant manager, myself, engineering and design, that sort of level rather than perhaps the top thing. It is a more understated style which gives the moral authority for managers throughout the organisation to come forward and implement the thing [TQM].

However, there is a perceived downside to the devolution of responsibility. On this point, the quality manager observed that:

the next layer of management [that is, supervisory level] is given an equivalent responsibility for the implementation, and they have specific responsibilities which don't cross-functionally cover the areas that are required to really implement change



or affect the overall quality picture in the organisation. So the expectation that each of the individual heads of department can allocate resources and show commitment across the board is probably not realistic. I [as a head of a department] have had the frustration where resources [outside of the department] are required but I don't have the authority to commit those resources as they are not mine to commit. So the resources aren't there. In our case, it depends on the mutual support of the next layer down.

Another interviewee suggested that the diverse organisational structure for the group of companies to which Electrico belonged militated against the direct role very senior management can take. Indeed, an interviewee noted that there was a certain amount of "lip service" paid by the international head office to the role management plays in quality. The reason attributed to this was that performance measurement tended to over-emphasise the quantitative view. Specifically:

We have our head office in [the capital of an overseas country] that wants graphs and charts and statistics rather than a qualitative view. They've got [a large number of] companies of this type all reporting in the same format, and they set KPIs [Key Performance Indicators] for each company [including Electrico]. Each is an attempt to get right into the nitty gritty of the company.

### Role of Employees

The general view at Electrico of the contribution employees make to the implementation of quality management is based on the notion that team members are close to the job task and are in the best position to effect improvements. From the perspective of the operations manager, it is essential to have empowered team members at the grass roots level because:

they are the ones who do the work. They know when something is not done to a correct standard. They know when there is a short cut out there that could lead to a poorer standard or a short cut that could lead to a better standard. They are the key to the business. You've got to empower them and give them the ability to look after themselves.

This approach is supported by the quality manager, who made the following observations:

Everyone has to have an ownership of the quality process, and that is how you build quality into the product every step of the way. However, this does not mean that employees have 'carte blanc' in stopping production or freely rejecting products. Maybe part of this results from the need to make the best of whatever is supplied to us [because of the lead times involved]. This sort of thing can be ingrained into subsequent operations. It does limit the power and discretion to be able to say "it's rejected". We are trying to increase the awareness of each individual's role in ensuring that everything they do is correct, such as through the system of job cards.

Clearly, interviewees saw the issue of empowerment as central to any expanded role of employees. In this, not only the extent of empowerment conferred upon employees should be considered, but also how much empowerment employees were prepared to accept. The operations manager identified two kinds of empowerment:

One kind of empowerment is obviously financial empowerment which the accountants won't let you get away from. This gets back to delegated levels of authority for signing this and that. Even those requirements can be circumvented in some ways. The other empowerment is to get on and do the job in your own time doing it the way it should be done. But that is a harder one to quantify. You can empower your employees to do things. They make take that empowerment positively by saying "great, I can finish this off in three hours and have the fourth and fifth hour off." Or they can say "I can finish it off in three hours and then get on to the next job", depending on their attitude to empowerment. I think a lot of the time, people on the shop floor are quite willing to take that extra empowerment even though if you asked them, they would say no.

### Structural Rationality

Interviewees generally viewed patterns of communication at Electrico in terms of an essentially top to bottom direction. However, there are clearly perceptible trends

within the organisation to improve lateral communication between sections, departments and individuals. Hence, the overall impression is one of a consistent move towards meaningful communication along both axes, depending on the circumstances. One interviewee assessed the current pattern of communication as “vertical wanting to become horizontal”. The trend towards horizontal communication patterns is helped along by an earlier attempt at flattening the hierarchy within the group of companies, with the aim of having only six tiers between the international head of the organisation and the least significant employee. However, there appears to have been some recent relaxation of emphasis on this, and the old hierarchy seems to be re-emerging. Another interviewee argued that some lateral communication in the organisation was apparent. The interviewee observed that:

we do have a bit of mutual adjustment but probably not as much as you could have. I suppose with mutual adjustment, you've got to have the empowerment of people, and I think management would like the adjustment but not necessarily give people the power to carry it out. There is a bit [of mutual adjustment], and as time goes on, more and more will come in as people take it up, like it and take it on or do it anyway, and force management along this road in some ways. I think mutual adjustment between units and people at the same level is inherently more efficient [than hierarchical referral]. For instance, our production department has a manufacturing meeting every second day. So if something crops up after the meeting, do you wait a day and a half until the next meeting or talk amongst yourselves? You do the latter, and sort it out there and then.

### Philosophy Towards Change

The overall organisational philosophy towards change at Electrico is generally seen by interviewees as one of slow and steady improvement. The operations manager, however, placed the issue into perspective:

TQM is about improvement but improvement to some may be change for change sake!! It's horses for courses. There are times when change will come via 'steady as you go', like a lot of these activity based process improvements. We are working through, identifying issues, finding out what we should be doing in implementing

those improvements and then monitoring the benefits. And that can be a long term process.

This is not to say that change at Electrico has been a gently sloping linear progression. The quality manager observed that he had seen a lot of change in his three years with the company. Indeed:

change has been continual and fairly radical. We completely changed our product design, which required adapting machinery and new processes all throughout the factory. So, in the process of change, there have been some great milestones.

Nonetheless, apart from the brief periods of revolution, the trend at Electrico is towards evolution and continuous improvement in its everyday operations. The following comments are representative of the general view:

The philosophy towards change at Electrico is one of an incremental approach to change. We've got a few small teams going now and again. A lot of things we do here are affected because we are a part of a multi-national organisation. Someone at [the international head office] decides that a certain way of doing things is the flavour of the month and they are going to have a 'hit' with this. As a result, it flows through the organisation. Within eighteen months, everyone within the Electrico group is doing the same thing. Head office changes their mind and then we go and do something else. For example, the small teams and Six Sigma. Six Sigma has faded a bit because we have been doing ABC costing. It is a different way of costing things, involving looking where all the money is being spent, and then setting up a small group to improve those areas with high costs. Reduce your cycle time and reduce your costs in the area. It's a different way of doing things.

## Utilityco

### Organisational Background

Utilityco is a large public service entity which employs many thousands of people in its diverse operations throughout Western Australia. Indeed, the Customer Services Division, from which several interviewees were drawn, alone employs approximately twelve hundred people across the State. When Utilityco became a statutory corporation in the mid 1990s, it began a move away from an internally focused public service culture towards a customer focused approach. The organisation provides essential services to the community through a divisionalised multi-location state wide structure with its head office in Perth. It has a very mature quality system which resulted from its engineering based heritage. Utilityco is working towards third party Quality Assurance certification and has been active in the implementation of TQM over the last decade. However, it uses a different terminology, to the point of eschewing the use of the word 'quality' in its publications.

### Organisational Goals

Organisational goals are seen generally in terms of running a profitable business in the provision of quality utility services. Importantly, an interviewee noted that since incorporating a few years ago, when the organisation came out "from under a public service type mentality . . . we just can't go out and spend a million dollars". As a result, profitability has been seen to move to the forefront of organisational goal setting.

As Utilityco is a government owned statutory corporation, the interviewees noted that there is a strong regulatory element which is an inescapable part of organisational goal selection and execution. Hand in hand with running a profitable business is the goal of conformance to legislative standards. One interviewee noted that "I'm getting asked more and more by my boss to assure him that this system is operating within legislative guidelines that it is supposed to do, and this concern is becoming more and more prevalent because we are now operating in an externally regulated market."

Prior to emerging from its public service 'cocoon', Utilityco was its own regulator in most areas of operation, which meant, as one interviewee put it, "open slather." Now, the organisation operates from a licence and regulations are set by a

number of government departments. According to a quality manager, this effectively sets a “base line beyond which we want to get into value adding, in terms of customer focus, and that is the commercial aspect of the business that we are trying to grow and develop.”

Moreover, the product must satisfy stringent public health and quality standards, and it was noted that the organisation’s preferred operational approach has always been strongly standardised and engineering based. That is why, according to one middle manager, the organisation has got a “rock solid reputation in our asset construction because of those standards.”

As quality is seen as an important element in the organisational goals, so Total Quality Management is seen as an important element in achieving such goals. The organisation has been ‘in quality’ for about a decade. The move to focus on quality was introduced at a time when the organisation was still a non-corporatised public service entity. At that time, the organisation had a ‘soft’ TQM focus. That is, a greater emphasis was placed on the human resource side of the equation and included a greater use of cross functional work teams. Currently, the focus is more on ‘hard’ TQM, where, according to the quality manager, “it is now a performance measured and outcome focused systematic QA approach.”

### Definition of Quality

Interviewees saw ‘quality’ at Utilityco in generally clear and well identified terms. Representative of the general view is the following observation:

I’d define quality as doing it right the first time for the lowest possible cost and to the level or standard of goods and services that the customer expects. It is what we are trying to do here: to do it right the first time to the level and cost the customer expects. An important task for all of us is to look for ways to reduce that cost. It may be overheads, or bringing in better systems that can deliver products and services more efficiently.

Further, the organisation is operating under a set of quality principles initiated a year ago which is aimed at making Utilityco the best at what they do. The superlative 'best' was seen to encompass a number of dimensions:

It is offering real value for money, making sure that we are very efficient and effective in our processes, and we get to know our customers and work with them, and we are preferred by choice. That is, our customers *want* to come to us. This is more and more applicable now there are competitors entering the field, although in the foreseeable future, [Utilityco] would be the dominant player in this state. The best way of getting rid of the competition is by making them a partner, isn't it? [laughing]

Nonetheless, such ideas are not accepted uncritically at Utilityco. In general terms, the views on quality as a concept are fairly consistent. One interviewee noted that "there has been a number of publications over the last few years questioning the benefits of quality." Indeed, another interviewee noted that three or four years ago, "quality was getting a bad name, which still remains with many senior executives here - a lot of money spent on it but with little to show for it." However, the overall approach to quality has evolved in this time, such that the organisation appears to have a much more streamlined approach now, where quality will not be 'sold' unless it has value, is streamlined and allows innovation. Interestingly, the term 'quality' has all but been removed from Utilityco publications. The quality system is now referred to as the 'management system' and similar terms.

Interviewees identified a further key limitation in this vision of quality in regard to the perceptions of the attitudes of senior management. For example, a quality manager observed that:

quality at Utilityco tends to be an upwards movement, rather than starting at the top level as could be expected in other organisations. The perception [by the interviewee] is that executive levels could improve their attitude and approach to quality.

The interviewee noted that the lower levels of the organisation were:

pushing quality up to senior management and we are saying to them continuously that they should get on board. The rest of us are doing it and we are going to be fighting a harder battle if it is not done. They [senior management] have got to recognise the benefits and business acumen that would be brought into the corporation if we do embrace quality throughout. I think we are winning that battle, slowly.

In reinforcing this view on the perceived tardiness of senior management in embracing quality and a resultant lack of a coordinated approach to the issue, another interviewee observed that:

We've had changes of CEOs, and when we started implementing quality in the early 1990s it was a top down driven thing. However, now it is currently driven from the bottom up, or at least middle management is driving it. Especially the middle management that has been around and has seen the benefits of it, the principles, processes and tools of it. So our biggest concern as a group, and we've been working on this for some time, is that there is no centralised structured approach. It is very fragmented at the moment and this is where we feel we are losing possible economies in terms of resources required to keep the thing going.

A central concern of interviewees in this was the wastefulness and "double dipping of resources" where divisions within the organisation and individuals within those divisions were implementing quality programs without any appreciable central coordination. As one interviewee put it, "you end up fighting each other over resources - we try to join forces at this level [middle management] but it should be driven from the top down to make sure of proper coordination."

### Role of Environment

Although some partnering with external entities is apparent from the evidence, through profit sharing alliance contracts with major suppliers for the service and maintenance of equipment in particular, the general view is that the environment is something separate to the organisation. Typical of this view is the assessment by a



middle manager that "we definitely think of suppliers as those who give us things, we think of us as being the middle man, and the customer as someone 'down there'." One of the interviewees, a middle manager, is experiencing difficulty in getting the message to his service staff that customers meant not only those external to the organisation, but also the person sitting next to them. The interviewee noted further that such a message was fundamental to the implementation of TQM but was still not well embraced by staff. He noted that the difficulties stemmed from "the way quality was put in the first place, the way they were taught it." Indeed, the licence under which Utilityco operates measures how the organisation deals with measuring organisational effectiveness with external customers, such as through response times for general correspondence, although such measurement for internal customers appears largely overlooked.

The answer to these limitations is perceived to be in the implementation of the quality system (ISO 9001) and the environmental standard ISO 14000, and non-externally audited versions of other Australian standards, namely AS 4801 (Occupational Safety and Health), AS 3806 (Risk Management) and AS 4806 (Compliance Standard). It was argued that these five standards are critical points which, when implemented, will force Utilityco to:

look at both internal and external customers and suppliers, and break down the perceived and real barriers. When people talk of customers, they will be talking about someone in here or someone out there, rather than talking about only outside customers.

In terms of external suppliers, the organisation begins with the old public service 'three tenders' principle in new product areas, but then will move to reduce the number of suppliers in supply categories where relationships have developed. There is also a change apparent in the organisational view of the broader environment. For example, an interviewee observed that:

I think that our organisation has moved from one where we thought of the solution ourselves to one where we are consulting with the community. It is not really a

production as against market focus. Rather, it is the focus of bringing the community into the discussion when developing options.

