PERCEPTIONS, PRACTICES, AND PRODUCTIVITY: AN ASSESSMENT OF PERSONNEL MANAGEMENT IN NEW ZEALAND

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ABSTRACT

The aim of this thesis is to assess the contribution and role of personnel management through an empirical examination of some of the major variables in the organisation, and how the personnel function affects them. Contemporary organisation theory suggests a contingency approach to the influence of the organisation on the personnel function, and recognises the multivariate nature of organisations, in as much their resultant productivity will depend on the relationship between the employees' (attitudes) and the way they are managed (practices). The practice of personnel management is therefore the selection of the most appropriate practices for outcomes which will produce the greatest productivity.

A research model was developed to explore these relationships, using employee attitude and personnel practice as the independent variables, and productivity as the dependent variable. Buchholz's Beliefs About Work Scale and the Litwin and Stringer Organisational Climate Scale were used as measures of employee attitude, and were administered to a sample of 2,111 members of the New Zealand work force from 40 work organisations. Measures of personnel practice were developed from structured interviews with each of the 40 organisations, and a set of productivity data was requested from each organisation.

It was concluded that while psychological measures of employee attitude can be obtained satisfactorily using scales that have been developed in previous studies, and that measures of personnel practice can be developed, the same cannot be said for productivity. The paucity of the productivity information is indicative of the current status of personnel management in New Zealand, with implications for both psychology and personnel management. These implications are discussed in this thesis.

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CHAPTER 1

INTRODUCTION

1.1 An Overview

This thesis is about psychology and personnel management, and describes an exploratory study across a sample of 40 New Zealand organisations. The aim is to assess the contribution and role of personnel management through an empirical examination of some of the major variables, and how the personnel function affects them. While there has been a great deal of discussion in New Zealand about the relationships between the nature of personnel management and productivity in organisations, no real attempt has been made to explore directly what these relationships are.

In the second chapter the personnel management function is introduced and New Zealand research is reviewed. It is implicit that the studies on personnel management have been mainly descriptive, with little information on its effectiveness as a management function. The central point in this chapter is that the measurement of human resources and effectiveness is provided through the application of the research methodology of psychology.

A major influence on the personnel management function is the structure of the organisation and its environment which is the subject matter of the third chapter. In this chapter, major theories of the organisational context of personnel management are reviewed. Early theories stress the search for the best ways of conducting personnel management. Classical and human relations theories imply that if an organisation gets its work structure and processes right then the personnel management practices will work. Contemporary organisation theories, on the other hand, suggest a contingency approach to the influence of the organisation on the personnel function. In other words the appropriateness of the particular configuration of personnel practices will depend on both the environment and the people in the organisation. Contingency theories recognise the multivariate nature of organisations, in as much as resultant productivity will depend on the relationship between the perceptions of the employees and the way they are managed through the personnel management practices.

The third chapter also reviews the problems of reaching appropriate definitions of employee perceptions expressed through the various constructs that have been developed to measure work attitudes and the climate of the organisation. To measure the effectiveness of personnel management implies developing appropriate measures of these constructs. The chapter suggests what these measures should be in the context of this study.

The practice of effective personnel management becomes the selection of the most appropriate practices for outcomes which will produce the greatest productivity. The fourth chapter describes the relationship between personnel management and productivity, and reviews the important issues associated with both its definition and measurement.

The fifth chapter describes the rationale for the development of a research model to explore the relationship between personnel management and key organisational variables, using work attitudes and personnel practices as the independent variables, and productivity as the dependent variable. It discusses the methodology and development of the measures for the independent and dependent variables, and specifies the research objectives. Finally a framework for the analysis of the results is presented to achieve the objectives.

The results and their discussion are presented in the next three chapters. In the sixth chapter the appropriateness of using the Beliefs About Work Scale as a measure of employee attitude is justified, and construct validity in a cross-national context is demonstrated by replicating the same factor analytic techniques used in previous overseas studies in America and Scotland. The use of factor analysis to produce a modified measure of climate using the Litwin and Stringer Organisational Climate Scale is also described. The implications of the results of the attitude scales are discussed in terms of research from other Western nations, and also differences between certain categories of employee.

The seventh chapter describes the information about personnel practices in this sample of New Zealand organisations obtained from the structured interviews, and how they were measured. The results provide support to the objective of many personnel practitioners to be more proactive in the approach to personnel management in New Zealand. The results also suggest that participation in practices is not as prevalent as would be expected. Formal participation is not used in a conscious way, but is used more spontaneously depending on the nature of the personnel practice.

The eighth chapter focuses on the difficulties in the measurement of productivity. It discusses the problem of the inability of many of the organisations to supply the basic data requested, and the attempt to derive the dependent variables from incomplete measures. The chapter suggests that this is probably the main reason why no meaningful relationships could be obtained between the independent and dependent variables. Some speculations as to why the quality of the productivity data was so poor are suggested.

The results of this research raise some important implications for both psychology and personnel management and these are discussed in the ninth chapter. Given the predominant beliefs about work, the definitions of work need to be reassessed to include much broader contexts than are currently in vogue, and the practitioners of psychology need to remain vigilant in the conducting and reporting of research studies, particularly in cross-cultural settings, where proper replication and confirmation is essential.

The implications for personnel management practitioners are critical. The chapter concludes that it will not be until real measures of individual productivity are used in New Zealand organisations that effective personnel management models and practices can be evaluated, and that personnel practitioners can demonstrate their ability to add value to the organisation in terms that are understood and accepted by other managers. The results suggest that steps must be taken to design, develop, and implement procedures to obtain the necessary data by the introduction of personnel management information systems, and that the language of measurement must be introduced to the educational and training curricula of personnel specialists.

CHAPTER 2

PERSONNEL MANAGEMENT AND APPLIED PSYCHOLOGY

2.1 The Personnel Management Function

The management process in an organisation can be described as the application of certain principles and techniques to achieve organisational objectives. The task of management can therefore be conceptualised as the achievement of specified objectives by utilising the three basic resources of money, capital, and people. While these resources are to an extent interdependent, it is people that are the prime concern of the personnel management function. Personnel management is therefore that part of general management, which focuses on the management of people, and involves the recruitment, selection, maintenance, development, utilisation of, and accommodation to human resources by the organisation (French 1987).

Personnel management can be depicted as both a science and an art because it deals specifically with the human resource. The science of personnel management is associated with the systematic application of the methodology and knowledge from behaviourial science to the management of people. This aids the understanding, prediction and control of human behaviour at work. The art of personnel management relies more on the interpretation of the knowledge of people to provide viable solutions to problems in particular organisations and environments. The art also involves balancing the sometimes differing objectives of organisations with those of their employees.

The process of personnel management deals as much with perceptions as it does with realities. While science can provide the manager with information based on fact, whether or not it is accepted by the employees as fact will depend largely on their perceptions. For instance, an objective remuneration system that has been designed using the best measures that the scientific method can provide, will be doomed from the start if it is not perceived as fair and equitable by those employees subject to it . In other words the realities of the world, or the realities as employees experience them, are very much the products of their perceptual processes.

The psychology of perception demonstrates that sometimes people's perceptions are false, as demonstrated by a variety of visual illusions. Nonetheless it is these perceptions that govern their behaviour. Personnel management is full of such ambiguities. For instance management may perceive that it is in the best interests of the employees to pursue the goals of the organisation, and that the interests of both management and employees are common. This was the view of traditional theories, such as the scientific management ideas of F.W. Taylor (Bendix 1956). Therefore, according to this approach, employees who do not agree with this are troublemakers and should be suppressed. Employees, on the other hand, may perceive any management initiatives as suspicious and a means of exploiting the human resource. Much of the conflict in industry is based on such conflicting perceptions.

Personnel management is now an accepted function of management, but little has been done to examine its function and influence on such issues as productivity in the workplace, attitudes to work, and the climate of the organisation. Given the ambiguities in the environment in which personnel management operates, it is not unexpected that particular relationships like satisfaction with work and performance on the job are contradictory (Landy 1989).

The personnel management function involves a set of personnel practices or activities that focus on recruiting, hiring, training, appraising, and paying the employees in an organisation (Dessler 1988). Personnel practices are the procedures that the organisation undertakes to carry out personnel policy. For instance if the personnel policies in an organisation are to achieve equal employment opportunity, then recruitment, selection, and promotion practices will be geared towards the achievement and maintenance of this policy.

There is a suggestion that the application of modern personnel management techniques and concepts will enhance productivity and performance by improving human behaviour at work (Dessler 1988). Baytos (1979) suggests that "productivity is the problem - and personnel is definitely part of the solution." He describes a number of case studies conducted in the United States that have demonstrated the impact of personnel management practices on productivity and performance, measured in terms of cost savings (Baytos 1979).

2.2 Personnel Management in New Zealand

In New Zealand there is little empirical information available about the impact of personnel management on productivity and performance. Most of the major studies on personnel management practices have been largely descriptive, demonstrating that personnel practices are many and varied. For example, a survey conducted in 1978 by the New Zealand Institute of Personnel Management (NZIPM), found that the decade had been marked by a rapid increase in the specialisation of personnel practices. Particular developments included the establishment of separate industrial relations appointments within the personnel function; an increase in the importance of job evaluation and wage and salary administration; an upgrading of performance appraisal; and, an increase in training and development activities. However the fact that 40 percent of all organisations surveyed did not have a personnel function was viewed with considerable concern (NZIPM 1978).

The most dominant personnel practices carried out by Personnel Departments in the 1978 NZIPM review were: labour turnover statistics, employee records, advertising for staff, providing accident statistics and reports, involvement with statutory provisions for safety, salary and wage activities, industrial relations activities, management for further education, and participation in employer associations. These practices had also been identified in a similar survey conducted in 1968 by the Auckland Personnel Managers' Association. The traditional welfare function of personnel in this survey no longer required a major allocation of personnel department time. The responsibility for welfare had in many cases shifted to other departments.

In the 1978 review, some more progressive personnel practices were also identified that had not appeared in earlier reviews. They were in order of frequency: job evaluation, performance appraisal, external executive development programmes, performance counselling, manpower planning, training evaluation, internal executive development programmes, succession planning, job enrichment/enlargement, joint consultation, grievance procedures, and overseas executive development programmes.

The extent to which these practices are established now in New Zealand organisations in relation to the more traditional practices described above is unknown. Straight frequency counts of various practices, although interesting, do not give the reader any information on the effects of personnel practice on the behaviour of the employees nor their productivity or effectiveness. They remain largely lists of specific activities undertaken in the personnel functions of those organisations surveyed in terms of their frequency of use.

A particular area of concern to personnel practitioners, when personnel management is discussed in general, is the need for the personnel function to be more proactive. Discussions carried out by the researcher with a number of personnel practitioners over the past five years have revealed this concern to be uppermost in their minds. The meaning of being more proactive is somewhat elusive. When pressed to explain what is meant by the term, most practitioners define it in terms of it being opposite to the traditional view of the personnel function, where personnel practice deals with reacting to situations as they arise. For example, a vacancy occurs in a department, and the personnel department must react to this situation by advertising and screening suitable replacements. Many personnel practitioners describe theses activities as "fire-fighting". Gilbertson (1984) concludes from his research with personnel managers that in the main they see themselves as garbage gatherers and fire-fighters, who are unable to initiate nor change major policy in the personnel area. By proaction then, personnel specialists imply the need to effect policy in an organisation so that human resource problems can be anticipated and prevented, or at least their effects minimised.

Some more recent research by Ransom (1987), has lent further weight to a desire by personnel practitioners to be more proactive. As part of a survey of the membership of IPM(NZ), Ransom identified 175 different personnel practices categorised into the following major groupings: corporate decision involvement, employment activities, salaries, wages,and compensation, employee relations, education and training, safety, health, welfare services, and external relations activities.

These were incorporated into a questionnaire that was circulated to members of the Institute. The number of returned questionnaires was 117 giving a response rate of approximately 71 percent. For each of the practices listed on the questionnaire, respondents were asked to weight the importance to the organisation in terms of the following scale: low, moderate, and high. Ransom listed those practices that were most frequently identified with high weights and those most frequently identified with low weights. The divisions were arbitrarily assigned 40 percent and 20 percent respectively. It is significant to note that he reported that 83 percent of the respondents checked all or most of the practices listed. The lowest areas of activity were in the safety and health areas, while the highest areas of activity were in corporate decision involvement. He concluded that the latter finding confirms the increasing participation of members of the Institute in top level decision making.

2.3 Personnel Management and Psychology

Assuming that one of the aims of personnel management practice is to enhance productivity through the improvement of employee behaviour at work (Dessler 1988), then personnel management has to be considered in the context of psychology, which is the scientific study of human behaviour. Psychology is scientific because it applies the methodology of science to the study of mental phenomena through behaviour. The scientific method involves making observations of phenomena and measuring these observations to determine patterns or interrelationships among them. This is how people make sense and order out of the environments they live in.

Central to the scientific method is measurement. By measuring phenomena, the world can be described in quantitative terms. Comparisons are able to drawn between events through measurement. It also enables the making of deductions about events. Psychology equips the manager to apply the scientific method to everyday events. McCormick and Ilgen (1980) note that psychology as a discipline has two faces: it has a research face and a professional face. The former is involved with the discovery of information about human behaviour, while the latter is involved with the application of this knowledge to the solution of various practical problems.

Therefore the link between psychology and personnel management becomes obvious when measurement is considered. Just as accounting allows an organisation to measure the behaviour of its financial resources, psychology provides the means to measure the behaviour of its human resources.

To some extent, in New Zealand, the way personnel management has developed has acted to inhibit the measurement and evaluation of personnel activities. This is because its development has been based on two traditions. These are British welfarism and American industrial relations (Boxall, Rudman, and Taylor 1986). The current industrial relations system (prescribed in the Labour Relations Act 1987[1]) is based on principles embodied in the Industrial Conciliation and Arbitration Act of 1894. The assumptions behind this legislation have provided a highly structured framework to govern employer-employee relations in New Zealand and are based on largely late nineteenth century attitudes towards work, whose relevance today is questionable.

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1 The present National government has introduced the Employment Contracts Bill, which when passed will fundamentally alter the nature of New Zealand's industrial relations system.

The evidence from the surveys of personnel practice in New Zealand suggest that much of the effort has been on using personnel practice to react to the demands imposed by these considerations. Therefore personnel management in New Zealand has been primarily concerned with administration, rather than evaluation.

An important variable to consider in the evaluation of the personnel management function is the attitude that people have towards their work and the organisations that they work in. As discussed in 2.1, people's perceptions of particular personnel management practices will have important consequences on their actual work behaviour. These perceptions are partly the result of the prevailing attitudes that they hold towards their work. Therefore when attempting to evaluate personnel management, it follows that the relationship between work attitudes, on the one hand, and the type of personnel management practices, on the other, becomes a legitimate and relevant area of enquiry.

In this respect, overseas research has demonstrated that differing attitudes to work can be measured scientifically (Goldthorpe, Lockwood, Bechhofer, and Platt 1968, Buchholz 1978a, Furnham 1984). For instance the Goldthorpe et al studies in the motor-assembly industry confirmed that employees had an instrumental orientation to work. Management had a system that was geared towards this orientation, resulting in industrial harmony and peace, thus enhancing productivity. This should be contrasted with New Zealand which, despite having a highly structured industrial relations system designed to channel and resolve conflict quickly, has had a high incidence of strikes and stoppages.

This may be indicative that current personnel practices in New Zealand may not be congruent with attitudes to work. Some anecdotal evidence suggests that this is so (Twinn 1977), and that the administrative emphasis in personnel management practice has not capitalised on prevailing attitudes to work. New Zealanders have the reputation of being highly imaginative and resourceful when pursuing their leisure, sporting, and weekend activities. Therefore given the right conditions they are able to work productively. The problem may be though, according to observers like Twinn, that the management of personnel in this country has failed to get New Zealanders to accept their forty or so hours spent at work as a significant part of their lives.

If work attitudes can be measured, and their relationship with personnel management practice identified, then some progress to evaluate the use of personnel management practice in organisations will be made. In this respect psychology can

make an important contribution because it is well established that people's perceptions and behaviour to events at work may be influenced by their attitudes to work and the way they are managed.

Little research has been undertaken in this country to measure prevailing work attitudes, except for particular ethnic minorities (Hines 1973a, Hines 1973b, Hines 1973c, Hines 1976) and occupational groups (Hines 1973d, Inkson and Simpson 1975, Inkson 1977, Inkson 1978). It may be postulated that it is the prevailing attitudes to work that should determine how people are managed. Like Goldthorpe's motor-assembly employees, appropriate personnel policies and practices should enhance the commitment of employees towards their jobs. It is essential that such postulations are tested empirically.

This is part of the scientific approach, and the methodology prescribed by psychology provides a framework to put propositions and assumptions about personnel management to the test. Rather than simply accepting certain personnel management practices in blind faith, or continuing with them because that is the way they may have developed in New Zealand, such practices should be tested. Therefore the central question about personnel management practices is to measure how they relate to the attitudes of the employees in terms of their feelings towards employment and how they enhance the utilisation and motivation of people to improve productivity.

The aim of the research contained in this thesis is to assess the contribution and role of personnel management in the organisation through an empirical examination of some of the major variables in the organisation, and how the personnel function affects them and how it is affected by them. A major influence on the personnel function must be the structure and the environment of the organisation itself. This needs to be addressed before any empirical research of the personnel function can be conducted, and is the subject of the next chapter.

CHAPTER 3

THE ORGANISATION AND ITS ENVIRONMENT

3.1 The Organisational Context of Personnel Management

In every work setting there are literally dozens of organising forces operating simultaneously on the behaviour of employees (Landy 1989). While occupational psychology is concerned specifically with the behaviour of individual persons in their jobs, the understanding, prediction, and control of occupational behaviour can only be achieved through the context of the organisation. Therefore any research about personnel management practice must be considered in the context of the organisation. Simply speaking, the organisation can be conceptualised as being the medium through which work is undertaken.

The process of work is the conversion of resources (materials, money, even information) into some form of output, usually in the form of goods or services to the community that the organisation serves. This output is achieved through the effort of people, and one approach to the management of people is managing them as a resource itself, in much the same way that other resources are managed. As Armstrong (1987) observes the integration of people programmes (the traditional approach to personnel management) with the corporate plans of the organisation in the form of human resource management has something to offer chief executives. Chief executives are concerned with productivity. For instance, one study of 236 top-level executives (representing a cross-section of 195 industrial companies in the United States), concluded that the greatest cause of productivity decline is managerial ineffectiveness. Yet most companies' efforts to improve productivity have focused on cost-savings rather than improving managerial effectiveness. Therefore their efforts to improve productivity have been misdirected (Judson 1982).

To address the problem of managerial ineffectiveness implies a recognition of the human resource concept which is based on four principles: treating people as assets; linking personnel policies and practices directly to the objectives of the organisation; paying close attention to the culture of the organisation; and managing this culture by getting employees to work to achieve common goals. The fact that organisation members can have different goals, concerns, and interests must be taken into account (Armstrong 1987).

Whether or not the new human resource management concept is in fact merely "a case of the emperor's new clothes" (Armstrong 1987), the importance of the link

between the individual employee, on the one hand, and the organisation, on the other, cannot be over-emphasised. Since any organisation is made up of individuals, it follows that its effectiveness will be a reflection of the collective effort of the people that make up that organisation. Organisational behaviour and the behaviour of individuals are therefore both comprehensively intertwined.

Just as certain influences within an individual will shape that individual's behaviour, there are certain influences that shape the behaviour of organisations. These influences are both the formal and informal characteristics of the organisation itself (Landy 1989). The formal characteristics of the organisation include the chain of command (i.e. the organisation tree), official communication channels, and written organisation policies. These formal characteristics act to organise effort and to constrain the behaviour of individual employees.

Informal characteristics are less visible, but their influence on behaviour is often greater than formal characteristics. Informal characteristics are described as the "personality" of the organisation, and include concepts such as management style, the "grapevine", and the perceptions of the organisation members. Just as individuals develop personalities or styles of behaviour, so do organisations. In fact parallels can be drawn between individual pathological styles of behaviour and organisational pathology. In a speculative paper, Kets de Vries and Miller (1986) suggest that the neurotic styles of some top executives will result in a neurotic style of behaviour by their organisations. They identify a number of dysfunctional types of organisation based on the behaviour of key organisation members.

3.2 The Role of Organisation Theory

Organisation theory has done much to influence the development of personnel management practice since the turn of the century. Managers to a large degree are pragmatic and the emphasis has been on trying to identify ways of improving the utilisation of an organisation's human resources. In other words the use of theory has been to help derive practices and techniques to improve employee productivity. The role of theory is to enhance people's comprehension of the real world by abstracting reality and simplifying it to produce concepts and constructs that can be measured in some way. Theoretical models are similar to maps that summarise reality into some manageable form, and they enable reality to be reduced to a number of key variables.

It is the relationships between these key variables that enable predictions to be made. Consequently the role of the scientific method is to test the theoretical formulations in order to establish whether they work. In this sense organisation theory is no different from any other theoretical framework.

Formal theories of organisation fall into three main orientations, and each of these has a historical precedent:

a. Classical organisation theories which emphasise the importance of the immediate organisational environment on employee behaviour.

b. Human relations theories which emphasise the importance of the individual employee, and the idea that the organisation is basically a reflection of the behavioural processes of the employees.

c. Contingency theories of organisation which emphasise the idea that organisations have a contingent relationship with their environments and the people who serve the organisations.

Each of these three groups of theories can be considered from both the perspective of the organisation, or alternatively from the perspective of the individual employee. Theories which describe the organisational perspective can be classified as macro-theories of organisational behaviour, while those that describe the individual perspective can be classified as micro-theories of organisational behaviour.

3.2.1 Classical Theories of Organisation

Classical theories of organisation at the macro-level were concerned with the affect of the structure of the organisation on employee behaviour. The variables that contributed to classical theories were such things as size, and number of levels of management. It was these types of variables which were thought to determine the overall success of an organisation.

For instance Weber's theory of bureaucracy (Henderson and Talcott Parsons 1964) proposed that the bureaucratic model of organisation was the ideal model for organisational efficiency. The bureaucratic organisation consists of a structure of hierarchically organised positions, each falling under the supervision of a higher position: their activities guided by a cohesive system of standardised and formalised rules, which guarantee uniformity in task performance, and is in harmony with other tasks. The behaviour of individuals is formal and impersonal (Blau 1955). The dimensions of the Weberian model allow for predictability and advancement by members of the organisation based on their merit rather than on nepotism and

favouritism. This means that only the best qualified people in terms of knowledge, skills and ability are able to advance in the organisation, and consequently efficiency will be maximised. Weber also proposed a number of dimensions of organisation (sometimes referred to as principles of organisation) such as the specialisation of labour, delegation of authority, and span of control.

These principles also appeared in administrative theories such as those of Fayol (1949). Fayol's legacy to organisation theory is the idea that management consists of five universal concepts of planning, organising, command, coordination, and control, and these apply equally to all types of organisation. Fayol produced a comprehensive list of 14 principles including the division of work, authority and responsibility, discipline, unity of command, unity of direction, the subordination of individual interests to general interests, remuneration of personnel, centralisation, scalar chain, order, equity, stability of tenure of personnel, initiative, and espirit de corps.

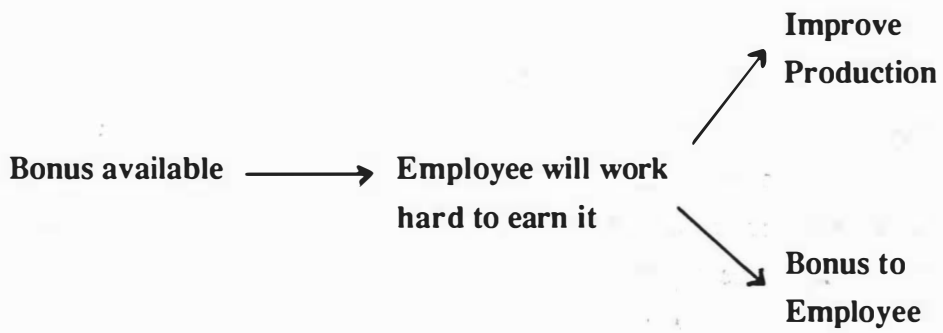
Other classical administrative theorists, such as Mary Parker Follet (Metcalf and Urwick 1941) and Chester Barnard (1938), differed from the ideas of Weber and Fayol by suggesting that management is a social process and the organisation is a social system. Such ideas focus on the psychological and sociological aspects of management, and are reflected in the Hawthorne Studies. They link the classical ideas of organisation to the organisational participants. Management therefore becomes a dynamic interaction between the principles of management on the one hand and the organisational participants on the other.

3.2.1.1 Scientific Management Theory

The concept of the division of labour is central to scientific management theory. This particular theory is illustrative of classical theory at the micro-level concerning the interface between the individual employee and job. F.W. Taylor was concerned about enhancing efficiency and suggested that this can be achieved by providing a work environment that will enable employees to maximise their earnings, and consequently improve the profits of the organisation. The achievement of these dual goals will resolve the conflict between labour and capital through scientific management (Bendix 1956). The scientific method would identify the one best method for doing each job in question through time and motion study. Using this method each job is broken down into its component parts, and then is reorganised so that the best ratio of benefits to costs is achieved.

Taylor's approach is essentially human engineering, where the employee is seen as an adjunct of the machine (Kast and Rosenzweig 1985). It assumes that the interests of employer and employee run parallel; it therefore calls attention to the problem of integrating the interests of employer and employee (Veen 1984). The key to productivity in Taylor's terms was the accurate measurement of jobs to find the fastest and most efficient ways of completing work, so that the earnings of the employee would be maximised as well as the employer's profits. The trade off for Taylor would be the substitution of freedom in jobs (which he called "rules of thumb") by rules and procedures that were scientifically determined and once applied would be standard across the employees involved in those jobs. Bowey (1978) suggests that most managers, when thinking about incentive schemes, think along the following lines:

FIGURE 3.1: A MODEL OF PRODUCTIVITY IMPROVEMENT



This is virtually identical to Taylor's ideas about human work behaviour and productivity improvement. While Taylor would not class himself as a theoretician, the ideas of scientific management did contribute to classical management theory through the provision of clear authority and responsibility, task specialisation, and the separation of planning from operations.

3.2.1.2 Classical Theories in Perspective

The main point about classical theories of organisation is that they all emphasise that there is one best way to structure an organisation and to organise the work in that organisation. They are universal in their application and present a rational and economic view of human behaviour. The implication of scientific management is that human beings work for economic reasons and therefore the role of management is to identify the most efficient way of getting the work done, by adopting some universal principles of organisation structure. In this way individuals will maximise their earnings and the business will increase its profits, and consequently organisational effectiveness will be enhanced. The classical school therefore suggested clear cut

concepts of management and provided definitive examples as guidelines. It is in ideological terms unitarist in nature, which asserts that all members of the organisation should support management in pursuit of organisational goals, since these goals are presumed to be rational and will achieve the enhancement of each employee's economic objectives (Deeks and Boxall 1989). Therefore any employee actions that upset or conflict with the achievement of these goals are considered to be irrational and the result of troublemakers and malcontents. Deeks and Boxall (1989) suggest that in New Zealand it is not surprising that this type of ideology is strong, given the relatively small sizes of business enterprises, and where teamwork and loyalty to the group have been for a long time valued above individual achievement. It is only in recent times that industrial relations legislation has in fact recognised the right of employees to undertake strike action, and for many years strikes were illegal, because of this predominant unitarian orientation in New Zealand. The heritage in the United States on the other hand is quite different, where the right to strike has always been recognised, and that the whole of the collective bargaining process recognises the reality of pluralistic views.

3.2.2 Human Relations Theories

Human relations theories emphasise the processes that occur in organisations rather than their structure. They best describe the relation between organisation requirements and the characteristics of the employees that make up the organisation (Landy 1989). These theories were heralded by the research of Elton Mayo at the Hawthorne Plant of the General Electric Company in the United States (1927-1932). Up until the time of these landmark studies, the emphasis in the workplace had focused on enhancing productivity through the careful application of scientific management to identify the best way of undertaking work. The subject of the original investigations was a study of the relationship between working conditions and employee productivity. The results of this study failed to show any simple relationship between illumination and productivity (in this case rate of output). Even with declining intensity, increased output was obtained in the experimental group. It was therefore obvious to the researchers that variables, other than physical conditions, were affecting rate of output. These initial observations led to three major groups of experiments conducted over five years.

The first group of experiments was the relay assembly test room experiments, which were prolonged studies of five young women making telephone assemblies, who were transferred from the factory floor to a special test room. During these experiments various changes were made to the physical working environments. These included a much less variable assembly task, shorter hours, rest pauses, more open and

friendlier supervision, and a preferred incentive system (Roethlisberger and Dickson 1939). The results were always the same, regardless of the manipulations made to the physical working conditions, productivity in the experimental group always increased, and after two years the output of the women had increased by 30 per cent (Roethlisberger and Dickson 1939). From these experiments and the results of the second relay assembly group and Mica Splitting Test room, it was suggested that the increased productivity was a result of changes in social relations, motivation, and supervision.

The next phase in the programme was the interviewing of a sample of 21,000 people over a three year period. The results of these interviews demonstrated the importance of human and social factors in the work situation.

The last group of experiments was the bank wiring observation room studies conducted over six months to observe and record the behaviour of a work group of 14 male employees using a group piecework incentive scheme. The main result of this phase of the programme was that the work group determined the output of individuals through the use of group norms, not management actions. This indicated that the productivity of individual employees is determined by social factors, rather than by aptitude or physiological factors.

Reviews by Carey (1967 and 1975) represent a major critique of these studies, in which the analyses are challenged and their consequent conclusions disputed. Carey's criticisms focus on the smallness and lack of representativeness of the samples used, and the lack of any attempt to employ control data from the output records of the young women who were not put under special experimental conditions. He believes that the increased production obtained in the relay assembly test room was due to a new system of compensation, rather than any intervention on the part of the experimenters. He argues further that the results of the interviewing programme, and the bank wiring room are erroneous because they are based on the fallacies of the relay assembly test rooms. Yet other reviewers like Sonnenfeld (1985), argue that critics like Carey have generally misunderstood or misrepresented the modest ideological and methodological presumptions of these pioneering studies, which were only intended to generate and not to verify hypotheses. Sonnenfeld concludes that there is "substantial evidence in the published reports (of the critics), observers' records, secondary statistical analysis, and recent first hand interviews with some of the actual study participants, to strongly endorse the findings of the original study". It is very to easy to criticise classical studies long after they have been concluded. The Hawthorne studies represent a major contribution to the development of theory, and consequently the conclusions of critics like Carey do little to assist theory development.

The Hawthorne revelations caused a major impact on personnel practice, and represented a swing away from the prevailing view of economic man to that of social man at work. Productivity would be enhanced by paying close attention to the psychosocial system in the organisation. The hard line task orientation of scientific-management gave way to the softer "concern for people" orientation in personnel practice. Ideologically it also represented a move away from the purely unitarist view of work proposed by scientific management that the goals of both employees and the organisation, as represented through its managers, are or should be the same, to a recognition that this is not necessarily so, and that employees get "rewards" other than purely economic ones from their work. Deeks and Boxall (1989) refer to this as pluralistic ideology, which views the organisation as a coalition of individuals and groups, each with their own objectives and interests, but dependent on each other for their survival. It can be argued that perhaps the earliest experimental evidence of this type of pluralism occurred in the bank wiring observation room studies, where group norms dictated rate of output, rather than purely economic and managerial prerogatives. The major concepts of human relations theory that governed behaviour in organisations are roles, norms, the informal work group, feelings, sentiments, attitudes, communication channels, and social-psychological needs (Kast and Rosenzweig 1985).

At the macro-level, human relations theories have emphasised the effect the organisation has on the behaviour of employees. For instance McGregor (1960) developed a theory proposing relationships between the beliefs of managers about their employees and their employees' behaviour, so that the behaviour of the employees is a result of their treatment by managers. Theory X creates an environment that hinders, while Theory Y creates an environment that helps employees. Central to McGregor's theory is the proposition that peoples' beliefs will influence behaviour, and this in turn will strengthen the original beliefs. Managers who have a predominantly Theory X belief system about their employees will treat their employees as being basically lazy, stubborn, and intractable. This will create an environment that dictates what the employees do, which in turn will affect the behaviour of those employees in the direction of Theory X, thus reinforcing the original beliefs held by those managers. Theory X organisations therefore tend to have tight control structures and there is little room for initiative and the taking of responsibility. Theory Y beliefs about employees, conversely, create an environment that pushes employee behaviour in the direction of Theory Y which reinforces the ideas of employee responsibility and initiative. Consequently employees will behave in ways that are opposite to their Theory X counterparts. Theory Y organisations therefore have "open-management" styles, where employees readily accept responsibility.

Likert (1967) suggests that an organisation's guiding principle to ensure that employees are motivated to perform in an optimal way for the organisation, is to have a structure which is conducive to them experiencing or perceiving that their interactions are supportive and contributing to their own sense of personal worth and dignity. In practical terms this implies the establishment of well-knit work groups which every employee is able to belong to and be a part. Coordination of these groups is undertaken by "linking pins". These are employees who are supervisors at one level and then function as the group representative at the next level in the organisation. The skeleton of the organisation structure is therefore comprised of the links between these particular employees.

The difference between Likert's scheme and classical structure is that these supervisors interact with the whole work group which meets and solves work problems with the group. The supervisor interaction therefore is not just with individuals, as is the case with traditional structure. An interesting parallel here is the idea of the commissar versus the prince's agent in political theory, whereas in reality the behaviour of each is the same.

The impact that the organisation has on employee behaviour is also reflected in Argyris's (1964) suggestion that individuals have the capability to develop on a number of dimensions, but that the formal organisation may impede this, because some forms of work organisation are not suited to the level of development of the individual entering the organisation. The assembly-line is an example of work organisation that is incompatible with Argyris's ideas of individual growth and development, and employees will react to this type of work organisation through certain types of behaviour such as high absenteeism and turnover. The organisation in turn will react to this type of behaviour by instigating control mechanisms to prevent this behaviour, usually in a punitive way, thus aggravating the situation.

While theorists such as McGregor and Argyris would therefore argue for more open and democratic styles of work organisation, their assumptions do not explain why more satisfied employees do not necessarily give a higher productivity, and that under certain circumstances autocratically-managed organisations can out pace democratically-managed ones. Ouchi (1981) proposed a new theory to explain this paradox calling it Theory Z. His theory is based on Japanese paternalism, and is marked by, long term employment, consensual decision-making, slow evaluation and decision-making, and a holistic concern for employees. In a sense it draws out the best features of both Theories X and Y, and produces a synthesis whereby benevolent autocracy (paternalism) can outstrip other forms of organisation in improving organisational efficiency. In Ouchi's view the closer an organisation approaches a

Theory Z style, the greater will be its productivity. Landy (1989) suggests two alternative reasons why Ouchi's theory has received some support. It may be that successful organisations adopt Theory Z type characteristics as a result of their success; or Type Z is only one of the many ways that organisations are successful, but that Ouchi's original sampling technique only tended to uncover the type of organisation that fitted his theory.

Human relations theories such as these above have made the integration between the individual employee and the organisation their central concern. They focus on the psycho-social system of the particular organisation, rather than the structure of the organisation and the application of a set of universal principles as in the classical theories. This approach is also called the integration-motivation approach (Veen 1984). Therefore the primary emphasis for these theories are the human components of organisational life.

3.2.2.1 Human Relations Theories in Perspective

Despite the controversy surrounding the scientific integrity of the original Hawthorne investigations, they remain landmark studies. The major contribution from subsequent human relations theories is from the idea that the organisation is a social system, as well as being a formal structure. In other words they give recognition to the fact that the organisation is not merely an impersonal edifice, but that it is made up of people who interact and behave in a variety of ways. Another major contribution from human relations theories is that they bring to the forefront a concern for humanism in industry, and the need to design the work environment to restore human dignity, much of which had been lost through the industrial revolution. Employees under human relations are no longer looked as merely being adjuncts to machines. The final and perhaps greatest contribution of human relations theories is the recognition by organisations and their managements that people are not motivated purely for economic reasons and therefore managerial practices that stress only economic benefits and rewards are doomed to failure.

While the human relations movement was an alternative perspective to the ideas of scientific management, it did not signify the end of scientific management. Instead both scientific management and human relations represent the start of two different perspectives on organisation theory development.

3.2.3 Contingency Theories of Organisation: An Integration of Contemporary Theories

Both scientific management and human relations theories have their complements in contemporary theories of organisation. For instance, the modern descendant of scientific management theory is management science (also referred to as operations research, or decision science). Management science adopts a scientific framework for solving management problems using what the management theorists purport to be objective, rather than subjective judgement. The emphasis of management science is therefore on rational and quantitative methodology, and is closely related to industrial engineering. Its main concern is with the economic-technical rather than the psycho-social aspects (Baumol 1961, Simon 1965).

The modern descendants of human relations theory are a group of theories which focus on the quality of working life (QWL). QWL theory has been reviewed quite extensively by Cherns (1975), Walton (1980), and Nadler and Lawler (1983). In brief the quality of work life is really about the perceptions of employees of their work environments, and that the productivity of employees is governed by their perceptions of the environments that they are employed in. Studies from psychology indicate that there is a direct relationship between measures on job satisfaction and productivity indicators such as low absenteeism rates and high employee retention (Muchinsky 1977, Porter and Steers 1973, and Muchinsky and Tuttle 1979). However the relationship between job satisfaction and performance is not so clear and most research indicates that job satisfaction and performance are only slightly related (Muchinsky 1987). The essential ingredient in all this is the emphasis on people in the organisation, and that the key managerial issue is to be able to design and implement a system in the organisation that will be able to maintain both high levels of productivity and meet the employees' expectations about their quality of working life.

Both the economic-rational (management science) and psycho-social (quality of work life) approaches have grown apart due to a lack of integration (Kast and Rosenzweig 1985). Both have their parallels in absurdity when it comes to measure their success. The body counts during the Vietnam war are one example of using the "objectivity" of management science to measure success. The blind faith exhibited by many managers in "glossy training packages" and other "human relations" programmes of dubious origin that contribute absolutely nothing in real terms to the success of an enterprise is yet another. It is fair to conclude that both perspectives have a role to play in organisation theory, and modern theories of organisation and management need to reflect both the structural and human factors expounded by scientific management and human relations theory.

It is in the third group of theories that some integration of the economic-rational and psychosocial perspectives is achieved. In both instances the theories seek to identify the best characteristics and to apply these universally to organisations. In this sense both approaches suggest that there are universal principles of structure and standard practices based on generalised patterns of human motivation and behaviour; the secret of good management therefore is to apply these directly to the particular organisation in question.

Contingency theories of organisation on the other hand suggest that there is no one correct configuration or personnel practice, and that the appropriateness of particular choices of configuration or practices will depend on the presence or absence of certain environmental variables such as technology or the sociology of the organisation. In other words there is a contingent relationship between the organisation, its members, and the environment.

At the macro-level, general systems theory best describes the contingent relationship that organisations have with their environments. It provides a broad macro-view that applies to all types of systems (Kast and Rosenzweig 1985). The application of general systems theory to organisations, suggests that organisations are comprised of smaller organisations (departments, sections, work groups), each characterised by a never ending exchange process with their surroundings. The functions of an organisation are dependent upon its structure. Therefore an organisation defined in systems terms can be thought of as a set of interacting components (or smaller organisations) surrounded by a filtering and transforming boundary, accepting inputs of two kinds, maintenance and signal, which are transformed by these components into both useful and useless outputs (Berrien 1976). Organisations are also embedded in communities, which may also be a source of maintenance or change. For instance the "community" created by the policies of the fourth labour government in New Zealand has been a source of great changes in public sector organisations since 1984.

A key concept from general systems theory is that of equifinality, where the final results or outputs may be achieved by using different initial conditions in different ways. So social organisations can accomplish their objectives with varying inputs and internal activities. Whereas the closed system counterpart to general systems theory would suggest that there is only one best way of achieving objectives (Kast and Rosenzweig 1985).

An early contingency theory of organisation was that of Woodward (1958), who suggested that span of control will depend on the type of technology of the organisation. She studied span of control in three different types of technology: small batch organisations (engaged in speciality products), mass-production organisations (engaged in assembly-line operations), and continuous process organisations (engaged in a continuous process for product output). She found that each technology type had a different median span of control. This work illustrates the relationship between the structural characteristics of organisations and the social patterns of their members, and that there is no one best span of control; the best supervisor/subordinate ratio will depend on the nature of the technology (Landy 1989). Woodward's original categorisation of technology has been extended by Thompson (1967) and Mahoney and Frost (1974).