### Role of Management

The general observations made by the interviewees that the rank and file membership of Utilityco is dragging the higher management into TQM was developed further in the discussions concerning the role played by management. Senior management are apparently interested in leading the change, though only to a point. Where that point is can be seen in the observation of a Utilityco middle manager:

My general manager is part of the corporate executive. As part of the performance agreement, the division is to be certified [to certain ISO standards] within a certain time frame. The general manager and other corporate executives are there, and active, and realise it has to be done, but the view of the general manager is very much like 'here you are [name of interviewee], I've made the objective and target, now, carry it out.' I've pushed him and pushed him over the last few years saying we should do this. We have to prove to customers that we are doing things right, and delivering a consistent quality of [the product]. If we get the 'five ticks' [a reference to the Standards Australia logo], customers will be able to see this. But I'm not sure if my boss actually knew or even appreciated what was involved in doing it. Yes, he came up with the objectives and deadline, but a few weeks later I went back to him and asked for a quarter of a million dollars and three people to do it, and his jaw dropped. I said that we've got [a significant number of] regions and 1200 people in the division, so come on, where's the training and so on. He came to the party, although he didn't quite understand that quality was separate from a marketing factor.

From the comments of all interviewees, there appears a degree of superficiality in the role played by senior management in the implementation of quality management at Utilityco. For example, another middle manager noted that "a lot of the quality principles happen throughout the organisation through individual good luck." The implementation of quality management was "never coordinated" and that, from the many discussions with general managers that the interviewee had, he doubted whether:

they have actually sat back, looked at the quality principles, got out the strategic plan and asked themselves the question: 'have we addressed these things?'. It is more based upon the crisis of the day that has driven them or customer feedback. It's not a textbook approach. To the senior managers, it is a business management principle, not a quality management principle.

The reasons for this attitude by senior management are complex, and interviewees had some difficulty in convincingly supporting their views. One interviewee proffered that part of the reason was cultural, and that it was essentially part of the 'engineering' baggage of the organisation. However, in terms of quality, this could be seen as a strength rather than a weakness because it ensures that important health and other standards are kept. In other words, quality has become part of the 'air the organisation breathes' and not requisite of special treatment. Indeed, one interviewee noted that:

I think it is the engineering culture that has in many ways made it easy to put in quality, because people are doing it [quality procedures], but they [team members] just don't understand the structure or the system. When writing up procedures, you just want to capture what they are doing. You don't want to change it very much, maybe here or there. For example, give them a form to sign to say they have done this or that, a checklist and a record to prove that it has been done. In other words, provide an audit trail. But it is not changing the way they do it, and that has made it simple to implement it in many ways.

Interestingly, responsibility for poor quality was seen as a middle management responsibility both at first instance and afterwards, rather than a senior management responsibility in getting the system settings right to obviate such problems. Resolution of quality problems is done by corrective action team meetings which gather together the stake-holders involved in the process. Root causes are examined and a remedial plan is developed jointly. There is a responsible senior manager assigned in an oversight role, but the actual identification and rectification process is the job of a middle manager. According to the quality manager, "probably ninety five percent of quality problems are

handled through the corrective action process, although team members don't know that they are doing the corrective action process.”

### Role of Employees

Utilityco uses team based structures for problem solving and brain storming involving employees at each level. However, the use of cross functional teams is no longer emphasised. Team meetings are seen to serve a useful purpose where, according to a middle manager, the requirement is “to meet and at least communicate, and in our division we've made sure that there is a continuous improvement focus in those meetings to pick up on the customer complaints and corrective action.” A result of downsizing and the consequential reduction of staff numbers in the customer services division is an apparent realisation by many team members that teams provide benefits in addition to enhanced problem solving and better communication.

According to a customer services middle manager, service operatives “are more reliant on other team members to give the information they need on time and in the required format so that they can do their job more efficiently.” Further, “quality has been enhanced and this is recognised by employees, at least to the extent that quality procedures are seen as a means of survival.” Although there is an attempt by senior management to drive more individual accountability through the organisation, customer service employees still tend to rely on teams as a support base. Not surprisingly, the issue of team empowerment was approached by this interviewee in political rather than technical or work task terms. The customer services division, along with others, is seen as a “political animal” and the issue of empowering team members, it was argued, could only be meaningful if discussed in terms of political (or, rather, implied) empowerment. Accordingly:

Politics plays an important part of any organisation, and you have to be careful what you say to whom or about whom. Empowerment itself is not really an issue. I've been asking my General Manager over the past year and a half for 'statements of empowerment' whereby employees get a signed form stating which decisions they can and cannot make. It has not happened because of the politics of the thing, but my experience tells me that the General Manager will back the decisions of staff and will

support his people. He will not formally empower people, but the support in decision making is there. He's not going to hit you for making a decision, only if you don't make a decision. The wrong decision based on an assessment of the facts known at the time doesn't matter. Just make a decision and get the customer on side.

It was felt that the empowerment of employees in teams could go further. One interviewee noted that they are operating in a "risk averse environment" currently, although at the same time, a strong push for innovation is also apparent in the organisation. Interviewees had difficulty in reconciling the two divergent interests, although an observation by a Utilityco middle manager helps to place matters in perspective:

I always have trouble with empowerment because I think we are never going to get there. But the level of delegated responsibility is broadened with management systems in place. Senior management tend to become more comfortable because there's a structure, and some boundaries within which to conform. They have realised they've added [unproductively] to the process by putting their nose in at times. The other driver is that we are a much leaner organisation, so senior management just hasn't got the time to get involved. Therefore, they need to rely on people below them to make decisions that aren't too risky.

Hence, there is a reliance on employees by senior management to make important (but non-strategic) decisions for themselves in relation to the work they do. It was apparent from comments made by the interviewees that strategic decisions come down from senior management without input from below. Indeed, many people are seen to be in 'comfort zones' and resist making more decisions than absolutely demanded by their job descriptions. In relation to the effect of a quality system on the perception of empowerment by employees, a middle manager observed the following:

This is where the quality system comes into it at least in customer services. We have the corporate incident management coordinator, who manages all the incidents that may happen around the state. When I first started writing up a process of what he does, as part of the quality procedures, it came to asking him about what authority he

had to do anything. There was a big hole there, a big blank - he wasn't sure what authority he had to do anything or instigate things other than if he received a problem report, he had to report it to the managing director or general manager of the division. But when I began to investigate it, not only was the general manager relying on him to make decisions, but also the managing director. I made him realise that he did have a lot of authority, albeit unexpressed or implicit. His comment to me, after this revelation, was "Hey, I *can* make a decision".

### Structural Rationality

There was general agreement amongst interviewees that the organisational structure in terms of patterns of communication and reporting requirements left much to be desired. With candour, one middle management interviewee noted that "personally, I have to say that the organisational structure sucks." The structural problems run deep, and are keenly felt at the middle and lower levels in the organisation. Another interviewee offered the following explanation:

I think with the communication aspect, the critical communication is top down and we have very strict reporting guidelines back to the corporate executive and the board. That is the legacy of having a matrix organisational structure [by matrix, the interviewee means divisional structure]. When the customer service guys have a [major product] quality problem, it has to go up to corporate level before coming back down to my guys in the technical division who have the expertise. There is no direct conduit. So what happens is there's a reaction up there [at senior management level], such as 'why hasn't this been fixed - what's happening?' or the like. So it gets back to the empowerment thing. The net result should be that the customer has a more responsive service and a 'fix' for their problem, but instead we have to report upwards in a very structured way and rely on the individuals having a relationship between each other to sort it out at an informal level.

Therefore, it appears that the formal organisation depends, to a significant extent, on the informal organisation to get a lot of the communication through.

## Philosophy Towards Change

Utilityco has apparently experienced significant change over the past decade, not the least of which was the corporatisation of the organisation a few years ago. Within these major structural changes, development has also been fast paced. However, observations indicate that a continuous change mentality may not have yielded entirely positive results. For example, one middle manager made the following observation:

I think Utilityco changes for change sake. We don't actually sit back and really consider this problem. The vibes we are getting from the board and senior management is something like 'I don't care what you do, as long as you seem to be changing and improving'. But sometimes if you haven't done the homework, you are uncertain as to what the nature and impact of that change is going to be. Senior management are really looking at it from a time-line oriented kind of way. But it is not planned change!! It is really saying, "we want change and we want it to happen by then and you guys go away and do it". We want these outcomes in terms of bottom line performance, or to be achieved within such and such a time frame. So we are told to just go away and make the change and the expectation is that you will meet these targets without really structuring it properly beforehand. I'm involved in a change project right now, so it is close to my heart, but change is done at a micro level. Each division tends to do its own thing. We really need to look at change at a macro level.

Furthermore, the human dimension also needs to be considered in the process of change, especially in the longer term. Another interviewee observed the following:

I guess it gets back to job security. It's not there any more. People want job security, and they see change as the enemy. A lot of change is not like that - it is about 'growing'. It just needs to be explained properly. The philosophy of change in the organisation is pretty good [as in benevolent]. A lot of the senior managers have a very good philosophy towards change. If you can prove your case and show a benefit, the rate of return and all that, then they have no problems with it. You can put it into practice if you can 'show them the money'. But the intangible aspects of change are difficult to grasp. The trouble is that we haven't been in quality long

enough to show whether the change has been good or bad. We are catching up to where we should have been 10 years ago.

The limitations identified in the 'role of management' discussion above recur under philosophy towards change. As part of the implementation, team members are urged to seek better ways of doing things. However, there is no central guiding hand in this process. According to one interviewee, "a division can go away and change regardless of what the other divisions think and that makes it very difficult to act independently from each other."

## **Bevco**

### **Organisational Background**

Bevco is a medium to large sized organisation. It is the WA division of a large sized Australian manufacturing franchisee. The Bevco manufacturing operation in WA employs several hundred people and is centralised in one location in Perth. In WA, Bevco manufactures and distributes the products of a very large worldwide food and beverage supply organisation. It has a mature quality system based on the franchisor's specifications. However, Bevco is working towards third party Quality Assurance certification to add greater authority to its quality efforts. The organisation is a relative latecomer to TQM, as it began actively implementing it from the late 1990s onwards.

### **Organisational Goals**

The mission of the company is to provide top quality products at an affordable price to consumers across all walks of life. This mission notwithstanding, interviewees were in general agreement that the overarching goal of the organisation, from which everything else flows, is the provision of a sound return on investment to shareholders. The following comments from a quality manager exemplify this perception:

At the top level, the stuff that the company puts out is related to increasing shareholder value. And why does the company exist? Mainly to do that. So much of what we do is aimed towards that end. So leading on from that, the rest of the goals and aims are there to support the goal of increasing shareholder value. It is about adding value to the shareholders' investment and achieving the other goals along the



way. For example, to be the best beverage manufacturer, having the highest quality and very good cost control, and being seen as a very responsible corporate citizen.

This is reinforced by the views of a production line supervisor:

Clearly, the ultimate goal is to provide maximum shareholder value. And the way we achieve that is through people development. So, the final goal is to create and provide maximum shareholder value. We achieve this goal through quality products. We achieve quality products by having skilled people and providing training to get people to that skill level. Looking for ways of doing things better, continuous improvement and those kinds of things. To get that final goal is, at the end of the day, to get that profit. To provide maximum shareholder value.

### Definition of Quality

Most definitions provided by interviewees at Bevco related to the conventional 'meeting or exceeding customer expectations' approach to quality. According to this wisdom, a standard is developed from objectively ascertained customer specifications. Production processes are created in which procedures conform to this standard, and operators follow the required procedures. Failure to comply with procedures is indicative of a non conformance with the required standard. The following comments by a production supervisor exemplify this perception:

Quality is 'repeat-ability'. Meeting the customers' expectations every time. It is the measure of how closely we meet the target, which is based on the standard set for us by our customers. What they expect. The customers' requirements are known to us by a variety of means: number of complaints received, polling, sale figures and so on. Sales is an obvious indicator as to whether the product is accepted by our customer public.

This is further reinforced by the following observation from a production team leader about the notion of quality:

I suppose the first word that would come to mind would be consistency, but consistent to what? A standard. So consistently meeting or exceeding that standard is what quality is all about. And I suppose with quality, it's something you continuously review. There is a chap upstairs and all he does is deal with customer complaints, and map out those customer complaints. Some of the ones can be a seasonal factor, others could arguably be out of our control, such as rough handling by distributors or consumers. One complaint is one too many.

However, the quality manager noted that the definition of quality is a relative thing:

For me, quality is a range of things. It is personal to the individual describing it. For one person, it might be simply fitness for use. Does it do the job to your customer's expectation? If it meets that expectation, then it is quality. If it doesn't meet that expectation, then something about it doesn't have the right quality. Whatever we use or consume must meet our expectations. If it meets and surpasses the expectation, people are happy with the quality. It is good enough. If you want to get into more definitions, to me quality is not 'over the top' or 'more than is necessary'. Why would you drive around in a Rolls Royce when a Holden will do exactly the same job and will meet all your requirements. The quality aspect for the Rolls Royce, I perceive, would be more of a prestige thing. Therefore, quality to me is answering the following question in the affirmative: are we meeting the customer's expectations well and satisfying them?

### Role of Environment

The views of interviewees indicate that it is virtually axiomatic and an unassailable conventional wisdom that the company has a strong customer focus. The quality manager stated that, to him, customers are at the highest point in Bevco's thinking. Indeed, "in the scheme of things, customers don't come at the end of the line. We should be looking at what our customers and consumers really want. This moves away from a production focus." However, congenial supplier and retail customer relationships appear to be another story. The quality manager gave the following explanation:

There are a lot more national supply deals now getting the very best prices for the group. So over the years, it has got more and more centralised to the point where we do major deals with suppliers that may not work perfectly for everyone of our operations, but the overall benefit to our business is there. So, if anything, we've got less direct influence over suppliers locally. In a small place like WA, where everything is a long way away, having direct influence over suppliers is desirable. Whilst Bevco talks about how important it is to work with suppliers, as a company we are still using a big stick approach. It is because of the buying power. We certainly don't have the best reputation for being absolutely fair with partnerships. I believe that is how we are perceived. And it is the same way we would talk about other businesses, like the very large food stores, with them treating us the same way as their supplier.

### Role of Management

The role of management at Bevco is seen as active and 'hands on' in attempting to drive the principles and practices of Total Quality Management throughout the organisation. Although such practices are fairly recent, management has made significant advances in developing the quality system, creating team based problem solving and, to a point, freeing up lines of communication throughout the organisation. The quality manager provided the following insight:

The role of management in the implementation of quality can't be anything else but very, very active. Without management really breathing it, and living it and trying to disseminate it to all levels of the business, it doesn't happen. If there isn't an example higher up to follow, it dies. So you can't expect people to be that open and honest with each other to the point where they are living the talk. I know it sounds cliched, but if the top level really doesn't live it and breathe it and 'walk the talk', then it just won't happen. At Bevco, we have varying levels of commitment and success. We are very successful in some areas, and we have a lot of work to do in other areas. But we, as a business and the organisation in WA, have come a long way over the last several years. I can say that from personal experience, from observing whether people are honest in what they feel about things. And you know when a culture starts

to change and people say things because they mean it rather than just being the politically right thing to say.

### Role of Employees

Bevco employees are seen by the interviewees as active agents in the implementation of TQM. Within the framework set by Bevco management, team members are empowered to make decisions relevant to their part of the work process. A production supervisor noted that “employees are the ones making the product and are the key to continuous improvement, as they are the people who are in the best position to see ways of improving the process.” The introduction of teams over the past few years has seen a fundamental shift in the culture of the organisation. For example, a production team leader made the following observation:

Quality is not going to work without employee commitment. They are the ones that might not make the rules but they implement them and make them happen. There is far more awareness now than two to three years ago, and I'd like to think there are quite a few people out there proud to be part of Bevco. It is a part of the culture change at Bevco. In the last year or so, team leaders have come about. In the past, it was always leading hands, and you had your leading hands in every shop floor section. It was very 'industrial', very shop floor and blue collar. Whereas this culture change has happened in the last two years and the role of the team leader is quite different to that of the leading hand.

### Structural Rationality

Interviewees were less enthusiastic about the patterns of communication at Bevco than they were about the developments in the roles of management and employees. According to the quality manager, Bevco “still leans on the directive side, even though we have made progress in allowing people to have ownership of certain parts of the business.” However, the general observation is that the traditional Bevco pyramid has got flatter because of the introduction of TQM, and that more people are responsible for their actions than before. The quality manager described the degrees of decision making permitted in teams to facilitate the orderly accomplishment of tasks in the following terms:

Within our teams, we have developed a matrix of different responsibilities. One area might be phone calls - everything to do with that can be decided by the team or individuals. There might be other tasks that require joint agreement, where management and the team have to agree. There might be one which is consultative, where the matter is very important, and typically it might have to be a management decision alone. In these matters, management will consult with team members, but at the end of the day, they will make the decision. And there might be yet others which are management decisions only, without consultation. So one of the mistakes I think we made in the early days, and hopefully have now corrected, was that we didn't know where to draw the boundaries.

### Philosophy Towards Change

As a result of Total Quality Management, Bevco is seen by several of the interviewees to have moved from a traditional reactive approach to change to a planned and adaptive mode where continuous improvement is emphasised. This view is illustrated by a production team leader:

In a nutshell, the view of change here is continuous improvement. Continuous improvement has been one of the buzzwords of 1990s at Bevco, and things are implemented on a fairly regular basis to prove that and our results do show that. As a quick answer, I would say that continuous improvement is Bevco's philosophy towards change. It is driven firmly through the organisation by senior management.

However, the quality manager was more reserved:

At times I think we are very reactive, and push change harder than we need to. We try to make it something that people can cope with. A lot of people have a bit of difficulty with change, especially when it is too rapid. And some people say, if you are going to make changes, then do it quickly - bang! done! But you get a lot of fallout from that. And it is just not worth the trouble. Unless you can bring people with you, you are going to have a lot more trouble than absolutely necessary, or you would have had, had you done it smarter. Some people will never want life to change

and will cling on to the past. Generally, we try to take it at a steadier pace. When you start to see the bigger picture of where we are going with our quality training, developing the support systems to allow the change, you know we are getting somewhere. We are getting smarter at it. But we weren't very good at it until recently. The national strategy for developing people to be able to handle change is what is starting to make a difference. Without that support, there's not a lot of point in trying to make these big changes when people don't have the skills or the understanding of 'the why' of it all. When we tried to make early changes [from the old industrial system] to teams and teamwork, it was doomed to failure because people didn't have the level of understanding and they were often confused about the process. It takes time for people to believe in the necessity for change and to understand it. That is a function of education and the way the cultural change is going as well.

## Summary

This chapter has attempted to cast a broad net over the perceptions and beliefs of thirty interviewees in relation to the implementation of TQM in five organisations. The evidence presented was grouped first by organisation and then by each of the seven theoretical dimensions of TQM identified in the literature. In using this framework, the evidence fell within readily digestible categories. When arranged within each of the dimensions, the findings provide a structured resource with which an assessment of the nature of applied TQM, in terms of the mechanistic and organismic models, can be made.

Wherever possible, the words of the interviewees have been used to support the narrative in the chapter. In a number of areas, some significant differences of opinion emerged, which are the natural consequence of differing experiences, preconceptions and levels of understanding. Views were assessed in terms of internal consistency and compared with other sources of evidence. In most cases, a consistent and convincing general view prevailed, although some dissenting views gave indications of emerging themes, especially when matched with similar views in other organisations.

Indeed, wherever practical, alternative viewpoints were used in the narrative to counterpoint any general consensus that may have otherwise emerged. The alternative viewpoints provided important qualifications and served as sobering reminders to the researcher that social interactions often involve complex issues. Overall, the results of the research indicate fertile ground for analysis and discussion, which is the purpose of the next chapter.

## CHAPTER 5

### Analysis and Conclusions

#### Introduction

This chapter considers two concluding aspects of the study. The first aspect is dealt with under the discussion and interpretation sections following this introduction. In the previous chapter, the findings were presented in a distilled narrative, a purpose of which is to provide the reader with an awareness and familiarity of the broad range of views expressed by the research participants. In this chapter, the findings are discussed and interpreted in abstracted form. The discussion section provides an analysis of the findings of the research in terms of the doctrine of TQM and the two dominant models of organisation. The discussion is structured in accordance with the seven dimensions of TQM which are central to the arguments presented in this research and which provide the essence of its theoretical framework. This structure also permits ready reference from the discussion to corresponding aspects in the narrative in Chapter 4. Under each dimension, the relevant theoretical aspects of the TQM doctrine and the dominant models are discussed and then compared with the actual findings of the research. In the interpretation section, responses to the research questions are proposed and justified, and possible explanations for the results, especially in terms of themes emerging from analysis of the evidence, are offered.

The second and last aspect of Chapter 5 relates to the research conclusions, possible limitations and recommendations. The conclusion first provides a summary of the study and then synthesises, in broad terms, the main threads of the argument and the findings of the report. The conclusion serves to highlight the contribution by this study to the limited but growing body of empirical research on the implementation of TQM. Potential shortcomings in the research framework and methodology, and the steps taken to reduce or obviate the effect of these are then described and justified in the limitations section. The chapter ends with a section in which recommendations for further research are proposed. The recommendations chiefly relate to an expanded and ongoing role for the research conducted to date. An opportunity to take advantage of the numerous possibilities identified by Spencer (1994) is also highlighted in terms of certain cultural perspectives in interpreting the implementation of TQM.



## Discussion

### Organisational Goals

Spencer (1994, p. 447) noted that the dominant priority in the philosophy of TQM is goal enhancement. The clear goal to be enhanced under the TQM doctrine, at least according to the conventional wisdom, is to improve quality. It is a goal that "is vital for the long term effectiveness and survival" of the organisation (Spencer, 1994, p.447). A central justification for this is that by the improvement of quality, overall costs are lowered and the achievement of other organisational goals is facilitated (Spencer, 1994, p. 447). Indeed, quality is the key which unlocks everything else, including productivity, efficiency and financial returns. The notion that quality provides a winning edge which ensures organisational survival is intertwined with the argument often made in the literature that contemporary organisations face increasing environmental uncertainty and increasingly competitive global markets (for example, Beyer, Ashmos & Osborn, 1997; Bounds, Yorks, Adams & Ranney, 1994; Walton, 1989; Walton, 1990).

Similarly, the organismic perspective sees goal attainment as the organisation's prime orientation, but in terms of the broader goal of system continuance (that is, survival) which displaces performance and efficiency goals (Thompson, cited in Spencer, 1994, p. 455). Although the need to make a profit is not ignored, the organisational obedience to 'mammon' is seen to serve only as a means of survival rather than as the end goal *per se* (Spencer, 1994, p. 455). Therefore, evidence which indicates that long term organisational survival, as reflected by quality improvement, is prized above short term financial goals, as reflected by efficiency and productivity, shows a 'push' towards the organismic model in the implementation of TQM.

Like the organismic perspective, a key tenet of the mechanistic view of organisations is that an organisation's *raison d'être* is to attain goals. However, unlike the organismic approach, the main aim is to achieve a performance goal or goals, which in practice relates to concerns about efficiency and productivity (Spencer, 1994, p. 449). Spencer (1994, p. 449) has suggested that such a view "has implications for both employees and organisations." Indeed, the relationship between the organisation and its

employees is expressed in legal terms, bound by the law of contract. Typical of the unitarist view, employees are expected to subordinate “personal interests and needs for the benefit of the organisation” (Spencer, 1994, p. 449). Hence, evidence which indicates that short term financial goals, as reflected by efficiency and productivity, are prized above a longer term goal of organisational survival, as reflected by quality improvement, shows a ‘pull’ towards the mechanistic model in the implementation of TQM.

From the evidence, the results in this dimension are clearly polarised. The evidence indicates that the goals in three of the organisations are strongly influenced by the mechanistic model. In Steelco, Utilityco and Bevco, organisational goals are expressed unequivocally in terms of increasing or maximising shareholder return, corporate profitability or overall efficiency. Quality improvement is seen as a supportive and necessary, but nonetheless secondary, element in organisational performance. In each of these organisations, energies are focussed primarily on performance goal setting, adherence to specific work procedures, and outcomes rather than processes. Measurement is by key performance indicators set by management, and conformance to organisational norms and requirements is couched in legalistic terms.

On the other hand, both Truckco and Electrico show convincing evidence of a strong push towards the organismic model in the implementation of their versions of TQM. Long term survival through growth and the development of reputations for quality are emphasised over short term performance goals. Here, the conventional TQM wisdom that a focus on quality leads to long term survival and performance appears strongly held. In Truckco, long term survival was expressed in terms of the traditional values of the organisation, long term prospects through growth in market share and the maintenance of market leadership. At Electrico, a flexible and expanding product range tailored to customers’ individual requirements and an espoused belief in the customer as the organisational *raison d’etre*, convincingly showed strong organismic propensities. The results for the ‘organisational goals’ dimension are summarised in Table 5.1 (below).

Table 5.1

Summary of Research Results in Terms of Organisational Goals

<b>Org. goals</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	long term survival through growth; reputation for quality seen as essential for survival; improved quality leads to financial results	focus on market share, and remaining as market leaders; emphasis of long term prospects, continuity	goals endorsed, although a minority perceived prime goal as profit underlined by quality in a broad sense	strong push towards organismic model
Steelco	shareholder return by being the preferred supplier in the provision of quality products and services	emphasis on training, systems, and quality procedures to ensure a bottom line return whilst ensuring workforce is safe	goals endorsed, with safety a prime operational qualification to shareholder return	strong pull towards mechanistic model
Electrico	long term survival by quality reputation; thorough customer focus	“customers are reason for being”; reflected in mission statement and highly flexible product range	goals endorsed; some believe that org is too customer driven for its own good	strong push towards organismic model
Utilityco	profitable operation in providing utility services; a quality focus supports this	hard TQM evident - performance measured and outcome focused	goals endorsed, but serious limitations because of statutory restrictions	strong pull towards mechanistic model
Bevco	increasing/maximising shareholder value; a quality focus supports this	KPIs, goal setting and feedback on performance support the top level goals	goals endorsed, incremental changes only	strong pull towards mechanistic model

## Definition of Quality

According to Spencer (1994, p. 447), the conventional wisdom of TQM defines quality as satisfying or delighting the customer. Central to this definition is the notion that all efforts to improve quality must begin, and end, with an appreciation of customer wants, needs, tastes and perceptions (Spencer, 1994, p.447). Indeed, Eisman (cited in Spencer, 1994, p. 450) suggested that if an organisation is not providing something which the customer finds useful, everything else that is done to provide that something does not really matter.