One of the criticisms leveled at classical theories of organisation is that they seek to identify the best organisational structure for all situations, and this makes no distinction between types of industries. Burns and Stalker (1961) proposed that organisations in stable industries are primarily "mechanistic" in their structures, with a dependency on formal regulations, centralised decision-making, and small spans of control. The small span of control implied a much higher manager to employee ratio. In contrast, they further proposed that organisations in changing and dynamic environments are primarily "organic" in their structures with much larger spans of control, much less formal procedures, and decentralised decision-making. Organic organisations therefore would tend to have much flatter organisation structures than mechanistic ones. Organic and mechanistic structure are really extremes on a continuum, just as much as the degree of bureaucracy indicates a dimension. Consequently a higher degree of bureaucracy coincides with being more "mechanistic" and a lower degree of bureaucracy coincides with being more "organic" (Hazewinkel 1984).

Lawrence and Lorsch (1967) took Burns and Stalker's position and expanded their theory to suggest that organisational behaviour is also a function of certain inter-organisational variables in addition to the mechanistic and organic environments. These variables can be best described as a dimension upon which organisations differ and this is known by Lawrence and Lorsch as "differentiation", defined as the difference in cognitive and emotional orientation of managers and supervisors in different parts of the organisation. This differentiation is the result of specialisation which produces side-effects as inconveniences and inefficiencies caused by different orientations toward time, goals, and interpersonal relations (Landy 1989). These side-effects are minimised through the act of collaborative effort or integration. This is defined as the state of collaboration existing between various departments, which

cannot be achieved until interdepartmental conflicts are resolved. The more heterogeneous an organisation, the more differentiated it will become, and the higher the degree of differentiation the greater is the need for formal mechanisms to promote cooperation and resolve inevitable conflicts (Hazewinkel 1984).

In a comparative study of six organisations operating in the same industrial environment, Lawrence and Lorsch (1967) found that within each organisation the degree of differentiation of behaviour and orientation between the sub systems of sales, research, and production, was found to be inversely related to the degree of integration obtained between these subsystems. The findings of this study indicate that, all other things being equal, differentiation and integration are essentially antagonistic, and that one can only be obtained at the expense of the other (Lawrence and Lorsch 1967).

Galbraith (1973) suggests that the organisation can be viewed as an information processing network. The greater the task uncertainty, the greater is the amount of information that must be processed among decision-makers during the execution of the tasks to achieve a certain level of performance. Therefore as the amount of uncertainty increases, the less able is a bureaucratic structure to carry out the necessary information processing. Therefore Galbraith suggests that there are four options open to an organisation: the creation of slack resources or committal of more resources to the transformation process; the creation of self contained departments; increasing the amount of relevant information available to decision-makers (vertical information system); or, decentralisation of operational decisions to lower levels (lateral relations). One or more of these must be utilised when uncertainty increases, which one(s) is(are) will be contingent on the environmental context of the organisation in terms of cost minimisation (Galbraith 1969).

The ultimate resolution to both the classical and human relations approaches to organisation theory is the contingency theory known as the sociotechnical model, which is a general systems model developed by Trist, Higgin, and Murrai (1963), and Rice (1963) which mixes the economic or material features of the organisation with the psychosocial aspects. This model assumes that the most appropriate type organisation structure will depend on the unique interactions of social and structural variables. Accordingly it seeks in any given situation to find the best match between the particular social system and the technical system. An early example of the sociotechnical model is the action research of Trist, Susman, and Brown (1977) at the Rushton coal mining operation in the United States. The aim of this research was to optimise the match between the human and technical systems of the coal mining operation to improve the perceived quality of working life in the labour force.

The research involved the examination of a number of technical aspects of the work, and this revealed a number of potential problems in the psychosocial environment, including the isolation of miners and competition among the various shifts. As a consequence, a number of changes were therefore introduced into the operation of the work groups, using a number of strategies and the formation of autonomous work groups. Progress in the study was maintained using the maximum involvement of the employees by way of employee-feedback sessions. While the results did not yield an overall increase in production among these autonomous work groups, there was a substantial decrease in the costs of mining using these groups, and job satisfaction among those employees was greatly enhanced. While the experiment was considered a success, the new mining operation was not extended across the whole mine, because of union pressure.

This study is considered to be a pioneer in the design of a technical system to improve the social/personal environment, and raises the whole issue of the possibility of improving the quality of working life through job design. It demonstrates the potential of improving satisfaction while decreasing the costs, which is another way of improving productivity.

One of the most popular theories at the micro-level to explain this phenomenon has been that of the job characteristics model developed by Hackman and Oldham (1976). The model suggests that certain characteristics of jobs (core job dimensions) will produce certain critical psychological states (individual perceptions) which will lead to certain individual and organisational outcomes. Certain employees who are high in growth need strength will react positively to jobs that have high amounts of the five core job dimensions of skill variety, task identity, task significance, autonomy, and feedback. People with low growth need strength will on the other hand only react positively to jobs that are low on these five core dimensions. Need growth strength is therefore a moderating variable, and suggests that various forms of job enrichment (Herzberg 1977) may not be appropriate for certain types of people. The Hackman and Oldham model also suggests that the five core dimensions can be combined in a way to provide an overall measure of the motivating potential of any job. The dimensions are measured using a questionnaire developed by the authors called the job descriptive survey (JDS). The model has been subjected to criticism, and doubts have been raised about the independence of the five core dimensions (Brief and Aldag 1975, and Dunham 1976). Recent reviews of studies on the Hackman Oldham model (Aldag, Barr, and Brief 1981, Roberts and Glick 1981, and O'Brien 1982) have all been negative. The relationship between the characteristics of the job and the psychological states of the employees is obviously complex, and relatively simple contingency

models such as the Hackman Oldham job characteristics model do not stand up to scientific investigation. However this by no means diminishes their value in the development of comprehensive theories of organisation.

3.3 Organisational Development

The evolution of organisation theory discussed in 3.2 above, has led to the development of its more practical counterpart, organisational development. Just as the various theories of individual behaviour in general psychology have resulted in the establishment of "professional" psychologies such as clinical, educational, and occupational psychology, the "professional" face of organisation theory is organisational development.

Friedlander (1980) suggests that the basis of organisational development is the goal of assisting organisations to evaluate and implement the need for change by increasing their awareness of the reasons why organisation members behave the way they do and what processes are involved. According to Landy (1989), it is similar to the aims and objectives of clinical psychology. Just as these are to assist the individual to adjust and to develop as a person, the aim of organisational development is to assist the organisation to develop, to adjust, and to meet its own objectives. One of the critical features of organisational development is the diagnosis of the current problem/situation: just as this is a critical feature of clinical psychology to identify the problem of the individual. Just as the perceptions of the individual are at the centre of any clinical intervention, so are the perceptions of the characteristics of the organisation by the members of the organisation central to the diagnosis of organisation problems and dysfunctions. This is why the climate of the organisation is an important element of organisational development.

Organisational development is a logical outcome of the general systems model as applied to organisation theory, because the central proposition of organisational development is that the organisation is an open system that interacts with the environment to maintain a balance between its own requirements and the demands of the environment in which it is embedded (Katz and Kahn 1966, Lawrence and Lorsch 1967, Beer 1980, and Burke 1982). Therefore authors such as Beckhard and Harris (1977) stress the need for "environmental mapping", where the organisation looks at its transactions with the environment and assesses their importance. Management books are therefore arguing that organisational effectiveness is best conceptualised as the state of congruence or fit between business strategy and several internal organisational dealings such as structure, systems, management style, shared values, and skills (Beer and Walton 1987). Beer and Spector (1984) suggest that the practice

of human resource management and its functions are now absorbing the values and practices of organisational development, because in increasingly competitive economies, having superior human resources is seen as having competitive advantage. This has resulted in substantial interest in companies developing high-commitment work systems that will attract, motivate, and retain superior employees (Beer and Walton 1987).

3.4 Organisational Climate

As concluded in 3.3 above, the climate of an organisation is an important element of organisational development. Employee perceptions of their work organisations constitute organisational climate, and climate will colour their work attitudes. A more formal definition of climate is that it is represented by the employees' perceptions of the objective characteristics of an organisation (Landy 1989). For example the number of managers employed by an organisation is objective, but employees' feelings about that number of managers is subjective.

Climate therefore differs from the structure of an organisation. Structure is the anatomy of the organisation, the bare bones or the skeleton. Climate on the other hand is the way the employees view the personality of the organisation. Muchinsky (1987) notes that there is debate whether the components of climate are actual attributes of organisation or merely the perceptions of the employees working in the organisation. The fact that most researchers concur that organisations differ by climate suggests that it is an organisational attribute. Such dimensions as structure, standards and reward policies can be conceived as being made up of a set of attributes that may be generated from the way the organisation deals with its members and environment (Hellriegal and Slocum 1974), and are identified through the responses of employees to questionnaires (Litwin and Stringer 1968). There is nothing inherently good or bad about an organisation's climate, rather it assumes value only when it is related to certain outcomes (Muchinsky 1987). Like the weather, a wet day is "bad" for a day at the beach, but "good" for the growing of crops.

There is evidence to suggest that organisational climate can influence both job performance and the satisfaction of employees (Lawler, Hall, and Oldham 1974). Unlike the weather, which is unable to be controlled, it seems that some organisational climates can be promoted to facilitate the achievement of organisational goals (Muchinsky 1987).

3.4.1 The Measurement of Organisational Climate

Because climate is about the perceptions its members have of the organisation, it follows that the measurement of climate will depend in part on the people that belong to the organisation. If climate is considered to be a barometer, then the measures that the "barometer" yields will depend on the type of barometer used. So far as weather is concerned, barometers can give a reasonably valid measure of the climate by measuring atmospheric pressure. However it needs to be stressed that atmospheric pressure is only one measure of climate. Unfortunately organisational climate measures, like many judgemental scales, do not share this high degree of validity.

An early definition of organisational climate is Forehand and Gilmer's (1964) suggestion that organisational climate is a set of descriptive characteristics of an organisation that are relatively enduring over a period of time which distinguish the organisation from other organisations and influence the behaviour of people that belong to that organisation. This definition represents the multiple measurement-organisational approach to measurement, which is one of the three approaches identified in a review of climate theory by James and Jones (1974). The other two approaches are the perceptual-organisational attribute approach, and the perceptual measurement-individual attribute approach. According to James and Jones, definitions such as Forehand and Gilmer's are measured by a variety of methods, and the attributes or main effects will include such variables as size, structure, systems complexity, and levels of authority.

The perceptual-organisational attribute approach to the measurement of climate views climate as an organisational attribute, but unlike the first approach is measured by perceptual rather than by objective means. For instance Tagiuri and Litwin (1968) agree with Forehand and Gilmer's definition, except that it is measured by the experiences of its members. In those circumstances the perceptions of the organisation members of the set of descriptive characteristics constitute climate rather than the objective realities. For instance if size is taken as a descriptive characteristic, the first approach would simply measure it in terms of the specified dimensions. While the second approach measures it in terms of the employees' perceptions of these dimensions. Campbell, Dunnette, Lawler, and Weick (1970) suggest that definitions of this sort view climate as a situational or organisational main effect.

The perceptual measurement-individual attribute approach views climate as a set of summary or global perceptions reflecting an interaction between actual events in the organisation and the perception of those events. Here the emphasis swings away from actual organisational attributes to a summary of individual perceptions measured by

perceptual processes (Schneider and Hall 1972). In this context, it can also be considered an intervening variable that is caused by both organisational and individual experiences, which in turn affects behaviour among individuals. In this sense climate can be both a dependent variable and an independent variable.

James and Jones (1974) note that these three approaches to organisational climate reflect the conceptual diversity expressed in the literature. They suggest that the concern in climate research has focused on measurement techniques rather than understanding the underlying constructs. In this way the state of climate research is in a similar state to work attitudes and is marked by confusion and ambiguity. This diversity and contradiction has led Guion (1973) to conclude that the concept of organisational climate is "fuzzy". James and Jones suggest as a first step in reconceptualisation that a distinction be made between climate being regarded as an organisational attribute (organisational climate), and as an individual attribute (psychological climate). The term organisational climate would therefore include both the multiple measurement-organisational attribute and perceptual measurement-organisational attribute approaches, and psychological climate would apply to the perceptual measurement-individual attribute approach.

A distinction needs to be made between organisational climate and organisational culture. Organisational culture consists of the managerial beliefs and values that define the way that conduct business. Like the anthropological view that a society's prevailing culture dictates what people are to learn and how they are to behave (Luthans 1985), an organisation's culture dictates what people have to know and the ways that things are done. These core values (about how to treat employees, customers, suppliers, and others) are thought to lead to sustained superior financial performance in organisations with strong cultures (Barney 1986). The culture of an organisation can be defined as the emergent pattern of beliefs, behaviours, and the interactions that uniquely characterise the organisation as it operates within an industrial and a societal context (Frombrun 1984). It is therefore the set of important beliefs, values, and understandings that all members of the organisation share in common (Kast and Rosenzweig 1985). Since culture defines the way the organisation conducts business, it has an important effect on the managerial philosophy and style in the organisation. In fact organisations with strong cultures go to great lengths to socialise new members into the prevailing beliefs and values that determine the way things are done in the organisation, and this may be the major feature in employee orientation and induction practices in such organisations. Highly successful organisations tend to have strong cultures (Peters and Waterman 1982).

The measurement of organisational climate is the means to uncover an organisation's culture (Desatnick 1986). Climate surveys measure the perceptions and reactions of organisation members to the culture of the organisation, as well as other organisational attributes, and the culture is reflected through its management style. Therefore climate measures employees' perceptions about the way they are being managed.

A variety of climate measures have been developed and the most frequently used ones have been used to measure climate in a variety of organisational settings (Woodman and King 1978). These settings have included hospitals, schools, and public utilities. Of these Litwin and Stringer's (1968) Occupational Climate Questionnaire (LSOCQ) is the most frequently used to measure climate in business organisations. Litwin and Stringer define organisational climate as referring to a "... set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behaviour." The Litwin and Stringer approach to organisational climate is the perceptual measurement-organisational attribute approach.

Litwin and Stringer drew from the McClelland-Atkinson motivation theory and based their dimensions of organisational climate and their effects on the need for achievement, the need for power, and the need for affiliation. They proposed that climate is made up of the dimensions of structure, responsibility, rewards, risks, warmth, tolerance and conflict. These are described briefly as follows:

a. Structure. Structure indicates the feeling that employees have about the constraints in the group, how many rules, regulations, procedures there are; is there an emphasis on "red tape" and going through channels, or is there a loose and informal atmosphere?

b. Responsibility. Responsibility is the feeling of being your own boss; not having to double-check all your decisions; when you have a job to do, knowing that is your job.

c. Reward. Reward is the feeling of being rewarded for a job well done, emphasising positive rewards rather than punishments; the perceived fairness of the pay and promotion policies.

d. Risk. Risk is the sense of riskiness and challenge in the job and in the organisation; is there an emphasis on taking calculated risks, or is playing it safe the best way to operate?

e. Warmth. Warmth is the feeling of good general fellowship that prevails in the work group atmosphere; the emphasis on being well-liked; the prevalence of friendly and informal social groups.

f. Support. Support is the perceived helpfulness of the managers and other employees in the group; emphasis on mutual support from above and below.

g. Standards. Standards are the perceived importance of implicit and explicit goals and performance standards; the emphasis on doing a good job; the challenge represented in personal and group goals.

h. Conflict. Conflict is the feeling that managers and other workers want to hear different opinions; the emphasis placed on getting problems out in the open, rather than smoothing them over or ignoring them.

i. Identity. Identity is the feeling that you belong to a working team; the importance placed on this kind of spirit. (Litwin and Stringer 1968, pp.81-82).

These factors may actually describe the way an organisation treats its employees (Campbell, Dunnette, Lawler and Weick 1970). Woodman and King (1978) list the LSOCQ as one of the most frequently used organisational climate scales. Consequently it has been the focus of much research.

Sims and Lafollette's (1975) research on the Litwin and Stringer Organisational Climate Scale (1968) was the first major review of this instrument as a measure of organisational climate. The sample used was of medical professionals and support staff within a large medical complex in the Midwest United States. Out of an original sample of completed questionnaires, a total of 997 were able to be used in the final analysis. The original Litwin and Stringer questions were reworded slightly to fit the medical centre environment. The results were factor analysed using the PA2 extraction and a varimax rotation (Nie, Bent, and Hull 1970). They ran 18 separate analyses on the data using both varimax and oblimin rotations. After examining the results they determined on a six factor orthogonal solution. The factors were:

a. General affect tone towards other people in the organisation.

b. General affect tone towards management and/or the organisation.

c. Policy and promotion clarity.

d. Job pressure and standards.

e. Openness and upward communication.

f. Risk and decision making.

The authors concluded that the majority of the items in the questionnaire collapsed into the two broad general affect tone factors explaining 32 percent of the variance in responses to the questionnaire. The general affect tone towards other people in the organisation was 24 percent of the variance, and the general affect tone to management was a further eight percent of the variance. The percentage of the variance explained by all six factors was 44 percent.

Muchinsky (1976) carried a theoretical and empirical study of Sims and Lafollette's 1975 study, using a random sample of 1160 employees of a large public utility. The result was a sample of 695 (60 percent) usable questionnaires. Identical factor analytic techniques were employed. Muchinsky reports that the oblique rotations were not reported in the results of the original study, ie there they obviously drew a blank. He found that a six factor orthogonal rotation best represented the data from the questionnaires. He named these factors as follows (percent explanation of variance follows each description):

a. Organisational milieu or inter personnel relationships (six percent).

b. Standards or emphasis on high standards of performance (seven percent).

c. General affective tone towards management/organisation (18 percent).

d. Organisational structures and procedures (10 percent).

e. Responsibility or who has the ultimate responsibility for getting the job done (five percent).

f. Organisational identification or pride in company (six percent).

With the exception of general tone towards management which was identical to Sims and Lafollette, the other five factors were quite different. The six factors accounted for 54.69 percent of the total variance.

In brief, the results from Sims and Lafollette's study and Muchinsky's study showed that the nine original scales could not be reproduced, but that the questionnaire data was best represented by six factors. Two other studies (Meyer 1968, Downey, Hellriegel, Phelps, and Slocum 1974) have also found six factors underlying the questionnaire. Meyer referred to these as: constraining conformity, responsibility, standards, reward, organisational clarity, and friendly team spirit. Downey et al referred to their six factors as: decision making, warmth, risk, openness, rewards, and structure.

Some of the reported factors appear common across these studies, while others appear to be specific to the study in question. The general tone towards management factor reported in the Sims and Lafollette study and the Muchinsky study do not have identical items comprising this factor. Several of the items in this factor in Muchinsky's study are in fact contained in Sims and Lafollette's affective tone towards people factor. These differences can be explained in terms of differences in the characteristics of each sample, due to the differing work practices, procedures, and goals of each of the organisations.

Rogers, Miles, and Biggs (1980) have directly compared the results of these five studies. On the surface the evidence points to a six factor rather than the nine apriori scales of Litwin and Stringer (1968). However there is considerable variation among these studies in terms of the actual details of the factor structures, and comparing across the studies there is little agreement as to items loading on the same factor. The authors conclude that the nine original scales do not therefore represent separate and independent measures of organisational climate, and that there seems to be no consistent factor structure in the different organisations reviewed. The factor structure for each data set seems to be unique for each organisation. There is more intra-organisational consistency in the factors than across organisations. Muchinsky suggests that the scale should be factor analysed for each organisation studied, or, alternatively a more general measure of organisational climate should be developed.

Notwithstanding these concerns, there does seem to be some consistency in the type of factors identified in these studies. In both the Sims and Lafollette (1975) and Muchinsky (1976) studies, a major factor involving the way people perceive management was identified.

These findings suggest that there are difficulties in arriving at some standardised climate questionnaire which will manifest high scale validity and reliability across many different organisations. Since climate is defined as perceptions towards the workplace, it follows that different types of organisations may have relatively unique work environments. Nonetheless there is some consistency across studies, because they do identify a similar number of factors, the main problem is that there seems to be no consistency among the individual items.

In more recent research, items from the LSOCQ have been used to measure aspects of organisational climate along with other measures Batlis (1980), Heller, Guestello, and Aderman (1982). It has also been used in studies in its own right as a measure of organisational climate and applied more or less blindly as it stands, with no check on the factor analytic structure, Ganesan (1983), Mossholder, Bedeian, Touliatos, and Barkman (1985), Putti and Kheun (1986).

It has also been studied in a modified form. Schnake (1983) administered a 30 item version of the LSOCQ to a sample of 8,938 non-supervisory employees of a large utility, together with an 11 item job satisfaction measure. The 30 item questionnaire was factor analysed using the same procedures as the earlier studies reported above (PA2 and varimax rotation). Again six non-trivial factors were identified, and it was concluded that the results provided evidence that an individual's affective response influences perceptions of organisational climate, that is, job satisfaction may influence perceptions of organisational climate.

The measurement of organisational climate is fraught with difficulties of replication and validation. Nonetheless it is an important part of the study personnel management practice. There is some research evidence that instruments like the Litwin and Stringer Organisational Climate Questionnaire do produce factors that indicate the perceptions about management in organisations. Such perceptions are important determinants of behaviour in the work place and are therefore relevant for investigation.

3.5 The Nature of Work Attitudes

One of the major contributions of the science of psychology has been to measure human behaviour through appropriate behavioural constructs. As argued in Chapter 2, people's behaviour is governed by their perceptions, and these in turn are affected by their attitudes. The construct attitude falls into the domain of social psychology, but could more reasonably be considered within general personality theory; it is in part a sub class of motivation because it embodies both an affective component and an action

tendency (Scott 1968). This affective component involves either positive or negative feelings towards an event or object, and the action tendency involves either approach/supportive behaviour or avoidance/obstructionist behaviour. People possess attitudes about a variety of events and objects in our environments, and many of these are based on their own learning and experience. Since attitudes affect the way they respond to their everyday environments, they are important psychological determinants of work behaviour.

When the literature on the meaning of work and work attitudes is reviewed, the immediate impression is one of ambiguity and complexity. The semantics of workers' cognitions have encouraged a variety of terms such as job involvement, alienation, work ethics, instrumental orientation, and other work values and beliefs. An inspection of each of these in turn illustrates the conceptual disarray that can occur when levels of analysis, definitions of constructs, and causes and effects are used indiscriminately.

A basic point articulated by Pryor (1982) is that all branches of science examining the nature of the world are not completely distinct, nor is any one more fundamental than the other. Branches of science may therefore need to interrelate to one another in order to provide an adequate explanation of a particular phenomenon. The situation is analogous to the old Dervish tale of the blind men of Industan and the elephant, where in this city one day an elephant was introduced (Shah 1970). Now elephants were completely unknown to the inhabitants of that city, and the blind men groped sightlessly at the elephant gathering information, because they did not know the form or shape of this strange object.

> "... The man whose hand had reached an ear said; 'It is a large, rough thing, wide and broad, like a rug!' One who felt about the trunk said 'I have the real facts about it. It is like a straight and hollow pipe, awful and destructive' One who had felt the feet and legs said 'It is mighty and firm, like a pillar.' Each had felt one part out of many. Each had perceived it wrongly. No mind knew all... All imagined something, something incorrect..."

The message of this tale is that our perception of reality is governed by our experience of reality, and our individual experiences do not necessarily tell us the whole story. Yet it is our perceptions of what is going on around us that actually determine the way we will act or behave in response to events that occur in the environment.

It is not until the semantics can be integrated into a meaningful whole that any true sense of reality can be made. Are we, like the blind men of Industan, still stumbling around trying to define the meaning of work, and its relationship with overall human endeavour?

Fueling this conceptual confusion, is the idea that the meaning of work itself is changing. For instance Brook and Brook (1984) in a review of the literature on the dynamics of work and non work in New Zealand note three changes. First, the distinction between work and non work is becoming increasingly blurred. Second, the character of work is now changing so rapidly that it is not so easily separated from non-work. Third, given the higher level of educational opportunities to the work force, there is a greater tendency for people to have interests outside their paid employment. However, despite these changes, Harpaz (1985) in a review concludes that work is still a significant part of human activity, and that economic considerations play only a secondary role in the meaning of work. Using Israeli samples he suggests that work centrality (or working as a life role compared to other life roles) still assumes a central position for a major part of the population. A later major cross-national study involving samples from eight countries (Belgium, Britain, the Federal Republic of Germany, Israel, Japan, Netherlands, United States, and Yugoslavia) reinforces this central position (MOW 1987). In this particular study a sample of approximately 14,700 people provided data from these countries over a six year period from 1978 to 1984. The research team reported that 86 percent of the combined national samples would continue working even if they had enough money to live for the rest of their life without having to work. In the same study it was found that work is second only to family in life role importance.

Consequently while the character of work may be changing, in terms of meaningfulness to the individual, it still has a high profile. Yet numerous accounts have linked productivity decline in countries like the United States directly to a decline in concepts such as the work ethic. New Zealand has experienced a relative decline from being one of the four richest nations in the world to about twentieth in international rankings by the end of the 1970's (OECD 1985). The anecdotal evidence (Twinn 1977) suggests that New Zealanders will work productively given the right environment. There is considerable evidence to this effect from the field of sport.

3.5.1 The Semantic Problems

Any discussion on attitudes to work raises the broader issue of the semantics involved in their definition and measurement. It also includes the question of the appropriateness of general frameworks being applied in different cultural settings. For

instance results of work attitude measures in the United States may not apply to the New Zealand setting.

A distinction needs to be made between work attitudes, values and beliefs. Attitudes are feelings manifested in some judgement about the goodness or badness of work (McCormick and Ilgen 1980). They tend to be short term and more commonly relate to specific jobs. Long term work attitudes are better expressed as values and beliefs. Both these concepts are concerned more with the enduring orientations of people to work, and relate specifically to the function and meaning of work.

One of the most common measures of job attitude (or the appraisal of one's job) is job satisfaction (Locke 1976). While measures of job satisfaction may tell a lot about how people feel about their specific jobs, they reveal little about people's underlying orientations towards work. For example it is possible for an instrumentally orientated person and a highly job involved person to experience the same level of satisfaction towards a job; however their basic orientations to work are quite different. In the case of the former the instrumentally orientated person is satisfied with the job because of the level of earnings it affords, while the job involved person is satisfied because of the content of the job. Both levels of satisfaction are the same, yet their fundamental orientations about the meaning of work are different.

Work values are even more elusive, and serious problems have been experienced in their formulation (Pryor 1979). Schiebe (1970) distinguishes between values and beliefs. The former are judgements as to what is desired or preferred, while the latter are judgements on what is possible, and what exists. Pryor (1982) has attempted a conceptual and empirical integration of the concepts of work preferences, needs, work ethics, and orientation to work. He maintains like the blind men of Industan that there are differing but valid ways of investigating human performance. The differences exist in the researchers' questions and their particular definitions of the situation. The same event or phenomenon may have an entirely different meaning depending on the particular question that is asked about it. The other important distinction that Pryor makes is that events observed at one level may be accounted for at another. For instance the same event can be accounted for both psychologically and sociologically.

The job-involvement construct, which has been the subject of a number of reviews (Lodahl and Kejner 1965, Lawler and Hall 1970, Saleh and Hosek 1976, Rabinowitz and Hall 1977, and Jans 1982), well illustrates some of the methodological difficulties, and different ways of looking at what is essentially the same object or construct. Each reviewer has defined the construct in different ways. Lodahl and Kejner (1965) view job involvement as "...the internalisation of values about the

goodness of work or the importance of work in the worth of the person..." Therefore the job-involved person is one for whom work is a very important part of life activities. The non-job involved person on the other hand finds interests elsewhere, the job is not part of that person's self-image. Lawler and Hall (1970) differentiate involvement from intrinsic motivation and job satisfaction, and define job involvement in similar terms to Lodahl and Kejner as the degree to which a person's total work situation is an important part of life. Saleh and Hosek (1976) identify three factorially different aspects of job-involvement. These are: active participation on the job; central life interest; and involvement as central to self-esteem.

Rabinowitz and Hall (1977) highlight this confusion and ambiguity, and conclude that there are essentially two classes of definitions of job involvement. Those that emphasise involvement as being a performance-self-esteem contingency, and those that focus on involvement as being a component of self-image. Their conclusion that much of the variance in involvement measures remains unexplained is reinforced by later research that involvement is a multi dimensional construct (Saal 1978, Lorence and Mortimer 1985, and Jans 1982). For instance Jans has postulated three aspects of involvement: an individual difference variable emphasising the importance of performance to self-esteem; identification with present job; and, career or specialisation involvement (identification with a person's career).

The job involvement construct has also been interpreted from both the sociological and psychological perspectives. (Kanungo 1979). The argument is that, despite their conceptual mishmash, there is a common thread running through all of the psychological formulations. All emphasise that situations lacking in the opportunity for the satisfaction of individual needs like self-esteem, achievement, autonomy, self-expression, and self-actualisation will decrease a person's involvement in work.

The lack of individual freedom, power and control which have been considered as necessary preconditions for non-involvement, is very similar to the sociological concept of alienation. This perspective has stressed alienation as a negative phenomenon. The early formulations of alienation expressed by the Church stressed the separation of people from God, their fellows and social institutions (Johnson 1973). More recent formulations have expressed alienation as a dissociative state of the individual (Schacht 1970).

Kanungo notes that Marx defined alienation in economic terms, as the separation of workers from the means of production and the products of their labour. The Marxian concept of alienation is essentially a lack of autonomy (ownership) and control of one's economic behaviour. To this extent, it is a special case of the more

general view expressed by Weber that alienation is the separation of people from the fruits of their endeavours, whatever these may be. Like Marx, Weber placed emphasis on freedom to make decisions, assuming personal responsibility and proving one's own achievement. If the environment cannot satisfy these individual needs, then alienation sets in. Durkheim extended the concept of alienation as a consequence of normlessness (or anomie). The traditional normative structure has been destroyed by industrialisation and has as a consequence uprooted people from their local groups and institutions. Kanungo observes that modern sociological writers, such as Dubois and Fource, stress that job-alienated people engage in work in purely instrumental terms for important off-the-job activities. Seeman (1959, 1971) has proposed five different variants of the concept. These are: powerlessness, meaninglessness, normlessness, isolation, and self-estrangement. The latter variant, according to Kanungo is perhaps the heart of the alienation concept, where people are engaged in activities that are not in themselves rewarding, but are instrumental for the achievement of other activities.

Kanungo concludes that the sociological approach has focused on the negative aspects of involvement and the analysis has been at the social system level rather than the individual level. This together with its epiphenomenological descriptions of the states of alienation (rather than in behavioural terms) has led to methodological and measurement problems in obtaining empirical verification. Yet sociologists argue that the preconditions for removing alienation are the presence of individual autonomy, control and power (an individual consideration).

The mixing of the sociological and psychological approaches to involvement and alienation has resulted in a lack of integration leading to conceptual fuzziness. Kanungo therefore proposes a conceptual integration of alienation and involvement as being "bipolar states of the same phenomenon". However, in defining these states thus, Kanungo limits their analysis to behavioural phenomena at the individual level. He states that "...work involvement is viewed as a generalised cognitive (or belief) state of psychological identification with work in so far as work is perceived to have the potentiality to satisfy one's salient needs and expectations. Likewise, work alienation can be viewed as a generalised cognitive (or belief) state of psychological separation from work in so far as work is perceived to lack the potentiality from satisfying one's salient needs and expectations...."

This concept therefore cannot be measured with existing instruments because they do not reflect this conceptualisation. (That is, they ask the wrong questions). The saliency of needs, the heart of Kanungo's approach, are determined by the person's past socialisation and are constantly being modified by present job conditions. The approach advocated by Kanungo does not make the assumption that control and

autonomy are the most salient needs of all workers. The proposition that people with salient extrinsic needs will be as strongly motivated in jobs as those with salient intrinsic needs, provided that they perceive their jobs to have the potential for satisfying their needs, was tested with 919 lower-middle managers (Gorn and Kanungo 1980). The results supported this proposition and also suggested that intrinsic motivation may have a greater role to play in work involvement rather than in job involvement. In this study job involvement was conceptualised as being different to work involvement.

The Gorn and Kanungo study is reminiscent of the studies of instrumental orientation in the car manufacturing industry in Britain (Goldthorpe et al 1968). These studies tested the embourgeoisement thesis, and showed that the workers were prepared to do monotonous work for money in order to increase their standard of living. The orientation of these workers was purely instrumental and motivated by the rewards that work could give, rather than any intrinsic rewards derived from the work itself. Their jobs were not part of their central life interests. Yet they were not alienated in the sense that the sociological writers would describe. In fact the image they had of the Company was quite harmonious, in direct contrast to the expression of antagonism and exploitation of miners and dockers. In their own words:

> "...To the extent that workers define their employment as essentially a means of acquiring a certain standard and style of living outside of work, it is clearly possible for them to take a negative view of the work tasks they actually perform while at the same time appreciating a firm which offers pay and conditions that can bring a valued way of life within their group..."

These instrumental workers are involved in their jobs to the extent that they get extrinsic rewards, but have no intrinsic involvement in their work. Work and job involvement are therefore two different things.

Kanungo (1982) produced scales of both job and work involvement arguing that previous researchers have treated involvement and intrinsic motivation as synonymous based on the assumption that involvement is a function of intrinsic rather than extrinsic factors. So Kanungo's reformulation of job involvement is that alienation and involvement are the polar opposites of the same psychological state. Furthermore there are two qualitatively different dimensions of involvement: job involvement and work involvement.

Therefore it is possible for one to be involved in work, yet still be alienated in one's job, if salient needs of the highly involved worker are not being met by the

particular job in question. Saleh (1981) proposes an interesting relationship between involvement, motivation and job satisfaction. He suggests that job-involvement is an intervening variable with job satisfaction as the dependent variable and motivation as the independent variable.

The differentiation between work and job involvement is shared by Jans (1982). Involvement implies commitment, and he argues that what is often overlooked is that the feeling of identification with the job can be different from identification with career. While on certain occasions job and career involvement might be the same, there are times when they are totally unrelated. Examples are of professional military officers who due to frequent rotation may find certain staff appointments much less rewarding than operational appointments. This is also characteristic of Royal New Zealand Air Force pilots (McGregor and Toulson 1980). Jans therefore distinguishes between three aspects of involvement. These are: the importance of performance to self esteem; identification with present position (ie job involvement); and identification with career (or specialisation involvement). He concludes that the appropriateness of a particular independent variable depends very much on what dimension of work involvement the researcher intends to measure. This is very similar to Pryor's arguments. The researcher must therefore choose carefully the most relevant aspect of involvement to the theoretical position under investigation.

The involvement research demonstrates three common threads so far as the semantics issue is concerned. First the variety of definitions of involvement creates ambiguity. Second there is the confusion between the psychological and sociological perspectives increasing the ambiguity. Third is the confusion of the job-related as opposed to the general work-related dimensions. These confusions only serve to increase the problems of the blind men of Industan. It is therefore clear that careful specification of these factors and integration of them is required.

Research on the commitment construct reveals similar ambiguity to that of involvement. Porter, Steers, Mowday, and Boulian (1974) suggest that organisational commitment is the relative strength of an individual's identification with, and involvement in a particular organisation. Conceptually, it can be characterised by at least three factors: a strong belief in, and acceptance of the organisation's goals and values; a willingness to exert considerable effort on behalf of the organisation; and, a strong desire to maintain membership of the organisation. Therefore a formal definition of organisational commitment is the relative strength of an individual's identification with and involvement in a particular organisation, which is characterised by belief in and acceptance of organisational goals and values, willingness to exert effort on behalf of the organisation, and a desire to maintain membership of that organisation (Mowday, Porter, and Steers 1982).

Yet the concept is fraught with difficulty. For instance over 25 different conceptualisations and measurements of organisational commitment have been identified (Morrow 1983). The focus in the study of commitment has therefore been unclear, and researchers have often confused commitment to jobs, unions, and work with commitment to organisations. This confusion of focus has therefore been responsible for many of the inconsistent findings about the influences on organisational commitment (Ogilvie 1986).

Mathieu and Zajac (1988) in a review and meta-analysis of studies on commitment report organisational commitment to be associated with reduced tardiness, absenteeism, and turnover. Mottaz (1988) concludes that over the past ten years a substantial amount of time and energy has been devoted to the concept of organisational commitment, and that its popularity stems from its linkage with other employee behaviours as job performance, absenteeism, and turnover. Much of the research on this has been concerned with identifying the antecedents or determinants of this attitude, yet there is little agreement regarding the impact of both individual and organisational factors on commitment. There is a lot of inconsistency in the results. A central theme that emerges from the conceptual work on commitment is the notion of exchange, where individuals attach themselves to the organisation in return for certain payments from the organisation. Therefore this perspective suggests that organisational commitment is largely a function of work rewards and values. Rewards come from doing the job, interacting with others on the job, and extrinsic rewards provided by the organisation to facilitate or motivate the task. Work values refer to what is wanted from work itself. Therefore the greater the perceived congruence between work rewards and work values, the greater is the commitment. The results indicate that while work rewards have a strong positive effect on commitment, work values have a weaker negative effect.

Meyer, Paunonen, Gellatly, Goffin, and Jackson (1989) lament that there has been little research examining the link between commitment and relevant work behaviour other than turnover. They suggest that affective commitment (the tendency for people to remain with an organisation because they want to) is positively related to performance and that continuance commitment (the tendency for people to remain with an organisation because they need to) is negatively related to turnover. Therefore the value of commitment to an organisation will depend on the nature of the commitment.

Allen and Meyer (1990) report that employees with a strong affective commitment remain in the organisation because they want to, those with strong continuance commitment do so because they need to, and those with strong normative commitment do so because they ought to. They suggest that the net sum of a person's commitment to the organisation reflects each of these separable psychological states.

Randall, Fedor, and Longenecker (1990) found in an empirical study that each dimension of commitment relates differently to work outcomes, and that none of the dimensions is able to predict absenteeism and tardiness behaviours. The three dimensions of commitment; affective, continuance and normative were used; the authors arguing that most studies in the past have focussed on only one of these. Therefore the strength of the organisational commitment-work outcome is highly dependent on the specific conceptualisation of the organisational commitment adopted. They found that although tardiness and absenteeism are the most frequently measured outcome variables in commitment research they failed to show any significant link either singularly or in combination of the three commitment dimensions and these particular outcomes. Their research provides evidence of the multidimensionality of the organisational commitment construct.

The discussion above raises the issue of definition. Both the constructs of involvement and commitment provide only part of the solution. They are both multidimensional, depending on the perspective the researcher adopts. Involvement can be simply conceptualised as being the commitment to a job, while commitment can be conceptualised as commitment to the organisation, irrespective of the reasons why. Neither constructs give us much information on the underlying attitude to work as a concept itself, irrespective of the job or the organisation. To identify a suitable construct that encompasses people's enduring orientations to work requires further investigation.

One particular possibility is the underlying orientation or construct known as the work ethic. The work ethic has its origins in Weber's theory which postulated a causal relationship between the Protestant work ethic and the development of capitalism in the Western world. This ethic which emphasised hard work and frugal living, provided the moral justification for the accumulation of wealth. Blood (1969) predicts that people who ascribe to Protestant work ethic ideals will be more satisfied with their jobs. It is logical to assume that work values precede and influence job satisfaction as an outcome. The use of two short scales indicated that the more people agreed with Protestant work ethic ideals, the more satisfied they are with work and life in general. Mirels and Garrett (1971) report a substantial correlation between Protestant work ethic endorsement and authoritarianism. Rim (1977), using Blood's 1969 scales, reports personality differences between men and women and endorsement of Protestant work ethic ideals.

People who endorse the Protestant work ethic tend to blame the unemployed for their predicament. (Furnham 1982). This confirms McDonald's (1971) finding that endorsers of the Protestant work ethic will blame the people rather than the system.

McDonald also suggests the Protestant work ethic is part of a general conservative attitude pattern. In a cross - national comparison, Malaysian samples (consisting of Malay, Indian, and Chinese ethnic groups) have significantly higher Protestant work ethic scores than a British sample (Furnham and Muhiudeen 1984). There are also sex differences, and socioeconomic differences, suggesting that the rise of the Protestant work ethic in Asia may account for the comparative economic success of the region. However, such an interpretation is difficult because of the uncertainty whether Protestant work ethic beliefs are a cause or consequence of economic success.