Quality, as defined in terms of the organismic model, is “perfectly compatible” with the definition of quality under the TQM doctrine (Spencer, 1994, p. 456). From the organismic viewpoint, quality (along with all other organisational activities) is determined by the careful and detailed assessment of environmental forces, movements and actions (Spencer, 1994, p. 456). Clearly, the actions and movements of customers are of key concern under the organismic perspective. Hence, evidence which indicates that quality is defined in terms of satisfying or delighting customers by the conformance to standards set in accordance with customer expectations shows a ‘push’ towards the organismic model in the implementation of TQM.

When defined in mechanistic terms, quality is those inputs, outputs and actions which conform to standards that have been laid down by the organisation (Spencer, 1994, p. 450). Certainly, internally derived standards may be portrayed as being customer driven, but these will reflect presumptions made by the organisation about what satisfies and delights customers. The internal focus of the mechanistic viewpoint logically leads to standards which are set in isolation to the environment and determined by the contemplation of predominantly internal factors only (Spencer, 1994, p. 450). Thus, evidence which indicates that quality is defined in terms of the conformance to internally set standards in the absence of a meaningful assessment of customer expectations shows a ‘pull’ towards the mechanistic model in the implementation of TQM.

The results in terms of the definition of quality are less distinctively separated than in the organisational goal dimension. Although evidence from Steelco, Utilityco and Bevco indicated that the mechanistic model was influential, only Bevco showed an unambiguously strong result. At Bevco, quality is perceived in terms of the conformance to an internally derived standard where customer expectations are clearly recognised but are seen more in abstract rather than in embodied terms. In other words, although the customer (or more appropriately, the consumer) was seen as 'king' at Bevco, the evidence suggested that the organisation is seen to lead, and the customer to follow, rather than the reverse. Whilst the organisation responds well to any consumer complaints and has a sophisticated survey system in place, the overall effect is one of an internal focus to perceptions of quality. The phenomenon can be best described as the organisation's expectations of customer expectations. This is explicable in view of the long established and powerful image based approach to marketing, and a limited though highly recognisable product range. This aspect was seen as a point of departure from the other two organisations with identifiable, though intermediate mechanistic traits in this dimension, Utilityco and Steelco. Whilst implacably conformist and internally standardised, some mechanisms were in place in these organisations to respond in a meaningful way to the broad expectations of the customer base.

On the other hand, both Truckco and Electrico exhibited strong or relatively strong influences by the organismic model. Quality at both organisations is expressed in terms of at least meeting customers' expectations. These expectations are not generally presumed by the organisations, but are carefully and comprehensively identified through close and continual contact with the end users. Interestingly, 'delighting' customers was not seen as a particularly useful element in the definition of quality at Electrico, as such excessive satisfaction of customers' needs and wants may ultimately prove an expensive hindrance or wasteful. The results for the 'definition of quality' dimension are summarised in Table 5.2 (below).

Table 5.2

## Summary of Research Results in Terms of Definition of Quality

<b>Definition of quality</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	meeting or exceeding customer expectations	continual efforts made to assess and map customer expectations; after sales surveys identify customer satisfaction levels and requirements	difficulty in fixing and identifying perceptions of people - quality is in the eye of the beholder	strong push towards organismic model
Steelco	conformance to industry and internally set standards, but with recognition of customer expectations	KPIs indicate overall conformance to standard; QA procedures; training to identify customer requirements	strong criticism at Steelco South of external 'quality barons' creating an industry and hijacking the real vision and meaning of quality	intermediate pull towards mechanistic model
Electrico	meeting customer expectations according to stated customer requirements; total quality, not just of product	aim to meet expectations but not delight customers - may be counter-productive; system in place to identify customer expectations	maybe too flexible - has resulted in vast product range	intermediate to strong push towards organismic model
Utilityco	conformance to internally set standards but customer expectations recognised	internal systems focus evident; engineering culture ensures standardised approach to quality	total quality is presently a fragmented approach, generally reliant on middle management commitment	intermediate pull towards mechanistic model
Bevco	conformance to an internally derived product and service standard; alignment to customer expectations assumed	clear indication of internally set standards; influence of actual customer expectations on standards problematic	greater utilisation of feedback from customers to improve quality	strong pull towards mechanistic model

## Role and Nature of Environment

As an important implication of the TQM doctrine, the demarcation between the organisation and its environment is indistinct, so that organisational stakeholders previously considered as a part of the environment, such as suppliers and customers, are regarded as intrinsic to the operational processes of the organisation (Spencer, 1994, p. 447). This leads to notions of a substantial blurring of the boundaries between an organisation and its environment or even the “boundary-less organisation”, which Spencer (1994, p. 450) suggested has “permeated recent TQM literature.”

The organismic approach sees a continuous interaction between organisations and their environments where organisations are not seen as autonomous entities. Instead, they have an interdependence with environmental entities whose presence and activities are often beyond organisational control and prediction (Thompson, cited in Spencer, 1994, p. 456). Indeed, Deming’s proposition that customers and suppliers are not only an essential part of, but intrinsic to organisational processes (Deming, 1986; Walton, 1989; Walton, 1990) is consonant with the organismic perspective. Evidence which indicates that the environment is seen to be intrinsic to, or at least an important part of organisational processes shows a ‘push’ towards the organismic model in the implementation of TQM.

However, the mechanistic perspective sees the relationship between the organisation and its environment as arm’s length in nature. Spencer (1994, p. 450) argued that this is an inevitable result of an internal focus by the organisation on its own processes. This author further argues that Deming’s proposition that the customers and suppliers are intrinsic to organisational processes is merely a reframing of the internal viewpoint so as to “incorporate more constituents, but the focal point (of the organisation’s technical core) remains the same” (Spencer, 1994, p. 450). Evidence which indicates an organisational perception of the environment as something outside and not intrinsic to organisational processes shows that the implementation of TQM has been ‘pulled’ towards the mechanistic perspective.

Only Truckco showed any evidence of a strong influence by either of the mental models. Here, a strong push towards the organismic model is evident through the development of close person-to-person relationships with customers and preferred suppliers by organisational personnel. Accordingly, these 'external' entities are seen as an essential part of the organisation's processes and the evidence suggests that this belief is deeply embedded rather than merely 'lip serviced'. The evidence of the effect of the organismic model on Electrico is less convincing. Although close relationships with customers appear the norm, relations with suppliers and especially amongst internal entities are more problematic. Accordingly, the perception of a smooth and seamless interface with the environment and interdependent internal processes is not fully evident at Electrico. Nonetheless, on balance, greater influence by the organismic rather than the mechanistic model is apparent in the organisation in this dimension.

Towards the mechanistic end of the scale are Utilityco and Bevco, with both showing an intermediate pull towards the machine model. At Bevco, whilst end consumers are virtually deified, centralised supplier and retail customer relationships are very much on a legalistic 'take no prisoners' basis. Further, convincing evidence exists of sub-cultural differences caused by functional specialisation within the organisation which, despite extensive use of teams and teamwork, still appear significant. Similarly, at Utilityco, supplier relationships, with only a few exceptions, remain on an arm's length and legalistic basis, although the organisation now engages in far greater consultation with end users and the community than it did even five years ago in regard to its activities and delivery of services. Further, significant use of external benchmarking indicated an active monitoring and measurement of environmental forces on the organisation.

A most unusual and perhaps enlightening result emerges when the evidence from Steelco is considered. Whilst the other four organisations (as defined and distinguished from any parent or sibling organisations in Chapter 3) are relatively centralised in one location each, Steelco is decentralised across several locations. Evidence was collected at two of these locations, Steelco East and Steelco South. Differences in perceptions were unremarkable under the first two dimensions (goals and definition of quality), but a significant schism appeared under the role and nature of the environment and



subsequently under the roles of managers, employees and structural rationality. As it would be futile to attempt an averaging of the views, the results for both locations are presented separately.

A strong influence by the organismic model on Steelco East is apparent, whilst a more mechanistic pull is evident at Steelco South. To a certain extent, the explanation for this, as proposed by a number of interviewees, lies in the personalities of the local managers and cultural differences between the locations. Significant latitude is available to local site managers at each Steelco location to stamp their personality on branch operations. Close personal associations with internal and external customers and suppliers appear the norm at Steelco East. On the other hand, a degree of functional differentiation at Steelco South and a somewhat more legalistic approach taken to relationships with external entities suggest a trend towards the mechanistic model. The results for the 'role and nature of the environment' dimension are summarised in Table 5.3 (below).

Table 5.3

Summary of Research Results in Terms of the Role and Nature of the Environment

<b>Role / nature of environment</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	close personal associations with customers and preferred suppliers; internal walls not significant	emphasis on building life long relationships with external customers; reliance on QA problem solving procedures and open culture to break down internal walls	need to increase vigilance in achieving even better relationships with customers due to competitive environmental forces	strong push towards organismic model
Steelco	close relationships with external and internal customers and preferred suppliers; but is a function of personality of site managers	Steelco East: flexibility in team approach to relationships Steelco South: more legalistic posture with outsiders and insiders	perceptions of role/ nature of environment varies according to local culture of branch and personality of site manager	Steelco East: intermediate to strong push to organismic model; Steelco South: weak to intermediate pull to mechanistic model
Electrico	'closeness' of customer relationships generally; suppliers less so; relations between internal customers weaker	personal/trusting rather than legalistic relationships with external parties; internal relationships between depts and divs problematic	need to reduce culture of internal walls; problems with isolation from 'internal' suppliers overseas	weak to intermediate push towards organismic model
Utilityco	supplier relationships on legalistic basis but some exceptions; internal walls; greater consultation now with end users and community	evidence of high degree of functional specialisation and separation; but strong attention to customer services; some privileged suppliers in close partnering; benchmarking	need to break down internal walls to improve process flow	intermediate pull towards mechanistic model
Bevco	end users worshipped but supplier and retail customer relationships on legalistic basis, some internal walls still	teams reducing effect of internal walls; consumer 'deification' well stated and practiced by company; supply 'partnerships' often on win/lose basis	difficult to get 'close' to end users (consumers) due to size of company; greater trust needed in supplier relationships	intermediate pull towards mechanistic model

## Role of Management

Under TQM, the role of management is to “create constancy of purpose for [the] improvement of products and services” (Deming, 1982, cited in Spencer, 1994, p. 447). According to this wisdom, management designs a system that is capable of producing quality output, and consequently it is the management and not the employees who are responsible for poor quality (Spencer, 1994, p. 447).

Under the organismic model, management’s role is to “act as the brain of the system” (Beer, cited in Spencer, 1994, p. 456). Here, the organisational vision is designed, and policies and system boundaries are delineated by management to guide and moderate employee decision making (Selznick, cited in Spencer, 1994, p. 456). The role of management is not seen in terms of central command, but rather in monitoring performance and the provision of feedback when remedial action is necessary (Spencer, 1994, p. 456). Hence, evidence which shows a preference by managers to indirectly coordinate processes and exert invisible control by creating an efficacious system, clearly enunciating the organisation’s mission and engendering a vision will indicate a ‘push’ towards an organismic implementation of TQM.

The mechanistic perspective sees the role of management as one of planning, organising, directing and controlling (Spencer, 1994, p. 450). Management is seen to act as a central command from which instructions and orders flow in a downward pattern throughout the organisation. Poor quality is seen as an inevitable by-product of everyday operation for which specialist controllers are needed to reduce or obviate. Accordingly, evidence which shows that managers prefer a more directive and ‘hands on’ approach to the coordination of work tasks and a visible control of organisational processes and employees indicates a ‘pull’ towards a mechanistic implementation of TQM.

The overall thrust of the evidence in the role played by management in the implementation of TQM, whilst not strong, is undoubtedly towards the organismic model. With committed management at Truckco, Steelco East, Electrico and Bevco providing a guiding, resource allocating, monitoring and coaching role, the influence of the organismic model in these organisations is clearly evident. Furthermore, Electrico and Bevco top managers are seen to ‘walk the talk’ and wherever possible convey and

inspire the organisational 'vision'. The effectiveness of this visible and active role is supported by evidence of a willingness to delegate responsibilities and empower employees within managerially set boundaries. However, at Truckco, the role of senior management in the implementation of TQM was seen by a few in slightly dubious terms, with some reliance being placed on the middle management as the 'owners' of the quality process.

At Steelco South, on the other hand, the value and effectiveness of teams is questioned by the management and a more directive and autocratic regime is apparent. Accordingly, a more mechanistic application of TQM is evident in relation to the role of managers. However, the evidence at Utilityco is inconclusive and the direction of influence is indeterminate. A consistent theme emerging from the interviews at Utilityco was an almost complete lack of central coordination and drive by top managers. Indeed, 'enquiry by panic button' appeared often to be the norm. Further, the top management at Utilityco was criticised by several middle managers for not understanding the requirements and consequences of the implementation of TQM in the organisation. Examples were provided where middle managers were directed to carry out major exercises, such as the certification to ISO standards, with completion by an apparently arbitrary time-frame, without discussion or planning. The results for the 'role of management' dimension are summarised in Table 5.4 (below).