3.5.2 The Measurement of Work Attitudes

Furnham (1984) suggests that the study of beliefs and values, in line with the Protestant work ethic, is more concerned with people's enduring orientations to work, rather that particular job reactions. It is these underlying orientations to work that are the key to the puzzle posed at the beginning of this Chapter. Clearly people have different orientations to work, and this is reflected in the prominence or otherwise that work has in their lives. Hahn (1973) defines beliefs as "general propositions about the world (consciously) held to be true". Goodenough (1963) provides a similar definition, defining beliefs as sets of propositions accepted as true.

The observations that there has been a fundamental change in traditional beliefs about work as a human activity was reported by Buchholz (1976) (1977). He approached the question of orientation work by studying people's beliefs about work, basing his observations on Rokeach's (1960) theory.

The essential features of Buchholz's approach have been to measure people's orientations to work using five dimensions defined briefly in the Table 3.1.

The initial instrument consisted of five sub-scales developed by administering 159 items on a Lickert scale that had been derived from an inventory of statements reflecting the various dimensions of the five belief systems. This inventory was sent to the top management personnel of Fortune's largest industrial organisations. Ten doctoral students were used to sort the original statements into as many categories as they found, and they were asked to identify what the categories represented. From this analysis the 20 best statements from each belief system were put in a questionnaire - each of these items was classified according to its appropriate belief system at least 8 out of 10 times. The questionnaire was then distributed to 445 people with a 76 percent return rate. The results were factor analyzed and 45 statements were selected to comprise five scales on factors that corresponded to the belief systems. Four items were reverse-scored.

TABLE 3.1: THE BUCHHOLZ FIVE BELIEF SYSTEM

System	Description
a. The work ethic.	Believers stress work as being good in itself, as bestowing dignity. Success is directly linked to one's own efforts and is measured by the accumulation of wealth. This dimension is essentially the same as the Protestant work ethic.
b. The organisational belief system.	Believers stress that work is not an end itself but is purely a means to ascribing one's status and progression through the hierarchy. Success is directly linked to one's ability to conform and adapt to group norms, rather than the result of individual effort and accomplishment.
c. Marxist-related beliefs.	Believers stress that work is basic to human fulfillment, because it is through work that people create the world and themselves. However because people have no control over the fruits of their labour, they are exploited and alienated from their productive activity.
d. The humanistic belief system.	Believers stress that work is an indispensable human activity and represents the way people fulfill themselves as human beings. Success is measured in terms of human growth and development on the job rather that the output of work. Therefore what happens to people in the work-place is more important than productivity.
e. The leisure ethic.	Believers stress that work has no meaning in itself, but only finds meaning in leisure. Success or fulfillment is found in the pursuit of leisure activities where people are free to do their own thing. Work is necessary for living; however it is through the pursuit of leisure activities that people obtain fulfillment, not work.

Buchholz's approach has been used successfully in cross-national samples overseas and has shown stability. In a 1977 study with US managers, Buchholz found a strong endorsement of the humanistic belief system and a clear rejection of both the Marxist - related and work ethic systems. Dickson and Buchholz (1977) using the 45 item scale on both US and Scottish examples concluded that the humanistic belief towards work is most strongly endorsed and the work ethic is least endorsed. In this study the American sample was drawn from the original one reported by Buchholz (1977). The same methodology was used with the Scottish sample. Five factors with similar items to the original factors reported by Buchholz were found. The article does not report the factor matrix or confirm the technique used. It is assumed that the same technique and rotation was used as Buchholz (1977). The results of this particular study are interesting because a number of independent variables were utilised. Both samples showed that the humanistic belief is most strongly endorsed and the work ethic is least endorsed. Company size had an important effect on beliefs. The smaller the company the more likely the work ethic would be endorsed. The level of management also affected the result. For instance there was less endorsement for the Marxist and leisure ethic belief systems from top management than middle management. In both samples there was a tendency for the Marxist and leisure beliefs to decrease with age. Overall only the Marxist and leisure belief systems differentiated between American and Scottish cultures. In fact it appeared from this study that demographic variables are more important in determining beliefs.

A similar study was conducted on blue collar workers, white collar workers, union leaders, and top managers in the US (Buchholz 1978a). A varimax rotation was completed and 41 items accounted for 40.8 percent of the total variance. The results showed that non management personnel were more Marxist-orientated then management personnel, and that younger age groups had a greater work ethic than older age groups. Younger age groups were also not more humanistically orientated than older age groups, and females were not more humanistically orientated than males. The data did however suggest that blacks were more Marxist-orientated then whites, but there was a uniform commitment to humanistic orientation across all groups. While there were some differences between groups, the overall finding was a uniform commitment to a humanistic orientation across all groups.

In another study, Buchholz (1978b) measured a whole range of occupations. Again the general finding was low work ethic scores from all occupational categories, and the highest scores were obtained on the humanistic belief system. Buchholz raised the possibility that this may mean that people still believe in working hard but also have a belief in collective action which was not present in the days of small organisations.

The endorsement of the humanistic belief system suggests that work is now valued for its contribution to personal development, where work is seen as the means of providing individual growth and development, as opposed to being good in itself and bestowing dignity on the person.

The data from Scottish samples (Dickson and Buchholz 1979) would also suggest that this trend is not just limited to the US. Using managers and blue collar workers, Dickson and Buchholz (1979) reported that both samples endorsed the humanistic beliefs and were indifferent to the work ethic. The main difference between the US and Scottish samples is that while the five belief system can be held independently in the US, the leisure and work ethics are interrelated in Scotland. Dickson concludes that Scottish workers have greater feelings of exploitation and a lack of participation. In Scotland the majority of workers belong to trade unions which are linked the Labour Party. In this respect the Scottish industrial relations situation is similar to that in New Zealand where trade unionism is at present compulsory and is linked to one of the major political parties.

Dickson (1982) used the Beliefs About Work Scale in relation to rationales for participation with a sample of 84 top managers chosen from a sample of Glasgow companies. He proposed that subscribers to the work ethic would oppose most forms of participation, whereas subscribers to the organisational, Marxist, and humanistic belief systems would see benefit in employee participation. The rationales for participation were collected through structured interviews with the top managers. A validity check on the scale was conducted using a principal components analysis and varimax rotation of the first five factors. After examining the factor loadings, a further rotation was undertaken. The result was a clear loading on six factors, with the Marxist-related dimension splitting into exploitation and participation. No data relating to these rotations were given in the report. Instead, a number of conclusions relating to the concepts being measured were discussed. These included the finding of an inverse relationship between the work ethic and participation and a positive relationship between humanistic beliefs and both types of participation.

Dickson (1983) extended his investigation of beliefs about work and the perceived uses of participation to include Arizona samples. He used a more clearly defined system of derived categories for participation. In neither of the two samples were the beliefs completely orthogonal, and he concluded that the separateness of beliefs will vary between samples. Results supported earlier research that the work ethic is endorsed least and the humanistic belief most in both samples. Details of the factor analytic procedure were not reported.

Ali and Schaupp (1985) reported a strong commitment to the Marxist - orientated belief system among Iraqi managers, using the Buchholz five belief system measures. This is an interesting comparison because Iraq has been operating a non-democratic political system since 1968, and Ali and Schaupp conclude that the influence of economic patterns is reflected in Iraqi managers' beliefs.

Buchholz and Dickson's work serves to confirm other speculations about the decline in work ethic in the continental United States. Whether or not this is directly linked to the decline in productivity or whether the productivity decline is a result of managerial practice that is no longer in tune with the prevailing ethic, is not proven. Clearly though the two events are related in some way.

Orientations to work in terms of those described above are products of the underlying beliefs people have about work. No doubt early socialisation and prevailing societal and economic conditions will have an effect on these. The other important issue is whether there is a better synthesis of such things as job involvement, alienation, and other underlying orientations.

There are distinct similarities between the various conceptualisations of work attitudes, values and orientations. However the very use of such conceptualisations as job-involvement and its multidimensional aspects make integration problematic. Instead of grasping at various conceptualisations like the blind men of Industan, a simpler description of what is occurring should be possible. The broad range of conceptualisations of what are basically work attitudes have simply served to confuse issues.

There is a basic distinction between short term constructs and longer term constructs related to work. The short term constructs tend to relate to specific jobs, while the longer term ones are more enduring and relate more to work in general. How these constructs are defined is less important than how they interrelate with the ways in which the work force is managed. While it is useful to identify and define the various dimensions of each construct, it is more useful to investigate the relationship with managerial practices if such questions as productivity improvement are to be resolved.

Assuming the decline in the work ethic and the current supremacy of humanistic beliefs concerning work, then Gould's (1980) conclusion that the workplace is not organised for human development means that there is an incompatibility between people's beliefs about their work and the way they are managed. This is the horns of the dilemma for New Zealand.

Given the circumstances outlined at the beginning of the chapter, one can speculate what would be the predominate attitude to work. The description fits Kanungo's job-alienation or Buchholz's leisure ethic. Are New Zealanders followers of a leisure ethic, hence the rather curious paradox of hard work at play and relaxation at work? While overseas findings may suggest that this is possible, the question of the transferability of overseas findings to the New Zealand culture is problematic. The short of it is that research has to be undertaken in New Zealand to test and compare overseas findings.

Given the difficulties in sorting out appropriate constructs, it is contended that the theoretical position adopted to generate testable hypotheses should not only address appropriate measures of work orientation, but should also incorporate measures of personnel practice. This is essentially the vital part of the jigsaw that is missing in work attitude study. The semantics involved in attitudes study should be carefully selected and specified before embarking on such a study. It is important to take cognisance of the whole initially rather than studying its parts separately if the confusion of the blind men of Industan is to be avoided.

3.6 Organisation and Environment in Perspective

The review of organisation theory and environment suggests that the traditional models of organisations as being static entities and having the one best way of managing their human resources is simply no longer applicable in contemporary organisation theory. While the contribution of classical organisation theory and human relations theory cannot be under-emphasised, each falls short of a realistic view of organisations. Organisations are dynamic entities that interact with their environments, and applying the open systems paradigm, are sub systems of their immediate environments, which provide the inputs in terms of people and other vital resources. The immediate environment is in turn a sub system of the greater society. Kast and Rosenzweig (1985) describe this in two ways as being the societal or general environment on the one hand and the technical or specific environment on the other. The general environment affects all organisations in a society and is made up of cultural, technological, educational, political, and legal variables, while the specific environment affects specific organisations in different ways. This environment is comprised of customers, clients, competitors, socio-political factors, and technological factors.

The important influence that this environment has on the behaviour of the organisation is through the perceptions and beliefs of its members, because it is through the process of perception and cognition that information from the environment is passed to the organisation through its members. Any theory of organisation must therefore take this into account if it is to approach reality and aid the understanding of reality. The strength of contingency theory is that it recognises the multivariate nature of organisations, and while some generalisations about behaviour may be possible, in the main behaviour is to a large extent unique. Therefore resultant effectiveness is dependent on the particular fit and relationship of the members with its personnel management practices. Theory now, according to Beer and Walton (1987), should apply to organisation adaptation, and rather than assuming that there is a single way to describe this, accept that theory should specify alternative adaptation strategies appropriate to a particular organisation's state of development.

The practice of personnel management then becomes a process of selecting the most appropriate practices or interventions for particular desired outcomes, rather than applying blanket structured and preprogrammed policies and practices as preached by some particular textbook or management consultant. A particular value system such as a totally participative management style may work well in one particular organisation, while it maybe quite inappropriate in another, because of the particular attitudes, work orientations, and perceptions of the employees. The important thing is the need to be able to measure the appropriate variables in order to determine the best personnel strategy. The use of theory enables the identification of these variables, but it will not solve the whole problem. Personnel management is not totally a science, it is as much an art where judgement based on experience and sound data will provide the best solutions to the question of organisation effectiveness.

An important variable of industry is productivity, and in any assessment of the contribution of personnel management an examination is needed of the contribution of personnel management to this outcome variable. Personnel managers are keen to demonstrate their effectiveness in relation to productivity, yet there are a number of difficulties in so doing. These are highlighted and discussed in the next chapter which deals with the uneasy relationship between the personnel management function and productivity.

CHAPTER 4

PRODUCTIVITY AND THE PERSONNEL FUNCTION

4.1 The Mythology of Non-Measurability

The relationship between the personnel function and productivity is vital because of the importance of the management of people as a resource to the business operations of an enterprise. It is in this area that personnel management has received its strongest critics. Meyer (1976) for example, writing on the personnel function, has described the image of personnel managers as being:

> "...good-old-Joe types, harmless chaps who spent their careers worshipping files, arranging company picnics, and generally accomplishing nothing whatsoever of any fundamental importance."

Images of personnel management such as these hurt, yet the development of personnel management suggests that there is some truth in such statements. Personnel is not seen as an important function in management. According to a report of a study of attitudes and opinions of senior personnel managers from 387 companies in Europe (Management Centre Europe 1987), personnel managers still defer to other specialist managers in their organisations. Marketing and finance are the most influential of the management disciplines. Human resource executives report that the areas where they can have the biggest impact are "effecting a change in company culture", followed by "improved productivity". It would seem that it is in this latter area where the greatest unfulfilled contribution can be made by the personnel function.

The language of business is dollars (Fitz-enz 1984), and all organisations depend on their ability to get the best possible return on dollars invested. Part of the reason why personnel managers have had to work with tight budgets and lean staffs is their inability to communicate with line management in business language. Accountants, production, and other management specialists have not had this same problem. This is primarily because they speak in terms that line managers understand. They use hard facts that are readily quantifiable in dollar terms, and that can be easily converted to a balance sheet. Accountants use money as the basis of their profession and engineers use valuable, tangible items, such as buildings and products as part of their contribution.

The direct and indirect costs related to the human resource may form the largest part of an organisation's total cost structure. Depending on the nature of the organisation and the degree of labour intensity, estimates can vary between 50 and 80 percent of the annual budget. It is also the most important resource from the point of view of producing results.

Paradoxically while the human resource is the most costly to the organisation, it is the worst managed. Personnel specialists suffer from what Gilbertson (1984) has identified as role stress and ambiguity. Personnel people see themselves as garbage gatherers, fire-fighters, and unable to initiate or change major policy. These results, according to Gilbertson, parallel overseas findings. Consequently in the main, personnel people see themselves as the servants of power.

Personnel specialists have spent a lot of time contemplating why personnel management is in this position. Part of the problem is the traditional inability to talk the same language as other business managers, and this is a problem that has been brought on by personnel people themselves. This is part and parcel of what Fitz-enz (1984) describes as the mythology of personnel work as outcomes of labour. This mythology is really based on the belief that personnel is something of a complex and mysterious art, with an ingrained notion that mathematical measures cannot and indeed should not be applied to this function.

Fitz-enz argues that there are a number of reasons why this mythology has arisen. Firstly a large proportion of personnel people have not been trained to objectively measure their productivity, which as argued earlier, is the area in which the personnel function can have most impact in terms of the profitability of the organisation. Many personnel people have worked their way up in organisations from clerical and recruiting positions, consequently they often lack the necessary knowledge and skills to make an impact in the organisation especially where productivity is concerned. Even in business courses, papers orientated to the measurement of behaviour are often not compulsory in personnel management programmes. Such courses are more likely to be given this status in related disciplines like psychology.

Secondly there is a belief that such objectivity is quite inappropriate for the personnel professional. This was a prevailing argument used against the utility of human resource accounting. Many critics argued that to treat people like assets with a value on them is somehow dehumanising, as Rogers (1974) observes:

> "There is a very real danger that in attempting to express people in measurable money terms, we may de-humanise and alienate the very resources we are striving to conserve and develop."

Thirdly there is in New Zealand a fear of being measured at work. This is in part linked to the idea that New Zealand should be an egalitarian society; a belief which is illustrated currently by the continuing calls for equity in the workplace. There is in some ways a contradiction here because equity cannot be achieved without adequate measurement. There has therefore been little motivation for personnel staff to measure productivity and this in turn has meant that there has been little pressure on training and educational establishments to change their curricula in personnel management to a more measurement oriented approach.

The final reason is that chief executives have bought the myth of subjectivity because they have had little interest in the personnel function. This has been compounded by a lack of understanding of the value of quantitatively based personnel management. The tradition of non-measurability has therefore remained unchallenged.

4.2 Foundations of Measurement

The ability to measure is of central importance to organisations, and according to management exponents like Drucker (1970), this is one of management's weakest areas. No one denies the importance of linking the management of personnel to productivity and effectiveness. Business is after all, and always has been, a numbers game (Fitz-enz 1984). The ability to measure accurately has also been enhanced through developments in computer technology, where the enormous gain in the power of computers has reduced the measurement and compilation of complex statistics down to a few seconds. Personnel managers can no longer offer the excuse that they do not have the technology to measure productivity. A central question relates specifically to whether or not personnel managers have either the willingness or the knowledge and skill to measure their personnel resources and the outcomes of their personnel practices effectively.

Occupational psychologists have for some time emphasised the importance of the measurement of human behaviour. They have identified three major sources of data which can be used for measurement purposes in the personnel function. The first of these is usually called objective data. Objective data has a superficial appeal to those whose task it is to measure performance. The basis of this data is probably best

explained in an example. All work should result in a form of output. This output can be reflected in a number of different ways. If the output took the form of objective data it would be directly measurable without the intervention of another person. An example would be the number of bolts put on to cars, or the number of garments produced in a day. This form of measurement is fine for the examples cited. In terms of productivity measurement however the situation can be a little farcical if objective measurement is used for something like the effectiveness of traffic officers where good performance would be a large number of traffic tickets issued. It could be that a low number of tickets could also depict high quality performance because of the skill of the officer in terms of his or her patrol area and the general respect given to that individual by the community. The use of objective data therefore while being seductive in the first instance has considerable problems associated with it, primarily in terms of its availability.

The second source of data identified has been called personnel data. This largely consists of the sort of information a personnel department should be collecting as a matter of course. It includes absenteeism records and labour turnover. These are two important indicators of productivity and have been shown to be predicted by biographical information (Cascio 1976). Recent work by Smith, Smith and George (1988) has investigated why biographical information has not been used very much by personnel staff. They concluded that one of the difficulties was the problem personnel practitioners had in understanding some of the statistical techniques involved in using the weighted application form. Their research focused on making it more accessible to personnel practitioners. Another reason why personnel data is not used much is because the record keeping of personnel departments is often inadequate. While current staff information is usually kept, long term data is often seen as not being useful to the organisation and is therefore thrown out.

This latter point is further emphasised by Guion (1965) who in a survey of research reported in the Journal of Applied Psychology showed that about 81 percent of the articles used judgemental scaling as their productivity measure or dependent variable. Judgemental scales are the third source data. They are widely used for measurement and in conventional form can be designed in a number of ways. Due to three frequent types of error in this form of measurement, sophisticated judgemental scale design has been advocated by a number of researchers. For example to reduce problems of central tendency, positive and negative leniency, pair comparisons can be used. This involves comparing each worker with one other worker on the task in question. Obviously if the emphasis was on productivity the assessment would be

based on who of the two was the better in terms of this dimension. The procedure continues by comparing every individual with every other individual. This is a time consuming process and, as can be imagined, leads to the lack of popularity of this particular technique. Other methods such as mixed standard rating scales have endeavoured to reduce problems of halo which is the situation where because a person is rated highly on one dimension it is assumed that they will be as good on another. Mixed standard rating scales (Blanz and Ghiselli 1972) attempt to solve this problem by mixing the scale items that are being assessed so that it is not completely clear which dimension is being assessed at any one time. Other techniques include behavioral anchoring (Smith and Kendall 1963), forced choice formats, and Behavioural Observation Scales (Latham and Wexley 1977; Latham, Fay, and Saari 1979), all of which attempt to reduce the problem of error.

The value of measurement in this context is that data obtained in the ways described above can be used to assess the productivity of the work force. The definition and measurement of productivity is an area of considerable debate. Generally speaking, productivity is the efficiency of the production process, i.e. the ratio of outputs to inputs. However the concept has been used and applied very loosely to a whole range of measures both at the macro-(national) and micro- (organisational levels). For instance Katzell and Guzzo (1983) in a major review of employee productivity studies have identified the use of three notional types of productivity criteria: worker output (measured in terms of its quantity, quality, or cost effectiveness); withdrawal behaviour (measured in terms of employee absenteeism and turnover); and disruptions (measured in terms of the frequency of accidents). Over half the studies reviewed reflected the use of employee output as productivity criteria, while approximately one third used withdrawal behaviour. Therefore, so far as these studies are concerned, productivity is not a unitary construct and has several dimensions.

The results of these studies are constrained in terms of their definitions and the extent that their impacts can be stated in administratively and economically meaningful terms (Hunter and Schmidt 1983). Therefore one of the key problems in measuring the impacts of behavioural science interventions is that the scales they use are psychological rather than being economically meaningful. For instance job performance of employees may be measured by ratings obtained from supervisors or managers, and some means of converting such data into dollars of labour savings is therefore necessary if the results of such studies are going to be meaningful in terms of profitability.

Utility analysis can therefore be used. Instead of reporting that the use of a particular device has a particular validity coefficient, the results are converted to outputs in dollar terms. One way to measure this is by use of the standard deviation of job performance using supervisors' estimates. (Schmidt and Hunter 1983; Eaton, Wing, and Mitchell 1985). The same effect can be produced by assessing labour savings in terms of percent output. Personnel managers have no excuse for not using the appropriate methodology. It is also possible to show from utility analyses that there will be an increase in dollar savings if an appropriate technique is used.

Any measurement can include error and bias. Scale bias has been summarised by Blum and Naylor (1965) as halo, central tendency and positive and negative leniency. In productivity terms opportunity bias is also an important consideration. If individuals are compared on productivity data in terms of sales of a particular product, it would be easy to assume that if one person sold more than another consistently that one was the better sales person. This of course can be far from the truth because of opportunity. Sales persons usually work from a territory of some sort, and though these territories can be equalised at any one time in terms of population or geography, there is no simple way of equalising all these variables. Examples would be an Auckland territory compared to say a South Island territory. These two differ quite radically both in terms of geography that it would be necessary to cover to make a sale and their populations.

Another form of bias relates to fulfilling one's own predictions. If we accept that error is a frequent failing of humans it is not difficult to see how this particular bias would operate in an industrial setting. If for example a personnel manager has responsibility for the selection of staff, this means that this individual would be responsible for the final decision. If the personnel manager was responsible for the performance appraisal in the organisation, this could mean that in some cases he or she was actually responsible for carrying it out. Under these circumstances it would be possible to find that the manager concerned was responsible for the selection and performance appraisal of the individual. If this was the case it could be argued that if a person in this situation selected somebody and had a good opinion of them for some difficult to assess reason, and also assessed their subsequent performance it could be that the individual concerned might be more impressed by the performance of the individual in the selection process rather than their performance in the work they had been doing. In other words knowledge of the predictor produces bias in the assessment of the productivity of the staff member.

Error refers to the inherent inconsistency in measuring devices. The terms reliability and validity are used to describe this error. Reliability refers to the degree to which a device is consistent in measuring whatever it is attempting to measure. A low reliability will indicate that there is inconsistency in the measuring device. Inter-rater reliabilities on judgemental scales are often quite low indicating that there is often inconsistency across people when they make judgements. This is especially true if raters are untrained (Ivancevich 1979). Validity refers to what the device measures and how well it does so, and it is determined with reference to the particular use for which the device is being considered (Anastasi 1968). There are therefore different types of validity depending on the purpose of the device. In most uses of devices the performance of the device is checked against a criterion or productivity measure.

The importance of measurement is paramount, particularly with questions relating to productivity. The measurement of productivity is conducted both at the macro and micro levels, and has been used to relate to a variety of economic and political debates. For example its macro use is central to current government thinking on the New Zealand economy. The current economic difficulties appear to be two-fold. Firstly there has been a significant decline in productivity (OECD 1987). The OECD reports that New Zealand's relative economic strength over the last 15 years has been poor, compared with the OECD average. In comparison to Australia, whose economic structure is similar, New Zealand rates poorly. An international comparison with five other OECD countries, including Australia, highlights the differences in real labour costs and productivity. Japan and Germany fare the best, while New Zealand compares unfavourably. Secondly, there has been a steady erosion of New Zealand's traditional markets. Therefore to overcome current economic difficulties, national productivity needs to increase and new markets for exports need to be identified. The productivity question in terms of current government policies means that New Zealand needs to work "harder and smarter."

Commentators on the productivity issue such as Judson (1982) note with alarm the decline in productivity in the Western democracies. Based on a survey of 195 United States industrial companies, Judson concludes that management ineffectiveness appears to be the biggest cause of this decline, and that most efforts in companies to improve productivity are misdirected and uncoordinated. In other words from this particular survey, managers themselves are at least admitting that "we have met the enemy and they is us". The problem is often that productivity improvement fails to address or involve the whole enterprise, so that productivity gains in one narrow area

may in fact be counteracted by losses in others. So the answer then lies (according to Judson's view) in making productivity improvement the achievement of the whole organisation. This has important implications particularly when it comes to the measurement of productivity.

4.3 The Problem of Definition

Defined in its simplest and narrowest form, productivity stresses the efficiency of the production process. Yet, as Skinner (1986) argues, such a narrow focus on efficiency ignores other ways to compete in a competitive world, and is necessarily concerned solely with the short term, rather than taking into account the efficacy of longer term strategic considerations. In his view the efficiency-driven mentality focusing on factory workers, has stunted generations of production managers, and as long as the primary measurements of industrial success are cost and efficiency, the manufacturing enterprise will continue to repel many able and creative people.

The way that productivity is measured and reported is partly determined by the perspective of the people who are using it. Tuttle (1983) suggests that productivity can be viewed from several perspectives. These are:

a. The economist's perspective where productivity is defined as the relationship between output and its associated inputs, when both are expressed in real (physical volume) terms.

b. The engineer's perspective, where productivity is used to define the efficiency of a machine as the ratio of useful work performed to the amount of energy consumed.

c. The accountant's perspective, where productivity is seen as the improvement of the financial performance of the organisation. Typically financial ratios such as profits to number of employees, profits to sales, or the ratio of net income (output) to owner's equity (input).

These three perspectives are overly restrictive. Katzell (1975) reported that over 80 percent of chief executives include efficiency, effectiveness and quality in productivity definitions, including such things as disruption, sabotage, absenteeism and turnover.

One of the major problems with these types of definitions is that they can be quite misleading when applying them directly to the productivity of the human resource. For instance improvements in technology through such things as the automation of production, computerisation of manufacturing, and computerisation of administrative and clerical support will in fact increase the level of activity, without a corresponding increase in the cost of labour. In fact with changes in technology a decrease in labour costs can be envisaged, with increased efficiency. This kind of situation makes overall comparisons of productivity across different organisations difficult, and one only has to consider that this type of problem is magnified when such comparisons between nations are made. For example a statistical comparison cannot be made between the productivity in terms of labour unit cost, or the manufacturing cost of an Italian hand crafted low production sports car, to a similar performing mass produced model geared for the mass market (Burdeau 1976).

The organisational psychologist's perspective accepts that a simple output/input perspective is not a useful measure of productivity because it is only partly a result of employee behaviour. Therefore output/input ratios are only useful if employees have direct influence over the amounts of goods or services produced. The organisational psychologist's perspective therefore gives more attention to organisational effectiveness and quality of working life, than to measures of efficiency. Also industrial engineers have developed productivity indices that attempt to measure management and operator effectiveness. They stress the importance of differentiating between efficiency and effectiveness.

Efficiency is competency or adequacy in the performance of an operation. Effectiveness on the other hand, is having the desired effect or producing an expected result. So the definition of productivity is not complete without the notion of effectiveness. Being productive really means being efficient in pursuing activities that have some real value.

However the distinction between productivity and effectiveness is also confused, since there are several ways of looking at this. Coulter (1979) suggests that productivity takes into account the efficiency with which an organisation achieves its effectiveness. Balk (1975) defines efficiency as the ratio of output to input, and effectiveness as the ratio of output to some standard. Productivity becomes the arithmetical sum of efficiency and effectiveness. Price (1977) suggests that while

productivity is efficiency expressed as the ratio of output to input, effectiveness is the degree to which an organisation achieves its goals. Therefore both concepts are quite independent, in the sense that an organisation may be efficient in producing its products but not effective, because it is unable to achieve its goals of high profits, if there is no market for its products.

The measurement of productivity is therefore fraught with conceptual and methodological problems. Perhaps as concluded by Tuttle (1983), some broad definition of productivity as being both efficiency and effectiveness is most appropriate. The weighting that each of these will have in any given organisation will depend a lot on the type of industry. On one extreme for instance a manufacturing concern may be more concerned about efficiency or producing goods at the lowest possible cost, whereas a hospital may be more concerned about the effectiveness of its service to the general community. There will be a balance though in most organisations between doing things right (efficiency) and doing the right things (effectiveness). Productivity can therefore be best thought of as a family of measures.

4.4 Productivity and Motivation

One of the leading assumptions about productivity is that it is influenced very strongly by the motivation and effort of people. Studies from psychology indicate that there is a direct relationship between measures on job satisfaction and productivity indicators such as low absenteeism rates and employee retention. However the relationship between job satisfaction and performance is not so clear and most research indicates that job satisfaction and performance are only slightly related (Muchinsky 1987).

In their review of the productivity issue, Kast and Rosenzweig (1985) report that there is strong evidence to support the notion that by paying closer attention to the climate of the organisation, greater pay-offs in terms of productivity will be achieved. The essential ingredient in all this is the emphasis on people in the organisation, and that the key managerial issue is to be able to design and implement a system in the organisation that will be able to maintain both high levels of productivity and meet the employees' expectations about their quality of working life. The evidence does fortunately suggest that these two goals are by no means mutually exclusive.

The organisation, as discussed in Chapter 3, affects climate through its personnel management policies and practices. It therefore follows that productivity in its widest sense is directly affected by employee attitudes and perceptions about work and by personnel management policy and practice.

4.5 The Importance of Measurement in Productivity Improvement

Measurement has a central role in the whole productivity improvement process. It is here that Tuttle (1983) makes a very strong argument for measurement. First it provides an objective basis for the fostering of awareness about productivity in the organisation. Being able to measure past performance will provide the basis for making plans for the future. It also enables the diagnosis of current activities to separate the high-productivity group from the low-productivity group. Measurement will also determine when and where to implement the changes in the organisation. Both the timing and location of these changes are vital, in the whole process of productivity improvement. Measurement is also critical for evaluation to answer the question "Did it work?".

4.5.1 The Measurement of Productivity:

The central question posed in this thesis is "What contribution or effect does the personnel management function have or make to the organisation?" Reference to the importance of the "bottom-line" in terms of evaluating the effectiveness of personnel management has been stressed in many books and articles (Fitz-enz 1984). To answer the question then, it follows that productivity must be the dependent variable or variables under investigation. Yet as discussed in the previous sections of this chapter, the measurement of productivity is fraught with difficulties, both conceptual and methodological.

There is considerable disagreement about the conceptualisation of organisational productivity (Kopelman 1986). This centres around definitions with respect to efficiency and effectiveness. The physical process conceptualisation that is used in narrow efficiency orientated definitions is essentially the ratio of output to inputs. In human resource terms an example of this conceptualisation would be monthly output divided by the number of labour hours (Pritchard, Jones, Roth, Stuebing, and Ekeberg 1989). Definitions that relate to the efficient use of resources do not ensure that the output is effective in satisfying needs, and therefore productivity needs to be

conceptualised also in terms of value added (Kopelman 1986). An example of this conceptualisation would be the relationship of monthly output to some expectation or standard expressed as a percentage (Pritchard, Jones, Roth, Stuebing, and Ekeberg 1989).

A distinction needs to be made between individual performance and productivity. Individual performance contributes to productivity but is not the same. Individual performance is the process of converting inputs into some output. When people work they are performing a variety of tasks or duties. The way the tasks are performed will affect their outcomes. Productivity on the other hand is an output/input ratio, and individual performance affects both output and input. The basis for early scientific management theory was that productivity (the efficiency of the production process) would be enhanced if the working conditions of employees could be manipulated to improve their performance. Individual performance is therefore an integral part of productivity, because it is through the performance of people, that productivity can be changed.

There is considerable agreement that any productivity measurement system should include all important aspects of what an organisation does (Craig and Harris 1973, Muchler 1982). So this implies a definition of productivity that embraces both of the above conceptualisations when considering the contribution of personnel management to productivity. For the purposes of this research productivity will be defined as the efficient and effective use of the employees in an organisation.

Since personnel management is used in a variety of different organisations, an assessment of its contribution implies the selection of productivity measures that enable the making of direct comparisons across different organisations. The productivity measures also need to be flexible enough to be applied to organisations in different types of industries with different technologies. They need to be general enough to be aggregated across the various departments within each organisation.

Pritchard, Jones, Roth, Stuebing, and Ekeberg (1989) suggest that the selection and design of a productivity measuring system will depend on the reasons for measuring productivity. In this case the purpose of measuring productivity is to assess the contribution of personnel management in New Zealand work organisations, therefore the measures selected need to reflect the output attributable to the human resource as well as satisfying the definition of productivity and the criteria delineated in the above two paragraphs.

Productivity (irrespective of its definition) is usually measured at the unit, departmental, or organisational levels of analysis. Individual productivity has been left primarily to jobs that can be measured using simple objective measures such as piece-work. It can be measured in a number of different ways depending on the perspective that one holds.

Because a study of personnel management will inevitably involve a number of diverse organisations, it is important to use productivity measures that are common and readily available. The problem therefore becomes one of determining which measures are most appropriate for this investigation. Given that a family of measures of productivity is more appropriate than a single overall measure, it is necessary to review the main possibilities.

Schmenner (1990) suggests that there are many partial measures of productivity in use. By partial, he means measures of productivity that relate only to labour and not to capital and materials. For instance the measure of direct labour efficiency and effectiveness are not classic productivity measures. They do not represent a ratio of output to input. Yet any movements in labour efficiency over time are likely to be correlated with movements in other more direct measures of labour productivity, such as units per labour-tonne, or tonnes per day. Schmenner (1990) concludes that while partial measures can be criticised on the grounds that they do not balance labour and capital productivity, they do have their place. They are relatively easy to calculate and are understandable by both managers and employees.

One obvious measure of productivity is profit using the organisation's financial ratios. The size of an organisation's profit is shaped by the efficient and effective use of its employees. However using only financial measures becomes a very narrow assessment of productivity, and may in itself be misleading if the profits of an organisation are being achieved through the efficiencies of non-labour resources such as machines or the manipulation of assets, rather than the efficient use of the employees.

Therefore some measure of direct labour efficiency will give a more accurate measure of the productivity of the utilisation of labour in the organisation. Performance indices based on labour efficiency provide information on the effectiveness of individual employees or groups of employees in job performance. Such information may be used by organisations to plan their production schedules as well as providing feedback to the employees on their performance and contribution to the output and goals of the organisation.

Another way to measure the effectiveness of the efforts of employees is to measure productivity from the viewpoint of the organisation's customers or clients, in terms of the quality of the goods or services that it produces. Customer or client satisfaction is directly related to the attainment of the goals of the organisation. If customers are not satisfied with output then they will seek alternative goods and services. To assess therefore the productivity of the employees in terms of the broad definition above necessitates the inclusion of a measure of customer reaction.

The research literature (Mowday, Porter, and Steers 1982) suggests that two human resource concerns related to performance and productivity are employee absenteeism and turnover. When both of these are high then productivity is adversely affected. Absenteeism is any failure of an employee to report for or to remain at work as scheduled, regardless of reason (Cascio 1989). Therefore absenteeism can be of two major types, approved absenteeism or unapproved absenteeism. Both types are a cost to the organisation, because during the time the employee is absent, other resources have to be employed to undertake the work. Productivity in terms of both efficiency and effectiveness will be affected, since the overall effect of absenteeism is to increase costs. This increases the cost of input as well as affecting the effectiveness of the organisation's goal achievement. The same can be said of employee turnover, which is defined as any permanent departure beyond organisational boundaries (Macy and Mirvis 1983). When turnover rates are high then the costs of labour will increase because there are costs of replacements for those employees who leave. These replacement costs include advertising, recruitment and induction as well as lost time on the job. On the other hand low turnover rates will ensure a greater continuity throughout the output of the firm.

While absenteeism and turnover are not direct measures of productivity per se, they do provide an indication, and in this sense can be used as productivity indicators. Provided that organisations keep up-to-date and comprehensive records of these, they can be measured accurately and relatively easily. Turnover may reflect a reaction against the organisation, or may be a reflection of some external influence. For instance turnover rates are affected by external economic and employment conditions. A high turnover rate may therefore indicate a buoyant economy where there is competition for labour, rather than some reaction to negative managerial practices in a particular organisation.

4.5.1.1 The Measurement of Employee Absenteeism

The Department of Labour conducted a survey of 1000 New Zealand firms in 1976. In this survey absence was defined as the non-working of rostered hours by full-time staff for any reason than approved leave of absence. Two categories of absence were used: approved absence (work accident and other), and unapproved absence (absenteeism). The measure used was the total absence rate, or the number of work hours lost divided by the number of work hours rostered. The time period covered was a minimum of two weeks, and the sample of firms represented a 70 percent response rate.

The findings indicated an overall absence rate of 5.9 percent. Just over half the sample had absence rates of five percent or less. Absence without approval accounted for 21 percent of all absence hours. Whereas approved absence accounted for 69 percent of all absence hours and the other ten percent were attributable to work accidents.

While there are other measures of absenteeism, Muchinsky's (1977) review indicates that frequency is the most reliable measure of absenteeism, even though reported reliabilities are not high. To arrive at a measure of absenteeism, it was concluded that each organisation should be able to provide the following information:

a. Frequency of unapproved absence

b. Frequency of approved absence due to work injuries.

c. Frequency of approved absence due to other reasons.

The simplest measure of this is work hours lost divided by the work hours rostered, averaged over a set period of time and expressed as a percentage of work hours rostered.

4.5.1.2 The Measurement of Employee Turnover:

Smith and Wilson (1983) note that a prime source of data on labour turnover in studies of this phenomenon are the employment records held in the personnel sections of companies. They note that the most commonly used measure of turnover is the separation or labour turnover (LTO) rate. This is defined as follows:

$$LTO = \frac{\text{No. of Separations over specific time period}}{\text{Average no. employed over same time period}}$$

Note that transfers are not normally included as turnover, and are subtracted from the number of separations. Price (1977) and Van der Merwe and Millar (1971) have noted two widely documented shortcomings of this measure:

a. Labour turnover has no precise meaning, eg 100% could mean the whole labour force has turned over once during the period, or half of it has turned over twice. Each of these could have different impacts on organisational effectiveness.

b. Labour turnover does not reflect the importance of other factors that affect stability. Length of service is the most important one here, the longer a person stays the less is the likelihood of that person leaving.

The anticipated sizes of some of the samples would be too small for other types of turnover measures such as mean length of service. Therefore the use of labour turnover as defined above, despite its disadvantages, is the most appropriate of the turnover measures for this particular type of investigation. It would be taken over the usual period that the organisation keeps records.

4.5.1.3 The Measurement of Direct Labour Efficiency

One of the major difficulties in measuring labour efficiency across disparate industries and organisations is the lack of a standard measure of direct labour efficiency. The field of work measurement is where the basis of measurement is provided. According to B.S. 3138 work measurement is defined as "the application of techniques designed to establish the time for a qualified worker to carry out a specified job at a defined level of performance". Work measurement therefore provides the concept of a Standard Rate of Working (British Standards Institution 1969), which is the average rate at which qualified workers will naturally work at a job. It is a measure that can be applied across a wide range of industries. Potentially it is a very accurate measure if the correct methods are used.

The overall measure applied in most firms is total work hours available for work. From this, various performance indices can be calculated which provide information on employee effectiveness. Since Standard Time is the index of the time

available for a qualified worker to carry out a specified job at a defined level of performance, it can be used to determine both productive time and non-productive time. All work has its non-productive aspects; some attributable to the employee, and others to the work done.

Productive time is the percentage of time spent working on the job. It is calculated by dividing the difference between total clock hours available and non-productive time by total clock hours expressed as a percentage. Non-productive time is the time that is spent not working on the actual job, and can be broken down into the following:

a. Supervision; which is the clock hours spent supervising on the job.

b. Rework; which is the total hours spent reworking products that have come from other departments, expressed as a percentage of total clock hours.

c. Training; or the estimated lost time due to learning effects expressed as a percentage of total clock hours.

d. Set up (Make-ready time); which is the time required for preparing machines or processes for production, expressed as a percentage of total clock hours.

e. Machine breakdown; which is the time spent waiting while the machine or process is down.

f. Other; including such things as supply shortage (or stock shortage), rectification (i.e. time spent rectifying errors within a department), cleaning and inspecting.

When used in research, the use of percentages offsets, to a large degree, the problem of confidentiality of the information, because at no stage is the organisation asked to provide raw data. It also allows each organisation, flexibility in the methodology that it adopts to arrive at overall percentages.

4.5.1.4 The Measurement of Quality of Product/Service

This is a variable that is difficult to measure, because it can be quite meaningless. For instance there are firms that produce low quality products as a deliberate policy. In other words the customer gets what he/she is willing to pay for. The quality of service, for example, in a cut price supermarket maybe zero in terms of the customers having to pack their own purchases, but this is offset by the reduced prices of their product lines. Often "quality" is measured solely in terms of expense. For example, two watches may be of equal value in terms of achieving the task of keeping the time accurately, but one is $300.00 while the other is only $80.00. The $300.00 watch maybe regarded as being of greater quality purely in terms of its price and the brand name.

However, if productivity is thought of as the extent to which an organisation is achieving its objectives, one of the ways this is going to be measured is through customer satisfaction. In bottom line terms this can be measured indirectly through profit; the argument being that the extent of a firm's profit is reflected to some extent by the number of customers it captures and the number it manages to retain.

In manufacturing concerns the quality of product can be measured in terms of the resources used in the production of unacceptable output. These resources include:

a. Scrap; which can be expressed as the total time to produce items that are later classified as scrap, expressed as a percentage of total clock hours.

b. Customer returns; which are unacceptable out-of-plant products returned, expressed as a percentage of total output in one year.

c. Recoveries (salvageable products in units or dollars).

d. Rework (additional direct and/or indirect labour in hours or dollars).

Two additional concepts when considering total product quality are recoveries (or salvageable products in units or dollar equivalents) and rework (or additional direct/indirect labour in person hours or dollar equivalents). Therefore product quality total is given by: scrap + customer returns + rework - recoveries. Also product quality below standard is given by product quality (actual versus engineered standard).

4.5.1.5 The Measurement of Profit

The most common measure of an enterprise's productivity is its profit. There are a number of financial ratios that are used to describe an organisation's profitability, and profitability is influenced by the efficiency with which the business is operated (Wilson 1985). The efficiency of the management of the business's human resource will therefore affect overall efficiency. One method of measuring operational efficiency is to use the ratio return on owners' equity. This ratio shows how the owners' investment is being used (Wilson 1985), and is calculated using the following formula:

Return on Owners' Equity = Net Income / Average Owners' Equity

Another ratio that indicates the profitability of a company is Earnings per Share (EPS). It is perhaps the most important ratio to owners because it tells them about their proportional share in the earnings of the company (Wilson, 1985). It is a major determinant of the company to pay a dividend and does play a significant part in the establishment of the price of shares in the firm. It is computed by dividing net income applicable to the common stock by the number of shares of common stock outstanding as follows:

EPS = Net Income / Average Number of Shares

4.5.2 The Use of A Family of Measures to Measure Productivity

Some organisations by nature of their industry will have different measures of productivity. To provide a common basis for comparison, particularly when evaluating the impact of the personnel management functions of a number of business organisations, it is necessary to have measures that are the same. These measures have to be at the organisational level of analysis, because personnel management is conducted at the organisational level. Personnel management is about having common policies and practices in the acquisition and utilisation of the people in an enterprise. The other reason why these measures have to be at the organisational level of analysis is that given the difficulties in defining productivity, the chief executive is concerned primarily with the overall profitability of the organisation.

It is important that in the evaluation of the personnel management function that consideration is given to its impact on the different indicators of productivity, not just one. Therefore it makes sense to adopt a family of measures to be built into a research model. The latter is the subject of the next Chapter.

CHAPTER 5

EVALUATING PERSONNEL MANAGEMENT - A MODEL

5.1 The Evaluation of Personnel Management

The central point of this investigation is to explore the influence of personnel management in New Zealand on certain key organisational variables. If the aim of personnel management practice is to enhance human productivity and performance (Chapter 2), then it is essential that research is conducted to evaluate its influence, rather than relying on common sense, or what theory may propose. As discussed in Chapter 2, an evaluation of the personnel management function represents the interface between psychology and personnel management, because psychology provides the wherewithal to measure the activities of the human resource. It also provides an appropriate framework to conduct evaluation that is both scientific and objective.

The key variables in this research are employees and the outcomes of their work. In other words it is pertinent to ask in an evaluation of the influence of personnel management practice about the effect it has on employees' feelings towards their employers and its effect on the productivity of the organisation. Employee attitudes towards work are also an important variable in assessing the influence of personnel management practice, since work attitudes may affect productivity. Therefore both employee perceptions of their treatment by organisations, coupled with their beliefs or orientations to work, may have a significant effect on their behaviour, and thus the quality of the outcomes of their labour. This is a basic premise of personnel management that, unlike other resources, the human resource is unique and simply cannot be treated in the same way as non-human assets.

The relationships between the perceptions of employees and their attitudes, the actual way in which personnel management is practiced, and the productivity of the organisation are the key factors in the evaluation of the personnel management function. These relationships are important in determining the contribution of personnel management to the business operations of the organisation. If personnel managers are to improve the image that they have with the rest of the business community, they must be able to demonstrate that the personnel management function has a positive contribution to make. Similarly if these relationships are unknown, then the appropriateness of certain personnel management practices is questionable. For example it is possible that if an organisation adopts a set of personnel practices or policies which are not in accord with the prevailing attitudes that people in the work force have about work, then the organisation's productivity may be adversely affected through higher absenteeism and turnover rates.

In Chapter 2 the Goldthorpe et al (1968) studies showed that most of the employees in the motor assembly industry had an instrumental orientation towards work. The reason that industrial relations and productivity were high was that the personnel practices were congruent with this orientation. In New Zealand however research undertaken with certain Pacific Island immigrants with that same instrumental orientation, reported that employee participation practices used in companies in the Auckland area were counterproductive (Hines, 1976). Since their prevailing work orientation was instrumental, they showed no interest in participating in decisions involving their work activities. Therefore personnel practices were not congruent with their prevailing work attitude.

The suggestion here is that the way that personnel management is practiced in organisations will influence the productivity of that organisation. Also the way it is practiced in organisations may not be congruent with the attitudes that people have about their work, and thus may have a detrimental effect on their motivation and their productivity. So people who believe that work is really the outcome of individual effort may not benefit from personnel practices that stress employee participation and group incentive schemes. The productivity of an organisation may be affected by a mismatch between the prevailing attitudes towards work of the employees in that organisation, and the personnel management practices of the organisation.

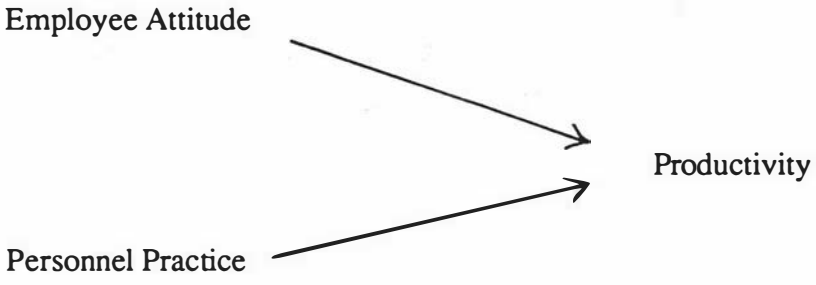
5.2 The Research Model

A methodology for the evaluation of personnel management in New Zealand requires the development of an appropriate research model, which includes the major variables to be explored. Research models are abstractions of reality that are developed to build and test theories, make predictions, and give the research some structure and direction. Research models identify the key variables and show their relationships, which are then tested through an appropriate analytic procedure. Essentially the model will limit the scope of the evaluation to a manageable whole.

Personnel management research in New Zealand has been largely descriptive, and lacks empirical depth (Chapter 2). Therefore a study that explores relationships between variables as well as describing them is appropriate. Consequently as well as attempting to confirm the appropriateness of certain measures in New Zealand, it is also intended to explore the relationships that are important in any evaluation of success or otherwise of the personnel management function.

A basic framework for the study is shown in Figure 5.1.

FIGURE 5.1: FRAMEWORK FOR STUDY



These three variables are the main constructs examined in this research. Constructs are variables that cannot be directly observed and therefore are known as latent variables, which are frequently encountered in the social sciences, other examples include intelligence, motivation, and ambition (Pedhazur 1982). These constructs play a vital role in the social sciences and in psychological research. In order to measure the relationships between constructs, manifest variables or variables that can be directly observed have to be used to measure the effect of the latent variables. For instance the manifest variable used to measure the effect of the latent variable employee attitude is often a score on an attitude questionnaire or scale.

Manifest variables need to have construct validity, in other words, they have to be accurate in measuring the underlying construct. They are therefore generally selected on the basis of what has been successfully used in previous research studies. A number of scales have been developed to measure the construct work attitude. The measurement issues were discussed fully in Chapter 3 and it was decided that the most appropriate are measures of work beliefs and organisational climate.

The measurement of personnel practice is difficult, because unlike employee attitude measures, there are no ready made "scales" which can be used. This necessitates the making of an early decision on what should be developed and used as manifest variables in the measurement of personnel practice. Some clues to the solution of this problem may be found from the research that describes the frequency at which particular personnel practices occur across organisations. (NZIPM 1978, Ransom 1987).

One important variable involved in personnel management practice is the level of participation by employees. Some organisations seem to encourage employee participation, while others prefer to follow more traditional managerial prerogatives in their management practices. Employee (sometimes referred to as worker) participation has aroused considerable interest in New Zealand, especially in the mid to late 1970's (Boxall 1986). The need for New Zealand to become more internationally competitive and therefore to produce products which satisfy the high standards imposed by our

customers and potential customers means the implementation of total quality control in many of our business organisations. This implies high level involvement where organisations are created in which every level of management, type of functional specialist, and people at the operator level actually participate (Boxall 1986). If this is in fact the case then the degree to which employees are able to participate in the practices that affect them in the organisation becomes an important measure of the effectiveness of personnel. It is also important in terms of the match with employee beliefs. Participation may not be important to those employees who have a predominantly instrumental orientation or belief about work. Boxall makes a strong case for the idea that we need participation not merely for moral or motivational reasons, but more importantly we need it to survive in world markets dominated by such producers as the Japanese and other associated competitors. In a world where innovation is a key to success, participation is particularly motivating in innovative situations (Kanter 1985). In other words more heads are better than one in improving productivity.

There is also the expressed desire of personnel managers to be more proactive (discussed in 2.2) in the personnel management function. The difference between traditional personnel practice and contemporary personnel practice is assessed mainly in terms of how proactive the personnel function is seen in an organisation. Gilbertson's (1984) research stressed the need for the personnel manager to break out of the traditional reactive "fire-fighting" mode and become more proactive, if role stress and ambiguity are to be reduced. Therefore the level of proaction in personnel practice becomes another important variable in personnel practice.

There is also a close link between the management style of the organisation and the personnel management function. An appropriate manifest measure of the type of personnel practice in an organisation would therefore be related to the management style or tone of the organisation. While no widely accepted typology of personnel management style has been forthcoming (Dyer 1988), Purcell and Gray's (1986) typology in employee relations is a potentially useful measure of tone. It is constructed on the basis of two dimensions of an organisation's employee relations strategy: individualism and collectivism. Individualism is "the extent to which the organisation gives credence to the feelings and sentiments of each employee and seeks to develop and encourage each employee's capacity and role at work" (Purcell 1987, p.536). Collectivism "concerns the extent to which the organisation recognises the right of employees to have a say in those aspects of management decision-making which concern them" (Purcell 1987, p.538). Boxall (1989a) suggests that in response to more competitive product markets, organisations can move in one of two directions. They can choose to move towards building much greater employee commitment and involvement. In Purcell's terms this would mean moving towards sophisticated human

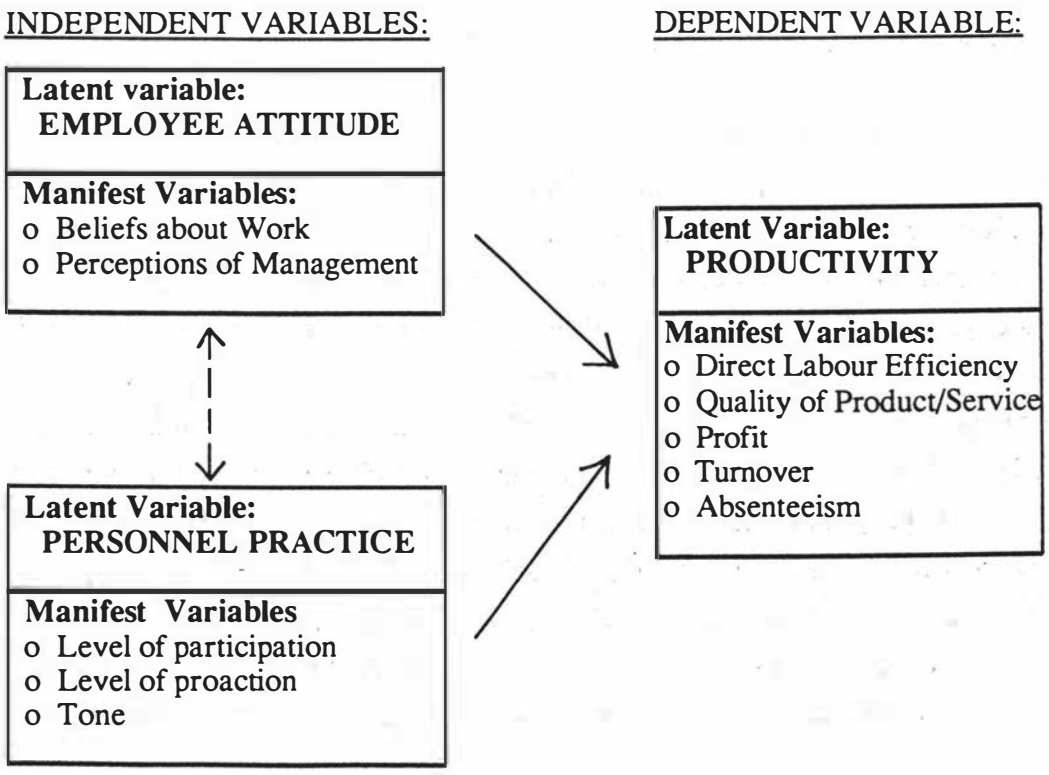
relations or the consultative style. Alternatively, they can choose to move towards reinforcing their control and pare back labour costs and take the "hard commercial decisions" with as few constraints as possible. In Purcell's terms this means moving towards constitutional, traditional or opportunistic styles.

The identification of appropriate manifest variables that will measure the latent variable productivity presents less of a problem, but the problems of definition and therefore selection in this study were discussed in Chapter 4. The measures identified in that Chapter represent a different perspective of productivity by giving data on profitability, quality of product, and the direct efficiency of labour.

One of the foundations of experimental research is the notion that the experimenter manipulates certain variables of interest and observes the manner in which the manipulation effects the variation in a dependent variable (Pedhazur 1982).

The full research model showing the independent and dependent variables is shown in Figure 5.2. In this model the main lines show the focus in measuring the effect of the latent variables personnel practice and employee attitude on the latent variable productivity, using the manifest variables shown as the measures. The dotted line between the two latent variables employee attitude and personnel practice indicates an interest in identifying whether there is any relationship between these two latent variables. In this part of the model the influence of personnel practice on employee attitude is being investigated, and therefore employee attitude becomes a dependent variable.

FIGURE 5.2: RESEARCH MODEL



The research model does not include some variables that may affect both the personnel practice and productivity variables. Such variables would include the level of technology, the type of industry, structural characteristics of the organisation, work force composition, and even geographic location. A case could be made for including all or some of these, because each may affect personnel practice and productivity in some way.

Some recent research certainly supports this possibility. A study conducted over 267 organisations in the United States suggests that personnel practices vary as a function of organisational characteristics (Jackson, Schuler, and Rivers 1989). The selected organisational characteristics included organisational structure, industry sector, innovation strategy, organisational size, manufacturing technology, and unionisation. These characteristics are also interesting with respect to their possible affect on productivity.

The organisational structure variable used in the United States study differentiated organisations on the basis of whether they were departmentalised by function or by product. This variable was selected because product-based organisations may emphasise results over processes in their personnel practices. The industry sector variable differentiated those organisations that had a manufacturing base (dealing with tangible products) from those that had a service base (dealing with intangible products). The reason for including this variable was that performance is often more difficult to monitor in service-based industries than in product-based industries. The innovation strategy adopted by organisations could also affect personnel practice. The pursuit of innovation as a deliberate competitive strategy in certain organisations may lead to personnel practices that will reinforce the development of expertise in the work force and provide a longer term focus on performance appraisal systems. The observation of differences in the type of supervision between small and large organisations led to the inclusion of organisation size as a variable. In small organisations there is a greater tendency for supervision to be informal and direct, while in larger organisations supervision often becomes more formal and indirect.

Differences in manufacturing technology affect personnel practices and outcomes. For instance mass production industries have a division of labour where employees do not have control over the final product. Industries that have flexible specialisation for niche markets, on the other hand, tend to employ people who have much greater control over the final product, and also foster a team orientation. Finally the absence or presence of a union on site will dictate the grievance and general industrial relations procedures and practices.

The justifications for including these variables in the above study are also pertinent to this investigation. The results from the United States study suggest that the organisational context is related to personnel practice and also to productivity.

The focus of this investigation, however, is to explore the core question concerning the relationships between attitude to work, personnel practice, and productivity, and to attempt to assess the contribution of personnel management to the organisation with respect to productivity. The resultant research model therefore does not deny the existence of other variables, such as the organisational characteristics described above that may affect the dependent variable, it simply treats these as extraneous to the central research question.

5.2.1 The Research Objectives

The main objective of this research study is to evaluate the influence of personnel management practice in a sample of New Zealand organisations by investigating its relationship with productivity and employee attitude. Using Figure 5.2, the study has the following specific research objectives:

a. To measure the beliefs about work that employees hold in New Zealand and to compare these with results from other countries.

b. To investigate whether there is any relationship between the beliefs that people have about work and the climate within organisations and the productivity of organisations.

c. To establish whether there is any relationship between personnel practice undertaken in organisations and the perceptions that employees have about their organisations.

d. To determine whether there is a relationship between personnel practice and productivity in organisations.

e. To investigate the degree of congruency between personnel practice and work attitude of the employees in organisations.

5.2.2 The Measurement of Employee Attitude

Two attitude scales were used to measure the variable employee attitude. Employee attitude comprises two manifest variables: beliefs about work and organisational climate. These variables were measured by the Beliefs About Work Scale (Buchholz 1976) and the Litwin and Stringer Organisational Climate Scale (Litwin and Stringer 1968). These scales are included as Parts 2 and 3 in a questionnaire developed for this study entitled the Attitude to Work Questionnaire. A copy of this questionnaire is contained in Appendix 1. The questionnaire is divided into four parts.

The first part asks for some biographical details including the following variables: sex, age range, ethnic origin, family status and number of dependent children, job title, job level, part or full-time employment, and length of time with present employer.

The second part contains the forty five items of the Beliefs About Work Scale. For each item respondents are asked to indicate whether they strongly disagree, mildly disagree, neither disagree nor agree, mildly agree, or strongly agree with the statement given.

The third part contains the fifty items of the Litwin and Stringer Organisational Climate Scale. For each item respondents are asked to indicate whether they definitely disagree, disagree, agree, or definitely agree with the given statement.

The final part of the questionnaire enables the respondents to write any comments about the questionnaire or the research study itself. This is included because a content analysis of these comments may provide additional information that is useful in the interpretation of the results.

5.2.3 The Measurement of Personnel Practice

As noted in 5.2.2 above, there are no readily available manifest measures of personnel practice. Therefore it seemed reasonable to construct measures that are built on the broader categories of personnel management practice established in the 1978 NZIPM Survey. A structured interview format would generate useful data to develop and measure these. The structured interview is a flexible yet reasonably objective method of gathering data of this nature. The aim was to obtain an assessment of the personnel practices in each of the selected organisations so that relationships could

later be determined with the prevailing attitudes to work in each organisation and the productivity measures. It is important to note that these measures would be at the organisational level of analysis.

It is not considered feasible in practical terms to measure personnel practice at the individual level of analysis. One of the features of personnel practice in organisations is that they are standard for all employees. In other words personnel practice is a result of the personnel policies of the organisation, and while there may be room for variation because of a particular manager or certain employees, the aim of personnel practice is to maintain management that is both fair and equitable to all concerned, while improving motivation which in turn produces greater efficiency and effectiveness on the job.

It was decided that the most appropriate way of developing and obtaining measures was to use a structured interview with the one person in each organisation responsible for the personnel function. The rationale for adopting this approach is really to satisfy the problem of reliability. In order to maintain as much consistency across the various organisations it was concluded that the one person in each organisation who should give the most accurate or valid response to the structured interview would be person responsible for the conduct of personnel management in that organisation.

Using the personnel practice data that was identified in the 1978 NZIPM Survey as a starting point, a structured interview schedule was designed. A copy of the personnel practices assessment interview schedule is contained in Appendix 2. This schedule was designed to establish the number and type of personnel practices undertaken in the organisation as well as assessing how many were under the direct authority of the personnel department. It was also designed to obtain measures on the three manifest variables: the level of proaction, the level of participation, and tone.

The interview schedule begins with basic information about the organisation itself, including the type of organisation (this classification was also used in the 1978 survey), identifying the geographical location of the organisation, and the size and the ethnic composition of the organisation. Four questions on the structure of the organisation are included, and whether the interviewee's position is considered first line, middle or top level management.

The second part of the interview schedule is designed to obtain information on the various personnel practices conducted in the organisation. In the first eight questions, the most frequent practices from the 1978 New Zealand Institute of

Personnel Management Survey are listed on cards, and each interviewee was asked to indicate whether the organisation undertakes the practice, and if so, whether the responsibility for its conduct lies with the personnel or some other department. To include any other dominant practices not included on the two cards, interviewees were also asked if there are any other dominant personnel practices carried out in the organisation. These were to be categorised at a later stage. Because of the great variation in the way practices are used in organisations, the structured interview provides an excellent medium to establish how each organisation conducts each of its personnel practices; why each practice is conducted in that particular way; and, how the employees tend to respond to the practice. Question 10 is designed to obtain descriptive data based on the opinion of the interviewee. While being subjective, its value will lie in providing some flesh to the variation of personnel practices in New Zealand organisations.

The third part of the schedule is designed to obtain information on the level of employee participation in personnel practice. To achieve this, each interviewee was asked to indicate which formal participatory structures are used in any of the personnel practices, and whether there are any additional ones not listed. The list of structures is taken from the 1978 NZIPM Survey. The interviewee was then asked to consider each personnel practice in turn, and to indicate which practices use participative structures and the type of structure/s used. To measure the informal level of participation by employees, the interviewee was asked to rate the level of participation in each practice using a four point scale from no input to high input.

In the fourth part of the schedule an attempt is made to assess the level of proaction in the organisation. Proaction is a difficult concept to define. The Oxford Dictionary defines proactive as "...a mental effect from a previous situation which is active in a subsequent activity..." For instance in learning, inhibition or interference with learning is caused by effects that remain active from conditions preceding that learning. Douglas, Klein and Hunt (1985) use the word proaction in relation to the proactive years in the United States during 1930 - 1945, specifically to the proactive legislation like the Anti-Injunction Act. Here this legislation was proactive by removing or limiting the role of government and the courts on business affairs by removing barriers to provide new national policy on labour relations. Using this information, a definition of proaction in terms of personnel management and practice was derived. This is: " Proaction is the extent that the personnel practice followed enables the personnel function to anticipate and solve problems by using new and creative strategies and the removal of or limitation of administrative barriers to the solution of personnel problems. In this sense it is really the opposite of the usual way of handling things, that is a problem occurs, and then the personnel department must find a solution through a reactive procedure."

Using this definition, the interviewees were asked to consider each practice in turn and rate them on a five point scale from a low level of proaction to a high level of proaction. Earlier on in the schedule (Part 2, Question 9) the interviewees were asked to categorise each practice listed in terms of whether it enables the organisation to anticipate problems before they occur or whether is used mainly to react after the problem has occurred. This is designed to discover how many practices are used predominately in an anticipatory (fire-prevention) or reactionary (fire-fighting) mode.

In the final part of the schedule, each interviewee was asked to select out of five descriptions, printed on cards, the one that best describes the organisation. These descriptions are based on Purcell's predominant management styles and constitute the measurement of tone.

5.2.4 The Measurement of Productivity

In Chapter 4 it was emphasised that it is important that an evaluation of personnel management involves evaluating its impact on a family of productivity measures, not just one measure. As suggested, this is because the definition of productivity may vary depending on a particular perspective adopted, and there are consequently a number of different approaches to its measurement.

Employee absenteeism, employee turnover, direct labour efficiency, quality of product/service, and profit were used as the family of productivity measures. These measures are defined and described in Appendix 3. The justification for their inclusion is discussed fully in Chapter 4 (Section 4.5.1). These measures were requested at the end of the structured interview by giving each executive a copy of the information obtained in Appendix 3, and requesting that the information be forwarded to the researcher when convenient. To ensure confidentiality, percentages were asked for rather than any raw data. It was felt that the participating organisations would be more amenable to releasing these data if they did not have to disclose actual figures.

5.3 The Pilot Study

The questionnaire and the structured interview were piloted using a local Palmerston North organisation. The pilot survey involved the administration of attitude to work questionnaires issued to a representative sample of fifty members of the work force. The sample composition and distribution of these questionnaires was coordinated by the head of the personnel function in that organisation. The return rate on these questionnaires was 50 percent.

No real problems were encountered with the attitudes to work questionnaire. The structured interview was carried out with the person responsible for the personnel function. The interview proceeded without any interruptions, and lasted just over two hours. The interviewee had no difficulties with the questions and found the use of the cards helpful. As a result of the pilot interview, some minor adjustments to the layout of the interview schedule were made.

There was no difficulty in obtaining the productivity information detailed in the productivity schedule. Most of it was on hand. The organisation was quite understandably concerned that its identity be kept confidential. The productivity information was obtained through the personnel manager with the approval of the chief executive. It was clear that the concern about confidentiality would be an important factor in the main study.

5.4 The Sample

It was important to try and achieve a representative sample of employed New Zealanders. A total of 77 organisations were contacted by letter in which the objectives of the research were explained and a request for their participation was made. A copy of the letter is contained in Appendix 4. Of the original number, 28 organisations replied to the letter and declined to participate. A further 7 organisations did not reply.

A total of 42 organisations agreed to participate in the research project. Two of these subsequently changed their minds, leaving a balance of 40 organisations. This represents a final acceptance rate of 52 percent. Table 5.1 shows the classification of these organisations. The classification is the same one used for organisations in the 1978 NZIPM Survey.

The work force of each of these organisations was sampled, based either on approximately 10 percent for the smaller organisations, and a flat limit for the larger organisations. This limit was either 200 or 300 people. The samples were drawn up by the personnel departments of each organisation. The instructions given to each of the personnel managers asked them to ensure that the sample was randomly drawn. A total of 4142 questionnaires were sent to the 40 organisations. A covering letter written by the researcher was included with each questionnaire providing information about the objectives of this research. A copy of this covering letter is contained in Appendix 5. The questionnaires were distributed by the personnel departments and in most cases were returned by stamped addressed envelope direct to Massey University. The responses were treated as confidential and the respondents were discouraged from identifying themselves on the returned questionnaires.

TABLE 5.1: ORGANISATION CLASSIFICATION

Classification	Frequency
Agriculture, hunting, forestry, fishing, mining, and quarrying.	1
Manufacturing - Food, beverages, and tobacco.	3
Manufacturing - Textile clothing, and leather.	1
Manufacturing - Wood, wood products (excluding furniture), paper products, printing, and publishing.	1
Manufacturing - Basic metal industries, fabricated metal products, machinery, transport equipment, professional and scientific equipment.	5
Manufacturing - Chemicals and chemical petroleum coal, rubber and plastic products: non-metallic mineral products and all other manufacturing industries not elsewhere classified.	5
Construction	0
Transport, storage and communication.	3
Wholesale and retail trade and restaurants and hotels.	6
Community, social and personnel services (non-government).	0
Government (excluding local authorities).	4
Financing, insurance, real estate and business services.	6
Local bodies, authorities (not government departments).	4
Municipal corporations.	1

most cases were returned by stamped addressed envelope direct to Massey University. The responses were treated as confidential and the respondents were discouraged from identifying themselves on the returned questionnaires.

A total of 2111 usable questionnaires was returned. This represents a response rate of 50.92 percent. As the questionnaires came in, each was checked individually by the researcher to ensure that the responses were clear. Spoiled questionnaires were removed from further consideration. The frequency of non-usable questionnaires was very small. More common were questionnaires that had individual items with missing responses.

The sample was limited to those people who are employed by organisations that have an identifiable personnel function. It did not therefore include the unemployed, self-employed, or those employed in small businesses. While these groups' beliefs about work are important in the national context; they are not represented in the context of this research because it is limited to the relationship between beliefs about work, personnel practice, and productivity in New Zealand business organisations.

5.5 Framework for the Analysis of the Results

The analysis of the results involved the consideration of three sets of data, which represent the major parts of the research model. The first set was the data collected from the 2,111 questionnaires that included demographic information and the responses to the items on the Beliefs About Work and the Litwin and Stringer Organisational Climate scales. The measures in this set were measures taken at the individual level of analysis. In other words the set would be based on a sample of 2,111 cases and 104 variables from which some composite variables (i.e. the beliefs about work scores and organisational climate scores) would be later derived.

The second set of data was collected from the 40 participating organisations in the structured interviews. This included information about the organisation, and then detailed information about the personnel practices undertaken in each organisation, from which the measures of personnel practice were developed. The measures in this data set were measures taken at the organisational level of analysis. The set itself was therefore based on 40 cases and some 298 variables. It was anticipated that the

number of variables would be reduced by the later derivation of composite variables relating to level of participation, proaction, and tone (in a similar way to the scores derived from the questionnaire totals in the first set of data).

The third set of data was the productivity information collected from each of the participating organisations. The measures in this data set were at the organisational level of analysis, and the set was based on 40 cases and 15 variables.

This research was exploratory in nature to describe the state of personnel practice in the sample of New Zealand organisations, and to attempt to evaluate its contribution to the productivity of those organisations. Given the amount of information that was gathered, and the fact that there were measures at the individual and organisational levels of analysis, it was important to have a framework for proceeding with the analysis of the results once the data collection was complete. This framework would provide direction in terms of the research model described in 5.2 above and the specific objectives delineated in 5.2.1.

The basic question of this research is about evaluating personnel practice in terms of its influence on employee attitude and productivity. Both the personnel practice and productivity measures are organisational measures, while those adopted for employee attitude are individual measures. Therefore in the analysis of the results appropriate measures of the employee attitudes of each organisation must be developed. Also the first research objective is to measure the beliefs about work that employed people hold in New Zealand and to compare these with overseas results. This necessitated focusing on the manifest variable of employee attitude.

The first step in the analysis is therefore to confirm whether the beliefs about work and perceptions of management measures are valid and appropriate measures in the New Zealand context. This implies factor analyses of the two attitude scales to identify the belief and climate dimensions that these scales are measuring. These dimensions will then form the bases of the individual measures of belief to be used in the achievement of the first objective. By using the obtained scores on the beliefs about work scale as dependent variables the following questions can also be investigated using analysis of variance :

a. What is the predominant belief system? How does this compare with overseas results?

b. Are there any differences in beliefs due to personal variables such as age, marital status, gender, ethnic origin job level and type of work.

A factor analysis of the organisational climate scale will provide a measure of the perception of management by workers in the sampled organisations. As noted in 3.4.1 above, Muchinsky (1976) suggests the development of a more general measure of organisational climate, as one solution to the problem of the lack of factor replicability across organisations. Using factor analysis will enable the reduction of the item content of the LSOCQ to contain only those factors that load on a general factor.

The measures of organisational climate, like the beliefs about work measures, will also be at the individual level of analysis. Therefore to achieve the next research objective, these measures will need to be made at the organisational level of analysis. So the mean scores for the employees in each of the organisations will need to be computed so that relationships can be established with both productivity and personnel practice.

At this stage of the analysis the independent variables will be the belief and climate mean scores for each organisation, and the dependent variables will be the productivity measures. As discussed in Chapter 8, the results of the productivity measures obtained from the organisations were incomplete. This meant in structuring the analysis of the results an appropriate productivity measure that could be applied to all organisations had to be contrived from the incomplete results.

The other three research objectives involve the relationship of personnel practice with both productivity and employee attitude variables. At this stage of the analysis it was necessary to analyse the results of the structured interviews, and to derive appropriate organisational measures of the three manifest variables in the model. These structured interviews would generate a lot of descriptive information about the way that personnel management is conducted in New Zealand organisations. This would build on what has already been documented (NZIPM 1978, Ransom 1987), and would provide some useful comparative information on recent trends in personnel practice.

Having determined appropriate organisational measures for each of the variables in the model, an analysis would be run to produce an inter correlation matrix to identify the relationships between the independent and dependent variables. The results obtained from the work attitude questionnaires and their analysis are the subject of the next chapter.

CHAPTER 6

THE ANALYSIS OF THE WORK ATTITUDE RESULTS

6.1 Characteristics of the Sample

Characteristics of the sample of completed questionnaires in terms of gender, age range, ethnic origin, and occupational classification compared with national statistics are shown in Tables 6.1 to 6.4. The number of respondents in each case is 2,111.

TABLE 6.1: CHARACTERISTICS BY GENDER

Gender	Sample		National Statistics
	f	%	
Male	1225	58.0	57.97% * (59.7%)+
Female	886	42.0	41.96% * (40.23%)+

* Total Work Force (1986 Census)
\+ Employed Work Force (1986 Census)

TABLE 6.2: CHARACTERISTICS BY AGE

Age Range	Sample		National Statistics
	f	%	
15 - 19	103	4.8	10.3%
20 - 24	340	16.1	14.4%
25 - 29	357	16.9	12.9%
30 - 34	268	12.7	12.2%
35 - 39	276	13.1	12.9%
40 - 44	283	13.4	10.5%
45 - 49	194	9.2	9.0%
50 - 54	157	7.4	7.3%
55 - 59	108	5.1	6.3%
60 - 64	25	1.2	3.9%

TABLE 6.3: CHARACTERISTICS BY ETHNIC ORIGIN

Ethnic Origin	Sample		National Statistics (March 1988)	
	f	%	Total Work Force	Employed Work Force
European	1921	91.0	82.8%	85.9%
Maori	108	5.1	8.0%	7.5%
Pacific Island	37	1.8	2.6%	2.5%
Other Ethnic Grp	45	2.1	6.6%	4.1%

TABLE 6.4: CHARACTERISTICS BY OCCUPATIONAL CLASSIFICATION

Occupational Classification	Sample		1986 Census
	f	%	
Professional/Technical	606	28.71	15.1
Administrative/Management	210	9.95	5.0
Clerical	524	24.82	17.6
Sales Workers	199	9.43	10.2
Service Workers	72	3.41	10.1
Agriculture, Forestry, Hunters	7	0.33	10.9
Production Workers, Transport & Equipment Operators, Labourers	459	21.74	30.9
Not Defined	34	1.61	0.2

Characteristics of the sample in terms of marital status, job level, and full/part time work are shown in Tables 6.5, 6.6A and 6.6B. Comparative national statistics were not available for these variables.

TABLE 6.5: CHARACTERISTICS BY MARITAL STATUS

Marital Status	f	%
Single	765	36.2
Married	1346	63.8

TABLE 6.6A: CHARACTERISTICS BY JOB LEVEL

Job Level	f	%
Unskilled	60	2.8
Semi-skilled	343	16.2
Skilled	981	46.5
Supervisory	373	17.7
Managerial	354	16.8

TABLE 6.6B: CHARACTERISTICS BY TYPE OF WORK

Full/Part-Time Work	f	%
Full Time	1927	91.3
Part Time	184	8.7

In general, the sample was representative in terms of the basic demographic variables of gender, age, and ethnic group.

6.2 Factor Analysis of the Beliefs and Climate Scales

Factor analyses were conducted of both the Beliefs About Work and Organisational Climate scales on the sample of 2,111 usable attitude to work questionnaires. As a first step in the evaluation of this study, it was necessary to determine the structure of both scales to see whether the results from overseas studies reported in Chapter 3 could be confirmed in New Zealand. The point of this was to establish whether the scales were measuring the same factors as those reported overseas, or whether due to the characteristics of the New Zealand sample, there were some differences.

In essence the factor analysis would establish the construct validity of these scales. Without this information, it would be difficult to make any meaningful conclusions based on the obtained results, and would mean that the resulting scores would be applied blindly. Similar uses of factor analysis have been made in previous studies involving tests using New Zealand samples. For instance Adcock (1974) failed to replicate five factors on Cattel's 16 PF test raising doubts as to the validity of the 16 personality dimensions in New Zealand. This research questioned the use of unvalidated test instruments based on the uncritical use of factor analysis. St George

(1983) used factor analysis to compare the internal properties of the Queensland Test of Cognitive Abilities between samples of Pakeha and Maori children. The results supported the use of this test across ethnic and cultural groups. More recently, Green, Walkey, Taylor, and McCormick (1989) used factor analysis to check on the factor replicability of the Hopkins Symptoms Checklist of New Zealand compared with United States samples. The results determined that there were three factors common to both samples that could be measured by using a shortened version of the original scale.

Factor analysis looks inside a single set of variables and attempts to structure the variables in this set independently of any relationship that they may have to variables outside this set (Harris 1985). It follows a set sequence of steps (Norusis 1985). First a correlation matrix for all the variables is produced. This is followed by factor extraction which involves the identification of a number of common factors necessary to summarise the data. The third step rotation, involves the transformation of these factors to facilitate their interpretation. Finally scores for each factor can be computed for each case. Factor analysis reduces the number of variables to a smaller set, and in so doing identifies their underlying structure. In the case of tests and attitude scales the number of items are reduced to factors that prescribe the underlying dimensions that the test or scale purports to measure. In the case of the scales used in this study, we are interested in determining whether factor analysis will replicate the dimensions reported in overseas studies.

Factor analysis is a very useful analytical tool, however it is not without its critics. McNemar (1951) notes the general struggle for interpretation that involves all factor analysis, and this according to Gorsuch (1983) is one that is still applicable to many studies. Gorsuch (1983) suggests that in addition to this basic criticism, there are also other criticisms that relate to the way factor analysis is practiced. These are as follows:

a. It is assumed that the factors from one study are the factors. Factors become factors only on replication from a number of studies. For instance as noted in Chapter 3, a number of studies have been unable to replicate the original factors of the Litwin and Stringer Organisational Climate Scale (Rogers, Miles, and Biggs 1980).

b. Insufficient attention is given to the selection of variables. The variables in a factor analysis determine what factors appear and at what level, therefore a great deal of thought needs to be given to the inclusion of each variable and its impact on the solution achieved.

c. Research studies often fail to report what was actually done in sufficient detail so that the analysis can be replicated in other studies. A major criticism of the factor analytic studies carried out on the Beliefs About Work Scale is that they fail to report factor loadings, and communalities.

d. There appears to be a heavy reliance on programmed factor-analytic procedures that are used because of their availability rather than using one that coincides with the design of the study.

e. Factors already well replicated in a standard area are often rediscovered and given a new name. Therefore it is important that research builds on those studies already well documented, and that marker variables should always be included for those factors that have already been well substantiated. This will minimise the tendency to keep on "rediscovering the wheel".

The key culprit underlying all these criticisms is a lack of theoretical approach that integrates the data collection, factor analysis, and interpretation, and which leads to the future use of results (Gorsuch 1983). This is one the reasons why it was decided in this study to use scales that had already been developed as a result of particular theoretical orientations, and used in research where factor analytic studies had been undertaken.