Table 5.4

Summary of Research Results in Terms of the Role of Management

<b>Role of management</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	committed middle management; guidance and coaching role; role of senior mgt problematic	evidence of managers 'walking the talk', strong use of functional and cross functional teams; variety of decision making forums for employees	too much reliance on middle management to 'own' the quality process; some communication problems from senior mgt	weak to intermediate push towards organismic model
Steelco	Steelco East: guiding, coaching role Steelco South: more directive role, command and control	Steelco East: mgrs spend time in developing people Steelco South: MBWA, value of teams questioned	perceptions of role of management varies according to local culture of branch and personality of site manager	Steelco East: strong push towards organismic model; Steelco South: intermediate to strong push towards mechanistic model
Electrico	committed management throughout; guidance role which monitors/audits the system	evidence that mgrs 'walk the talk'; recognition that provision of resources important	personality important factor - strong trend to delegate at Electrico	intermediate to strong push to organismic model
Utilityco	committed middle mgt are driving qual. management; senior mgt appear reluctant and do not fully understand need	evidence indicates senior mgt approach is in terms of business management principles not quality management	lack of central coordination of quality principles; actions taken by senior mgt are more via panic button	indeterminate - does not readily fit organismic or mechanistic models
Bevco	guiding; providing resources; setting KPIs but allowing employees to take some responsibility	visible and effective senior mgt efforts to communicate the mission and vision; "walk the talk"	still significant hierarchy, though flatter than before TQM	intermediate push towards organismic model

## Role of Employees

The empowerment of employees is undoubtedly a key theoretical premise to the implementation of TQM (Korukonda, Watson & Rajkumar, 1999). Without employee empowerment, albeit within managerially defined parameters, the promise of quality being built into every step of the process rather than merely inspected out by quality specialists at the end of the line could not realistically be achieved. According to Spencer (1994, p. 447), TQM requires the empowerment of employees, and additional training where necessary to achieve this, so that the appropriate decisions are made, relationships developed and moves taken to continuously improve the quality of the product or service.

According to the organismic perspective, employees are bound to the organisation and the achievement of organisational goals through a shared vision and commitment rather than mere hierarchical subservience (Spencer, 1994, p. 457). This view sees both employees and the organisation as a whole 'marching to the beat of the same drum'. In the logical extension of the metaphor that organisations are organisms, employees are seen as organs or cells of the body essential for its good health and function rather than just another tooth on a gearwheel. From this perspective, employees are encouraged to "define their roles and increase their power by building a network of contacts both within and outside the organisation . . . . [and consequently] are less easily replaced" (Gharajedaghi & Ackoff, cited in Spencer, 1994, p. 457). Therefore, evidence of the implementation of TQM which shows that employees are allowed to react to certain situations and have latitude for self control within boundaries set by management indicates a 'push' towards the organismic model.

Under the mechanistic model, "employees follow orders and carry out specialised tasks within narrowly specified positions" (Spencer, 1994, p. 451). In keeping with the metaphor of the machine, employees are seen as replaceable machine parts, each accomplishing the task as designed. Although some 'on the spot' problem solving is beneficial to organisational operation, the role of employees is nonetheless seen in fairly limited terms. Thus, evidence which shows that the role of employees is one of passivity and following orders, and that control over processes is essentially the responsibility of

management and their appointed specialists, indicates that the implementation of TQM has been 'pulled' towards the mechanistic model.

With the exception of Steelco South, all organisations displayed influences towards the organismic model in relation to the role played by employees in the implementation of TQM. With a comprehensive use of functional and cross functional teams and a strong commitment to the organisational vision and mission, both Truckco and Electrico showed a strong push towards the organismic model. At Steelco East, the effect was similar, with a close knit and empowered membership engaging in decision making within managerially set boundaries. Although the effect was less impressive at Bevco and Utilityco, both nonetheless exhibited some organismic influences. Employees at Bevco, for example, had well defined boundaries in which to operate and displayed a strong commitment to continuous improvement. However, a bone of contention at Utilityco was the lack of the clear definition of the boundaries of empowerment, although employees generally knew the unspoken limits. Indeed, it was argued that employees could draw some comfort in the knowledge that their 'lawful' decisions would be supported by their superiors. At Steelco South, although teams are used and some independent decision making by employees is evident, a strong reliance on managerial directives and bureaucratic controls (in the form of the strict adherence to procedures and rules) indicated a pull of some strength towards the mechanistic model. The results for the 'role of employees' dimension are summarised in Table 5.5 (below).

Table 5.5

Summary of Research Results in Terms of the Role of Employees

<b>Role of employees</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	empowerment within boundaries set by management; strong sense of vision by employees through ownership and tradition	strong use of functional and cross functional teams; variety of decision making for employees; many long serving people with strong commitment to org and org goals	some operational difficulties, but little in the way of improvement seen necessary in role of employees	strong push towards organismic model
Steelco	Steelco East: employees empowered within management set guidelines Steelco South: limited role, follow procedures	Steelco East: use of teams builds relationships, aids effective decision making; Steelco South: strong requirement to adhere to written procedures	perceptions of role of employees varies according to local culture of branch and personality of site manager	Steelco East: strong push towards organismic model Steelco South: intermediate to strong pull towards mechanistic model
Electrico	empowerment and decision-making within boundaries set by mgt	strong involvement in setting QA procedures; strong use of teamwork and cross functional teams	some reluctance by shop floor workers to accept greater decision making responsibilities	strong push towards organismic model
Utilityco	some empowerment real but implied and unspoken; some links to continuous improvement; problem solving via teamwork	greater reliance on team processes caused by downsizing and restructuring - cooperation necessary for survival	use of cross functional teams no longer emphasised; need for clear empowerment guidelines from top mgt	weak to intermediate push towards organismic model
Bevco	empowered to make decisions within guidelines; strong links to continuous improvement; devolution of responsibility	high levels of training; clear statements of extent of empowerment; involvement through teams; cultural changes	existing separate department for quality assurance suggests part retention of old QC focus	intermediate to strong push towards organismic model



## Structural Rationality

Spencer (1994, p. 447) noted that, under TQM, tasks are accomplished by teams which are centred around organisational processes. Overall, the organisation is restructured as a set of horizontal processes which extends outside of the organisation to embrace suppliers and customers (Spencer, 1994, p. 447). Accordingly, Spencer (1994, p. 452) observed that “enhancing the flow of work across processes theoretically is more important than [in] maintaining control.”

Under the organismic model, horizontal and vertical coordination, and organisational rationality are emphasised (Spencer, 1994, p. 457). Unlike the mechanistic viewpoint, advice and information, rather than decisions and instructions, “are shared across functional areas and between people of different rank” (Burns & Stalker, cited in Spencer, 1994, p. 457). Communication arrangements involving both vertical and horizontal lines of communication are seen to promote these ends. In this, overall control of the process is not surrendered by management, but achieved more by collective and concertive means than directive, technological or bureaucratic control strategies (Barker, 1993, p. 409). Hence, evidence which clearly shows effective lines of communication in both horizontal and vertical directions, and an emphasis on organisational rationality (that is, goal seeking activity justified on the grounds of organisational efficacy) will indicate a ‘push’ towards the organismic model in the implementation of TQM.

From the mechanistic viewpoint, the structure of an organisation is seen as a downward looking chain of command (Chapple & Sayles, cited in Spencer, 1994, p. 452). The effect of this chain of command is to efficiently exert control over the organisation. A key tenet in the mechanistic perspective, and indeed classical organisation theory, is the division of labour (Shafritz & Ott, 1996, p. 31). It is seen as the “primary means of attaining performance goals and ensuring technical rationality” and coordination amongst the specialised groups is dealt with by reference to a higher authority in the hierarchy (Spencer, 1994, p. 452). Hence, evidence which indicates a vertical pattern of communication along a chain of command and an organisational emphasis on technical rationality (that is goal seeking activity justified on the grounds of

technical efficiency) will suggest that the implementation of TQM has been 'pulled' towards the mechanistic model.

The dimension of structural rationality returns the discussion to one of a dichotomy in the approaches taken at the five organisations. The evidence from Steelco South, Utilityco and Bevco shows a clear indication of the influence of the mechanistic model. At both Steelco South and Utilityco, for example, an emphasis on hierarchical referral, a preponderance of top down communication, and significant discouragement of lateral communication between functional departments suggest a strong predilection towards the machine model. Bevco is a relatively recent convert to TQM, and still has echoes of a bureaucratic and production focussed past life. However, comprehensive and increasingly effective use of cross functional and functional teams indicates that these stubborn vestiges of the mechanistic model are gradually being overcome, and only a weak to intermediate influence remains.

The evidence at Truckco, Steelco East and Electrico, conversely, provides indications of a push towards the organismic model in some strength. In particular, Truckco and Electrico appear to pass the 'litmus test' of well developed lateral as well as vertical communications. Further, the requirement for hierarchical referral appears to have been removed except in clearly strategic matters. In both organisations then, the pattern of communication is both vertical, in terms of guidance, feedback and assistance from management, and horizontal, in terms of process adjustment and coordination between functional units. At the closely knit Steelco East, the emphasis was placed on consensus and a meaningful involvement in decision making. Indeed, communication on matters of work processes and the day to day operation of the business was often informal. The results for the 'structural rationality' dimension are summarised in Table 5.6 (below).

Table 5.6  
 Summary of Research Results in Terms of Structural Rationality

<b>Structural rationality</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	vertical and horizontal communication pattern; clear organisational rationality	encouragement of lateral discussions for problem solving; obviation of need to go through channels in all but strategic issues	some evidence of communication difficulty between two depts and from senior mgt	intermediate to strong push towards organismic model
Steelco	Steelco East: emphasis on horizontal communication and mutual adjustment Steelco South: emphasis on hierarchical referral	Steelco East: consensus and involvement Steelco South: move away from consensus and lateral arrangements to vertical emphasis	perceptions of structural rationality varies according to branch	Steelco East: strong push towards organismic model Steelco South: strong pull towards mechanistic model
Electrico	some balance between vertical and horizontal communication; clear organisational rationality	trend towards flattening hierarchy; adjustment between teams especially via regular meetings; reduced need for hierarchical referral	need to reduce internal walls which affect communication	intermediate push towards organismic model
Utilityco	top down communication; hierarchical; communication between functional departments very limited	strict reporting guidelines; upwards referral prior to action; strong trend towards centralising admin functions evident	need to be more process structured to ease response to customer needs - need direct conduits between departments	strong pull towards mechanistic model
Bevco	main direction of communication is downward rather than horizontal between teams and departments	some directive traits still evident; but teams reducing this gradually	greater horizontal communication needed to implement TQM fully	weak to intermediate pull towards mechanistic model

### Philosophy Toward Change

In keeping with the active role played by employees in quality improvement, positive change and continuous improvement are fostered under TQM (Spencer, 1994, p. 447). Organisations are seen as environments in which learning and employee development are encouraged (Spencer, 1994, p. 447). Strategies such as benchmarking, cross-functional teams and employee training approaches foster continuous learning in the organisation (Spencer, 1994, p. 458).

From the organismic viewpoint, the prime goal, as noted earlier, is organisational survival. Hence, organisations, like organisms, must cope with and resolve a range of environmental challenges. Organisations will therefore develop abilities to search for and learn about the effects environmental forces have on them (Thompson, cited in Spencer, 1994, p. 458). Evidence which indicates a preference for organisational adaptation to environmental forces through evolutionary change and learning suggests a 'push' towards the organismic model in the implementation of TQM.

From a mechanistic standpoint, "stability is prized because it increases predictability, which in turn, increases control" (Spencer, 1994, p. 453). This viewpoint is a natural extension of the machine metaphor where, once control is achieved, the machine is set to replicate the product in the specified quantity and quality of output. Spencer (1994, p. 453) noted that the shift in emphasis from control and stability towards one of learning and a tolerance for change "appears to mark a vital distinction between mechanistic thinking and TQM." Accordingly, evidence which indicates a preference towards stability in organisational processes shows a 'pull' towards a mechanistic implementation of TQM.

The evidence indicates a propensity towards the organismic model in virtually all organisations studied. Truckco, Electrico and Bevco all displayed the hallmarks of the organismic model in terms of the perceptions of the organisational philosophy toward change: a long term horizon, emphasis on continual improvement and an active awareness and pursuit of environmental forces impinging on organisational survival. These perceptions were supported by evidence and observations of organisational

practice, including a systematic approach to corrective action and process adjustment (such as through quality assurance), the use of key performance indicators to identify organisational strengths and weaknesses, and the fostering of a work culture which is amenable to continuous improvement.

However, whilst Steelco (both locations) presently displays some adherence to the tenets of continuous improvement, a longer term view indicates a serious discontinuity of approach. Indeed, many interviewees were able to provide a detailed history of the ebb and flow in approaches taken over the last ten years at Steelco. Such desultoriness appears more explicable in terms of institutional theory than in any theory of change management. In view of these inconsistencies, any assessment of a longer term influence by either model cannot be determined. Similarly, the evidence at Utilityco supports neither model. Examples abound in the evidence at Utilityco of changes being made for the sake of change, and perhaps here again, institutional theory (especially in terms of the rhetorical aspect of TQM identified by Zbaracki (1998)) may prove more apposite in examining this phenomenon. However, such a situation is arguably unsustainable, and a reversion to a more stable pattern of little or no change reflected by the mechanistic model is to be expected. The results for the 'philosophy toward change' dimension are summarised in Table 5.7 (below).

Table 5.7

## Summary of Research Results in Terms of Philosophy Towards Change

<b>Philosophy toward change</b>	<b>Perspective on the way things are:</b>	<b>Examples of the way things are:</b>	<b>Improvements / way things should be:</b>	<b>Emphasis</b>
Truckco	long term view, adaptive to environmental change, emphasis on continual improvement	emphasis on problem solving and corrective action; adjusting procedures and products according to changing circumstances	process of continuous improvement creates significant demands on available time	intermediate to strong push towards organismic model
Steelco	an incremental approach founded on continuous improvement after several major changes in quality emphasis	use of KPIs to measure performance and improvements; non conformance reports to identify required change	lack of consistent approach: major swings in emphasis, beginning with TQM and moving to QA, then to OSH, retaining elements of previous phases	intermediate push towards organismic model; but longer term emphasis indeterminate because of inconsistent approach
Electrico	incremental approach to change after major changes introducing TQM, designs and new processes	emphasis on continual improvement; small teams set up to question the process, facilitate improvements	isolation from parent company sphere reduces exposure to new ideas	intermediate to strong push towards organismic model
Utilityco	often change for change sake; changes to structure are emphasised rather than continuous improvement to process	change outcomes tend to be measured in terms of bottom line performance or arbitrarily set time frames; reasons for changes not well understood	change cannot always be equated with improvement; some good from the changes not being capitalised; current situation unsustainable	presently indeterminate - but is unsustainable and likely to revert to stable pattern = strong pull towards mechanistic model
Bevco	proactive more than reactive; emphasis on continuous improvement and adaption to environmental forces	big change (TQM itself) has occurred over several years but CI from then on; KPIs quantify CI ; measures taken to foster 'CI culture'	earlier shift to teams made more difficult because culture had not changed - successful change is function of culture and education	intermediate to strong push towards organismic model

## Interpretation of Results

The analysis of the evidence indicates sufficient scope to provide answers to the two research questions posed in Chapter 2. These two questions have guided the development of the research throughout and are restated below:

1. In terms of the major dimensions of TQM identified in the literature, is TQM applied in an organismic or mechanistic way ?
  
2. In terms of the major dimensions of TQM identified in the literature, in which way(s) does applied TQM vary from doctrinal TQM ?

The first question sought to enquire about the way in which TQM is applied in practice. The question is framed in terms of the major dimensions of TQM identified in the literature, and relates to the influence of the organismic and mechanistic ‘mental’ models in the way TQM is implemented. Once the grounds for this issue were established, the second question sought to plumb the difference between doctrinal and applied TQM in terms of the same seven dimensions. In this way, not only the nature and shape of the implementation process can be ascertained, but also the extent of any difference between the conventional wisdom of TQM and its application. Table 5.8 summarises the major results of the research. In Table 5.8, the grey shading denotes the relative strength of the influence of the mechanistic model. Lighter grey shadings indicate weaker influences, whilst darker grey shadings indicate stronger influences. The relative strength of the organismic model is denoted by underlining and bold print.

Table 5.8  
Summary of the Major Results of the Research

	Truckco	Steelco East	Steelco South	Electrico	Utilityco	Bevco
Goals	<b>strong</b> push towards organismic model	strong pull towards mechanistic model	strong pull towards mechanistic model	<b>strong</b> push towards organismic model	strong pull towards mechanistic model	strong pull towards mechanistic model
Definition of quality	<b>strong</b> push towards organismic model	intermediate pull towards mechanistic model	intermediate pull towards mechanistic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	intermediate pull towards mechanistic model	strong pull towards mechanistic model
Role /nature of environment	<b>strong</b> push towards organismic model	<u>intermediate</u> to <b>strong</b> push to organismic model	weak push to organismic model	weak to <u>intermediate</u> push towards organismic model	intermediate pull towards mechanistic model	intermediate pull towards mechanistic model
Role of management	weak to <u>intermediate</u> push towards organismic model	<b>strong</b> push towards organismic model	intermediate to strong push towards mechanistic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	<i>indeterminate - does not readily fit either model</i>	<u>intermediate</u> push towards organismic model
Role of employees	<b>strong</b> push towards organismic model	<b>strong</b> push towards organismic model	intermediate to strong pull towards mechanistic model	<b>strong</b> push towards organismic model	weak to <u>intermediate</u> push towards organismic model	<u>intermediate</u> to <b>strong</b> push towards organismic model
Structural rationality	<u>intermediate</u> to <b>strong</b> push towards organismic model	<b>strong</b> push towards organismic model	strong pull towards mechanistic model	<u>intermediate</u> push towards organismic model	strong pull towards mechanistic model	weak to intermediate pull towards mechanistic model
Philosophy toward change	<u>intermediate</u> to <b>strong</b> push towards organismic model	short term - <u>intermediate</u> push towards organismic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	<i>presently indeterminate</i>	<u>intermediate</u> to <b>strong</b> push towards organismic model
Influence overall	<u>intermediate</u> to <b>strong</b> push towards organismic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	intermediate pull towards mechanistic model	<u>intermediate</u> to <b>strong</b> push towards organismic model	intermediate pull towards mechanistic model	weak to intermediate pull towards mechanistic model



## Research Question 1

A simple answer to the first question eludes this research. Consistent and relatively strong influences arise in only two organisations, Truckco and Electrico. Both organisations showed convincingly that organismic influences in the implementation of TQM were present in terms of each and every one of the seven dimensions. The use of evidence from two locations in a third organisation, Steelco, provided mixed results. Steelco East showed generally organismic traits in the implementation of TQM, whilst Steelco South displayed generally mechanistic traits. The remaining organisations, Utilityco and Bevco, generally showed a propensity towards mechanistic implementation in most dimensions, although the assessment for Utilityco is complicated by the inability of the evidence to satisfy either model in two of the dimensions.

At first glance, these results may appear to offend commonsense and what might be estimated by the knowledgeable but disinterested observer. Given that mental models do influence the implementation of TQM, the learned observer may intuitively predict that such implementation should proceed in an internally consistent fashion throughout. Further, the effect of the TQM doctrine and the pattern of practices contained within, which, at face value, are strongly systems oriented, should create a strong organismic push in their own right. Indeed, the observer might argue that the organismic push should override the preconceptions and mind set of the organisational participants engaged in the implementation. Alternatively, the observer could argue that as the overriding pattern for organisations is the machine, which is reflected in the overwhelming preponderance of bureaucratic forms in society (Robbins & Barnwell, 1998, p. 278), a mechanistic implementation should generally prevail. However, the results of this research do not fit into either of these convenient logical ‘packages’, and several factors can be put forward as possible reasons for this.

The first possible clue comes from the originator of the theoretical framework which has inspired and guided this research. Spencer (1994, p. 448) predicted that “[t]hose who practice TQM may or may not hold strictly to any one of these . . . perspectives [that is, models of organisation]; indeed, they may *vacillate* [italics added] among them . . . [although] allegiance to a particular viewpoint is likely to influence the practice of TQM by affecting the selection and application of quality components.” As

implementation is assumed to be a process of continuous enactment rather than an objective reality, the argument that the application of TQM is a complex and changing mosaic becomes sustainable. In the enactment process, the various 'quality components' are argued over, negotiated, blended and modified. An additional implication of this notion is that nobody 'rings the bell' when the process of implementation is complete. It is evolutionary by nature. Hence, TQM is either in an ongoing state of implementation in which 'TQM nirvana' is never possible, or is unequivocally abandoned.

Indeed, it is conceivable that in the early bloom of implementation, the direction in which TQM takes may be influenced by a systems approach and the conventional wisdom of consultants, at the expense of any mechanistic predilections of participants. This is suggested by Spencer (1994, p. 448) when the author notes that implementation will be guided by choices "based not only on [the participants'] *understanding of the principles of TQM* [italics added] but also on their own conceptual frameworks." Later, as the process matures and the consultants depart, a force of mechanistic gravity may begin to be felt, and the nature of implementation changes accordingly.

Additional clues may also be provided by three emerging themes from the present research. First, in organisations which are decentralised and confer significant operational latitude on local managers, the personality of the site manager may possibly provide some explanation for observed differences. It could be argued that a more directive and autocratic manager will arguably exert an influence towards a more mechanistic implementation of TQM, whilst a more democratic and consultative manager will foster a more organismic implementation. Indeed, the differences between Steelco East and South were explained by several Steelco employees in just these terms and were especially apparent in the role of the environment, management, and employees, and in terms of structural rationality. Closely associated with this are lingering cultural influences on the organisation. Utilityco was described as having a strong engineering tradition, with a concomitant adherence to standards, and this may attract mechanistic minded people to the organisation and proselytise new members to this outlook.

Second, the extent to which the organisation has matured in the implementation of TQM may also be a relevant factor, although the effect of this is not clear from the evidence in this research. Certainly, with an intermediate to strong push towards the organismic model, Truckco is a new entrant into TQM and has relatively recently also acquired certification to ISO 9002. On the other hand, Utilityco, which arguably has a more mechanistic approach overall, is a relative 'old hand' at TQM and quality assurance. It is possible that mechanistic influences are stronger in the longer term, whilst organismic influences are more noticeable in the shorter term. This explanation, however, is qualified by a conclusion in the research of Beyer, Ashmos and Osborn (1997). The researchers argue that any positive result from a strongly mechanistic implementation of TQM (and by implication, TQM itself in the organisation) is short lived (Beyer, et al., 1997, p. 33). Further, Bevco, with a generally mechanistic implementation, does not fit easily into this explanation as it has had an extremely long exposure to quality systems but is a relatively recent adopter of TQM.

The indeterminate nature of the role of management and philosophy towards change at Utilityco serves to complicate the issue further. It is tempting to suggest that such an indeterminate status indicates a 'faulty' implementation in each of the two dimensions, but such a conclusion would be inconsistent with the 'no-fault' approach taken in this research. When the long term indeterminacy of Steelco's philosophy towards change is taken into consideration as well, it could be that, over time, the application of TQM in certain areas may tend to become less clear cut and certain as a result of organisational fatigue.

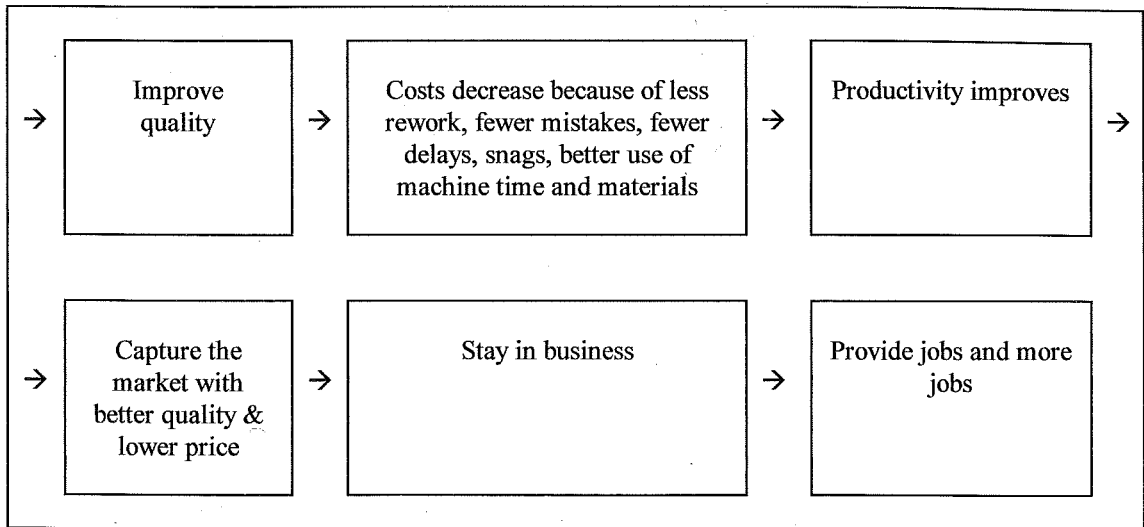
Last, organisational size may also contribute to mechanistic and organismic influences. For example, the smaller organisations (as discrete units) in the research, Truckco, Electrico and Steelco East, all displayed organismic traits in the implementation of TQM. Conversely, the larger organisations showed more mechanistic traits. Indeed, quantitative studies have identified a link between larger organisational size and a higher incidence of bureaucratic structures and mechanistic processes (Robbins & Barnwell, 1994, pp. 141, 279). However, an essential part of the present research has been to control for organisational structure, and accordingly no comparisons are possible from the evidence.

## Research Question 2

The evidence is more amenable to answering the second research question. The evidence indicates that key differences between doctrinal and applied TQM, in terms of the seven dimensions of TQM, are contained within organisational goals, the definition of quality and, to a lesser extent, structural rationality. Certainly, a majority of the organisations researched showed a strong pull towards the mechanistic model in terms of the way organisational goals and quality are perceived. The evidence is less convincing in terms of structural rationality, although the mechanistic influence is clearly stronger in this than in any remaining dimension.

In terms of the organismic model, examples of intermediate to strong influences were found in every doctrinal dimension. However, there was no convincing evidence in any dimension which indicated an extreme organic influence going beyond doctrinal prescriptions. Hence, consideration will focus on mechanistic variances, and each of the three dimensions in which key differences were detected will now be considered.

Under the conventional TQM wisdom, quality improvement is seen as the prime organisational goal from which all others flow. Perhaps the quintessential statement of this view is expressed in the Deming Chain Reaction (Deming, 1986, p. 3) which places quality at the centre of organisational fortunes (see Figure 5.1 below). With a focus on quality improvement, productivity and financial benefits will occur as a result. This is not to suggest that productivity and financial goals do not arise at all in the thinking of business operators and owners, just that keeping the faith with a quality improvement focus creates the chain reaction from which long term survival, growth and indeed profits will be the reward (Deming, 1986; Walton, 1989; Walton, 1990).