6.2.1 The Beliefs About Work Scale

An immediate concern with Buchholz's Beliefs About Work Scale (BAWS)[1] was to see whether the five belief dimensions could be replicated in the New Zealand sample. Previous studies (Buchholz 1976, Buchholz 1977, Buchholz and Dickson 1977, Buchholz 1978a, Dickson and Buchholz 1979, Dickson 1982, and Dickson 1983) have reported replicability using both United States and Scottish samples, and indicate its utility in cross-national comparisons. If replicability could not be achieved,

[1] The abbreviation BAWS will be used in the text to refer to the Beliefs About Work Scale. Individual items on this scale will be referred to by item number immediately after the abbreviation. For example BAWS1 refers to Item 1 of the Beliefs About Work Scale.

then direct comparisons with the overseas results would be equivocal. To ensure the nullification Gorsuch's key criticisms above, implied using the same factor analytic methodology reported in the earlier studies (Buchholz 1976, Buchholz 1977, Buchholz and Dickson 1977, Buchholz 1978a, Dickson and Buchholz 1979, Dickson 1982, and Dickson 1983). These studies utilised the principal axis factoring method and a varimax rotation, which produced essentially a five factor solution in all studies, with the exception of Dickson (1982), who reported a six factor solution after further rotation. This six factor solution essentially split one of the original five factors (i.e. the Marxist factor) into two factors: one relating to participation and the other relating to exploitation.

The responses to the BAWS on the 2111 questionnaires were factor analyzed using the Factor procedure of SPSS^{x} (SPSS Inc. 1986). A principal axis factoring using a varimax rotation was undertaken, in keeping with the techniques used in the previous studies. Prior to the factor analysis a decision has to be made about missing values. In this survey involving a large sample of respondents, it was inevitable that some of the questionnaires would have missing items. Of the 2,111 completed questionnaires, 131 cases had missing items in the BAWS. The majority of these were either one or two items missed and there was no obvious pattern to the missing items. There is no way of knowing whether the one or two items with no response, were simply missed or whether they would constitute a refusal. Since there was no evidence to suggest that missing item values were anything but random, a listwise deletion was made (Norusis 1985). This eliminates a case from the factor analysis if it has a missing value on any of the items. The total number of usable cases for this analysis was therefore 1980 cases.

In the first part of factor analysis, a correlation matrix of all the items of the BAWS is produced. Two statistical tests that are also used to decide whether there is sufficient evidence to proceed with a factor analysis were employed. The first test is Bartlett's test of sphericity which is a test of the degree that the obtained correlation matrix is an identity matrix. If the value is large and the significance level small, then it is unlikely that the population correlation matrix is an identity (Norusis 1985). The obtained result of 20766.876 is evidence that the population matrix is not an identity, and that there are a sufficiently high number of intercorrelations indicating an underlying factor structure.

The second statistic is the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. This statistic compares the magnitudes of the obtained correlation coefficients to the magnitude of the partial correlation coefficients. If the sum of all the

squared partial correlation coefficients between all pairs of items is small when compared to the sum of the squared correlation coefficients, the KMO measure is close to unity. Therefore a small KMO measure means that conducting a factor analysis is not a good idea because correlations between pairs of items cannot be explained by the other items (Norusis, 1985). The obtained measure was 0.857, and measures of this magnitude are, according to Kaiser (1974), meritorious, therefore the factor analysis can proceed. Measures of sampling adequacy are also computed for each single item in a similar way, and these are printed on the diagonals of the anti-image correlation matrix (i.e. the negatives of the partial correlations). These ranged from 0.723 to 0.903, therefore there was no need to eliminate any items from the factor analysis.

The first principal axis factoring yielded ten factors with eigenvalues greater than one. Principal axis factoring uses estimates of the communalities in the diagonals and the initial statistics (See Table 6.7) show the communalities for the items and the characteristic roots (eigenvalues) for the factors. The communalities are the sum of the shared variance of each item with the factors.

In principal components analysis the communalities for each item are always unity, and this assumes that the total variance on each item is accounted for by the common factors. In other words there is no unique variance due to the item itself. Table 6.7 shows that the communalities of a number of items are low, which means that there is a lot of variance that is unique to the individual items. The eigenvalues are equal to the sum of the squared loadings on the items used on each of the factors, therefore each eigenvalue represents how much variance is actually accounted for by each factor.

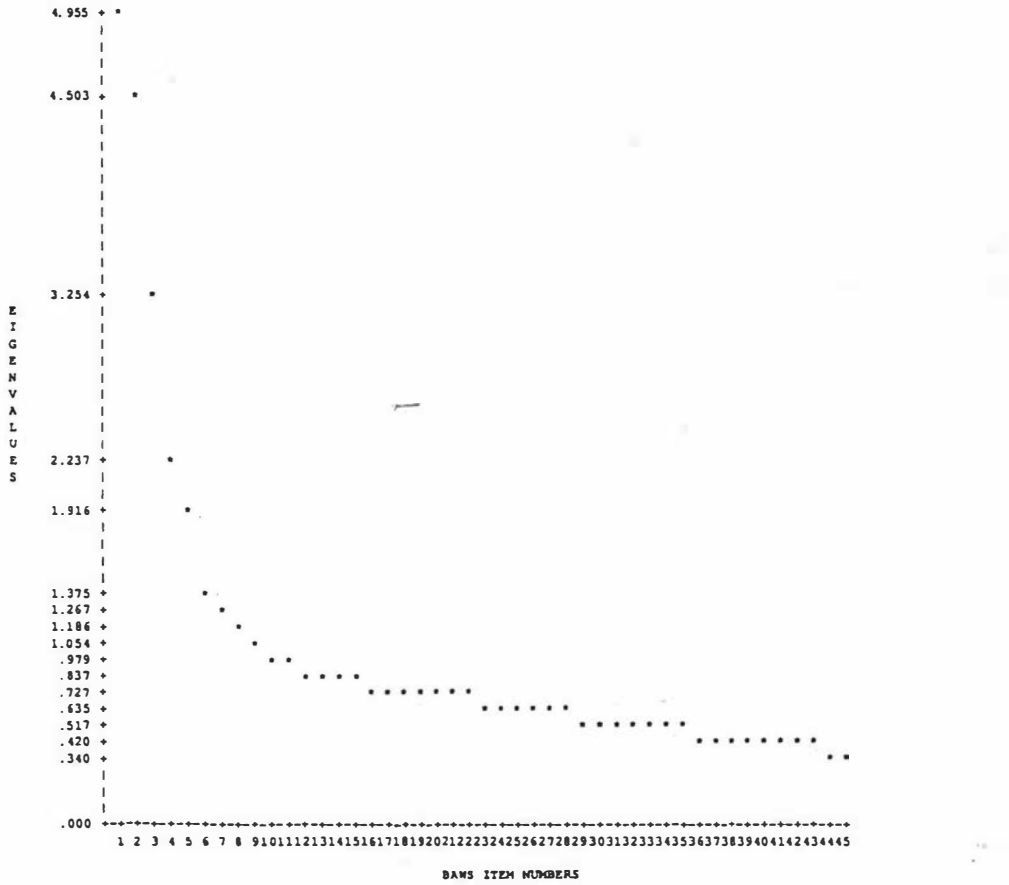
Since the aim of factor analysis is to summarise the items of a scale into a set of meaningful factors, the aim of extraction is to remove the non-trivial factors. One method of doing this is by extracting those factors that account for eigenvalues greater than or equal to unity. Gorsuch (1983) suggests that this criterion gives a closer fit to the number of factors usually extracted, and it is the one method that is in general use. However Guttman (1954) proved that this criterion was a poor estimate of the actual number of factors, because it was a lower bound for the number of factors. Yet Gorsuch (1983) reports that many investigators have assumed it to be the number of factors for a correlation matrix, while citing several studies that cast doubt to its accuracy. He concludes that this criterion is only approximately correct, and will often underestimate or overestimate the number of factors. Tucker, Koopman, and Lisson (1969) also conclude that the eigenvalue criterion is not always the best solution.

TABLE 6.7: PRINCIPAL AXIS FACTORING OF BELIEFS ABOUT WORK SCALE: INITIAL STATISTICS

Item	Communality	Factor	Eigenvalue	Pct Of Var	Cum Pct
BAWS1	.15491	1	4.95495	11.0	11.0
BAWS2	.18427	2	4.50337	10.0	21.0
BAWS3	.17397	3	3.25428	7.2	28.3
BAWS4	.19577	4	2.23705	5.0	33.2
BAWS5	.29245	5	1.91624	4.3	37.5
BAWS6	.13674	6	1.37522	3.1	40.5
BAWS7	.23558	7	1.26736	2.8	43.4
BAWS8	.30581	8	1.18609	2.6	46.0
BAWS9	.31565	9	1.05399	2.3	48.3
BAWS10	.26690	10	1.02028	2.3	50.6
BAWS11	.17279	11	.97897	2.2	52.8
BAWS12	.30617	12	.92785	2.1	54.8
BAWS13	.34721	13	.91333	2.0	56.9
BAWS14	.24579	14	.85345	1.9	58.8
BAWS15	.40314	15	.83707	1.9	60.6
BAWS16	.17853	16	.81457	1.8	62.4
BAWS17	.37183	17	.81112	1.8	64.2
BAWS18	.18659	18	.79082	1.8	66.0
BAWS19	.24410	19	.76869	1.7	67.7
BAWS20	.39561	20	.75364	1.7	69.4
BAWS21	.22901	21	.72995	1.6	71.0
BAWS22	.23005	22	.72684	1.6	72.6
BAWS23	.32758	23	.69314	1.5	74.2
BAWS24	.30066	24	.68577	1.5	75.7
BAWS25	.30648	25	.67952	1.5	77.2
BAWS26	.36511	26	.66151	1.5	78.7
BAWS27	.41303	27	.64486	1.4	80.1
BAWS28	.26943	28	.63451	1.4	81.5
BAWS29	.31134	29	.61611	1.4	82.9
BAWS30	.19435	30	.58129	1.3	84.2
BAWS31	.35483	31	.57424	1.3	85.4
BAWS32	.43455	32	.56772	1.3	86.7
BAWS33	.47584	33	.55220	1.2	87.9
BAWS34	.46196	34	.53523	1.2	89.1
BAWS35	.43575	35	.51686	1.1	90.3
BAWS36	.32688	36	.50084	1.1	91.4
BAWS37	.31425	37	.49037	1.1	92.5
BAWS38	.37570	38	.47237	1.0	93.5
BAWS39	.17864	39	.45723	1.0	94.5
BAWS40	.43269	40	.44207	1.0	95.5
BAWS41	.21664	41	.43887	1.0	96.5
BAWS42	.17412	42	.42718	.9	97.4
BAWS43	.43881	43	.41961	.9	98.4
BAWS44	.34780	44	.39376	.9	99.2
BAWS45	.34116	45	.33960	.8	100.0

A simple test of the number of non-trivial factors is the scree test (Cattel 1966). In this test the eigenvalues are simply plotted on a graph as in Figure 6.1, and this is equated to a cliff and the rubble at its bottom (Gorsuch 1983).

FIGURE 6.1: SCREE DIAGRAM OF EIGENVALUES FOR BAWS PRINCIPAL AXIS FACTORING



The first few roots show the cliff, and the rest show the rubble or trivial factors. The predominant factors (high eigenvalues) account for most of the variance, and in the principal axis factoring solution, the factors are extracted according to size. To apply the scree test, a ruler is laid on the bottom of the graph, and where the roots deviate significantly from a straight line represents the break point between the rubble and the meaningful factors. Experimental evidence indicates that the scree test is most appropriate, because the scree begins at the kth factor, where k is the true number of factors (Norusis 1985). Applying this test to the graph in Figure 6.1 indicates that a five factor solution is appropriate.

As an additional check the PAF was run again using a split sample as a check for the stability of the number of factors. The splitting of the sample into two random samples was achieved by utilising SPSS^{X}'s random number generator. This is used in selecting random samples by setting a seed or large integer that is less than two thousand million. Starting with the same seed, the system will repeatedly produce the same sequence of numbers and will select the same sample from a given data base (Norusis 1985). Two random samples were therefore produced by generating random

numbers between the values of zero and unity, and drawing the first sample from the case values less than 0.5, and the second sample of case values either equal to or greater than 0.5. The principal axis factoring was carried out independently on each sample. The resulting eigenvalues for the factors for each sample are plotted in Figures 6.2A and 6.2B. Inspection of these two scree plots clearly suggests five non-trivial factors in both cases, and one is immediately struck by the similarity of the distributions in both samples.

There is however evidence of a high level of unique variance (note the low communalities for each item listed in Table 6.7). Whether or not these low communalities were also obtained in the overseas factor analytic studies is not known, because no study reported the item communalities. However it is suspected that this was the case, because in two studies (Buchholz 1978, and Dickson and Buchholz 1979) the total variance attributed to the five factors in each case was only 40.8 percent and 36.2 percent respectively. This suggests a high level of unique variance as well. While there is therefore clear evidence of five major factors, it is not as clear cut as the research literature would imply.

FIGURE 6.2A: SCREE PLOT OF EIGENVALUES FOR SAMPLE 1

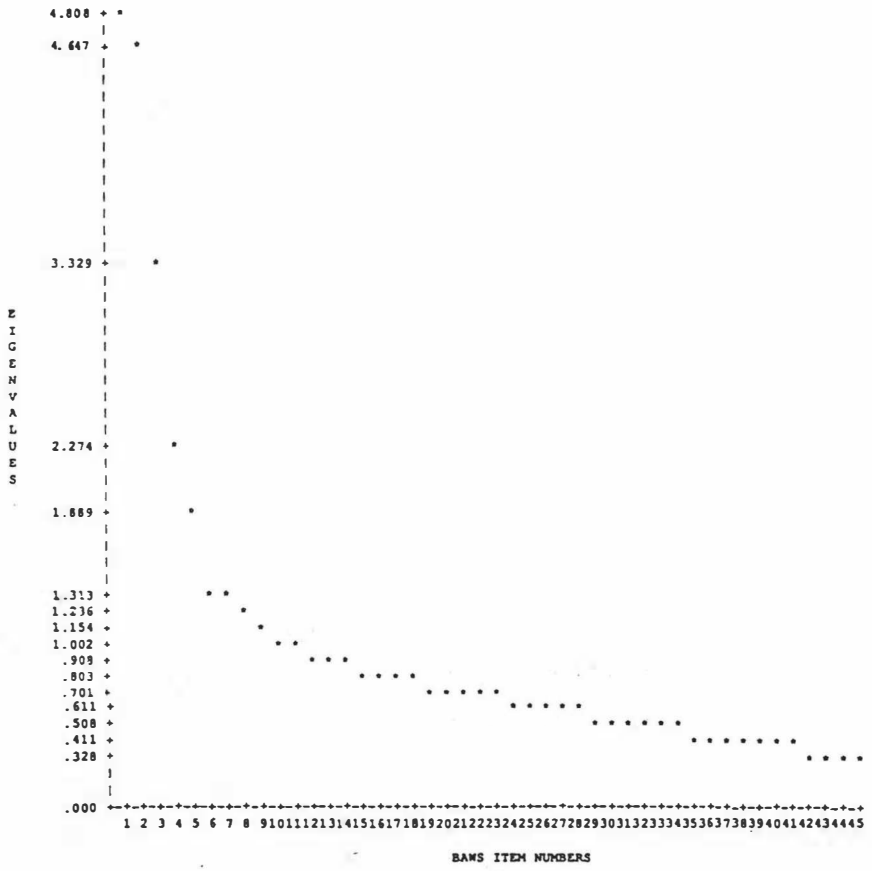


FIGURE 6.2B: SCREE PLOT OF EIGENVALUES FOR SAMPLE 2

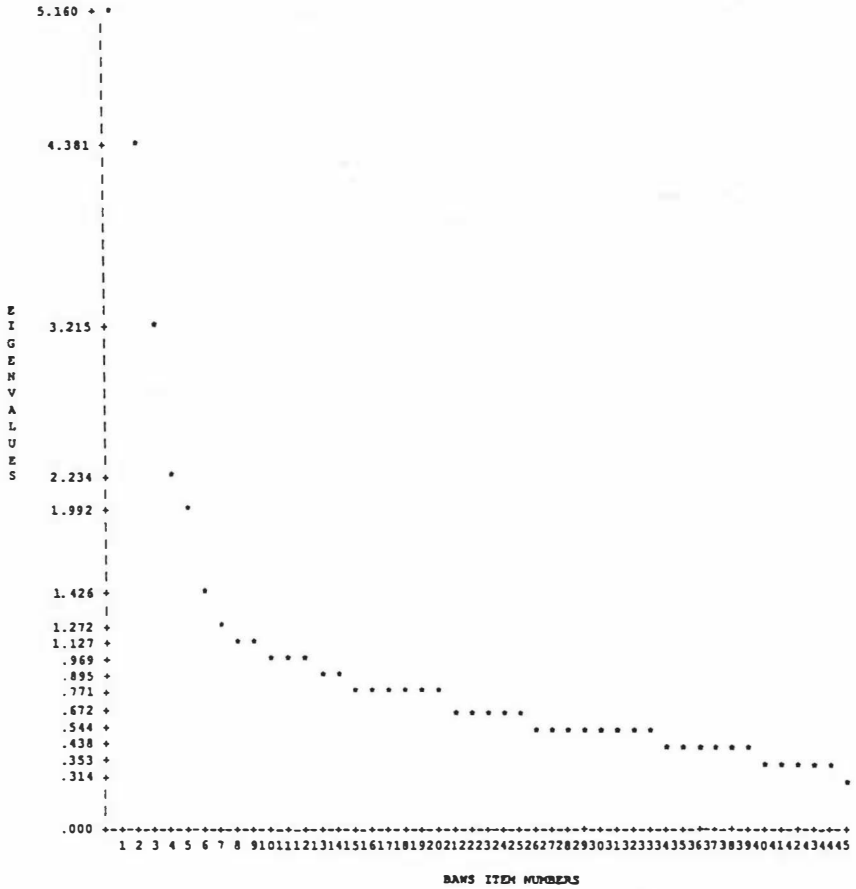


Table 6.8 shows the final statistics based on the ten factor solution. It is called the final statistics because it shows the communalities and the factor statistics after the ten factors have been extracted (Norusis 1985). The communalities for each item have changed because they show the amount of variance explained by the factors which have also changed. For instance 20.22 percent of the variance of Item 1 (BAWS 1) is explained by the 10 common factors. The total amount of variance in the BAWS explained by the 10 factors is 37 percent, therefore approximately two thirds of the variance in the BAWS is attributed to trivial (or unique) factors.

The rotated factor matrix for the ten factors is contained in Table 6.9. The purpose of rotation is to achieve a simple and interpretable structure by achieving non-zero item loadings for only a few of the factors, preferably one (Norusis 1985). This maximises the differentiation between each of the factors. Rotation redistributes the explained variance for each of the individual factors, therefore the eigenvalues change. The varimax method of rotation (Kaiser 1958) attempts to minimize the number of items that have high loadings on a factor by maximising the variance of the squared loadings across the factors. This rotation is inappropriate if the theoretical expectation suggests a general factor may occur (Gorsuch 1983). In this case and in the previous studies the theoretical expectation is for the reproduction of the five belief systems derived by Buchholz (1976), therefore the varimax procedure is appropriate.

TABLE 6.8: PRINCIPAL AXIS FACTORING OF BELIEFS ABOUT WORK SCALE: FINAL STATISTICS

Item	Communality	Item	Communality	Item	Communality
BAWS1	.20226	BAWS16	.22550	BAWS31	.46618
BAWS2	.19106	BAWS17	.57065	BAWS32	.51187
BAWS3	.19336	BAWS18	.22099	BAWS33	.68963
BAWS4	.30317	BAWS19	.28248	BAWS34	.55301
BAWS5	.37704	BAWS20	.46775	BAWS35	.52455
BAWS6	.16149	BAWS21	.27916	BAWS36	.36519
BAWS7	.34846	BAWS22	.28320	BAWS37	.35403
BAWS8	.38065	BAWS23	.41615	BAWS38	.42622
BAWS9	.38582	BAWS24	.36312	BAWS39	.23084
BAWS10	.32549	BAWS25	.41425	BAWS40	.53139
BAWS11	.23675	BAWS26	.39367	BAWS41	.24049
BAWS12	.37685	BAWS27	.44747	BAWS42	.20455
BAWS13	.43711	BAWS28	.35875	BAWS43	.60740
BAWS14	.28047	BAWS29	.37546	BAWS44	.41704
BAWS15	.54963	BAWS30	.27593	BAWS45	.42500

Factor	Eigenvalue	Pct Of Var	Cum Pct
1	4.37275	9.7	9.7
2	3.92433	8.7	18.4
3	2.66332	5.9	24.4
4	1.59574	3.5	27.9
5	1.24253	2.8	30.7
6	.86518	1.9	32.6
7	.70143	1.6	34.1
8	.52381	1.2	35.3
9	.41643	.9	36.2
10	.36603	.8	37.0

Table 6.9 shows loadings greater than 0.300 highlighted in bold. Inspection of these loadings indicates that the items with the high loadings tend to cluster on each factor in sub-groups of items from each of the original Buchholz five beliefs system. A summary description of these item clusters is:

a. The seven items that load on Factor 1 (BAWS40, BAWS17, BAWS24, BAWS8, BAWS19, BAWS14, and BAWS37) are all Humanistic items, each emphasising how work can be made meaningful.

TABLE 6.9: ROTATED FACTOR MATRIX OF THE BELIEFS ABOUT WORK SCALE

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10
BAWS40	.67388	-.11477	-.06723	.13103	-.02811	-.04677	.18305	-.01977	-.07413	-.00664
BAWS17	.60615	-.04550	-.01382	.16993	-.02228	-.01897	.09328	.01708	-.01047	.40266
BAWS24	.57409	.00548	-.08054	.05016	.02840	-.02330	.09094	-.04957	.04548	-.10183
BAWS8	.53869	-.10431	-.08087	.12913	-.03438	-.02066	.00626	-.05470	.00801	.22730
BAWS19	.49704	-.02248	-.07980	.01886	.01461	.00696	.13442	.00954	.07327	-.06649
BAWS14	.47406	.09336	.00374	.01078	.15887	-.09690	.07105	.06916	.04915	-.00471
BAWS37	.44317	.03668	.02212	.02223	.12713	-.04602	.33956	-.05155	.01573	-.13716
BAWS35	-.00132	.66756	.08693	.03206	.06647	-.01113	.06699	-.24115	-.00749	.05557
BAWS20	.10914	.63925	.05237	-.07822	.12827	-.06131	-.02343	-.08790	-.03049	-.09443
BAWS43	-.04390	-.58921	.02329	.12151	-.01136	.16674	-.04400	.44762	-.02066	.11108
BAWS12	-.12558	.58804	.02023	-.05446	.03328	.08310	-.02230	.01777	-.02915	.04732
BAWS23	-.05637	.58473	.16800	.02164	.10756	.01094	.00598	.15442	-.07911	-.02305
BAWS21	-.23885	.41663	.13773	.01188	-.00348	.04890	-.00949	.12012	-.11097	.01372
BAWS16	.07388	.40809	.01531	.08539	.11376	.12464	-.01231	.05345	.12038	.00173
BAWS34	-.08874	.12580	.66748	.11466	.20853	.11358	.01190	.08238	-.07646	-.03840
BAWS44	-.04664	.02952	.61340	.09264	.11806	.08367	.02462	.05649	-.06530	-.01221
BAWS45	-.00484	-.07638	-.61148	.04858	-.13629	.08238	-.00590	.10850	.07038	.02734
BAWS29	-.09158	.03927	.57695	.06376	.08448	.11036	-.02898	.06270	.04214	.05230
BAWS28	.05377	-.02377	-.57167	.04452	-.02664	.09898	.01858	.08558	-.09126	-.00147
BAWS26	-.12045	.03226	.34942	.32115	.22685	.24440	-.04517	.10318	-.07710	.15190
BAWS2	-.03090	.11708	.30388	-.00347	.25692	.05649	-.00516	.10784	-.05446	-.01483
BAWS31	-.00006	.00352	.05885	.66371	.05178	.00943	.05141	-.04583	-.02680	-.11816
BAWS9	.08487	-.09233	-.04432	.55321	.06756	.15388	.04362	-.02014	.17714	.01268
BAWS25	.22144	.00055	.00282	.54209	.05979	.01025	.10576	-.03018	-.18475	-.14642
BAWS22	.04165	.05901	.06567	.49741	.00297	-.10984	.04140	.07944	.01803	.07636
BAWS10	.13381	-.06003	-.05596	.44119	.03458	.09076	.10997	-.08850	.26545	.07983
BAWS18	.06025	-.02256	.08652	.41398	.05542	.05808	-.01301	.04408	.12025	.12236
BAWS41	.19759	-.02099	-.01161	.38090	.07438	.02104	.11515	.03903	.00914	-.18695
BAWS3	-.02161	.01107	.04714	.37244	.16466	-.03100	.09035	-.01400	-.06561	.10532
BAWS42	-.05636	-.01314	.06958	.33623	-.04351	.15329	.00946	.17692	-.16239	-.01259
BAWS15	.12768	.14533	.19161	.15220	.66900	.00552	.04565	.00620	.04645	.02122
BAWS13	.11065	.11815	.21654	.06666	.58863	-.01123	.10453	-.04013	-.01306	-.01609
BAWS36	.02810	.12502	.26354	.11991	.50381	.01656	.08421	-.04233	.02303	-.03780
BAWS27	-.00045	.09465	.40060	.23529	.44156	.09642	.01773	-.00701	-.12857	.03875
BAWS7	.03901	.04377	-.01690	-.01883	-.00164	.57723	.03702	.00824	.07261	-.06693
BAWS4	-.06549	-.01356	.04388	.07166	.07089	.48293	.00542	-.06145	-.21017	.07356
BAWS30	-.06366	.01749	.09211	.04286	.06122	.47856	-.00441	.00346	-.16285	.04401
BAWS39	-.07850	.05593	.05315	.00726	-.07995	.44027	-.02386	.07892	.06516	-.08599
BAWS6	-.05018	.01916	.04576	-.02918	.05196	.36776	.01178	.07780	.09110	.05673
BAWS11	.09830	-.09072	-.10990	.15814	-.02511	.31312	.04400	-.00920	.28332	-.02829
BAWS1	.05469	-.10093	-.08060	.18672	-.05944	.30874	.01067	-.02383	.21942	-.00708
BAWS33	.23568	-.00417	-.00299	.18875	.02394	.00167	.76596	.01632	-.03621	.09789
BAWS32	.22466	-.02729	-.02983	.17309	.04252	.03029	.64797	-.01298	.08242	-.01587
BAWS38	.31909	.05188	.02425	.07356	.16289	.05283	.53305	-.01519	-.00902	-.04406
BAWS5	-.02215	-.40590	.02503	.09990	-.04445	.17637	-.01562	.40719	-.00515	-.04514

b. The eight items that load on Factor 2 (BAWS35, BAWS20, BAWS43, BAWS12, BAWS23, BAWS21, BAWS16, and BAWS5) are all Leisure Ethic items emphasising the importance of leisure time, rather than work.

c. The seven items that load on Factor 3 (BAWS34, BAWS44, BAWS45, BAWS29, BAWS28, BAWS26, and BAWS2) are all Marxist Belief System items that emphasise exploitation of workers.

d. The nine items that load on Factor 4, (BAWS31, BAWS9, BAWS25, BAWS22, BAWS10, BAWS18, BAWS41, BAWS3, and BAWS42) are the nine Organisational Belief System items about the importance of groups at work.

e. The four items that load on Factor 5, (BAWS15, BAWS13, BAWS36, and BAWS27) are Marxist Belief System items that emphasise the importance of worker participation.

f. The seven items that load on Factor 6, (BAWS7, BAWS4, BAWS30, BAWS39, BAWS6, BAWS11, and BAWS1) are all Work Ethic items that emphasise the importance of independence and self-reliance at work.

g. The three items that load on Factor 7, (BAWS33, BAWS32, and BAWS38) are the remaining Humanistic Belief System items that emphasise the importance of novelty at work.

These findings are identical to those reported by Dickson (1983), except that the three humanistic items emphasising the importance of novelty of work that loaded on a seventh factor, were part of the humanistic factor reported by Dickson. Therefore Dickson did not distinguish between the novelty and other humanistic items.

TABLE 6.10: PRINCIPAL AXIS FACTORING OF BELIEFS ABOUT WORK SCALE
FINAL STATISTICS OF THE FIVE FACTOR SOLUTION

Item	Communality	Item	Communality	Item	Communality
BAWS1	.15929	BAWS16	.18609	BAWS31	.43055
BAWS2	.18092	BAWS17	.31250	BAWS32	.29505
BAWS3	.16978	BAWS18	.19076	BAWS33	.33386
BAWS4	.19936	BAWS19	.25853	BAWS34	.52666
BAWS5	.28527	BAWS20	.44987	BAWS35	.49952
BAWS6	.15554	BAWS21	.22460	BAWS36	.28556
BAWS7	.34274	BAWS22	.26315	BAWS37	.33800
BAWS8	.24927	BAWS23	.33261	BAWS38	.34157
BAWS9	.35969	BAWS24	.30478	BAWS39	.21466
BAWS10	.25181	BAWS25	.32002	BAWS40	.47259
BAWS11	.16875	BAWS26	.37171	BAWS41	.19575
BAWS12	.35429	BAWS27	.41662	BAWS42	.14461
BAWS13	.30348	BAWS28	.24303	BAWS43	.49409
BAWS14	.22672	BAWS29	.31736	BAWS44	.37235
BAWS15	.33723	BAWS30	.22413	BAWS45	.36460

Factor	Eigenvalue	Pct of Var	Cum Pct
1	4.28666	9.5	9.5
2	3.83663	8.5	18.1
3	2.60429	5.8	23.8
4	1.54367	3.4	27.3
5	1.19808	2.7	29.9

The results reported in the literature have been reasonably consistent and have in most cases pointed to a five factor solution. Yet the studies have not reported basic results to enable the conducting of a confirmatory factor analysis. Only two studies (Buchholz 1977, Buchholz 1978a) have reported factor loadings, and in both cases five factor solutions were reported.

A five factor solution was then forced on the New Zealand data. Table 6.10 shows the obtained communalities and eigenvalues. When the five factor solution is forced, the five factors account for only 30 percent of the total variance. The factor loadings are contained in Table 6.11, and an inspection of the items and their loadings shows that the original five factors are reproduced. All ten Humanistic items in the BAWS load on Factor 1 which represents the Humanistic Belief System. The 11 Marxist-related items load on Factor 2, therefore Factor 2 represents the Marxist-related Belief system. The eight Leisure ethic items load on Factor 3, which represents the Leisure Ethic dimension of the scale. The nine Organisational items load on Factor 4, which represents the Organisational Belief System. The seven Work Ethic items load on Factor 5, which represents the Work Ethic dimension.

TABLE 6.11: ROTATED FACTOR MATRIX OF BAWS USING THE FIVE FACTOR SOLUTION

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
BAWS40	.66050	-.08233	-.11652	.10308	-.07313
BAWS37	.57005	.07850	.06991	.01098	-.04320
BAWS38	.55445	.11433	.08669	.08313	.08165
BAWS24	.54300	-.08127	.01578	.03047	-.04633
BAWS33	.53811	.04282	.01639	.19893	.05121
BAWS17	.52848	-.03100	-.08221	.15540	-.03665
BAWS32	.50505	.00791	.00634	.18520	.07463
BAWS19	.50119	-.08231	-.02297	.00565	.00196
BAWS8	.45804	-.10660	-.11336	.11131	-.05350
BAWS14	.45471	.06802	.08012	.00753	-.09414
BAWS34	-.09591	.70069	.07539	.09406	.10938
BAWS44	-.05956	.59847	-.01787	.06874	.07479
BAWS45	.01561	-.58458	-.06805	.07456	.11151
BAWS27	.04907	.58319	.10916	.23732	.07658
BAWS29	-.12212	.53696	-.01553	.04737	.10788
BAWS28	.08352	-.46978	-.00493	.06290	.10668
BAWS36	.13256	.46788	.17215	.13854	.01560
BAWS15	.21974	.46764	.19300	.18139	.00987
BAWS13	.22215	.46274	.17620	.09354	-.01419
BAWS26	-.11811	.44234	-.00576	.32250	.24095
BAWS2	-.02162	.40905	.09480	-.00158	.06434
BAWS35	.02926	.11287	.69617	.02893	-.02076
BAWS43	-.06741	.03481	-.65680	.13173	.19897
BAWS20	.07672	.11487	.64793	-.08290	-.06403
BAWS12	-.13967	.06039	.56387	-.04667	.10497
BAWS23	-.07469	.23757	.51782	.02218	.04432
BAWS5	-.04675	.02133	-.47735	.10299	.21013
BAWS16	.06243	.07052	.38405	.09359	.14479
BAWS21	-.24565	.16073	.36356	.01312	.07794
BAWS31	.03956	.08365	.01835	.64934	.00313
BAWS9	.13026	-.02325	-.08064	.55772	.15692
BAWS25	.24842	.05387	.01459	.50511	-.00767
BAWS22	.05188	.06962	.02676	.49620	-.09316
BAWS10	.20730	-.06122	-.03899	.44075	.09649
BAWS18	.05847	.09466	-.04644	.41483	.06439
BAWS3	.05525	.13890	.02659	.38195	-.02894
BAWS41	.24044	.02785	-.01358	.36912	.02700
BAWS42	-.06941	.07982	-.06392	.32069	.16278
BAWS7	.05534	-.01727	.04091	-.02348	.58065
BAWS39	-.10108	.01147	.02378	.00048	.45138
BAWS30	-.06067	.13750	.01136	.03795	.44718
BAWS4	-.04779	.10191	-.00025	.06774	.42674
BAWS6	-.03119	.06822	-.00100	-.02153	.38658
BAWS11	.12861	-.13749	-.08435	.16437	.31492
BAWS1	.06640	-.12446	-.09846	.18799	.30718

To check on the stability of these results, a split sample check was also run using the five factor solution. The two random samples were generated in the same way as before using the SPSS^{X} random number generator. The results of the communalities as eigenvalues are contained in Tables 6.12A and 6.12B.

TABLE 6.12A: PRINCIPAL AXIS FACTORING OF BELIEFS ABOUT WORK SCALE FINAL STATISTICS OF THEF IVE FACTOR SOLUTION USING A SPLIT SAMPLE: SAMPLE 1

Item	Communality	Item	Communality	Item	Communality
BAWS1	.17111	BAWS16	.17909	BAWS31	.41842
BAWS2	.19005	BAWS17	.33960	BAWS32	.30413
BAWS3	.14369	BAWS18	.18854	BAWS33	.35360
BAWS4	.16945	BAWS19	.27476	BAWS34	.53872
BAWS5	.23093	BAWS20	.50255	BAWS35	.46270
BAWS6	.14090	BAWS21	.22312	BAWS36	.29113
BAWS7	.34762	BAWS22	.29064	BAWS37	.34939
BAWS8	.29339	BAWS23	.34155	BAWS38	.35800
BAWS9	.37132	BAWS24	.28894	BAWS39	.20410
BAWS10	.29417	BAWS25	.31297	BAWS40	.50083
BAWS11	.14485	BAWS26	.35147	BAWS41	.19164
BAWS12	.35571	BAWS27	.41016	BAWS42	.12355
BAWS13	.31011	BAWS28	.24910	BAWS43	.49557
BAWS14	.25438	BAWS29	.29118	BAWS44	.38328
BAWS15	.33685	BAWS30	.23232	BAWS45	.37137

Factor	Eigenvalue	Pct of Var	Cum Pct
1	4.13225	9.2	9.2
2	4.00029	8.9	18.1
3	2.68196	6.0	24.0
4	1.58131	3.5	27.5
5	1.18114	2.6	30.2

TABLE 6.12B: PRINCIPAL AXIS FACTORING OF BELIEFS ABOUT WORK SCALE FINAL STATISTICS OF THE FIVE FACTOR SOLUTION USING A SPLIT SAMPLE: SAMPLE 2

Item	Communality	Item	Communality	Item	Communality
BAWS1	.14632	BAWS16	.20127	BAWS31	.43850
BAWS2	.17942	BAWS17	.29096	BAWS32	.30233
BAWS3	.20033	BAWS18	.19887	BAWS33	.33097
BAWS4	.23412	BAWS19	.24657	BAWS34	.51336
BAWS5	.34357	BAWS20	.41198	BAWS35	.53185
BAWS6	.18213	BAWS21	.23418	BAWS36	.28354
BAWS7	.31902	BAWS22	.23848	BAWS37	.32828
BAWS8	.21296	BAWS23	.33012	BAWS38	.34799
BAWS9	.34751	BAWS24	.32244	BAWS39	.22654
BAWS10	.22094	BAWS25	.33842	BAWS40	.44439
BAWS11	.20211	BAWS26	.38945	BAWS41	.20307
BAWS12	.35212	BAWS27	.41858	BAWS42	.17462
BAWS13	.31445	BAWS28	.24052	BAWS43	.50002
BAWS14	.20259	BAWS29	.35166	BAWS44	.36641
BAWS15	.34155	BAWS30	.23273	BAWS45	.35183

Factor	Eigenvalue	Pct of Var	Cum Pct
1	4.49485	10.0	10.0
2	3.71063	8.2	18.2
3	2.56965	5.7	23.9
4	1.54201	3.4	27.4
5	1.27195	2.8	30.2

Both rotated factor matrices (Tables 6.13A and 6.13B) show very similar results with only slight variations in the order of the size of the obtained factor loadings. In both split samples the order of the factors is changed compared to the order in the full sample. In the split sample (in both cases) Factor 1 is the Marxist-related Belief System, Factor 2 is the Humanistic Belief system, Factor 3 is the Leisure Ethic system, Factor 4 is the organisational belief system, and Factor 5 is the Work Ethic dimension.