**Figure 5.1.** The Deming Chain Reaction (from Deming, 1986, p. 3)

However, the evidence tends to indicate that a focus on quality improvement (or the allied broader concept of growth and survival) is not the prime aim in most of the organisations studied. In Steelco, Utilityco and Bevco, maximising the return on investment to the owners of each organisation appeared to be the main, and ineluctable concern. This was also apparent from the dissenting views in the other organisations. Indeed, productivity, cost reduction and effectiveness ensured profitability. For these organisations, quality was an important but subsidiary and supporting goal to improvements in the annual balance sheet and dividend payments. Spencer (1994, p. 456) cited studies by KPMG Peat Marwick which showed that senior executives are rewarded almost entirely in terms of financial performance. Further, recent research by AT Kearney (Change handled better in-house, 2000) indicates that 90% of senior manager respondents to a survey conducted in medium and large European companies identified reduction of costs as one of the main goals for change. Certainly, in view of the short term financial return pressure to which many organisations are continually exposed, it is understandable that the TQM doctrine is, perforce, adjusted towards a more mechanistic interpretation.

Doctrinally, quality is seen as that which satisfies or delights customers. According to this wisdom, such satisfaction or delight of customers can be achieved by an understanding of needs and wants that only a commercial intimacy with customers

will bring. In most of the organisations researched, the actual emphasis lies in conformity to internally derived product and service standards. Of course, in most interviews, customer expectations were acknowledged as important by interviewees. Convincing evidence, however, often could not be found as to how those needs and wants directly influenced the standards to which the members and the products of the organisation must conform. Indeed, terms such as 'delighting the customer' or 'the customer is king' appear hollow and mantric without a coherent methodology for translating them into organisational ways of doing things. It is therefore not surprising that an inwardly focused perception of the nature of quality emerges, given human nature. Arguably, it is much easier to unilaterally specify levels which accord with organisational 'comfort zones' than to the far more difficult and ongoing exercise of reconciling the heterogeneity of a broad customer base.

As noted above, the difference between doctrinal and applied TQM in terms of the dimension of structural rationality is not as clear cut as it is in organisational goals and definition of quality. Under the TQM doctrine, the organisation is seen as a horizontal set of processes expanding from the supplier to the customer. The processes are carried out by empowered people coordinating their activities through teamwork both 'inside' and 'outside' the organisation. In only two of the organisations, where top management was still unable or unwilling to relinquish full control, was a strong trend away from this approach observed. This result is perhaps surprising because generally organismic patterns of communications do not appear at first glance to reconcile well with the generally hierarchical and bureaucratic nature of all the organisations researched. However, some reconciliation is possible when the effective use of cross functional teams is considered. Cross functional teams can be seen as a form of adhocatic overlay to bureaucracies so that the benefits of flexibility and standardisation may be harnessed (Robbins & Barnwell, 1998, p. 304). The effect of such a matrix formulation means that a greater emphasis is placed, by necessity, on horizontal decision making and adjustment between functions, and less on hierarchical referral. In broad terms, such structural 'ambidexterity' is seen by Duncan (1976) as important in fostering innovative change, where organic structures are needed, and in carrying the change through, when a mechanistic structure is desirable. In Steelco South, and apparently in Steelco as a group, cross functional teams have been largely abandoned. Further,

although some cross functionality is apparent in Utilityco, it is fragmented, *ad hoc* and lacks support of top management. It is not surprising then that both of these organisations appeared to have stronger mechanistic tendencies in terms of structural rationality than the other organisations which used cross functional teams to a much greater extent.

### Synthesis

The effect of the results of the two research questions, when considered together, indicates a remarkable conclusion which conflicts with the arguably unitarist outlook inherent in the TQM doctrine. Such a conclusion also reveals a 'recessive' gene in the make-up of TQM. Importantly, however, the following discussion does not seek to achieve a quantitative-like generalisation or an extrapolation of the research results beyond the context of the study. It serves merely to alert the reader to certain important implications flowing from the research.

As has been demonstrated in this research, TQM can be implemented in organisations in overall mechanistic or organismic ways. This supports the results of the study of the implementation of TQM by Beyer, Ashmos and Osborn at two organisations, one of which showed a consistent mechanistic influence throughout, whilst the other had an "extremely organic approach" (1997, p. 32). The use of the seven dimensional framework suggested by Spencer (1994) also reveals that the implementation of TQM in three of the organisations in the present research is neither uniformly mechanistic nor organismic, but varies according to the particular dimension studied. This result moves beyond the observation of different but internally consistent implementations in the study by Beyer, Ashmos and Osborn (1997), and supports Spencer's prediction that the ongoing enactment of TQM is subject to varying degrees of 'vacillation' by practitioners among 'mental' models (1994, p. 448).

As noted earlier, the doctrine of TQM and the application of TQM appear to part company in terms of goal orientation, the definition of quality, and to a lesser extent, structural rationality. Further, the evidence, especially from Steelco, indicates that different parts of an organisation could implement TQM in different ways. When viewed

in terms of the dominant models of organisation, the implementation of TQM in one location might be organismic, whilst another might be mechanistic.

Therefore, in the organisations studied, the implementation of TQM is proceeding in either an organismic or mechanistic manner, but not necessarily in a uniform manner throughout the organisations. Where the implementation is not internally uniform, the lack of uniformity may arise in at least two main ways. First, different doctrinal dimensions (such as goal orientation, definition of quality and so on) may be consistently applied in a more mechanistic or organismic way. Alternatively, a location may apply TQM uniformly but differently to other locations in the same organisation.

Such an assessment of the evidence presented in this study creates some difficulties for a unitarist view of TQM. From the evidence, not all employees necessarily march to the beat of the same TQM 'drum'. Indeed, the relatively simple seven dimensional scheme used in this research allows a large number of permutations in the implementation of TQM to potentially arise. Further, the counter argument that the principles of TQM must be strictly followed comes "dangerously close to viewing it as the 'one best way' of managing" (Spencer, 1994, p. 451). Such an insistence on the adherence to a set of principles uncovers a 'recessive' gene in TQM and undermines the claim by TQM proponents that it represents a fundamental split from the prescriptions of classical theory (Dean & Bowen, 1994; Dean & Evans, 1994; Spencer, 1994). Indeed, seeing the implementation of TQM as 'shifting sands' allows the debate to move from viewing observed differences in applied TQM as pathologies, towards viewing the nature of the difference as an evolutionary subject of study in its own right. In other words, a mechanistic or organismic implementation of TQM is not evaluated as either 'good' or 'bad'. It is the difference, in itself, that is seen as important.



## **Summary of the Research and Conclusion**

This study has examined the doctrine and application of Total Quality Management (TQM) in the light of dominant models of organisation. TQM is generally seen in the literature as a major philosophy embracing much of current managerialist thinking. The key tenets of TQM are a customer focus, teamwork and continuous improvement. These tenets are driven by a committed leadership and integrated at strategic level in the belief that quality improvement leads to longer term survival and organisational performance. The translation of these key tenets of TQM into practice can be viewed along seven dimensions identified by Spencer (1994): organisational goals, definition of quality, role and nature of the environment, role of management and employees, structural rationality and philosophy towards change.

A review of the literature indicates that TQM has been both praised and condemned, but both lines of argument have generally related to the assumption that TQM is an objective reality which awaits organisational discovery and adoption. If adopted, the result is either a measurably successful or unsuccessful implementation. Consequentially, much of the orthodox literature, although strongly acknowledging the importance of implementation, remains focussed on the performance outcomes of TQM rather than the process of its application.

An alternative perspective is provided by Spencer (1994) who suggests that TQM is not an objective reality but a vague system of belief and that its implementation is a continuous enactment by organisational participants. Further, implementation is influenced by the limits of understanding and the 'mental models' or perspectives of the participants on the way in which to organise. Although many mental models are available for both participants and researchers alike, the two dominant perspectives of organising are the mechanistic and organismic models. This approach opens the door to the possibility that there are a number of valid courses in which the implementation of TQM may take. From this, a research focus on the implementation of TQM in terms of the dominant models of organisation and using the seven dimensional framework of Spencer (1994) emerges. This approach promises to provide a greater insight into the ongoing way in which TQM is applied, than the pursuit of relatively closed ended arguments concerning the success or failure of TQM as an objective reality.

In accepting the view that the implementation of TQM is a subjective process of negotiation, argument and interpretation by organisational participants which will be influenced, according to Spencer (1994), by their mental pictures or dominant models of organising, two lines of enquiry are apparent. The first line of enquiry relates to whether the mechanistic model or the organismic model has a greater effect on the nature of applied TQM. The second line of enquiry seeks to establish the extent of the difference between doctrinal and applied TQM. The satisfaction of both questions through empirical research may provide a basis for further enquiry into this important but little researched area. Further, it promises greater insight into the dimensions and nature of applied TQM which transcends the conventional focus on the outcomes of TQM as an objective reality.

In keeping with the basic assumption that the implementation of TQM is a continuous enactment rather than an objective reality, a qualitative research methodology was adopted. However, the research avoided engaging in the debate as to the superiority of positivist or non-positivist ideological stances by acknowledging the pleas of Martin (1990) for methodological open-mindedness. Accordingly, the most appropriate methodology mix, in keeping with similar research identified in the literature, was employed to collect and analyse the evidence. Further, a multiple case study design using semi-structured interviews with a broad cross section of managerial and non-managerial staff across five organisations was used to gather the evidence. Responses to interview questions were grouped in terms of the dimensional framework identified by Spencer (1994), and additionally divided into subjective, objective and reflective views to facilitate the triangulation of evidence and the emergence of themes regarded as important by the interviewees. Similarly, the collected evidence was sorted according to the procedure suggested by Miles and Huberman (1994). A general analytical method, as suggested by Miles and Huberman (1994) and further described by Hussey and Hussey (1997), was used to reduce, analyse, abstract and interpret the evidence in terms of the two research questions.

The evidence indicated that the implementation of TQM is influenced predominantly by the organismic model in at least two of the organisations studied and predominantly by the mechanistic model in a further two organisations. The evidence in

the fifth organisation was affected by a clear split in approach taken in the two locations studied. Furthermore, doctrinal and applied TQM appeared to differ in the majority of organisations in terms of organisational goals, definition of quality and, to a lesser extent, structural rationality. This exploratory research is neither intended to establish nor is capable of establishing causal or correlational relationships between variables. However, a number of themes and issues emerging from the evidence were identified as potentially important factors and qualifications to the overall effect of the mental models on the implementation of TQM.

In general terms, the results indicated that the implementation of TQM proceeded in mechanistic as well as organismic ways, and overall, was far from uniform. Indeed, implementation proceeded in an internally consistent manner in only two of the organisations studied. When viewed together, the responses to the two research questions create difficulties for a unitarist view of TQM. The counter argument that the doctrine of TQM can and should be applied with precision is inconsistent with the claim that TQM represents a conceptual departure from the 'one best way' prescriptions of classical management theory. Accordingly, variations in the implementation of TQM should be seen not as pathologies, but recognised and valued *per se*.

In the conclusion to their longitudinal research, Beyer, Ashmos and Osborn (1997, p. 33) fear that any positive results of TQM will be short-lived when it is implemented in a strongly mechanistic way. This present cross-sectional research may make no such prediction. However, the final conclusions that the present exploratory research can draw are that TQM is validly applied in both organismic and mechanistic ways and that key differences between the conventional wisdom of TQM and its practical incarnation may likely arise in terms of the goal orientation and the perceptions of quality by organisational members, and in the patterns of communication within the organisation. Arguably, an enduring theme in the development of human history is the human desire to maximise control and minimise uncertainty. The organisational world and its beliefs, as subsets of humanity, are no exception to this theme. Thus, in more prosaic terms, whichever approach to the implementation of Total Quality Management that best satisfies these twin desires of human nature will prevail in the long term. The smart money, to be sure, will be on the machine.

## Limitations

Several potential limitations in the research were briefly identified in Chapter 1 to alert the reader from the outset. These limitations will now be discussed in detail. These relate to possible shortcomings in the theoretical framework and its concomitant assumptions, the research stance and scale, and in the methodology used. Wherever possible, comprehensive efforts have been made to ameliorate or obviate the impact of these limitations on the effectiveness of the research instrument and the results.

The research accepts Spencer's (1994) thesis that the implementation of TQM is interpreted and modified in terms of dominant organisational models. Although this exploratory research does not presume to identify the causal relationships between the models and the application of TQM, it may be seen as dependent on such an unexplored relationship being in place. However, the research carefully focuses on achieving a better understanding of the nature of applied TQM, and the key differences between applied and doctrinal TQM. The study has sought to establish the strength and direction of a mechanistic or organismic influence, but has not attempted to determine the origin of the influence nor the conditions in which such an influence could arise. Therefore, the capacity of the findings to answer the two research questions is arguably unimpaired by any future research which does not support Spencer's (1994) arguments.

Furthermore, the study only considers the implementation of TQM in terms of two models of organisation, the machine and the organism. Spencer (1994) used three models in her discussion (machine, organism and culture), and urges more research to be undertaken in terms of the cultural metaphor, an approach which is studiously ignored in this present research. Morgan (1997) has identified a total of eight models of organisation (machine, organism, brain, political arena, culture, flux and transformation, instrument of domination and psychic prison), and indeed, any number of other models are possible. However, within the constraints of the present research, the two arguably dominant models of organisation, the machine and organism, were chosen. These two models emerged from the research into the implementation of TQM by Beyer, Ashmos and Osborn (1997), and the use of these two dominant models simplifies the analysis within manageable and comprehensible proportions. Nonetheless, Beyer, et al. (1997, p. 37) suggest that, had they used Spencer's (1994) framework instead of the one indicated

by Burns and Stalker, they would have assessed the implementation of TQM in one of the two organisations they studied as more cultural than organic. Arguably though, placing the implementation within the realms of the two dominant models of organisation adds strong intuitive and pragmatic appeal to the conclusions drawn, without disabling the impact or worth of the research.