TABLE 6.13A: ROTATED FACTOR MATRIX OF BAWS USING THE FIVE FACTOR SOLUTION ON A SPLIT SAMPLE: SAMPLE 1

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
BAWS34	**.71787**	-.09409	.06274	.06209	.08210
BAWS44	**.60980**	-.05807	-.04483	.02100	.07489
BAWS45	**-.58689**	.00477	-.03616	.09730	.12699
BAWS27	**.58663**	.02773	.09413	.22802	.06634
BAWS29	**.51306**	-.13559	.00232	.05197	.08282
BAWS13	**.49128**	.15552	.19001	.09195	.00283
BAWS36	**.48390**	.13912	.14846	.12029	.03337
BAWS15	**.48140**	.19531	.18053	.18497	.01244
BAWS28	**-.46742**	.09279	.02174	.06914	.12943
BAWS26	**.42266**	-.13830	-.04169	.31637	.22776
BAWS2	**.40795**	.00240	.09014	-.03200	.12032
BAWS40	-.08426	**.67496**	-.12607	.12179	-.08623
BAWS37	.08372	**.57687**	.09056	-.00644	-.03688
BAWS33	.03825	**.56568**	.03306	.15368	.08617
BAWS38	.07375	**.56259**	.15498	.05833	.09292
BAWS17	-.02249	**.53762**	-.13379	.16937	-.05899
BAWS32	-.02539	**.51906**	.02864	.14696	.10792
BAWS24	-.06469	**.51892**	-.00008	.07715	-.09759
BAWS19	-.07941	**.51127**	-.02316	.03690	-.07184
BAWS8	-.10505	**.47774**	-.15243	.13281	-.11507
BAWS14	.07024	**.46875**	.08645	.00597	-.14906
BAWS20	.13773	.07274	**.67211**	-.13237	-.09500
BAWS35	.12715	.04068	**.66522**	.01593	-.04588
BAWS43	.08671	-.06437	**-.63507**	.13910	.24748
BAWS12	.05116	-.14173	**.55938**	-.09523	.10501
BAWS23	.24419	-.06053	**.52011**	.03361	.08135
BAWS5	.01775	-.04681	**-.42595**	.12884	.17432
BAWS16	.01859	.06120	**.37820**	.13159	.12100
BAWS21	.20114	-.22297	**.34073**	-.03009	.12626
BAWS31	.08503	.01368	.00336	.64099	-.01082
BAWS9	-.03988	.13349	-.07125	**.57510**	.12687
BAWS22	.07036	.04758	.03193	**.51397**	-.13505
BAWS25	.11057	.27097	.00103	**.47637**	.01976
BAWS10	-.11399	.22874	-.02910	**.47418**	.05625
BAWS18	.04261	.03739	-.04845	**.42627**	.03566
BAWS41	.03141	.25871	-.01197	**.35080**	.02282
BAWS3	.12362	.11045	-.01126	**.34056**	-.00999
BAWS42	.10469	-.04205	-.10564	.27045	.16284
BAWS7	-.04568	.02505	.01840	-.00321	**.58699**
BAWS39	-.00797	-.09334	.03233	.01519	**.44051**
BAWS30	.18255	-.09593	-.01438	-.01768	**.43505**
BAWS4	.08980	-.04548	-.00679	.04178	**.39690**
BAWS6	.06356	-.02851	-.00263	-.00234	**.36883**
BAWS1	-.16266	.06591	-.12010	.21864	.27943
BAWS11	-.16962	.07374	-.06565	.20787	.25123

TABLE 6.13B: ROTATED FACTOR MATRIX OF BAWS USING THE FIVE FACTOR SOLUTION ON A SPLIT SAMPLE: SAMPLE 2

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
BAWS34	**.68196**	-.09660	.08138	.11948	.13440
BAWS44	**.58806**	-.05654	.00121	.10473	.08019
BAWS27	**.57445**	.06702	.12011	.25181	.07917
BAWS45	**-.57439**	.02394	-.10263	.06188	.08349
BAWS29	**.56694**	-.11017	-.03924	.03855	.12280
BAWS28	**-.47308**	.07097	-.03187	.07009	.07583
BAWS26	**.46298**	-.10048	.01690	.32453	.24371
BAWS15	**.45725**	.24554	.20292	.17599	.00569
BAWS36	**.45320**	.12516	.19080	.16107	-.01163
BAWS13	**.44008**	.29433	.15794	.09108	-.03016
BAWS2	**.40978**	-.03943	.09555	.01950	.02086
BAWS40	-.08664	**.64347**	-.10629	.08727	-.06254
BAWS37	.06875	**.56346**	.04260	.03007	-.05780
BAWS24	-.10019	**.55815**	.02618	-.00540	-.01259
BAWS38	.15205	**.55573**	.02110	.10451	.06833
BAWS33	.04836	**.52122**	-.00433	.23798	.01759
BAWS17	-.04634	**.51720**	-.02991	.14216	-.01441
BAWS32	.04028	**.49986**	-.01993	.22071	.04166
BAWS19	-.08557	**.48429**	-.02529	-.01936	.06078
BAWS14	.06183	**.43676**	.07603	.01058	-.04606
BAWS8	-.11614	**.43218**	-.06958	.08816	.00899
BAWS35	.10599	.02173	**.72041**	.03348	.00602
BAWS43	-.01679	-.06541	**-.67305**	.12856	.16105
BAWS20	.08713	.07964	**.62923**	-.03324	-.03168
BAWS12	.06476	-.13599	**.56356**	-.00061	.10879
BAWS5	.02454	-.04658	**-.52629**	.07945	.23980
BAWS23	.23339	-.08272	**.51809**	.00898	.01761
BAWS16	.12251	.06315	**.39133**	.05982	.15984
BAWS21	.12332	-.26287	**.38137**	.05362	.03938
BAWS31	.09004	.06492	.03081	**.65193**	.01447
BAWS9	-.00147	.12377	-.08906	**.54025**	.17996
BAWS25	-.00358	.22832	.02290	**.53364**	-.03142
BAWS22	.07138	.05218	.03135	**.47631**	-.05297
BAWS10	-.00216	.18125	-.05128	**.41461**	.11642
BAWS3	.16024	.00795	.06025	**.41143**	-.04114
BAWS18	.14676	.07500	-.04182	**.40342**	.08489
BAWS41	.02894	.22325	-.01597	**.38903**	.02806
BAWS42	.05859	.08901	-.02963	**.36293**	.17511
BAWS7	.00014	.08302	.06226	-.02451	**.55467**
BAWS30	.08422	-.02396	.02590	.08999	**.46508**
BAWS39	.02817	-.10580	.01719	-.01004	**.46277**
BAWS4	.10740	-.04741	-.00202	.08853	**.46097**
BAWS6	.07662	-.02864	.00015	-.04109	**.41684**
BAWS11	-.11328	.17241	-.10478	.13671	**.36039**
BAWS1	-.08151	.06040	-.07606	.16817	**.31932**

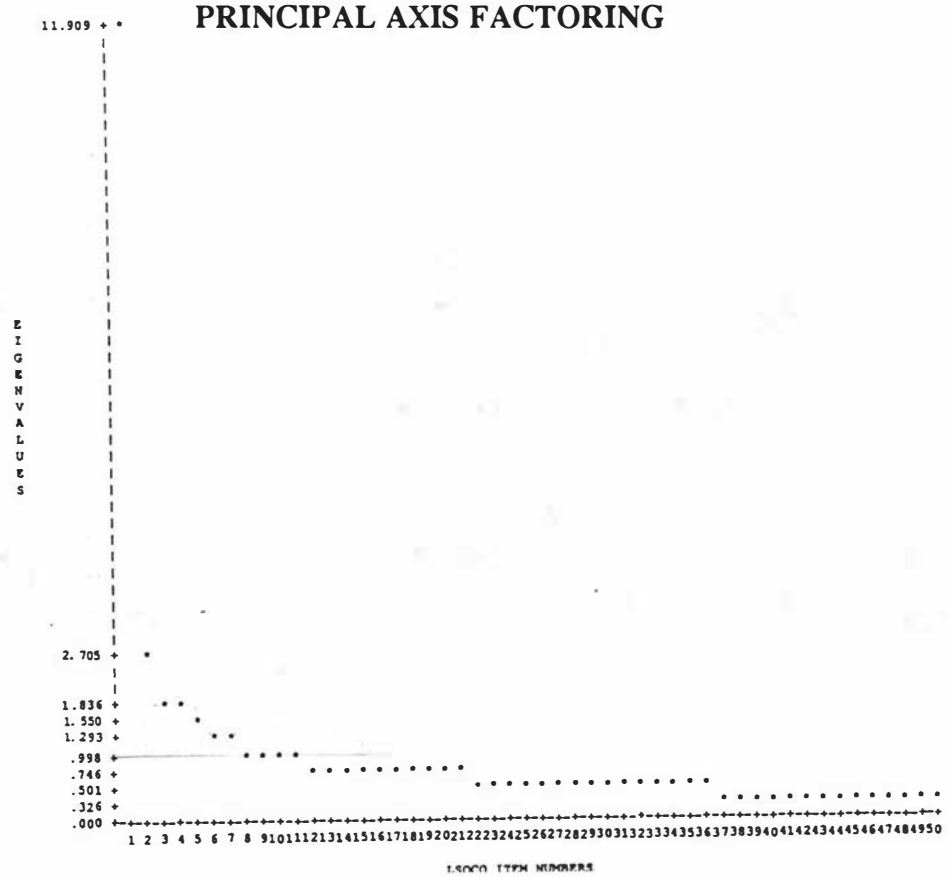
The loadings from the rotated varimax five factor solution in Table 6.11 are listed in Appendix 6, with the factor loadings from the two other studies reporting factor loadings (Buchholz 1977, Buchholz 1978a). These studies also used five factor solutions.

There are two important aspects to note from Appendix 6. The first is the similarity in loadings that were obtained in this study with two overseas studies, when the five factor solution is forced. The second is that the same items load on each factor across the three studies. While it is accepted that a proper confirmatory factor analysis could not be carried out, there is sufficient evidence from these results to show that the BAWS can be used in the New Zealand context for making comparisons with both the American and Scottish results. It also has sufficient internal stability to give a reasonable measure on each of the five belief systems.

6.2.2 The Organisational Climate Scale

Previous studies in which the Litwin and Stringer Organisational Climate Scale (LSOCQ) has been factor analyzed (Meyer 1968, Downey et al 1974, Sims and Lafollette 1975, Muchinsky 1976, and Biggs, Miles, and Rogers 1977) have reported six factors. However each study has reported different items loading on each of the factors, and therefore the factors are quite different across the studies. As concluded in Chapter 3, the LSOCQ factor structure almost totally fails to be replicated across studies (Rogers, Miles, and Biggs 1980). The main problem is that the factor structure for each data set from these studies seems to be unique for each organisation. If this is indeed the case it means that the way it is used in this study (across 40 different organisations) implies that any obtained factor structure can only reflect the sample. In this sense then the LSOCQ could only be used as a very crude measure of climate.

FIGURE 6.3: SCREE PLOT OF EIGENVALUES FOR LSOCQ PRINCIPAL AXIS FACTORING



The LSOCQ was factor analysed using principal axis factoring with iteration and a varimax orthogonal rotation of the factors. The rationale for missing values used with the BAWS was also applied to the analysis of the LSOCQ. The listwise deletion therefore left the number of usable cases as 1,945. Inspection of the 50 item correlation matrix indicated that there were 11 items on the scale that did not have a reasonable inter-correlation with at least one other item. These were items 9, 10, 11, 12, 13, 21, 26, 39, 40, 44, and 46. The obtained Kaiser-Meyer-Olkin measure of sampling adequacy was .945 which according to Kaiser (1974) is "marvellous". The Bartlett test of sphericity was 31124.095 which is also evidence that the population correlation matrix is not an identity matrix.

The principal axis factoring yielded 10 factors with eigenvalues greater than one. However an inspection of the scree plot in Figure 6.3 indicates that most of these factors are trivial. Applying the scree test indicates that there are two non-trivial factors before the scree starts, consisting of a large factor accounting for some 24 percent of the total variance, and a small factor accounting for a further 5.4 percent of the variance. The other eight factors account jointly for 22.6 percent of the variance. There is evidence of a lot of uniqueness in this scale. The communalities shown in Table 6.14 for many of the individual items are low, and the ten factors with eigenvalues greater than 1 account for only half the total variance in the scale.

Two random samples were generated using the random number generator in the same way that was used to generate two random samples with the Beliefs About Work Scale. The factor analysis was repeated on each sample and the obtained eigenvalue plots produce very similar screes (See Figures 6.4A and 6.4B) to the original.

Unlike previous studies, this study could not produce a six factor solution. The obtained scree plots do not indicate the presence of six factors, nor indeed the original dimensions suggested by Litwin and Stringer (1968). Clearly the a priori structure of the Litwin and Stringer Scale could not be used, because of the failure to replicate the factors that have been reported in previous studies. The evidence in this study suggests the operation of a large factor that accounts for some 24 percent of the variance. If this general factor is a measure of some overall feeling of climate then it may be a useful overall measure of perceptions towards management. The other alternative would be to simply score the 50 items on the Litwin and Stringer Scale to produce an overall score that reflects the degree of positive as opposed to negative feelings towards the organisation.

TABLE 6.14: PRINCIPAL AXIS FACTORING OF LSOCQ: INITIAL STATISTICS

Item	Communality	Factor	Eigenvalue	Pct of Var	Cum Pct
LSOCQ1	.37633	1	11.90944	23.8	23.8
LSOCQ2	.32088	2	2.70486	5.4	29.2
LSOCQ3	.40196	3	1.91219	3.8	33.1
LSOCQ4	.31190	4	1.83554	3.7	36.7
LSOCQ5	.28425	5	1.55045	3.1	39.8
LSOCQ6	.31944	6	1.40536	2.8	42.6
LSOCQ7	.31273	7	1.29306	2.6	45.2
LSOCQ8	.27817	8	1.18028	2.4	47.6
LSOCQ9	.14555	9	1.09257	2.2	49.8
LSOCQ10	.15718	10	1.02694	2.1	51.8
LSOCQ11	.15055	11	.99781	2.0	53.8
LSOCQ12	.14436	12	.92600	1.9	55.7
LSOCQ13	.14341	13	.90174	1.8	57.5
LSOCQ14	.47075	14	.87608	1.8	59.2
LSOCQ15	.43004	15	.86312	1.7	61.0
LSOCQ16	.42827	16	.84502	1.7	62.6
LSOCQ17	.44640	17	.82031	1.6	64.3
LSOCQ18	.49123	18	.81417	1.6	65.9
LSOCQ19	.43981	19	.79034	1.6	67.5
LSOCQ20	.43391	20	.76997	1.5	69.0
LSOCQ21	.21681	21	.74634	1.5	70.5
LSOCQ22	.19400	22	.72766	1.5	72.0
LSOCQ23	.25803	23	.71239	1.4	73.4
LSOCQ24	.31192	24	.68157	1.4	74.8
LSOCQ25	.39430	25	.66466	1.3	76.1
LSOCQ26	.25054	26	.64532	1.3	77.4
LSOCQ27	.51853	27	.62241	1.2	78.6
LSOCQ28	.44653	28	.60503	1.2	79.8
LSOCQ29	.37016	29	.59716	1.2	81.0
LSOCQ30	.40187	30	.57520	1.2	82.2
LSOCQ31	.52181	31	.55279	1.1	83.3
LSOCQ32	.29585	32	.54679	1.1	84.4
LSOCQ33	.42281	33	.53425	1.1	85.5
LSOCQ34	.44758	34	.53392	1.1	86.5
LSOCQ35	.49185	35	.51408	1.0	87.5
LSOCQ36	.37608	36	.50084	1.0	88.6
LSOCQ37	.40948	37	.49215	1.0	89.5
LSOCQ38	.25969	38	.47797	1.0	90.5
LSOCQ39	.30254	39	.46856	.9	91.4
LSOCQ40	.23867	40	.45000	.9	92.3
LSOCQ41	.28328	41	.44405	.9	93.2
LSOCQ42	.40500	42	.42593	.9	94.1
LSOCQ43	.36836	43	.41335	.8	94.9
LSOCQ44	.10428	44	.40649	.8	95.7
LSOCQ45	.41526	45	.39140	.8	96.5
LSOCQ46	.17355	46	.38701	.8	97.3
LSOCQ47	.53899	47	.36569	.7	98.0
LSOCQ48	.54101	48	.34252	.7	98.7
LSOCQ49	.51509	49	.33288	.7	99.3
LSOCQ50	.51611	50	.32632	.7	100.0

FIGURE 6.4A: SCREE PLOT OF EIGENVALUES FOR SAMPLE 1

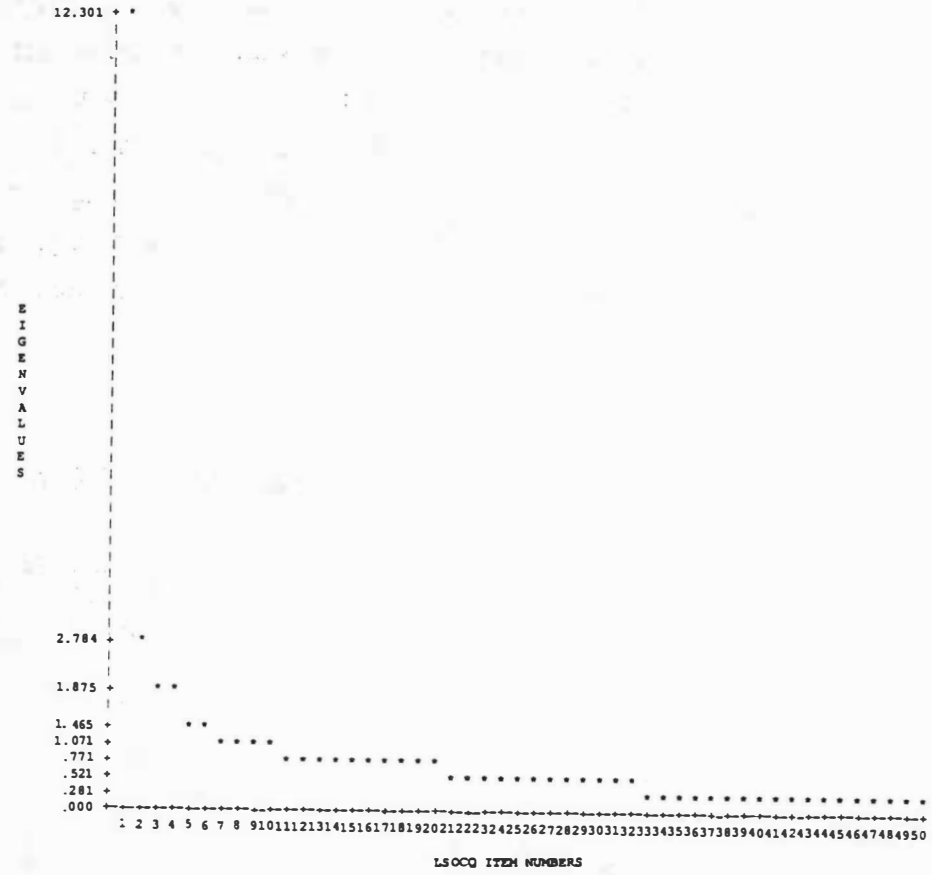
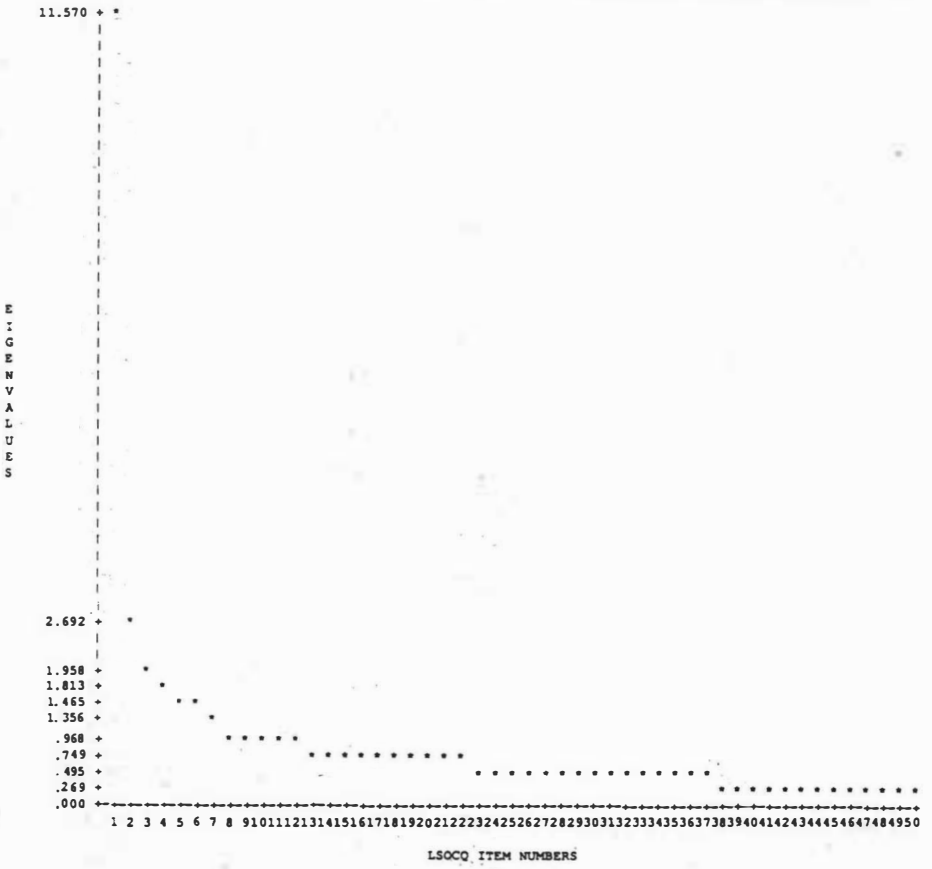


FIGURE 6.4B: SCREE PLOT OF EIGENVALUES FOR SAMPLE 2



The results of the varimax rotation are in Table 6.15, and this solution produced only four factors with eigenvalues greater than one. The items that load on Factor 1 are Items 16 to 20 and Items 31, 33, and 35. The first five items are about rewards and criticism and all constitute the reward dimension in Litwin and Stringer's original nine dimensions. The remaining three are warmth and support items from the respective original dimensions. The varimax rotation however is used when the theory suggests that there are a number of independent factors and the varimax procedure therefore maximises the variance across the factors.

TABLE 6.15: ROTATED FACTOR MATRIX OF THE LSOCQ USING A VARIMAX ROTATION

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
LSOCQ18	.60691	.26003	-.19788	-.06557	-.11031	.14813	.09242	-.11007	-.03965	.01321
LSOCQ17	.55161	.27788	-.18220	-.15800	-.14014	.07820	-.05702	-.03461	-.09522	.04350
LSOCQ20	-.54064	-.03795	.21747	.13751	.18886	-.17468	.07356	.04633	.20474	.03093
LSOCQ16	.52247	.18944	-.26942	-.06428	-.03407	.19298	.08313	-.20207	-.00073	.01908
LSOCQ33	.49068	.28186	-.20380	-.15129	-.14070	.08090	.04633	-.15017	.01437	-.08752
LSOCQ35	.43654	.43452	-.16232	-.19772	-.17446	.08132	-.06291	-.10287	-.02031	.00531
LSOCQ31	.41753	.35096	-.14959	-.37297	-.22766	.12323	-.04081	-.06954	-.06233	.00106
LSOCQ19	-.36355	-.12956	.28556	.18749	.25187	-.17338	.12748	.02365	.26722	.04828
LSOCQ48	.21063	.47114	-.29755	-.20482	-.36471	.10529	.07923	-.14209	-.04147	-.02198
LSOCQ40	.20783	.43903	-.03778	-.00470	-.09252	.01448	-.00887	.10876	-.05834	.09679
LSOCQ36	.13419	.43677	-.20367	-.26252	-.11956	.03929	.02179	-.17867	-.11110	-.05395
LSOCQ45	.26339	.39692	-.11513	-.17982	-.16538	.11060	.00548	-.31712	-.01908	.11883
LSOCQ46	.04607	.38309	-.09610	-.04815	-.02786	.09509	.10478	.00215	.05732	.06503
LSOCQ8	.21009	.36905	-.04251	-.07918	-.05190	.25529	.05444	-.02466	-.13804	.14830
LSOCQ3	.14069	.27428	-.57825	-.12146	-.07419	.11753	.04187	-.10091	.09829	-.07261
LSOCQ2	-.18279	-.00522	.56706	.09264	.07857	-.05611	.08754	.06751	.09824	.04475
LSOCQ1	.16565	.27632	-.54974	-.08475	-.06024	.03343	.06460	-.08720	.01056	.00401
LSOCQ7	-.10926	-.06639	.50781	.16509	.09948	-.01216	.10759	.10538	.13966	.05540
LSOCQ6	-.18422	-.08389	.47076	.07380	.14196	-.07722	.02148	.04977	.21262	.08454
LSOCQ29	-.07120	-.09031	.13850	.65514	.07443	-.08563	.03470	.06438	-.01525	.06984
LSOCQ30	-.09731	-.03909	.14886	.63652	.13607	-.09896	.04620	.16772	.05079	.04834
LSOCQ27	.20926	.43730	-.13797	-.49714	-.14053	-.00508	.00671	-.06529	-.15083	.00649
LSOCQ28	.23294	.40662	-.05114	-.44791	-.07773	-.03508	-.13631	.06731	-.13357	.08844
LSOCQ34	-.32243	-.19260	.24624	.33199	.25182	-.10147	.11245	.16691	.14249	.07429
LSOCQ32	-.27523	-.09566	.11659	.30906	.16876	-.07918	.18614	.16126	.08292	.02339
LSOCQ49	-.25711	-.19519	.18102	.21207	.64342	-.15591	-.00524	.07316	.07499	.03845
LSOCQ50	-.30285	-.17178	.16101	.22535	.52014	-.12741	.10795	.19808	.14056	.08252
LSOCQ47	.28903	.42448	-.19948	-.18696	-.46304	.09749	.07312	-.07994	-.01408	.00844
LSOCQ42	-.15210	-.20559	.19465	.17215	.40533	-.01593	-.07455	.27615	.24122	.02408
LSOCQ25	.25017	.36543	-.13578	-.08433	-.10804	.44053	.04332	-.11457	-.03580	.05552
LSOCQ24	-.10341	-.11154	.21027	.10284	.14676	-.42786	.03316	.20452	.16379	.04998
LSOCQ4	.18653	.30059	-.17292	-.09326	-.02540	.41091	-.01529	.00910	-.10382	-.01432
LSOCQ23	.19006	.17546	-.01248	-.00598	-.06085	.40155	.13784	-.00566	.15283	.11132
LSOCQ22	.05605	.13106	.03309	.02380	.03535	-.39156	.00075	.27263	.08422	-.05862
LSOCQ26	.16572	.10873	.13269	-.02273	-.01786	.37462	.18874	-.01552	.21150	.10682
LSOCQ5	-.18827	-.06403	.27965	.14006	.05820	-.36351	.05776	.00382	.17836	.01032
LSOCQ39	-.04459	.01494	-.00728	.04794	-.01557	.08678	.65839	-.05710	.05126	.06561
LSOCQ38	-.02729	.08038	.08172	.03483	.01315	.00507	.57636	.06531	-.03262	.03419
LSOCQ37	.04504	.37250	-.20203	-.02983	-.22030	.06529	.44299	-.24592	-.11455	-.08205
LSOCQ21	-.12061	-.18230	.10924	.22680	.08341	-.10495	.25700	.11928	.08507	.02760
LSOCQ44	.08544	-.01798	.02842	.04989	.03816	.02356	.19709	-.00061	.09280	.16781
LSOCQ43	-.24527	-.12715	.08939	.14132	.15836	-.10973	.07883	.52881	.13847	.03427
LSOCQ41	-.10454	.03281	.18122	.12695	.06492	-.13021	-.04462	.52850	.02525	.06768
LSOCQ15	-.21512	-.11859	.25433	.12945	.18166	-.11051	.02851	.18976	.49114	.09152
LSOCQ14	-.30575	-.12402	.27449	.13653	.16972	-.08022	.11190	.19038	.46424	.09207
LSOCQ11	-.01775	.14470	-.03901	-.05553	.00887	.00979	-.01336	-.00544	-.03462	.48319
LSOCQ10	-.03710	.05986	.03442	.03522	.01274	.07803	-.02801	.03083	-.00529	.47844
LSOCQ13	.01012	-.10646	.06847	.07529	.03481	-.01751	.07246	.09462	.05412	.42648
LSOCQ12	.02477	.09603	.07224	.02480	.00013	.01001	.14576	-.04155	.08313	.39454
LSOCQ9	.05713	.13268	-.02777	.03922	.02581	-.21953	.18661	.06588	.09334	-.25163

If the expectation is that there is a large factor operating, then the varimax procedure is inappropriate (Gorsuch 1983). The evidence from the scree suggests a general factor and also the use of this scale in this research would be in line with the proposition to obtain a measure of employee perceptions. Therefore factor analysis can be used to reduce the number of items to those that are the best indicators of that general factor.

The unrotated factor matrix (pattern matrix) is contained in Table 6.16. In this matrix 35 items on the LSOCQ have loadings of .400 or greater. The quartimax method of rotation tends to produce a solution which includes one factor with all the major loadings and no other major loadings in the rest of the obtained matrix (Gorsuch 1983). So it maximises the complexity of the first factor rather than minimising it as in the varimax procedure, by minimising the number of factors to explain a variable (Norusis 1985). This is a shortcoming in factor analysis technique if one is trying to identify an underlying structure of a number of different factors. However if the intention is to try to identify and interpret one general factor the quartimax procedure is most appropriate.

A quartimax rotation (which converged in 8 iterations) was therefore undertaken. The rotated factor matrix is reproduced in Table 6.17. The solution produces loadings of greater than .400 on Factor 1 by the same 35 items that were obtained in the unrotated matrix. The quartimax also produces a loading of less than .400 on Item 29 (-.395), which had a loading of -.430 in the unrotated factor matrix. The fifteen items that did not have loadings greater than .400 in both the unrotated factor and the quartimax rotated matrices were Items 9, 10, 11, 12, 13, 21, 22, 23, 26, 38, 39, 40, 41, 44, and 46. Of these all but Items 22, 23, 38, and 41 had no high correlations with any other item in the original correlation matrix. The evidence suggested that therefore the 35 items originally identified in the unrotated factor matrix should be used to measure climate on a unidimensional basis, less Item 29 because it did not meet the .400 criterion after rotation. It is emphasised that the .400 or greater criterion was a decision that was made prior to proceeding with the modified scale. It was therefore arbitrary in the sense that a higher criterion could have been adopted, nonetheless it was felt that it was important to include as many items as possible to measure this general factor.

TABLE 6.16: THE UNROTATED FACTOR MATRIX OF THE LSOCQ

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
LSOCQ48	.69622	.13341	-.00241	.18368	-.02933	.03120	-.06651	-.08783	.07590	-.11660
LSOCQ31	.69244	.04211	.20280	.02783	-.01634	-.05644	.07601	.02821	-.05666	-.00164
LSOCQ47	.67872	.16266	.06142	.15001	-.02616	-.09777	-.08991	-.09014	.00371	-.18582
LSOCQ50	-.65855	.13831	-.00254	.00254	.12973	.20502	.11237	.06328	.02748	.18193
LSOCQ35	.65242	.10592	.16583	.03374	.10557	-.08280	.04475	.05476	.09121	-.00340
LSOCQ49	-.65201	.01393	.00447	-.05977	.12714	.19031	.13912	.15886	.12935	.30020
LSOCQ34	-.64539	.16145	-.05273	-.00548	.04948	.02717	-.01629	-.03320	.03904	.02120
LSOCQ27	.62269	.01604	.27310	.20031	-.12430	.10137	.01721	-.00449	-.03286	.13507
LSOCQ18	.62079	.17966	-.03327	-.07524	.20792	-.17580	.08043	.16453	-.04695	.04024
LSOCQ17	.61728	.05804	.12928	-.06044	.20314	-.13271	.01950	.11110	-.05548	.03696
LSOCQ19	-.60799	.16687	.00756	.09956	-.10814	.06137	.05603	.08161	.12878	-.01967
LSOCQ33	.60451	.08288	-.00637	.04410	.11713	-.13665	.12467	.14442	.01940	-.00946
LSOCQ14	-.58235	.25926	.11304	.06092	-.05517	.07357	.17565	.02617	.03234	-.21675
LSOCQ20	-.57907	.10372	.03032	.17782	-.16232	.18155	-.01542	-.06517	.18163	-.03392
LSOCQ16	.57582	.13903	-.12662	-.12586	.16303	-.06374	.11648	.21061	-.00171	.02747
LSOCQ45	.57483	.16595	.06674	-.01847	-.10530	.00320	-.05802	.12174	.18740	.00146
LSOCQ42	-.55921	.05244	.11496	-.12173	.17427	.08394	.23731	.00940	-.00027	.02709
LSOCQ36	.55177	.04310	.06227	.17526	-.06841	.09558	-.00441	-.02413	.13745	.09191
LSOCQ25	.54509	.25708	-.03889	-.20080	-.00993	.02711	.10305	-.14482	.09342	.02404
LSOCQ15	-.53924	.21305	.16770	.03570	.01289	.04814	.19795	.08234	.05351	-.23775
LSOCQ3	.52728	.01353	-.18710	.13057	.17926	.29625	.11398	.02136	.06963	-.14793
LSOCQ28	.50521	-.00674	.43254	.10435	-.01702	.08132	.00104	-.01824	-.03774	.13023
LSOCQ1	.50095	.03413	-.15877	.14083	.21517	.27381	-.00010	.06171	.04122	-.07682
LSOCQ43	-.49998	.10721	.12769	.11653	.22159	.11232	.06352	-.20478	-.21355	-.05436
LSOCQ30	-.47818	.21109	-.14726	-.04670	.34098	-.16378	-.15853	-.08514	.17104	-.00107
LSOCQ32	-.47251	.18179	-.12880	.07831	.08214	.04235	-.03740	-.08357	.01561	.02515
LSOCQ6	-.46658	.17216	.20408	-.03453	-.17680	-.12102	.07109	.04255	.08063	-.00147
LSOCQ24	-.45872	.02795	.20229	.23297	.11671	-.05850	-.04644	.16422	-.04266	-.01970
LSOCQ4	.45535	.13590	-.02539	-.17872	.06501	.08175	.13368	-.21966	.03800	.08754
LSOCQ37	.44251	.30411	-.30576	.29896	-.13946	.00547	-.09883	-.04728	.05948	.07531
LSOCQ7	-.44008	.25367	.13865	-.05492	-.12489	-.23244	.05262	-.03434	.02872	.04597
LSOCQ2	-.43233	.22709	.20427	.00548	-.22246	-.22388	.01751	-.06017	.07449	.08638
LSOCQ29	-.42955	.16672	-.21248	-.10199	.29192	-.20569	-.23651	-.04713	.17715	-.00263
LSOCQ5	-.42908	.06029	.10727	.22500	-.05954	-.11420	-.07698	.14593	.10832	-.05236
LSOCQ8	.41840	.26066	.08714	-.12215	.02368	.02330	-.03678	-.11191	.04278	.13630
LSOCQ21	-.37193	.17164	-.15071	.08152	.04651	-.05094	-.02998	.03448	-.11542	-.00876
LSOCQ41	-.34117	.10177	.29361	.08524	.25546	-.02544	-.03376	-.24399	-.14779	.00174
LSOCQ40	.33077	.22553	.20805	.07329	.18027	-.03604	-.08190	-.10594	.08668	.05170
LSOCQ39	-.01788	.47715	-.34324	.17700	-.16438	.02800	.00807	.05446	-.20954	.06428
LSOCQ38	-.05104	.42920	-.19360	.22440	-.09626	-.03146	-.01428	-.01522	-.21076	.15562
LSOCQ26	.13651	.39396	-.00908	-.21416	-.10047	-.06440	.22011	-.03013	-.03413	-.07436
LSOCQ23	.26152	.35441	-.04024	-.21821	-.01433	-.00424	.16854	-.08096	-.01419	-.09060
LSOCQ12	-.00363	.34198	.10128	-.10140	-.05151	.09308	-.17365	.14304	-.02259	-.03700
LSOCQ46	.26487	.26672	.06277	.09540	.03793	.11052	.02448	-.08204	.11556	.00884
LSOCQ44	-.03094	.24366	-.03873	-.04345	.01241	.00487	-.01171	.12715	-.08991	-.01650
LSOCQ13	-.16198	.23041	.10992	-.18699	.03890	.09550	-.19970	.13460	-.15305	-.06244
LSOCQ9	-.00838	.06072	-.05542	.36366	.11961	-.10625	.12549	.03561	.02536	.02997
LSOCQ22	-.12294	.01123	.23974	.34118	.25305	-.06691	-.01828	.04738	-.03378	-.00736
LSOCQ11	.08291	.22328	.20128	-.15443	-.00978	.23999	-.27175	.08968	-.01545	-.00247
LSOCQ10	-.02502	.23817	.16906	-.24487	-.00323	.18116	-.24853	.04484	-.02379	-.03523

It was considered that the .400 criterion was not unreasonable. All of the items that load on this factor are statements that express either positive or negative sentiments about the management system in the organisation, and therefore their combined effect would constitute a reasonable overall measure of employee perceptions towards the management that they are working under.

TABLE 6.17: ROTATED FACTOR MATRIX OF THE LSOCQ USING A QUARTIMAX ROTATION

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
LSOCQ31	.69813	-.03255	.02537	.10346	.08338	-.15290	.06936	-.02959	.01998	-.01368
LSOCQ48	.68870	.12118	.00889	.07549	.02027	-.01263	-.07635	.19725	-.01544	-.17109
LSOCQ47	.68016	.10556	.03741	.11615	.06311	.01139	.01804	.10008	.01457	-.26658
LSOCQ35	.66852	-.04676	.04017	.16856	.11119	.01934	.03817	.03053	-.03918	.03237
LSOCQ50	-.65355	.07129	.08880	.08409	.06546	.01951	-.08274	.06026	.05461	.31125
LSOCQ49	-.64264	-.03766	.03981	.04383	.00297	.02515	-.04728	.04061	-.05247	.45556
LSOCQ17	.63858	-.05348	.06285	.14165	.07494	.06215	.01821	-.17459	.01654	.07478
LSOCQ18	.63751	.09337	.03228	.09923	.17444	.14244	-.01504	-.21149	-.06167	.10210
LSOCQ34	-.63706	.09186	.07447	.03416	.06283	.13407	.02286	.06039	.04181	.05562
LSOCQ27	.62458	.02760	.04124	.14917	-.08545	-.30140	.08214	.15033	.04684	.05981
LSOCQ19	-.61078	.10091	.05590	.09472	.08941	-.01968	.05312	.15424	-.13432	.03645
LSOCQ33	.61072	.05040	-.06675	.13186	.13358	.03751	-.02955	-.10573	-.11377	.04395
LSOCQ14	-.59025	.05801	.10490	.16772	.30481	-.08304	.00281	.10973	-.03078	-.08462
LSOCQ20	-.58914	.06864	.04259	.06123	-.00992	-.06878	.01005	.33233	-.05651	-.02500
LSOCQ45	.57686	.03531	.14460	.00345	.06672	-.00704	.06115	.14049	-.21016	.00956
LSOCQ16	.57659	.08272	.02750	-.00545	.18203	.10812	-.11706	-.18349	-.14227	.13990
LSOCQ42	-.55125	-.12777	.02593	.09020	.22344	.00251	-.03868	-.04703	.10951	.20835
LSOCQ36	.54899	.06015	-.02221	.06553	-.05731	-.09862	-.01461	.23275	-.05216	.05248
LSOCQ25	.54525	.07022	.07955	-.17520	.28115	.07450	.01199	.12386	.06040	.06166
LSOCQ15	-.54260	-.03194	.10484	.22159	.31956	-.06935	-.00898	.06009	-.05730	-.06305
LSOCQ28	.52267	-.12839	.12503	.21312	-.05848	-.26477	.13154	.10233	.13306	.09568
LSOCQ3	.49317	.05592	-.06049	.03352	.07682	-.02139	-.46399	.12547	-.04249	.00394
LSOCQ43	-.49155	.03975	.04430	.21265	.07854	-.01499	-.09448	-.00170	.37637	-.01532
LSOCQ1	.47798	.08316	.01725	.07399	-.01893	.02558	-.42087	.09074	-.03063	.03696
LSOCQ32	-.46771	.17987	.02887	.04402	.02840	.15790	-.04383	.08983	.08046	.02749
LSOCQ4	.45585	.00902	.00486	-.16990	.20845	.04546	-.04092	.10702	.18380	.12387
LSOCQ6	-.45072	-.00833	.09625	.08333	.16460	-.05725	.29898	.06594	-.07680	.00362
LSOCQ24	-.43881	-.00471	.06159	.37943	-.08260	-.01964	.05942	-.05599	-.02373	.00370
LSOCQ8	.43569	.08150	.17850	-.05298	.12408	.06829	.09815	.11507	.11776	.11385
LSOCQ5	-.41579	.04131	.02147	.26116	-.06779	.01706	.14173	.06869	-.17200	-.07505
LSOCQ7	-.41328	.08509	.07026	.06458	.19270	.05746	.35901	.01556	.00744	.00074
LSOCQ21	-.37014	.23789	.02318	.06053	.02494	.10374	-.01941	-.08198	.01930	-.02728
LSOCQ40	.36220	.01283	.14205	.21998	.06349	.12987	.07760	.14601	.14506	.04049
LSOCQ46	.26878	.12148	.10361	.10364	.13713	.02080	-.03603	.23680	.04550	.03995
LSOCQ39	-.03661	.65490	.07496	-.04738	.11763	-.00846	-.03838	-.00049	-.04365	-.02502
LSOCQ38	-.05036	.57591	.05484	.06118	.05209	.00085	.06656	.01485	.07017	.02704
LSOCQ37	.43043	.49575	-.05401	-.01383	-.04802	.07461	-.04465	.22819	-.10450	-.06963
LSOCQ44	-.03021	.17837	.17161	.03098	.11991	.02793	-.00922	-.08697	-.04688	.02014
LSOCQ11	.08909	-.01033	.49279	-.00747	-.03212	-.03023	-.01645	.08089	.02080	.02804
LSOCQ10	-.01670	-.03011	.48149	-.06913	.03684	.03045	.01717	.03920	.04888	.00196
LSOCQ13	-.15469	.04748	.41999	.00483	.04296	.02519	.00001	-.12555	.03190	-.02167
LSOCQ12	.00272	.13666	.40688	.03020	.09028	.01534	.04776	.02642	-.06867	-.00955
LSOCQ22	-.09624	-.01871	-.02770	.48244	-.08976	.01356	-.00037	.00116	.10015	.00299
LSOCQ9	-.00155	.18173	-.22560	.30579	-.00103	.03481	-.03780	.04175	-.03022	.02236
LSOCQ26	.13397	.16719	.12273	-.10907	.45302	-.00541	.10828	-.01466	.00365	.00065
LSOCQ23	.25750	.12966	.12771	-.12444	.40776	.04932	.00968	.01567	.05327	-.00635
LSOCQ29	-.39526	.05258	.06979	.01909	-.00850	.56543	.02354	-.01918	-.00018	-.00155
LSOCQ30	-.44204	.05420	.05951	.10610	.05409	.52859	.00282	.02525	.06745	.03381
LSOCQ2	-.40421	.07521	.06508	.07361	.12542	-.00786	.43650	.10779	-.00870	-.00862
LSOCQ41	-.30742	-.06681	.09159	.28106	.03405	.06100	.08117	.01393	.41278	-.01553

The following 34 items had loadings of .400 or greater on Factor 1 after the quartimax rotation had been completed (See Table 6.17): Items 1 to 8, Items 14 to 20, Items 24 and 25, Items 27 and 28, Items 30 to 37, Items 42 and 43, Item 45, and Items 47 to 50. An Alpha reliability check (Cronbach 1951) was run on these 34 items. Reliability is a measure of internal consistency and if a test or scale has high internal consistency then it indicates that there is a general factor underlying most of the scale items. One of the outcomes of this procedure is that it computes the overall alpha if a particular item is deleted. If an item by its inclusion decreases the reliability (alpha coefficient) of the scale, it should be deleted. The results of the reliability procedure are shown in Table 6.18.