The approach taken by Spencer (1994) in proposing that the implementation of TQM in organisations is an enacted state is strongly evocative of a phenomenological stance to research. Indeed, Spencer (1994) urged more research to be conducted using interpretive methodologies. Such research, Spencer anticipated, would use an ethnographic approach to “examine the behaviour of all organisational participants and to look for clues concerning the meaning of quality from multiple points of view” (1994, p. 467). Although this present research has similar objectives and uses qualitative methodologies to achieve those objectives, the approach used is definitely not interpretivist.

Indeed, the research deliberately does not adopt a particular ideological stance at all, but uses methodologies which are appropriate to the assumptions behind the framework used and in keeping with the time and expenditure constraints imposed upon the study. Consequently, although semi-structured interviews were used which permitted flexible responses, the interview questions were informed by the seven dimension framework which imposed an overarching regulation on the overall range of topics covered. Furthermore, the analysis of the evidence proceeded in conformance with the seven dimensions, which allowed themes to emerge within these boundaries but not outside of them. Nonetheless, the purpose of this research is neither to endorse the approach taken by Spencer (1994), nor to promote the interpretive view. Instead it has answered the research questions by utilising a framework ultimately derived from the conventional literature. Further, by using an innovative perspective on the application of TQM, it opens up possible lines of investigation normally closed to outcomes based studies. Consequently, any tension which might be observed between the framework and the methodology used is more of an ideological rather than operational nature.

A fundamental premise of the research is that differences between doctrinal and applied TQM go beyond mere semantics. The semantic (or purist) perspective would assume that if the organisation has not implemented TQM according to the doctrine, then it has in fact implemented 'XYZ' instead of TQM. To an extent, organisational sampling using minimum standard criteria accounted for possible semantic misunderstanding by filtering out those putative TQM organisations which did not conform to basic and identifiable principles of the philosophy, whatever the organisational interpretation may be. Nonetheless, the whole thrust of the research is to examine applied TQM in terms of those implementing it rather than those of the doctrinal purist, and consequently the semantic argument is, within reason, discounted.

An additional limitation to the research could be the relatively limited access into the sample organisations, in terms of interview time, scale and in the amount of evidence available. In general, the ability to do post interview reviews to ensure that interviewee perspectives were fully captured in the transcripts was similarly limited. The sample organisations are commercial entities, and accordingly, the exigencies and confidentiality of commercial life limit not only the time available to interview organisational members, but also the observational and documentary resources from which evidence may be drawn.

Furthermore, time and other constraints meant that the view of TQM implementation in the sample of organisations was cross-sectional rather than longitudinal. Beyer, Ashmos and Osborn (1997, p. 5) have suggested that a reason why the knowledge of implementation is scarce in the literature is because "implementation of any management strategy or planned change like TQ entails a long-term, complex social process that is difficult to study." The authors emphasised that any thorough investigation of such a social process "requires collecting data over time from many different actors" (Beyer, et al., 1997, p. 5). Such an argument is appealing, although a longitudinal approach for the purposes of this study can only form part of the recommendations for further research, for the reasons given.

The sample size of five organisations and thirty members may have provided an insufficiently representative view of applied TQM. However, as the research is both qualitative and exploratory, the emphasis on achieving relatively rich and detailed evidence across a limited sample can be justified. Indeed, McCracken (1988, p. 17) argued that qualitative research “does not survey the terrain, it mines it” and that limited sampling offers “an opportunity to glimpse the complicated character, organisation, and logic of culture.” Further, a sample size that would ensure suitable coverage by any measure would not be practical given the research constraints of cost and time.

The evidence collected relates to the perceptions and opinions of organisational members in regard to issues and processes upon which they may not have consciously reflected. In particular, the possible inability of some interviewees to put into words otherwise well understood ideas and images may impose significant restrictions on the richness of evidence. However, the risk has been reduced with appropriate interview methodology, using carefully worded questions and a logical structure, and the use of a range of organisational members.

## Recommendations

The results of this study have indicated at least four promising directions for future research into the implementation of TQM.

First, the material yielded in this cross-sectional view of the implementation of TQM may provide a suitable base for a future qualitative study, using Spencer's (1994) framework, of the same organisations. In so doing, insight into the course of the implementation of TQM over time may be found in such a longitudinal approach. This would be in keeping with the point made by Beyer, Ashmos and Osborn (1997, p. 5) that any comprehensive investigation of such a process of social change as TQM "requires collecting data over time from many different actors." The need for a further, strictly quantitative study is arguably not indicated by the results. Indeed, the usefulness of quantitative methodology alone in researching the implementation of TQM is called into question by Beyer, Ashmos and Osborn (1997). The authors argue that the "many variants of TQ that have grown up militate against common quantitative measures being able to capture much of the details of what has actually happened in any discrete case" (Beyer, et al., 1997, p. 5). However, an appropriate mix of quantitative and qualitative methodologies may provide useful evidence and is in keeping with Martin's (1990) plea for methodological open-mindedness in social research.

Second, Spencer's (1994) call for ethnographic research into the subject should not be ignored by future researchers. In particular, Spencer (1994, p. 467) suggested that "[i]nterpretive researchers may wish to explore the links between the conceptual frameworks (mental models) held by members who are implementing TQM practice . . . . [and] by conducting interviews . . . the rationale behind members' choices as well as the values these choices entail [may be discerned]." This present research, in its exploratory role, has highlighted the usefulness of Spencer's (1994) seven dimensional framework as a heuristic tool and an effective template to structure investigation into the moderating effect of models of organisation on the implementation process. Clearly, the use and imposition of such a structured approach in the collection and analysis of evidence is antithetical to interpretivist research. Therefore, the present research does not have the credentials to promote interpretive research. Nonetheless, each of the dimensions



provides a 'guiding landmark' to any type of future study on the subject permitting the efficient use of limited research resources.

Third, the use or integration of other frameworks identified in the literature review in Chapter 2 may assist in yielding further insights into the interactive, as well as the interpretive nature of TQM. For example, Zbaracki (1998) uses institutional theory and considers the adoption, implementation and use of TQM to see how institutional processes shape the technical reality of TQM. The author develops a model which demonstrates "how *individual actions and discourse shape TQM* [italics added] and fuel institutional forces" (Zbaracki, 1998, p. 602). Further, Beyer, Ashmos and Osborn (1997, p. 8) employ, in their analysis, the change model of Beyer and Trice (1978), which views the process of change in the discrete stages of *adoption, implementation and institutionalisation*.

The integration of both models may open up fertile ground for investigation into the influence on, for example, the measures of success of those who originally chose to *adopt* TQM, by the interactive 'looping' or reciprocating effect of the experiences and perceptions of those who actually *implement* TQM. Indeed, it may be argued that the dimensions of TQM are defined by how those implementing TQM interpret their implementation experiences and, through interaction, influence the views of the adopters. One interpretation of institutional theory would suggest, however, that the interactive and refractive effects of this are limited because of the propensity for those implementing TQM to express their experiences in terms amenable to the expectations of the adopters (and indeed other stakeholders), who are often in positions of high organisational power and authority.

Last, structuralist researchers may find that a focus on the possible effect that different organisational structures have on the development of TQM practice within organisations may provide useful insights into the course and nature of applied TQM. It is intuitively appealing (and even seemingly obtuse) to postulate that an organic organisational structure (such as reflected in a network or genuine matrix organisation) will exert a strong push towards an organismic implementation of TQM. Similarly, a bureaucratic organisational structure (such as reflected in the five organisations selected

in the present research) may exert a strong pull towards a mechanistic implementation. This present research has attempted to control for any generalised effect that organisational structure may impart by choosing organisations with generally bureaucratic characteristics. Nonetheless, there is significant evidence of a push towards organismic implementation across all dimensions in two of the organisations studied, and representative organismic traits in various dimensions in the other organisations. Accordingly, the yield of similar counter-intuitive results in dedicated structuralist research, which may choose also to consider contingency factors such as organisational size, environment and technology, may contribute not only to the TQM literature, but to organisation theory generally.

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# Appendix 1

## Ethics Statement Honours Thesis

*(to be read by interviewer before the start of the interview. One copy to be left with interviewee, and one copy should be signed by respondent and kept by interviewer)*

My name is Brad Moore. I am an Honours student in the School of Management at Edith Cowan University and I am conducting thesis research into the nature and mode of the implementation of quality management in organisations.

Thankyou for your willingness to participate in this research project. Your participation is very much appreciated. Just before we start the interview, I would like to reassure you that, as a participant in this project, you have several very definite rights.

- Your participation in this interview is entirely voluntary
- You are free to refuse to answer any question at any time
- You are free to provide as much of an answer as you feel you want to, or you feel is necessary
- You are free to withdraw from this interview at any time and without any obligation
- This interview will be kept strictly confidential
- This interview will be recorded by a tape recorder under your control, unless you object to sound recording, when hand written notes will be made
- The research neither seeks nor is interested, in any way, in matters of a proprietary or personal nature
- Excerpts of this interview may be made part of the final research report, but under no circumstances will your name or any identifying characteristics be included in this report

I would be grateful if you would sign this form to show that I have read you its contents.

---

\_\_\_\_\_ dated

Please send me a report on the results of this research report (circle one) YES NO

address for those requesting a copy of the research report

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Thankyou again for your participation.



## Appendix 2

Attention: The Quality Manager  
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.....  
.....

I am a university Honours student conducting post graduate research into the nature and mode of implementation of quality management in organisations. I believe your organisation has adopted Total Quality Management principles (or similar) and is using team processes to facilitate aspects of quality management, including continuous improvement.

If my information is correct, I would be grateful if I could secure your permission to conduct approximately 6 on-site interviews with members of your teams, and an interview with a senior manager (if possible), in the next few weeks. Each interview would last no longer than 45 minutes, and would be scheduled and conducted so as to minimise any disruption to work. My research is essentially qualitative in nature, and interviews provide a richness of information that may not be available through questionnaires and surveys alone.

All interviews will be carried out under strict standards of ethics and confidentiality, and any data collected will be made available to your organisation on request. I am seeking team member and managerial perceptions of quality management only, and information of a proprietary, commercial or official nature is neither being sought nor is of any relevance to this study.

I understand only too well that time is of the essence in business, having been a senior manager myself prior to becoming a student several years ago. I have already conducted a number of interviews in a pilot study to this main research, and disruption to work flows and staff time during these interviews was very minor. In fact, the general manager of the organisation involved found that my interviews were beneficial in fostering greater staff awareness and understanding of quality management issues.

I can be contacted at any time on telephone and fax number [REDACTED] (in answering machine mode) or by email at [REDACTED]. Thankyou for your time in considering my request.

Yours faithfully,

Brad Moore

## Appendix 3

### SEMI STRUCTURED INTERVIEW QUESTIONS

<b>Doctrinal element</b>	<b>normative / subjective</b>	<b>descriptive / objective</b>	<b>prescriptive / reflective</b>
	<i>personal opinions and perspective about the way things are (or intended)</i>	<i>evidence or specific examples of the way things are (or intended)</i>	<i>personal opinions and perspectives about the way things should be or could be; problems</i>
Organisational goals	what are the main goals and aims of the organisation ?	what aspects of the work you do and your company does reflect and/or do not reflect these main goals and aims of the organisation ? Specific examples of this ?	what should the organisational aims be in regard to the work you do and your company does ?
Definition of quality	what does the term 'quality' mean to you in regard to the work you do and your company does ? (same for TQM)	what aspects of the work you do and your company does reflect and/or does not reflect the meaning of quality as you see it ? (same for TQM) Specific examples of this ?	how should quality be seen in regard to the work you do and your company does ? (same for TQM)
Role/nature of environment	where do your external customers and suppliers fit in to the 'quality picture' in your organisation ?	what aspects of the work you do and your company does reflect and/or does not reflect the role and place customers have in your picture of quality in the organisation ? Specific examples of this ?	how should the purpose, role and importance of customers and suppliers be seen in regard to the work you do and your company does ?
Role of management	what is the role management plays in the implementation of TQM / quality management in your organisation?	What aspects of the work you do and your company does reflect and / or does not reflect this role of management in the implementation of TQM / quality management ? Specific examples of this ?	what role should management play in the implementation of TQM / quality management ?
Role of employees	what is the role/s team members / employees play in the implementation of TQM / quality management in your organisation?	What aspects of the work you do and your company does reflect and / or does not reflect this role/s of team members / employees in the implementation of TQM / quality management? Specific examples of this ?	what role should team members / employees play in the implementation of TQM / quality management ?
Structural rationality	what is the main way orders, instructions and other forms of communication flow within your team and within your organisation	what aspects of the work you do and your company does reflect and / or does not reflect this pattern of communication within your team and within your organisation ? Specific examples of this ?	what way/s and means should be used to disseminate information/ and other communications within your team and throughout your organisation ?
Philosophy toward change	does the organisation prefer a 'steady as you go' approach to change/ development or a more active and adaptive approach to change and development within the org?	what aspects of the work you do and your company does reflect and / or does not reflect this approach to change in the organisation ? Specific examples of this ?	what should be the preferred approach to change by the organisation ?