TABLE 6.18: RELIABILITY ANALYSIS OF SHORTENED VERSION OF LSOCQ

Item No	Scale Mean If Item Deleted	Scale Variance If Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha If Item Deleted
LSOCQ1	85.2761	278.4536	.4958	.3769	.9344
LSOCQ2	85.5000	278.2481	.4336	.3122	.9353
LSOCQ3	85.3176	277.3216	.5116	.3903	.9343
LSOCQ4	85.7560	279.7555	.4403	.2944	.9350
LSOCQ5	85.5546	280.0446	.4215	.2751	.9353
LSOCQ6	85.8968	278.8495	.4692	.3124	.9347
LSOCQ7	85.0185	278.3480	.4373	.2935	.9352
LSOCQ8	85.6082	281.6870	.3954	.2419	.9354
LSOCQ14	85.7911	275.4175	.5692	.4574	.9337
LSOCQ15	85.5997	276.7414	.5329	.4218	.9341
LSOCQ16	85.8317	275.9987	.5578	.4088	.9338
LSOCQ17	85.5240	274.8330	.6001	.4372	.9334
LSOCQ18	85.6894	274.6874	.6002	.4835	.9334
LSOCQ19	85.6268	274.8977	.5944	.4252	.9334
LSOCQ20	85.8672	275.8345	.5658	.4248	.9337
LSOCQ24	85.4499	281.3754	.4460	.2640	.9349
LSOCQ25	85.3071	280.1528	.5044	.3290	.9344
LSOCQ27	84.9379	277.9149	.5912	.5134	.9336
LSOCQ28	85.3327	280.0136	.4660	.4163	.9347
LSOCQ30	85.0326	282.1057	.4356	.2666	.9350
LSOCQ31	85.5436	274.5369	.6604	.5160	.9328
LSOCQ32	85.4118	281.3672	.4471	.2786	.9349
LSOCQ33	85.5842	274.3804	.5833	.4136	.9335
LSOCQ34	85.4419	275.2152	.6266	.4381	.9331
LSOCQ35	85.5977	275.8466	.6324	.4817	.9331
LSOCQ36	84.8487	279.7766	.5318	.3665	.9341
LSOCQ37	84.9749	282.2961	.4147	.3219	.9352
LSOCQ42	85.1513	278.2929	.5393	.4019	.9340
LSOCQ43	85.5882	279.5376	.4690	.2987	.9347
LSOCQ45	85.4659	277.7196	.5433	.3861	.9340
LSOCQ47	85.2515	275.5046	.6487	.5357	.9330
LSOCQ48	85.0882	274.4895	.6679	.5328	.9328
LSOCQ49	85.2510	274.6081	.6179	.5082	.9332
LSOCQ50	85.6603	275.0826	.6291	.5046	.9331

The alpha coefficient is .9359 which demonstrates a high internal consistency on the modified scale. The alpha coefficient obtained when a specific item is deleted is listed for each item in the right hand column of the table. Because the alpha is not increased beyond .9359 in any case, then all 34 items are contributing and should therefore be retained. A quartimax rotation on the 34 items of the modified scale was also conducted. The results of this are contained in Table 6.19. All items meet the minimum loading of .400 or greater on Factor 1. Therefore these 34 items were selected as the measure of climate within this particular sample for this research study, and the measure was simply the sum total of the items (with the negative items reverse scored). Therefore the higher the score on this modified climate scale the more positive are the perceptions of the employees to the way they are managed in the organisation that they are employed.

TABLE 6.19: ROTATED FACTOR MATRIX FOR QUARTIMAX ROTATION OF SHORTENED LSOCQ

Item No	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
LSOCQ31	.69328	.07627	-.06136	.24169	.07770	.00656
LSOCQ50	-.68592	-.10533	.01579	.09948	.13399	.10157
LSOCQ48	.68517	-.03794	.29159	.09388	.00036	-.01296
LSOCQ47	.68085	.08732	.25906	.07046	.05834	-.03670
LSOCQ49	-.66736	-.10394	-.08529	.06989	.08874	.07521
LSOCQ34	-.65650	.04560	.10315	-.05260	.07581	.05722
LSOCQ35	.65145	.04659	.02795	.15532	.17927	.03205
LSOCQ1	.62113	.02580	-.09024	.03516	.29052	.02573
LSOCQ19	-.62028	.09128	.18948	.08013	.02578	-.01248
LSOCQ18	.61907	.02167	.01322	-.08384	.40961	.04894
LSOCQ27	.61788	.02168	.05550	.44058	-.08074	-.03030
LSOCQ33	.60192	-.01357	.01984	.01263	.24758	-.02889
LSOCQ14	-.59976	.11706	.16171	.14240	.17012	.03419
LSOCQ20	-.59842	.02691	.24445	.15571	-.17587	.02384
LSOCQ42	-.58620	-.03490	-.20274	.12738	.18200	.17270
LSOCQ4	.56420	.08673	.13470	.07151	.04409	.05290
LSOCQ15	-.56334	.09851	.08940	.18259	.21171	.00748
LSOCQ16	.56000	-.06599	.00709	-.08790	.33632	.11024
LSOCQ36	.53899	-.05363	.19260	.18643	-.04530	-.00562
LSOCQ25	.51044	.05646	.09627	-.01599	.08907	.28072
LSOCQ43	-.50018	-.05697	-.00990	.09784	.07330	.02682
LSOCQ28	.49808	.07527	-.08982	.47996	-.01702	.00493
LSOCQ32	-.48272	-.01748	.19833	-.08161	.06019	.08898
LSOCQ3	.47793	-.41572	.19557	.06374	.10388	.09154
LSOCQ1	.46249	-.41526	.18842	.06647	.13113	.05716
LSOCQ30	-.46083	.02735	.07613	-.16888	.17558	.06642
LSOCQ6	-.46070	.33307	.05745	.11272	.08178	-.02751
LSOCQ24	-.45288	.04894	-.01528	.16224	.09329	-.23868
LSOCQ7	-.42682	.40048	.04765	.01859	.08808	.07048
LSOCQ5	-.41512	.14665	.15710	.06996	.06647	-.31763
LSOCQ8	.40198	.11819	.08557	.04785	.07295	.33143
LSOCQ2	-.41698	.46252	.09685	.07711	.01355	.02849
LSOCQ37	.42601	-.02096	.48203	-.07680	-.00231	.02449
LSOCQ4	.43210	-.02429	.01652	.01408	.04208	.45837

6.3 Results of Beliefs About Work in New Zealand

The first research objective is to measure the beliefs about work that employees hold in New Zealand and to compare these with results from other countries. To do this meant using the results of the Beliefs About Work Scale (BAWS) scored according to the original five dimensions. As reported in 6.2.1 above, it is concluded from the factor analyses that the BAWS has sufficient construct validity to be used on the New Zealand sample in the same way that it has been used in the research overseas.

It was therefore necessary to compute for each person in the sample the individual scores on each of the five dimensions on the BAWS in the same way that the scale has been scored in previous studies. In all studies the score on each belief system have been computed according to the formula (Buchholz 1976):

$$MB = E\,Xi / N$$

Where MB is the mean of the particular belief system, E Xi is the sum of the scores on each item relating to that belief system, and N is the number of items that relate to the belief system. Therefore five scores were computed for each individual: a work ethic score (seven items), an organisational score (nine items), a Marxist score (eleven items), a humanistic score (ten items), and a leisure score (eight items), each of these scores ranged from 1.000 to 5.000. A decision had to be made regarding those people who had missed items in the BAWS. Because there was no evidence of any systematic reason why certain items had been missed, the mean scores the belief system obtained by an individual were inserted on any items missing that weighted on that belief system. This meant that all of the 2111 respondents were utilised and their results were used in the analysis.

There is an inherent difficulty with this type of scoring system when making comparisons of the BAWS scale scores with each other across the five belief systems. For instance it is debatable whether Buchholz's conclusion that the results of the BAWS indicate a strong endorsement of the humanistic belief system and a low subscription to the work ethic is justified. This conclusion is based on a comparison of mean scores on different scales which are not strictly comparable. Therefore the result could be an artifact of the specific wording of the different questions contributing to each of the five different belief systems. It is only statistically legitimate to compare scale mean scores with other mean scores using the same scale. For example it is legitimate to directly compare the mean scores of males and females on the humanistic belief scale.

To maintain comparability with the conclusions from both Buchholz and Dickson's results reported in Chapter 3, it was decided to interpret the results in the same way, thus making comparisons across dimensions. However such interpretation is made with the full knowledge of the statistical weakness inherent in making such comparisons.

Buchholz (1978a) in an empirical study of contemporary beliefs about work in the United States used the BAWS to produce overall results and also to break these results down by job level, age, sex, race, and education. This was conducted on the expectation that while uniformity of beliefs throughout a whole society is theoretically

possible, it is reasonable to expect that the strength of commitment to certain beliefs will vary according to certain demographic variables, such as age and sex (Buchholz 1978a). Buchholz's results certainly indicated that this was the case, therefore the results of this study were also broken down by all of the demographic variables, except education.

Table 6.20 shows the results of the mean scores and standard deviations obtained by the whole sample on the BAWS five belief dimensions. The results of Buchholz (1977) and Buchholz and Dickson (1977) are also duplicated for comparison. The striking feature of these results compared with the American and Scottish samples is their consistency. The mean scale score is highest on the Humanistic belief system in New Zealand as was the case in the American and Scottish samples some 10 years previous. In Buchholz's early samples, respondents' mean scale scores were lowest on both work ethic and Marxist belief systems. A similar low mean scale score is obtained on the work ethic in the New Zealand sample.

TABLE 6.20: BAWS SCORES FOR THE TOTAL SAMPLE

Variable	Mean	Std Dev
Work Ethic	2.628	.690
Organisational Belief System	3.476	.611
Marxist-Related Beliefs	3.076	.691
Humanistic Belief System	4.366	.449
Leisure Ethic	3.379	.625

N = 2111

Buchholz (1977) Results:

	Mean	Std Dev
Work Ethic	2.316	.738
Organisational Belief System	3.046	.669
Marxist-Related Beliefs	2.013	.511
Humanistic Belief System	4.486	.425
Leisure Ethic	3.089	.703

N = 366 Top Managers

Buchholz and Dickson (1977) Results:

	US Mean	Scottish Mean
Work Ethic	2.58	2.55
Organisational Belief System	3.16	3.12
Marxist-Related Beliefs	2.98	2.46
Humanistic Belief System	4.35	4.38
Leisure Ethic	4.22	2.83
	N = 105	N = 130

These results were then broken down by the following demographic variables: gender, marital status, ethnic origin, age range, type of work, and job level (Tables 6.21 to 6.26). These tables show the means and standard deviations of each belief system for each group. One way analysis of variance was conducted to compare means within each demographic category. This was conducted to establish if there were any significant differences between population mean scores between demographic categories on each of the five belief systems. Multiple comparison procedures protect against calling too many differences significant by setting up more stringent criteria to declare differences as being statistically significant than does the usual t test (Norusis 1985). Therefore multiple range procedures ensure that the difference between any two sample means in an array of means must be larger to be declared as a true difference. The most conservative method for the pair wise comparison of means is the Scheffe method (Winer 1971), because it requires larger differences between means than do most other methods. The level of significance selected was .01 and the most conservative test of significance (Scheffe's test) was used. The F Ratios and their corresponding significance levels are shown in Tables 6.21, 6.22, and 6.25. Mean differences that are statistically significant are shown with an asterisks on each of Tables 6.23, 6.24, and 6.26.

TABLE 6.21: BELIEF SYSTEM BY SEX

Variable	Males		Females		
	Mean	Std Dev	Mean	Std Dev	F. Ratio/Sig
Work Ethic	2.58	.70	2.69	.67	12.12(.0005)
Organisational Belief	3.45	.64	3.52	.57	7.47(.0063)
Marxist Beliefs	3.04	.71	3.13	.66	8.07(.0045)
Humanistic Belief	4.35	.45	4.34	.44	4.18(.0410)
Leisure Ethic	3.99	.64	3.36	.61	1.56(.2115)

Buchholz (1978) reported a statistically significant result only on the Marxist belief system for gender, with the females showing a higher mean than the males. The results in this research (Table 6.21) are significant for all dimensions except the humanistic belief and leisure ethic systems. Females show a significantly greater endorsement of the work ethic, organisational belief, and Marxist belief systems than do males.

TABLE 6.22: BELIEF SYSTEM BY MARITAL STATUS

Variable	Single		Married		
	Mean / Std Dev		Mean / Std Dev		F. Ratio/Sig
Work Ethic	2.64	.66	2.62	.71	0.43(.5111)
Organisational Belief System	3.43	.59	3.50	.62	7.16(.0075)
Marxist Belief System	3.09	.66	3.07	.71	0.82(.3648)
Humanistic Belief System	4.3	.45	4.39	.45	13.47(.0002)
Leisure Ethic	3.4	.61	3.36	.63	2.10(.1474)

One area of interest not investigated overseas was whether marital status should have any effect on endorsement of any particular system. Since beliefs are usually the result of an enduring orientation, it is anticipated that marital status should have little if any impact on beliefs about work. This was included because the instrumental orientation reported in Goldthorpe's (1968) work was based on a sample of married males who were living with their wives. It was therefore interesting to see if marital status would have an affect on a person's work orientation. The married group included de facto relationships. The results in Table 6.22 suggest that married people have a higher endorsement of the organisational and humanistic belief systems than do single people.

Buchholz (1978a) reported a greater endorsement of the organisational, and Marxist-related belief systems among black people than white people. One finding of major interest in the New Zealand data is that statistically significant results are found on these same dimensions for both Maori and Pacific Island respondents (Table 6.23). In both cases the direction is the same. However the most interesting finding is that Maori's show significantly greater endorsement of the work ethic than do their European counterparts. This provides evidence that some commonly held stereotypes about Maori attitudes towards work are simply untrue. The other interesting thing about the New Zealand data is the strength of endorsement of the humanistic belief system across all ethnic groups. Essentially for those employed, the predominate belief about work is similar.

TABLE 6.23: BELIEF SYSTEM BY ETHNIC ORIGIN

BELIEF SYSTEM	EUROPEAN		MAORI		PACIFIC ISLANDER		OTHER ETHNIC	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
WORK ETHIC	2.60	.68	2.88 *	.69	2.92	.64	3.13 *	.74
ORGANISATIONAL BELIEF	3.44	.60	3.81 *	.67	3.88 *	.72	3.71	.51
MARXIST BELIEFS	3.05	.69	3.34 *	.58	3.61 *	.66	3.11	.49
HUMANISTIC BELIEF	4.36	.45	4.37	.43	4.44	.63	4.44	.45
LEISURE ETHIC	3.39	.62	3.21	.65	3.08	.60	3.43	.62

* Indicates significant mean differences at .01 level compared with European group.

Buchholz (1978a) in a sample of workers and managers showed that commitment to the work ethic was strongest in the younger workers. Also in a Dickson and Buchholz study (1977) it was found in both American and Scottish samples that support for both the Marxist and leisure ethic belief decreased with age. The results of this study (Table 6.24) do not support these trends. There are no differences between the various age groups in the New Zealand data.

TABLE 6.24: BELIEF SYSTEM BY AGE RANGE

BELIEF SYSTEMS	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
	X SD	X SD	X SD	X SD	X SD	X SD	X SD	X SD	X SD	X SD
WORK ETHIC	2.76 .69	2.67 .62	2.68 .66	2.54 .70	2.54 .65	2.54 .69	2.63 .70	2.65 .79	2.79 .79	2.78 .69
ORGANISATIONAL BELIEF	3.52 .58	3.55 .54	3.37 .58	3.35 .61	3.47 .60	3.52 .63	3.54 .67	3.55 .65	3.58 .64	3.52 .69
MARXIST BELIEFS	3.04 .61	3.13 .63	3.02 .72	2.98 .65	3.06 .66	3.13 .70	3.11 .75	3.09 .81	3.13 .69	3.26 .53
HUMANISTIC BELIEF	4.22 .41	4.28 .42	4.34 .47	4.35 .44	4.41 .46	4.42 .40	4.42 .50	4.44 .45	4.44 .43	4.41 .35
LEISURE ETHIC	3.22 .62	3.41 .60	3.45 .62	3.43 .61	3.40 .63	3.39 .64	3.34 .61	3.23 .64	3.23 .65	3.28 .54

* NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT .01 LEVEL

Whether a person is in part time or full time employment may be related in part in their orientation and beliefs about work. In the sample there was a reasonable proportion of part time employees. The results are shown in Table 6.25 and these show that there are no differences, and suggest that beliefs about work are not affected by type of employment.

TABLE 6.25: BELIEF SYSTEM BY TYPE OF WORK

Variable	Full-Time		Part-Time		
	Mean / Std Dev		Mean / Std Dev		F. Ratio/Sig
Work Ethic	2.63	.69	2.63	.69	.00 (.9624)
Organisational Belief	3.47	.61	3.53	.60	1.90 (.1675)
Marxist Beliefs	3.07	.69	3.12	.65	0.82 (.3656)
Humanistic Belief	4.37	.45	4.37	.42	.00 (.9797)
Leisure Ethic	3.38	.62	3.34	.63	1.30 (.2552)

TABLE 6.26: BELIEF SYSTEM BY JOB LEVEL

BELIEF SYSTEM	UNSKILLED		SEMI-SKILLED		SKILLED		SUPERVISORY		MANAGERIAL	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Work Ethic	2.84	.66	2.73*(1)	.67	2.64	.70	2.57	.68	2.52	.69
Organisational Belief	3.71	.63	3.55	.62	3.45	.61	3.50	.61	3.41	.58
Marxist Beliefs	3.39**(2)(3)	.69	3.29**(2)(3)	.70	3.14*(2)	.66	3.01*(2)	.67	2.71	.64
Humanistic Beliefs	4.22*(4)	.47	4.26*(5)	.45	4.37	.43	4.40	.46	4.46	.45
Leisure Ethic	3.26	.70	3.37	.66	3.42*(6)	.63	3.40	.60	3.27	.57

Notes

1. Semi-Skilled result is statistically significant compared with Managerial.
2. All groups' results are statistically significant compared with Managerial.
3. Unskilled and Semi-Skilled results are statistically significant compared with Supervisory.
4. Unskilled result is statistically significant compared with Managerial.
5. Semi-Skilled result is statistically significant compared with Skilled, Supervisory, and Managerial.
6. Skilled result is statistically significant compared with Managerial.

There are however a number of differences when each belief system is analysed by job level, and the results are in Table 6.26. The semi-skilled group have a significantly higher endorsement of the work ethic than does the managerial group. There are no differences on the organisational belief system between the five groups, but there are a number of differences on the Marxist related belief system. The unskilled, semi-skilled, and supervisory groups show a significantly higher endorsement of the Marxist related beliefs compared to the managerial group. The unskilled and semi-skilled groups also show a significantly greater endorsement of the Marxist related belief system than does the supervisory group. The unskilled group shows a significantly lower endorsement of the humanistic belief system than the managerial group., while the semi-skilled group shows a significantly lower endorsement of the humanistic belief system than the skilled, supervisory, and managerial groups. Finally the skilled group has a significantly greater endorsement of the leisure ethic than does the managerial group.

These results reflect, to an extent, some of the managerial and non-managerial results reported overseas. For instance Buchholz and Dickson (1979) showed the same significant decline in work ethic from blue-collar to managerial employees. Similarly Buchholz (1979) reported that both supervisory and managerial employees scored significantly lower on the Marxist-related belief system than did blue-collar employees. Dickson and Buchholz (1979) reported a strong endorsement for the humanistic belief system across all groups and which was replicated in this research.

While there are some differences between certain demographic variables in the endorsement of these five belief systems, the New Zealand data mirrors the findings overseas in that the respondents' highest mean scale score is obtained on humanistic beliefs about work, and the lowest mean score is on the work ethic.

6.4 Organisational Measures of Beliefs About Work and Perceptions Towards Management

The beliefs about work scores and the raw scores from the modified Litwin and Stringer scale are at the individual level of analysis. It was therefore necessary to convert these to organisational measures, since the personnel practice and productivity measures are all at the organisational of analysis. This was achieved by computing the mean scores for the employees in each of the organisations on each of the five belief dimensions and the modified Litwin and Stringer scale total. These mean scores and the standard deviations by organisation are contained in Table 6.27 and Table 6.28.

TABLE 6.27: MEANS AND STANDARD DEVIATIONS FOR BAWS SCORES BY ORGANISATION

Org	Cases	The Work Ethic Mean	Std Dev	Organisational Belief Mean	Std Dev	Marxist Belief Mean	Std Dev	Humanistic Belief Mean	Std Dev	Leisure Ethic Mean	Std Dev
	2111	2.6378	.6901	3.4758	.6106	3.0764	.6909	4.3657	.4488	3.3786	.6251
1	25	2.6467	.7579	3.5200	.5708	2.7985	.7717	4.4187	.4214	3.2850	.5858
2	42	2.4313	.6916	3.5079	.7235	3.0260	.6945	4.1548	.5114	3.3474	.6740
3	19	2.4511	.5953	3.2573	.3375	2.8947	.6416	4.2977	.3663	3.1852	.6069
4	30	2.5802	.8071	3.2598	.6409	2.8009	.6057	4.4481	.4286	3.4319	.5770
5	43	2.5919	.8233	3.5297	.5512	2.8376	.6202	4.4023	.3188	3.0988	.6435
6	17	2.8235	.6917	3.6601	.6291	2.8209	.5422	4.4059	.3561	3.3676	.5633
7	46	2.5752	.7369	3.3635	.6184	3.0009	.5724	4.4870	.3925	3.4457	.6048
8	29	2.6256	.6348	3.4100	.5428	3.0408	.5436	4.3724	.3807	3.4224	.4788
9	36	2.6944	.5550	3.6420	.4848	2.8636	.7291	4.4173	.4362	3.2535	.6550
10	90	2.6167	.6086	3.4280	.5497	2.8155	.5791	4.2195	.5350	3.3335	.5900
11	71	2.6479	.7465	3.3149	.5202	2.7772	.6598	4.3549	.4478	3.4391	.6096
12	100	2.5757	.7426	3.5947	.6587	3.1605	.7673	4.4216	.4352	3.2568	.6656
13	105	2.5646	.6136	3.2686	.5812	3.2162	.6353	4.4743	.4345	3.5405	.6278
14	45	2.7672	.6928	3.3818	.6117	2.6410	.5303	4.3756	.4091	3.4139	.6856
15	28	2.6735	.8517	3.3532	.6796	2.8084	.7432	4.2857	.4344	3.6339	.7038
16	45	2.5460	.6867	3.2790	.7172	3.0505	.8334	4.2311	.4527	3.4500	.5700
17	50	2.6110	.6549	3.6200	.5926	3.3018	.6585	4.5260	.3556	3.1925	.6567
18	70	2.6592	.6966	3.2540	.6092	3.1792	.6434	4.3767	.4903	3.3543	.6742
19	35	2.6170	.8202	3.6413	.5523	2.9792	.6998	4.3514	.5376	3.2561	.6906
20	15	2.6571	.8167	3.6991	.6665	3.1998	.9206	4.5222	.3106	3.3500	.7168
21	32	2.4473	.8903	3.2674	.6563	2.6229	.8167	4.4750	.4586	3.3326	.5354
23	67	2.4254	.6038	3.2160	.4756	3.0491	.5929	4.4622	.3669	3.4110	.6182
24	34	2.5630	.6019	3.7288	.6124	3.1872	.7486	4.2471	.4329	3.0956	.5790
25	115	2.6213	.6410	3.3775	.5639	3.2111	.6321	4.3622	.4050	3.4924	.6510
26	18	3.1429	.6445	3.6543	.5853	3.0505	.5835	4.4833	.2431	3.3611	.5654
27	17	2.6807	.5452	3.3464	.4174	2.7487	.4258	4.3471	.3955	3.4926	.4950
28	29	2.5764	.6771	3.5441	.5761	3.0909	.8033	4.4448	.4461	3.3707	.5906
29	21	2.8367	.6855	3.8108	.5732	3.2589	.7838	4.3619	.3653	3.6156	.5073
30	42	2.7817	.6215	3.4550	.5004	3.0712	.6235	4.2214	.4776	3.3673	.5497
31	96	2.7505	.6442	3.7007	.5632	3.4390	.6316	4.1884	.4749	3.3984	.5964
32	18	2.8889	.5380	3.8603	.6007	2.9646	.7784	4.4333	.4524	3.3750	.8225
33	72	2.6563	.7506	3.5891	.6602	2.9640	.7445	4.3148	.5086	3.3715	.6743
34	125	2.6399	.6558	3.4657	.6050	3.1400	.5867	4.4076	.4439	3.3947	.5110
35	41	2.8316	.6664	3.7093	.8181	3.2886	.7004	4.2171	.6044	3.2782	.7609
37	23	2.8137	.7734	3.5845	.6908	3.4664	.7518	4.4348	.4499	3.4783	.6546
38	103	2.4672	.6789	3.6102	.6064	3.1236	.7931	4.3204	.4225	3.3119	.6926
39	66	2.6364	.6266	3.3064	.4608	2.8333	.6283	4.3808	.3899	3.3030	.5973
40	93	2.7517	.7627	3.6487	.5898	3.4010	.6375	4.3204	.4668	3.3374	.6079
41	72	2.5643	.6534	3.5928	.6039	3.0302	.6218	4.3705	.4503	3.5575	.5927
42	86	2.5814	.6994	3.3372	.6010	3.2358	.5558	4.5212	.4228	3.4724	.5549

The mean scores for each of the five beliefs about work dimensions are listed in Table 6.27. In general no organisation obtained means that would re-order the findings of the overall population. Across all organisations the dimension that receives the highest mean scale score is the humanistic belief system, and the one with the lowest mean scale score is the work ethic. A one way analysis of variance was undertaken on these scores. Again the significance level selected was .01, and the most conservative multiple range comparison (the Scheffe procedure) was used. The multiple range comparison between pairs of means revealed that no differences on any two pairs of means on any of the belief dimensions are statistically significant.

TABLE 6.28: MEANS AND STANDARD DEVIATIONS FOR ORGANISATIONAL CLIMATE SCORES BY ORGANISATIONS

Org	Count	Mean	Standard Deviation	Standard Error
1	25	89.7382	18.6297	3.7259
2	42	85.0591	16.3084	2.5164
3	19	94.7911	15.5628	3.5703
4	29	87.8621	13.5929	2.5241
5	43	96.4690	18.9789	2.8943
6	17	94.1765	13.3521	3.2384
7	46	85.1102	15.0836	2.2240
8	29	88.8171	15.2389	2.8298
9	36	97.3287	15.7140	2.6190
10	90	93.1021	14.0076	1.4765
11	71	91.0112	16.0089	1.8999
12	100	86.8461	15.9391	1.5939
13	105	79.6785	15.2236	1.4857
14	45	102.0603 **	14.1716	2.1126
15	28	86.6429	14.8903	2.8140
16	45	91.2000	14.6870	2.1894
17	50	89.6897	15.7467	2.2269
18	70	83.3394	18.2863	2.1859
19	35	95.7680	16.9925	2.8722
20	15	81.1072	14.3006	3.6924
21	32	84.2652	19.4433	3.4371
23	67	88.9792	15.6840	1.9161
24	34	92.1176	17.3236	2.9710
25	115	86.5038	16.6093	1.5488
26	18	97.9832	16.3774	3.8602
27	17	83.4706	14.4833	3.5127
28	29	79.3971 *	19.8286	3.6821
29	21	86.5238	10.5338	2.2987
30	42	93.2381	20.8324	3.2145
31	95	86.9582	15.1447	1.5538
32	18	99.5623	17.5030	4.1255
33	72	81.1676	18.2526	2.1511
34	124	85.8388	15.3766	1.3809
35	41	91.5626	16.6756	2.6043
37	23	67.7903 ***	18.4554	3.8482
38	103	80.6605 *	15.3923	1.5166
39	66	101.0055 *	15.2838	1.8813
40	93	82.2118	16.4630	1.7071
41	72	94.0866	15.8555	1.8686
42	86	85.7851	17.1086	1.8449
	2111	87.9471	17.1728	.3740

The mean scores and standard deviations for the climate scores (the sum total of the 34 items from the Litwin and Stringer Organisational Climate Scale) are listed in Table 6.28. A one way analysis of variance and the Scheffe multiple range procedure revealed significant differences between the asterisked pairs of means. These differences were significant at the .01 level.

The five mean belief scores and the mean climate score for each organisation would be used as the organisational measures of the attitude to work variable. The next stage of the results necessitated an analysis of the structured interviews and the derivation of the three personnel practice measures. These results of the structured interview will be the subject of the next chapter.

CHAPTER 7

THE RESULTS OF THE STRUCTURED INTERVIEWS

7.1 The Interview Schedule

The structured interviews provided a rich source of data about personnel practices in each of the participating organisations. A lot of the information was qualitative and was based on the opinion and the judgement of the executive in each participating organisation who was responsible for the personnel management function. This executive was called by a variety of titles across the organisations. In the case of one of the participating firms, the Chief Executive was interviewed.

The titles of the positions that these senior personnel executives held were: managing director (1), personnel manager (20), human resource manager (4), group personnel manager (3), executive personnel manager (1), senior executive officer (personnel) (2), personnel director (1), staff registrar (1), chief manager personnel (1), director of personnel (1), head of personnel services (1), manager employee relations (1), personnel administrator (1), personnel executive (1), personnel officer (1).

7.2 The Classification of the Organisations

The organisations were classified into four types using the 1978 NZIPM Survey classification. The results are shown in Table 7.1:

TABLE 7.1: ORGANISATION TYPE

Type	Number	Percentage
Sole Unit	7	17.5%
HQ or Main Branch	5	37.5%
Branch	11	27.5%
All units	7	17.5%

These results cannot be compared with the NZIPM Survey (1978) because the obtained frequencies were not reported in that survey.

The organisations were located predominantly in the North Island. 20 organisations operated in both the North and South Islands, while 15 were based solely in the North Island and five solely in the South Island. The majority of organisations were urban in location, while five were classified rural. The rural classification was based on the fact that each of the organisations was located in the country, and not within a provincial town or city.

The original question in the interview schedule concerning the industry classification of the organisations was taken directly from the NZIPM survey (1978). To assist the analysis, the classifications of the organisations by type of industry were recategorised into three basic groups: manufacturing organisations, other business organisations, and public sector organisations. The result of this recategorisation is shown in Table 7.2.

TABLE 7.2: RECATEGORISATION OF INDUSTRY TYPE

Industry Type	Frequency	Percentage
Manufacturing Organisations	16	40.0%
Business Organisations	15	37.5%
Public Sector Organisations	9	22.5%

7.2.1 The Structural Characteristics of the Organisations

The sizes of the organisations measured by the total number of people employed showed a range from 100 employees to several thousand employees. The size of the work forces were divided arbitrarily into small organisations (up to 200 employees), medium organisations (200 to 1000 employees), and large organisations (1000 employees and above). The breakdown obtained is shown in Table 7.3.

TABLE 7.3: WORK FORCE SIZES

Number of Employees	Frequency	Percentage
Up to 200 employees	3	7.5%
200 to 1000 employees	20	50.0%
1000 employees and above	17	42.5%

The question about the ethnic composition of the work force did not produce any meaningful results. None of the interviewees could supply accurate data. At best most could offer only educated guesses. The information on ethnic background was obtained from Part 1 of the attitude towards work questionnaire. Therefore it was decided to discard the information on the ethnic composition supplied by the executives. The information from the question about the number of departments was also discarded. The term department varied in use depending on the type of organisation encountered. It was therefore of little use as a standard measure of structure.

The other measures of structure: the number of management levels and whether the structure was centralised or decentralised were retained. The levels of management ranged from two to fifteen. To obtain a measure of "flatness" of the organisational structure, an arbitrary division was made so that flat organisations were identified as those that reported four levels of management and less, and hierarchical organisations were those that reported management layers of five or more. The results of these categorisations are shown in Tables 7.4 and 7.5.

TABLE 7.4: FLAT vs HIERARCHICAL ORGANISATIONS

Structure	Frequency	Percentage
Flat Organisations	19	47.5%
Hierarchical Organisations	21	52.5%

TABLE 7.5: CENTRALISED vs DECENTRALISED ORGANISATIONS

Structure	Frequency	Percentage
Centralised Organisations	18	45.0%
Decentralised Organisations	22	55.0%

Some cross tabulations were run to establish whether there were any relationships between the various structural characteristics of these organisations. Tables 7.6 to 7.11 show these cross tabulations. At the bottom of each table the Chi-Square is given with its level of significance in brackets. Of these six, only one obtained a statistically significant result (at the .05 level). This was the cross tabulation of number of levels of management with size of work force. The result indicated a greater tendency for hierarchical organisational structures to be have larger work forces, than organisations with "flat" structures. There were no other significant relationships.

TABLE 7.6: MANAGEMENT LEVELS BY WORK FORCE SIZE

Work Force Size	Flat Organisations	Hierarchical Organisations
Up to 200 employees	3	0
200 to 1,000 employees	11	9
Above 1,000 employees	5	12

Chi-Square = 5.997 (.0499)

TABLE 7.7: MANAGEMENT LEVELS BY ORGANISATION STRUCTURE

Organisational Structure	Flat Organisations	Hierarchical Organisations
Centralised	8	10
Decentralised	11	11

Chi-Square = 0.001 (.975)

TABLE 7.8: TYPE OF INDUSTRY BY WORK FORCE SIZE

Work Force	Manufacturing	Non-Manufacturing	Government
Up to 200 Employees	2	1	0
200 to 1000 Employees	9	2	2
Above 1000 Employees	5	5	7

Chi-Square = 6.446 (.168)

TABLE 7.9: TYPE OF INDUSTRY BY MANAGEMENT LEVEL

Management Level	Manufacturing	Non-Manufacturing	Government
Flat Organisations	8	9	2
Hierarchical	8	6	7

Chi-Square = 3.286 (.193)

TABLE 7.10: TYPE OF INDUSTRY BY ORGANISATION STRUCTURE

Management Level	Manufacturing	Non-Manufacturing	Government
Centralised	7	6	5
Decentralised	9	9	4

Chi-Square = 0.567 (.753)

TABLE 7.11: WORK FORCE SIZE BY ORGANISATION STRUCTURE

Work Force Size	Centralised	Decentralised
Up to 200 Employees	2	1
200 to 1000 Employees	9	11
Above 1000 Employees	7	10

Chi-Square = 0.699 (.716)

7.3 Position of the Personnel Executive

The 1978 NZIPM survey reported that senior personnel executives now reported to more senior executives compared to 1968. In 1968, 61 percent of the senior personnel executives reported to top level management (either the Chairman, Managing Director, Director, Deputy Managing Director, General Manager, or Deputy General Manager). In 1978 this percentage had increased to 86 percent. These figures related only to private sector companies. A concern was expressed by the authors of the 1978 report that 40 percent of the organisations surveyed did not employ any specialist personnel staff.

Of the 40 organisations in this study, only one did not have a personnel department. In this organisation the entire personnel function had been "devolved" to line management. However that organisation did employ a personnel specialist called a training officer.

In this survey one of the key questions in the structured interview was the position of the personnel manager (PM). The aim being to establish how many of the personnel executives were actually members of top management. The results of the personnel executive's categorisation are shown in Table 7.12:

TABLE 7.12: THE MANAGEMENT LEVEL OF THE PERSONNEL EXECUTIVE

Management level	Number	Percentage
Top Level Management	24	60%
Middle Level Management	16	40%

24 out of the 40 personnel managers identified themselves as being top-level management and as being members of the top management team. Each reported directly to the chief executive officer. The other 16 personnel managers categorised themselves as middle management and reported to the chief executive officer through some other senior executive. They were not members of the top management team.

Therefore in these results 60 percent of the personnel managers reported directly to the chief executive. These results can be compared directly to a percentage of 14 percent in 1968, and 32 percent in 1978. In both years, these percentages were for private sector organisations only. From the results of Table 7.15, the trend for both private and government sector organisations is the same. In fact the results from Tables 7.13, 7.14, and 7.16 demonstrate that such factors as organisation structure, size in terms of work force, and number of layers of management have no effect on whether the personnel manager is a member of top management or not.

TABLE 7.13: PM POSITION BY ORGANISATION STRUCTURE

PM Position	Organisation Structure	
	Centralised	Decentralised
Top Level Management	9	15
Middle Level Management	9	7

Chi-Square = 0.711 (.399)

TABLE 7.14: PM POSITION BY WORK FORCE SIZE

PM Position	Up to 200 Employees	200-1000 Employees	Above 1000 Employees
Top Level Management	2	11	11
Middle Level Management	1	9	6

Chi-Square = .421 (.810)

TABLE 7.15: PM POSITION BY INDUSTRY TYPE

PM Position	Manufacturing	Non-Manufacturing	Government
Top Level Management	8	11	5
Middle Level Management	8	4	4

Chi-Square = 3.286 (.193)

TABLE 7.16: PM POSITION BY MANAGEMENT LEVEL

PM Position	Flat Organisations	Hierarchical Organisations
Top Level Management	10	14
Middle Level Management	9	7
	Chi-Square = 0.338 (.561)	

7.4 The Personnel Practices Undertaken in the Organisations

The second part of the structured interview dealt with the personnel practices undertaken in each organisation. The practices included the 19 practices listed on the two cards, and any additional practices that each respondent wished to add that were not reflected adequately in the 19 practices listed. Data was listed with each practice categorised in terms of the questions asked in Part 2 of the structured interview. These are presented in Sections 7.4.1 to 7.4.5 of this Chapter.

7.4.1 Personnel Practice Activities: Whose Responsibility?

The first eight questions in Part 2 of the questionnaire were concerned with identifying: the number of organisations not undertaking each practice; the number of organisations in which the practice is the responsibility of the personnel department; and the number of organisations where the practice is the responsibility of some other department in the organisation. Table 7.17 summarises the frequency of practices performed across the 40 organisations and whether or not the personnel department has responsibility. The results of the 1978 survey are included in Table 7.18 for comparative purposes.

Compared with the results of the 1978 survey, the overall impression is that with most of the practices where comparisons can be made, greater percentages of the personnel department responsibilities were reported in this sample for the practices employee records practices, job evaluation, succession planning, and grievance procedures, than in 1978. The personnel practices that appear to have shifted from being the responsibility of the personnel department to that of another part of the organisation are the production of labour turnover statistics, and the provision of accident statistics and involvement with statutory provisions for safety. However whether these results indicate true trends or simply are artifacts of the present sample cannot be proven. If anything one is impressed by the similarity of the results over most of the practices reported.

The main point from the present data in Table 7.17 is that the personnel department still maintains responsibility for the majority of personnel practices listed. The only two practices that tend to be the responsibility of departments other than the personnel department are the provision of accident statistics and reports, and involvement with statutory provisions for safety. Even such traditional practices as employee welfare are still the responsibility of the personnel department.

7.4.2 Personnel Practice Activities: Treatment or Prevention of Problems

Question 9 in Part 2 of the structured interview was designed to identify the number of organisations where the practice is described as being mainly reactive to problems; the number of organisations where the practice is described as being mainly anticipatory to problems; and the number of organisations where the practice is considered to be both or neither reactive nor anticipatory to problems. The results are summarised in Table 7.19. Only broad trends can be identified regarding whether the practices are used primarily in the treatment mode (popularly referred to as "fire-fighting"), or in the prevention (or anticipatory) mode. A number of organisations indicated that certain practices were used for both anticipating problems or reacting to problems, depending on the particular circumstances. The data could therefore only be interpreted from an overall impression.

The practices that were reported as being used mainly in a reactive way are: the production of labour turnover statistics; advertising for staff; appointments; providing accident statistics and reports; grievance procedures; and, advising line managers. These are the practices that are most likely to be used in response to a situation or problem that has already developed and requires resolution.

There were a number of practices that organisations reported as being both reactive and anticipatory. The key factor here is that they can be used in either way depending on the particular circumstances in which they are used. For instance performance counselling may be used in largely a reactive mode if the employee has made an error and corrective action must ensue, yet it can also be used to develop an employee in a more proactive way. The practices reported as being in this "both" category are: performance counselling, job enrichment and enlargement, and joint consultation. Other industrial relations activities listed in the additional practices were also categorized as falling into both camps.

TABLE 7.17: PERSONNEL MANAGEMENT PRACTICES: WHOSE RESPONSIBILITY?

Personnel Practices	Personnel Manager Responsibility		Other Dept Responsibility		Not Undertaken	
Production of Labour Turnover Statistics	28	(70.0%)	7	(17.5%)	5	(12.5%)
Employee Records	34	(85.0%)	6	(15.0%)	0	
Advertising for Staff	33	(82.5%)	7	(17.5%)	0	
Providing Accident Statistics and Reports	10	(25.0%)	21	(52.5%)	9	(22.5%)
Involvement with Statutory Provisions for Safety	18	(45.0%)	20	(50.0%)	2	(5.0%)
Salary and Wage Activities	39	(97.5%)	1	(2.5%)	0	
Management for Further Education	31	(77.5%)	8	(20.0%)	1	(2.5%)
Participation in Employee Associations	27	(67.5%)	11	(27.5%)	2	(5.0%)
Employee Welfare	34	(85.0%)	6	(15.0%)	0	
Job Evaluation	32	(80.0%)	3	(7.5%)	5	(12.5%)
Performance Appraisal	30	(75.0%)	7	(17.5%)	3	(7.5%)
Executive Development Programmes	25	(62.5%)	4	(10.0%)	11	(27.5%)
Performance Counselling	26	(65.0%)	8	(20.0%)	6	(15.0%)
Manpower Planning	27	(67.5%)	4	(10.0%)	9	(22.5%)
Training Evaluation	29	(72.5%)	7	(17.5%)	4	(10.0%)
Succession Planning	25	(62.5%)	3	(7.5%)	12	(30.0%)
Job Enrichment/Enlargement	14	(35.0%)	4	(10.0%)	22	(55.0%)
Joint Consultation	21	(52.5%)	7	(17.5%)	12	(30.0%)
Grievance Procedures	32	(80.0%)	5	(12.5%)	3	(7.5%)
Additional Practices						
Employee Communications	8	(20.0%)	32	(80.0%)		
Public Relations Activities	2	(5.0%)	38	(95.0%)		
Personnel Policy Review and Development	6	(15.0%)	34	(85.0%)		
Salary and Benefit Advice	7	(17.5%)	33	(82.5%)		
Industrial Negotiation and Relations	12	(30.0%)	28	(70.0%)		
Staff Skills and Training	5	(12.5%)	35	(87.5%)		
Occupational Health and Safety	4	(10.0%)	36	(90.0%)		
Work Force Restructuring	7	(17.5%)	33	(82.5%)		
Equal Employment Opportunity	3	(7.5%)	37	(92.5%)		
Provision of Administrative Services	6	(15.0%)	34	(85.0%)		
Appointments	4	(10.0%)	36	(90.0%)		
Advising Line Management	3	(7.5%)	37	(92.5%)		
Employee Orientation and Career Advice	3	(7.5%)	37	(92.5%)		
Organisational Representation	3	(7.5%)	37	(92.5%)		
Managing Change and Restructuring	8	(20.0%)	32	(80.0%)		

TABLE 7.18: WHOSE RESPONSIBILITY? (1978 SURVEY)

	Personnel Manager Responsibility	Other Dept Responsibility	Not Undertaken
Labour Turnover Statistics	87%	6%	7%
Employee Records	72%	28%	0%
Advertising for Staff	67%	33%	0%
Providing Accident Statistics and Reports	49%	39%	12%
Involvement with Statutory Provisions for Safety	85%	10%	5%
Job Evaluation	78%		
Performance Appraisal	77%		
Executive Development Programmes	75%		
Performance Counselling	68%		
Manpower Planning	65%		
Training Evaluation	62%		
Succession Planning	56%		
Job Enrichment/Enlargement	53%		
Joint Consultation	52%		
Grievance Procedures	52%		

TABLE 7.19: CATEGORISATION OF PRACTICES AS REACTIVE OR ANTICIPATORY

Personnel Practices	Reactive	Anticipatory	Both	Neither	N	
Production of Labour Turnover Statistics	17 (49%)	12 (34%)	4 (11%)	2 (6%)		35
Employee Records	10 (30%)	15 (45%)	8 (24%)	7 (21%)		40
Advertising for Staff	25 (63%)	3 (8%)	12 (30%)	-		40
Providing Accident Statistics and Reports	16 (52%)	7 (23%)	7 (23%)	1 (3%)		31
Involvement with Statutory Provisions for Safety	9 (24%)	18 (47%)	12 (32%)	0		38
Salary and Wage Activities	5 (13%)	17 (43%)	16 (40%)	2 (5%)		40
Management for Further Education	5 (13%)	25 (64%)	7 (18%)	2 (5%)		39
Participation in Employee Associations	6 (16%)	18 (47%)	9 (24%)	5 (13%)		38
Employee Welfare	5 (12%)	23 (58%)	10 (25%)	2 (5%)		40
Job Evaluation	4 (12%)	20 (59%)	8 (24%)	2 (6%)		34
Performance Appraisal	2 (6%)	20 (56%)	11 (31%)	3 (8%)		36
Executive Development Programmes	3 (10%)	21 (72%)	3 (10%)	2 (7%)		29
Performance Counselling	12 (35%)	10 (29%)	10 (29%)	2 (6%)		34
Manpower Planning	3 (10%)	23 (74%)	3 (10%)	2 (6%)		31
Training Evaluation	8 (22%)	20 (56%)	5 (14%)	3 (8%)		36
Succession Planning	3 (11%)	18 (64%)	5 (18%)	2 (7%)		28
Job Enrichment/Enlargement	6 (33%)	8 (44%)	4 (22%)	0		18
Joint Consultation	4 (14%)	9 (32%)	14 (50%)	1 (4%)		28
Grievance Procedures	18 (49%)	7 (18%)	11 (30%)	1 (4%)		37
Additional Practices						
Employee Communications	1 (12.5%)	4 (50%)	3 (37.5%)			8
Public Relations Activities		2 (100%)				2
Personnel Policy Review and Development		6 (100%)				6
Salary and Benefit Advice	1 (14%)	3 (43%)	3 (43%)			7
Industrial Negotiation and Relations	3 (25%)	5 (42%)	3 (25%)	1 (8%)		12
Staff Skills and Training	1 (20%)	3 (60%)	1 (20%)			5
Occupational Health and Safety		1 (25%)	3 (75%)			4
Work Force Restructuring	1 (14%)	6 (86%)				7
Equal Employment Opportunity	1 (33%)	1 (33%)	1 (33%)			3
Provision of Administrative Services	2 (33%)	3 (50%)		1 (17%)		6
Appointments		3 (75%)	1 (25%)			4
Advising Line Management	2 (67%)	1 (33%)				3
Employee Orientation and Career Advice	1 (33%)	1 (33%)		1 (33%)		3
Organisational Representation	1 (33%)	1 (33%)	1 (33%)			3
Managing Change and Restructuring	0	6 (75%)	2 (25%)			8

All the other practices were reported as tending to be anticipatory. A general indication of the level of proaction over all organisations is indicated in Table 7.20:

TABLE 7.20: LEVEL OF PROACTION OVER ALL ORGANISATIONS

Category	Frequency
Practices categorized as primarily reactive	6
Practices categorized as primarily anticipatory	18
Practices categorized as being both anticipatory and reactive	10

The overall impression from this is that at the present time there is a definite trend towards using personnel practices in this sample of organisations in a more proactive rather than reactive way. The reality of their use then appears to support the clear objective of many personnel practitioners to be more proactive in the approach to personnel management in New Zealand.

7.4.3 Content Analysis of the Verbal Responses From the Structured Interviews

A major part of the structured interview was designed to establish the reasons how practices are undertaken in organisations and the reasons why they are undertaken. It was also designed to assess what impact (if any) these practices have on employees.

This was the content of Question 10 and was the most unstructured part of the interview. The interviewer took notes while each personnel executive spoke. These notes were then content-analysed by the researcher and a breakdown of the main categorisations obtained. The results of this content analysis are summarised in Table 7.21.

TABLE 7.21: RESULTS OF CONTENT ANALYSIS

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 1: The Production of Labour Turnover Statistics (N=35)					
	f		f		f
From personnel records	14	Statutory obligation	4	Positive	5
From payroll system	6	Monitor supervisor/manager performance	4	Neutral	23
By line managers	1	Assist personnel planning	1	Negative	3
On an ad hoc basis	1	To establish why it is occurring	8	Not given	9
By the sites/branches	2	Budgetary/wage considerations	6		
After a set period (eg monthly)	11	Feedback to units/managers	2		
		Identify problems on job/trends or changes	8		
		Not given	2		
Practice 2: Employee Records (N=40)					
	f		f		f
All personnel records are computerised	10	To provide speedy answers to queries	1	Positive	14
Pay and personnel records are kept separate	3	To record any changes	2	Neutral	18
Non-computerised but are moving towards one	6	Have an efficient pmis	4	Negative	2
Manual records	11	To build a profile of data on each employee	8	Not given	6
Both manual and computerised	1	To aid us in decision-making	7		
Not centralised held in the units/ branches	5	For legal and statistical purposes	12		
Held by line managers	2	For audit purposes and staff development	2		
Records are centralised	2	For information if something happens to the employee	1		
		Not given	3		

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 3: Advertising for Staff (N=40)					
	f		f		f
Complete function of personnel	12	Attract the best people suited or qualified	10	Positive	15
Function of agencies and consultants	8	Meet staffing needs of the units	13	Neutral	9
Personnel shortlists, line management decides	12	Achieve appropriate organisational climate	1	Negative	4
		Guauge the labour market	3	Not given	12
Function of line management, personnel gives advice	6	Statutory requirement	1		
		Result of industrial agreement	1		
Complete function of line management	2	Decisions are made at the branch level	4		
		Internal recruitment policy	6		
		Not given	1		
Practice 4: The Provision of Accident Statistics and Reports (N=31)					
	f		f		f
When accidents occur	10	Purely administrative	1	Positive	11
Provided routinely	3	For statutory reasons (eg Factories Act & ACC)	9	Neutral	5
Done by the branches/unit/divisions/ depts	6			Negative	1
		To ensure appropriate investigation	1	Not given	16
Maintain an Accident register	4	To improve on overall efficiency	1		
Occupational health and safety com ittee	1	To promote safety conciousness/awareness	3		
		For management information and action	4		
By safety officers	5	Highlight trends	5		
Through a health type clinic	1	Not given	9		
Not given	1				
Practice 5: Involvement with Statutory Provisions for Safety (N=38)					
	f		f		f
Complete function of personnel	10	Ensure legal compliance	15	Positive	11
Personnel provides advice	6	Influence changes in legislation	2	Neutral	6
Driven by union/staff	4	Take the initiative	3	Negative	5
Personnel has little input	7	To identify unworkable legislation	1	Not given	16
Function of Safety committees	7	Influence welfare of staff	2		
Through the Employer's Federation	1	Ensure safe working conditions and safety record	10		
By Factory inspectors	2				
Not given	1	Not given	5		
Practice 6: Salary and Wage Activities (N=40)					
	f		f		f
Complete function of personnel	27	For consistency in industrial agreements	18	Positive	13
Complete function of payroll/ salaries	5	Because of high labour costs	5	Neutral	5
		To maintain competitive edge	7	Negative	10
Personnel formulates policy	1	To ensure equitable pay	6	Not given	12
Personnel recom ends changes 4		Because of parent company policy	3		
Complete function of line management	3			Not given	1
Practice 7: Management for Further Education (N=39)					
	f		f		f
Formal ext/int develop ent/training programmes	10	Motivational device	5	Positive	26
		Labour investment/development	16	Neutral	
External courses/institutions	12	Enhancing competitive edge	3	Negative	1
Ad hoc little done	3	Improving supervisory skills	5	Not given	12
Individual basis only	13	Humanise the work force	2		
Use conferences	1	Succession planning and career development	3		
		Introducing new procedures/technology	1		
		Response to specific needs	1		
		Not given	3		
Practice 8: Participation in Employee Associations (N=38)					
	f		f		f
Use a social club	21	Build morale/team spirit	10	Positive	20
Provide subsidies/financial assistance	4	Bring people together/break down barriers	8	Neutral	2
		Keep ears to the ground	6	Negative	2
Offer encouragement only	5	Enable employees to do their own thing	5	Not given	14
Personnel runs them	2	To support staff	1		
Not much done	4	Not given	8		
Not given	2				

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 9: Employee Welfare (N=40)					
	f		f		f
No formal programme, on an individual basis	11	Enhance employee feelings of well being/ goodwill	7	Positive	22
Have formal benefit/welfare programme	25	Be a good employer	9	Neutral	6
Employee initiated	1	To improve efficiency	1	Negative	2
By line managers	2	To be paternalistic (look after people)	11	Not given	10
Not given	1	To be anti-paternalistic (help people to help each other	3		
		As a safety valve	5		
		To do their own thing	3		
		Not given	1		
Practice 10: Job Evaluation (N=35)					
	f		f		f
An unsystematic subjective system by managers	7	To determine external comparability	3	Positive	8
Job grading	2	To determine internal relativity	7	Neutral	5
Factor comparison	3	To determine both internal and external relativity	10	Negative	12
Points system (eg Price-Waterhouse)	5	For award wage negotiation purposes	1	Not given	10
Based on the Hay technique	12	For salary review	6		
Decision-banding	1	Requirement of the conditions of appointment	2		
Home-made system	4	For both wage and salary review	4		
Job evaluation Committee	1	Not given	2		
Practice 11: Performance Appraisal (N=37)					
	f		f		f
Use rating forms	15	Evaluative - promotion	4	Positive	20
No formal system, just done by managers as required	6	Evaluative - wage and salary review	6	Neutral	3
MBO system	7	Developmental - improve performance	9	Negative	6
Self and supervisor appraisals	8	Developmental - career aspirations	2	Not given	8
Not given	1	Developmental - improve communication	1		
		Developmental - feedback on performance	6		
		Multi-purpose, both developmental and evaluative	4		
		Not given	5		
Practice 12: Executive Development Programmes (N=29)					
	f		f		f
Use external courses and facilities	10	For personnel development/promotion	9	Positive	12
Use internal courses and facilities	2	An organisation wide development programme	5	Neutral	0
Use both internal and external facilities	11	Because of manpower planning	2	Negative	2
All conducted overseas	3	For development of key managers	9	Not given	15
Japanese methodology	1	As result of training needs analysis	2		
Ad hoc	2	To keep people in the Company	1		
		Not given	1		
Practice 13: Performance Counselling (N=34)					
	f		f		f
As required, independent of appraisal	4	Improvement in performance is required	14	Positive	12
As a consequence/part of the appraisal system	22	As part of the disciplinary procedure	1	Neutral	4
Informal by line managers	4	To enhance efficiency and effectiveness	3	Negative	4
Coordinated by personnel	2	To improve relationship between supervisor and employee	6	Not given	14
Not given	2	Feedback to employees	5		
		Because personnel initiates it	2		
		To follow a particular programme eg Demming	1		
		Not given	2		
Practice 14: Manpower Planning (N=31)					
	f		f		f
On going all the time	3	For operational reasons	6	Positive	4
Informal/senior positions only	7	Changes in technology	2	Neutral	4
Only for certain occupational groups	3	To predict needs in short/medium term	4	Negative	3
Use an integrated model/process	8	For strategic reasons	7	Not given	20
Done by divisions/branches	4	For manpower reductions/considerations	6		
Periodically reacting to a change	3	To achieve market forecast	2		
Undertaken by personnel solely	2	Control turnover	1		
Use a consultant (overseas)	1	Career development/develop own people	1		
		Not given	2		

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 15: Training Evaluation (N=36)					
	f		f		f
Informally by consulting user managers	6	Monitor training programmes	5	Positive	6
Feedback from trainees and supervisors	10	Evaluate effectiveness of training	14	Neutral	7
Formal course evaluations	2	Whether meeting needs of depts/divisions	9	Negative	2
Training evaluation committee	1	Whether meeting needs of individuals	4	Not given	21
Training audits	5	As part of the planning cycle	1		
By training officers	3	Not given	3		
As part of/ from performance appraisal	3				
Informally by consulting trainees	5				
Not given	1				
Practice 16: Succession Planning (N=28)					
	f		f		f
Centralised basis by top management	8	Because of downsizing	1	Positive	3
Informally	1	Similar to manpower planning/utilisation	8	Neutral	5
On a percentage of positions	2	To ensure suitably qualified people for future jobs	6	Negative	1
Administered by the training officer	1	Maintain replacements with turnover	5	Not given	19
Formalised system based on performance appraisal	3	Policy of promotion within	1		
Decentralised to branches	3	Because of business demands	3		
		Required by the Parent Company	2		
		Not given	2		
Practice 17: Job Enrichment/Enlargement (N=18)					
	f		f		f
Through a study group/committee	1	Get greater employee involvement	1	Positive	7
Informally by departmental managers	10	To make jobs more interesting	4	Neutral	1
Formal work study programme	2	In response to individual performance needs	3	Negative	1
Only on an individual basis	4	To improve the utilisation of people/ downsizing	5	Not given	9
Use Japanese techniques	1	To reward for performance	1		
		To improve orgn efficiency and effectiveness	2		
		To remove demarcation	1		
		Not given	1		
Practice 18: Joint Consultation (N=28)					
	f		f		f
In house and ad hoc	5	Involve employees/utilise their experience	8	Positive	15
Formal and informal with union reps	12	To reach agreement on employment conditions	6	Neutral	1
Through committees/teams	6	To consult jointly with union representatives	7	Negative	2
Meetings throughout the organisation	4	To communicate with employees	4	Not given	10
Through line management	1	To solve common problems like welfare and health	2		
		To look ahead	1		
Practice 19: Grievance Procedures (N=37)					
	f		f		f
Follow a formal internal procedure	20	To be scrupulously fair	1	Positive	13
Follow informal consultation first	10	To resolve things as quickly as possible	3	Neutral	1
Follow procedure laid out in the legislation	3	To stay out of the courts or formal grievances	7	Negative	1
Personnel acts as advisory to the line	2	Statutory requirement	5	Not given	22
Personnel handles all grievances	2	To appease employees	3		
		To deal with the problem at the lowest level	9		
		To solve problems in the workplace	3		
		Not given	6		
Practice 20: Employee Communication (N=8)					
	f		f		f
Periodic discussions with employees	2	Involve the employees keep them in the picture	3	Positive	1
Opinion survey	1	Head office requirement	1	Neutral	1
Team briefings	1	To prevent rumours	1	Negative	0
Quality improvement scheme	1	Adoption of Japanese style	1	Not given	6
Company newsletter/magazine	3	For downwards communication	2		

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 21: Public Relations Activities (N=2)					
	f		f		f
Organise fashion parades	1	To keep the organisation vital	1	Positive	1
Liaise with general public	1	To maintain company's public profile	1	Neutral	1
				Negative	
				Not given	
Practice 22: Personnel Policy Review and Development (N=6)					
	f		f		f
Conducted through personnel	3	To have standard procedure for all personnel pracs	2	Positive	2
Creating delegated procedures	1	To push ideas through the organisation	1	Neutral	
Research new practices	1	To delegate personnel practices to line managers	1	Negative	
Construct a personnel policy manual	1	Some of current practices are archaic	1	Not given	4
		To ensure equality of treatment	1		
Practice 23: Salary and Benefits Development (N=7)					
	f		f		f
Tailoring of remuneration to meet business needs	1	Response to changing circumstances	1	Positive	2
Review of position descriptions	1	To provide proper salary increases	1	Neutral	1
Provision of payroll	2	Change from mainframe to PC system	1	Negative	
Superannuation advice	1	Personnel has records	1	Not given	4
Employee share issues	1	For joint consultation	1		
Not given	1	Communicated to by personnel	1		
		Not given	1		
Practice 24: Industrial Negotiation and Relations (N=12)					
	f		f		f
Maintain a watching brief	1	Direct from MD accountability	1	Positive	3
Maintain continuous negotiations	4	To portray the philosophy of the Company	1	Neutral	
Assist branch managers to recover from the IR	2	For redundancy and relocation	1	Negative	2
Interpretting legislation/advice to managers	3	So managers will anticipate situations better	4	Not given	7
Award determination	2	Maintain the status quo	2		
		To maintain harmony	2		
		To break down demarcation	1		
Practice 25: Staff and Skills Training (N=5)					
	f		f		f
Orientated to branches	1	To provide the skills	1	Positive	1
Conduct staff training	1	Because we pay in the topc quartile	1	Neutral	
Driver operator training	1	Because it is so specialised	1	Negative	
Sales staff training	1	To motivate and enhance sales staff	1	Not given	4
Not given	1	Not given	1		
Practice 26: Occupational Health and Safety (N=4)					
	f		f		f
Run by line managers	1	To be ahead of other companies	1	Positive	1
Great commitment	1	To hold periodic meetings with representatives	1	Neutral	
Not given	2	Not given	2	Negative	
				Not given	3
Practice 27: Work Force Restructuring (N=7)					
	f		f		f
Line responsibility and personnel assists	2	To give the Company direction	1	Positive	2
Personnel analyses the existing workforce	2	To decide what we are going to look like	2	Neutral	1
Planning teams	1	Flow on from manpower planning	1	Negative	1
Voluntary severance programmes	1	To assist in changes of recruitment	1	Not given	3
Redundancy programmes (job search)	1	To reduce staff	1		
		To maintain work force commitment	1		

Column A: How The Activity Is Undertaken		Column B: Reasons Why The Activity Is Undertaken		Column C: Employee Feelings	
Practice 28: Equal Employment Opportunity (N=3)					
	f		f		f
Development of policies & programmes	1	To knock down barriers	1	Positive	
Not given	2	Not given	2	Neutral	
				Negative	
				Not given	3
Practice 29: Provision of Administrative Services (N=6)					
	f		f		f
Arrange staff concessional travel	1	Part of the whole business	2	Positive	3
Covering all jobs on a given day	2	Personnel manager is the only person who knows		Neutral	0
Administer company vehicles	2	where everyone is	1	Negative	1
Administer leave & removal expenses	1	To control costs	1	Not given	2
		Move from owning to leasing vehicles	1		
		Personnel has considerable discretion	1		
Practice 30: Appointments (N=4)					
	f		f		f
Use selection panels	2	To appoint from within	2	Positive	0
Conduct graduate recruitment	2	To retain appropriate expertise	2	Neutral	1
				Negative	0
				Not given	3
Practice 31: Advising Line Management (N=3)					
	f		f		f
Advice to line managers	3	To solve problems	2	Positive	
				Neutral	
				Negative	
				Not given	3
Practice 32: Employee Orientation and Career Advice (N=3)					
	f		f		f
Induction programme	2	To improve the skills of new staff	1	Positive	3
Career counselling	1	Reduce turnover	1	Neutral	
		For supervisory staff	1	Negative	
				Not given	
Practice 33: Organisational Representation (N=3)					
	f		f		f
Functional relationships (salaried		Improve the relations between departments	1	Positive	
management meetings)	1	To communicate the feelings of the Company	1	Neutral	
Representation on the Employers'		Not given	1	Negative	
Fedn	1			Not given	3
Not given	1				
Practice 34: Managing Change and Organisational Restructuring (N=8)					
	f		f		f
Tackle both structural and people		To meet market demands	1	Positive	
issues	2	To reorganise the administrative structure	1	Neutral	
Use of a management group with personnel		Reflects what the Company is doing	1	Negative	1
advice	2	Because of major technology change	1	Not given	7
Internal and on going	2	More flexibility in problem-solving	2		
Use an outside consultant	1	To be more client driven	1		
Organisational restructuring	1	Not given	1		

7.4.3.1 The Production of Labour Turnover Statistics

All but five of the organisations reported undertaking this practice and the majority collect this information routinely through their personnel records or payroll systems. The most common reasons given for collecting this type of information are to fulfill their statutory obligations, and to try to establish why people are leaving. Some organisations also indicated that it is used to give feedback to managers and to monitor supervisor performance. Only one organisation reported using this practice to assist in personnel planning. The employees' responses to this practice are in the main quite neutral. It is the kind of practice that is undertaken without many of the employees being aware that statistics are being compiled. Very few organisations appear to use the turnover statistics in an anticipatory way, mostly it appears to be undertaken as a routine personnel activity.

7.4.3.2 Employee Records

All organisations reported that they keep employee records, and in most cases this is the function of the personnel department.

Over half maintain some manual records system while the remainder have either fully computerised systems or a dual system. A few of the organisations were in the process of moving from a manual system to an automated system. The most common reason given for maintaining an employee records system is for legal and statistical purposes.

Another reason is to build a profile on each employee to assist in decision-making. Only one organisation stated that the main purpose is to assist in staff development. Similar to the first practice, the majority of organisations reported that the reaction by employees about the keeping of employee records is quite neutral.

Only two organisations reported a negative perception by their employees. In the first case, employees felt threatened by the organisation's maintenance of individual absenteeism records, while in the other organisation it was the current difficulties being encountered with a computerized records system which were becoming a great source of frustration to both managers and employees.

A great benefit reported by those organisations using up and running computerised records systems is the speed and accuracy of updates of personnel information, and also the speed with which the personnel department can answer employee enquiries with respect to questions like the amount of leave owing and so forth.

7.4.3.3 Advertising for Staff

All organisations, as would be expected, reported the advertising for staff. During the structured interview, the researcher extended the scope of this practice to establish what organisations did up to the selection decision point.

It was clear from the result of this that the personnel department's role is primarily to assist line management in reaching the selection decision. Only in two organisations is the advertising and selection function the sole prerogative of line management. Only eight organisations reported that they use agencies and consultants to advertise for staff, the majority of organisations prefer to do it themselves.

The most common reasons for advertising for staff are to attract the best qualified people for employment, and to meet the staffing needs of the various departments. In the main the majority of organisations reported that their employees are either quite positive or neutral to the advertising practices carried out. Where there is negative reaction, it tends to occur in the public sector organisations, in the form of appeals. A number of organisations reported that they have established policies of advertising all vacancies internally, which draws a very positive response from their work forces.

7.4.3.4 Providing Accident Statistics and Reports

Over 75 percent of the organisations provided accident statistics and reports. Of these, a third provide them routinely on a periodic basis, while another third raise them only after accidents had occurred. Four organisations actually maintain accident registers. The rest tend to use health and safety committees for the provision of this practice, or it is carried out at the branch or unit levels. Five organisations reported the use of appointed safety officers to maintain accident summaries and reports. The most common reason for the keeping of accident records is to comply with legislative requirements through the Factories Act and Accident Compensation Commission.

However some organisations stated that the prime purpose is to provide management with information for action, or to highlight trends, or to actively promote safety consciousness and awareness. The overall reaction to those organisations by staff who pursue active accident reporting systems is positive.

7.4.3.5 Involvement with Statutory Provisions for Safety

Only two organisations reported that they do not get involved with statutory provisions for safety. It is interesting to assess how each organisation conducts this practice in relation to the degree of personnel department involvement. For instance in 10 organisations, it was a complete function of personnel. However in the majority of organisations, personnel is used more in an advisory capacity to the line management, who tend to drive this activity. In seven organisations personnel has little if any input into this activity. In another seven organisations, this activity is carried out by established safety committees.

Only two organisations rely solely on Factory Inspectors. The majority of organisations reported that the main reason for this activity is to ensure that their organisation is complying with legal requirements. Another substantial portion of organisations conduct this practice to ensure that they have safe working conditions and a good safety record. Only a few reported the more proactive reasons to take the initiative in influencing and improving current legislation, and also to influence safer working habits for their own staff. The majority of work forces were reported as reacting positively to this particular practice.

7.4.3.6 Salary and Wage Activities

All organisations reported undertaking this activity. In two thirds of the organisations, it was reported as being the complete function of personnel. Only three organisations reported it as being a complete function of line management, with personnel acting in a coordinating role. Five organisations reported that it is the responsibility of separate payroll or salary branches that are not part of personnel.

The main reason cited by most of the organisations for undertaking this activity is to maintain consistency in industrial agreements. Two other common reasons are to be able to maintain a competitive edge and to ensure equitable pay.

Generally work forces were described as being enthusiastic towards pay and salary activities, although 10 organisations did report a generally negative response by their employees. The main reasons for these negative reactions were that the employees feel that they are being paid short or that the organisation simply does not recognise their true value.

7.4.3.7 Management for Further Education

All but one organisation reported conducting management for further education. In eight organisations the responsibility for this activity is not vested in the personnel department. Over half the organisations use either a combination of internal and external training programmes, or rely solely on external institutions to conduct management development programmes. 13 organisations reported that they have no systematic education programmes, rather they conduct such activities in response to individual cases.

The majority of organisations reported that they are engaged in education and development activities as a form of labour investment/development. A few engage in this practice to enhance their competitive edge, while others use it as a motivational device. Two organisations reported that they have management development programmes to humanise the work force.

It is not surprising that most organisations reported positive responses to their management development activities, with only one organisation reporting an adverse reaction. In this particular organisation the decision to allow employees to undertake education and training activities is left entirely to the employees' manager. This raises questions of equity amongst the employees, as there is no company policy and each individual manager has discretionary power.

7.4.3.8 Participation in Employee Associations

Only two of the organisations reported a lack of participation in employee associations. Over half of the organisations use some form of social club, and in two cases the personnel department actually runs these associations. Rather than taking an active part, some organisations offer encouragement only.

The main reasons given for undertaking these activities are to build morale and to foster a good team spirit, also to bring the employees together and to break down barriers between departments and units. Six organisations reported they use the association as a listening post to keep in touch with their employees.

In most cases the employee response to this activity is positive; only two organisations indicated a negative response, and this was due in both cases to a "them and us" attitude between management and employees.

7.4.3.9 Employee Welfare

All organisations undertake employee welfare activities, and in all but six, welfare is the responsibility of the personnel department. Over 60 percent of the organisations have developed formal welfare programmes, while a quarter conduct welfare on an individual basis without any systematic programmes. Two organisations make employee welfare the sole responsibility of the line managers.

The most common reason for engaging in formal employee activities is the feeling of responsibility that organisations have towards looking after their staff. This paternalism is also accompanied by a wish to be seen as a good employer. There are a few organisations who take the opposite view and see the principal roles of welfare activities as being to assist employees to assist themselves and to improve overall company efficiency.

Again organisations reported a generally enthusiastic response to their welfare practices from the employees.

7.4.3.10 Job Evaluation

Almost all organisations undertake some form of job evaluation. 30 percent of the organisations use the Hay system indicating its popularity in this country. The fact that it is used by so many organisations increases its popularity as a job evaluation system and general personnel package.

A reasonable proportion of the sample (17.5 percent) rely on unsystematic subjective judgements by line managers as the basis for determining the worth of each job. Five organisations reported that they use other points-rating systems (like the Price Waterhouse system), three organisations use a factor comparison methodology,

two use job grading, one uses decision-banding, four use unspecified "home-made" systems, and one uses a job evaluation committee. The major reasons given to undertake job evaluation are to determine external and internal pay relativities, and also to assist in salary reviews. In two organisations, job evaluation is a requirement of the conditions of appointment to positions.

There is a high proportion of negative reaction to job evaluation in the organisations. This is usually caused when employees perceive the job evaluation as being unfair through a lack of understanding and therefore a suspicious attitude. It could be due to the often subjective basis for many job evaluations.

7.4.3.11 Performance Appraisal

Only three organisations do not undertake some form of performance appraisal. Fifteen organisations use rating forms, while seven use management by objectives. A further eight use either self or supervisor appraisals. Six organisations reported that they do not use formal appraisals as such, rather they rely solely on managers' reports as required. The accent on the reasons why appraisal is undertaken in these organisations is on developmental uses. Only ten organisations reported that they use appraisal for evaluative purposes, such as promotion or wage and salary review.

Eighteen organisations reported the primary purpose of performance appraisal as being developmental like improving performance, catering for career aspirations, improving communication between employees and their supervisors, and feedback on their performance. Four organisations reported multi-purpose performance appraisal systems which are used for both developmental and evaluative purposes.

The prevailing responses from work forces to appraisal was reported as being positive. Six organisations did report negative reactions from their employees. One negative reaction is due to the fact that appraisal is new and that the employees find it threatening. Another reason for a negative reaction is due to the lack of openness in the appraisal system. Finally three negative reactions are due to linking performance appraisal with a salary review.

7.4.3.12 Executive Development Programmes

75 percent of the sample organisations reported undertaking executive development programmes. The majority of organisations use both internal and external development programmes, and three organisations conduct all their executive development activities overseas.

The main reasons given for the undertaking of executive development programmes are for the development of key people in preparation for future appointments. Two organisations reported that their development programmes are linked closely to their human resource plans. Surprisingly only two organisations suggested that they undertake executive development programmes as a result of training needs analyses. Generally executive development programmes are seen very positively by those people involved.

7.4.3.13 Performance Counselling

In most cases performance counselling is the outcome of the performance appraisal process. Only four organisations reported that performance counselling is not part of performance appraisal. In these organisations counselling is undertaken as the need arises at the managers' discretion.

In most cases it is given when improvement is required. Also it is carried out as part of the general feedback process on performance to employees. In two organisations it is left up to the personnel department to initiate this performance counselling. Generally there is a positive reaction by most employees in these organisations towards performance counselling.

7.4.3.14 Manpower Planning

Three-quarters of the organisations reported that they undertake manpower planning. Some organisations use an integrated model or process, while the rest tend to have manpower planning for either key positions or certain occupational groups, or it is done at the branch level.

The majority of reasons given why it is undertaken are associated with organisational forward planning. Only one organisation suggested that the primary reason for undertaking it is to assist in career development and to develop their own people.

Employee reactions are difficult to gauge, with a balance between those who view it positively and those who have negative reactions.

7.4.3.15 Training Evaluation

Nearly all organisations undertake some form of training evaluation. The most common way of conducting training evaluation is through feedback from both supervisors and trainees. Three organisations see it as part of the personnel appraisal system. Only two organisations actually use formal course evaluations, the rest seem to rely on comments from either the employees who have been on the training course or their supervisors.

It is undertaken to evaluate the effectiveness of training, and whether the needs of individuals and divisions are being met. The response from the employees is in the main reasonably positive towards training. The general opinion from most of those executives interviewed is that training evaluation tends to be unsystematic and relies very much on the informal end of course comments by those people participating.

7.4.3.16 Succession Planning

Succession planning was reported as an activity by 70 percent of the organisations. In most cases it is undertaken quite informally, and in several organisations is only conducted on a centralised basis by top management executives. Only three organisations reported that it is a formal system based on the performance appraisal procedures adopted by the organisation. In most cases succession planning is conducted by a centralised body, usually the top-management team. However three organisations emphasised that their succession planning is actually decentralised and is given to the branches to undertake.

Most of the organisations noted that succession planning is linked very closely to the manpower planning activities of the organisation, however one organisation emphasised that it is carried out in that organisation because of the effects of "down sizing". It is the sort of activity that draws little if any response from the work forces because it really deals with managerial positions and the succession plans are known only to a select few.

7.4.3.17 Job Enlargement and Job Enrichment

Job enlargement is undertaken by less than half the organisations. In most of these organisations it is simply carried out on an informal basis by managers. Only two organisations reported that it is a result of formal work study programmes.

A wide range of reasons were given as to why organisations undertake job enlargement and enrichment. These are to get greater employee involvement, to broaden the scope of employees and to make jobs more interesting, to remove demarcation, and to improve the utilisation of people. As well as the accent on trying to make jobs more interesting (i.e. a motivational device), a number of organisations reported using job enrichment in restructuring and down sizing work forces.

Generally the reactions reported by employees are positive about the use of such programmes.

7.4.3.18 Joint Consultation

It was interesting to find that joint consultation was not reported in twelve organisations. In the other organisations it is either carried out informally in-house, or alternatively through formal meetings with union representatives. The use of committees and meetings are two very popular ways of achieving joint consultation with employees.

Apart from responding to the demands placed on them through union initiatives, management also conducts joint consultation to seek greater employee involvement thus utilising employee experience to its greatest effect.

Generally across the organisations that undertake joint consultative activities, a positive reaction from their employees was reported. In the two organisations reporting a negative attitude to attempts at joint consultation, the employees were generally suspicious of any attempts by management to consult jointly.

7.4.3.19 Grievance Procedures

In contrast to joint consultation, all but three of the organisations reported the use of grievance procedures. The majority of these organisations follow a formal procedure for the airing and resolution of a grievance. A number have policies that encourage trying to solve the grievance first before the formal procedures are initiated. The personnel department tends to provide advice to line management in some organisations, whereas in others the whole of the grievance procedures are dealt with by the personnel department.

The main reason why organisations have grievance procedures is to try to solve things as quickly as possible. Several organisations reported that they have their grievance procedures established so to resolve a grievance at the lowest level possible. Three organisations indicated that they use grievance procedures to appease the employees. There is a high level of positive reaction from employees about grievance procedures reported across the organisations.

7.4.3.20 Other Personnel Practices

The additional practices mentioned by organisations during the structured interview tended to overlap somewhat with the 19 practices summarized above. However at the time of the interviews, each practice was identified as being specific and different to those key practices summarised on the cards in the structured interviews, so these are included and a brief summary follows.

Employee Communications. Eight organisations reported that they undertake specific personnel practices that are aimed at improving employee communication. These activities include the introduction of a Company newspaper and also conducting surveys of employee opinion about the way the organisation is run. The aim of these programmes is to keep management informed about employee opinion and to enhance communication downwards in the organisation.

Public Relations Activities. While this is not strictly a personnel activity, two of the organisations reported that part of the personnel function's responsibilities is to undertake public relations activities. This is achieved by organising fashion parades (in one organisation) and by general liaison with the public (in the other). The main reason for these activities is to maintain the Company's public profile, and to keep vitality in the organisation.

Personnel Policy and Review. Six organisations indicated that this is an on-going function of their personnel departments. It involves researching new practices, creating personnel policy manuals, and delegating procedures. The main reasons for undertaking this activity are to standardise personnel practice throughout the organisation, to ensure equality of treatment and to delegate much of the operational personnel management practice to the line managers.

Salary and Benefits Development. Seven organisations indicated that in addition to the usual salary and wage activities, they have active programmes of advice to top management on such things as superannuation advice, employee share issues, and the tailoring of remuneration to meet business needs. Such advice is a response to continually changing circumstances.

Industrial Negotiation and Relations. This practice covers a number of procedures undertaken by twelve organisations that are additional to the joint consultation identified in the main part of the structured interview. These procedures include practices to assist line managers in the conducting of negotiations and interpreting legislative requirements. They also include maintaining an audit role on the way the organisation conducts its industrial relations activities. The main reason for this activity is so that line managers will anticipate industrial relations situations better.

Staff Skills and Training. Four organisations included staff training as a specific practice undertaken within their organisation. This training involves specific skills training demanded by the nature of the business operation. The main reason why this is undertaken is because the skills required are highly specialised and it is unlikely that people would be recruited with these skills.

Occupational Health and Safety. Four organisations undertook specific health and safety programmes to promote employee health and also to be ahead of other companies.

Work Force Restructuring. Seven organisations were actively undertaking work force restructuring. Here the personnel department is involved with providing analyses of the existing workforces and redundancy programmes. There is a lot of overlap here with manpower planning, but restructuring refers specifically to reducing the sizes of work forces.

Equal Employment Opportunity. Despite all the publicity and debate on equal employment opportunity programmes, only three organisations specifically reported EEO as part of personnel practice. Activity in this area is focused on the development of policies and programmes and the main reason given is to break down barriers to EEO in the organisation.

Provision of Administrative Services. Six organisations included the provision of administrative services as a major part of the personnel function. These activities include tasks like maintaining the fleet of company cars, arranging staff travel, and administering removal expenses. While not being personnel activities as such, they are part of the personnel function's brief in those organisations. The main reasons given are associated with the idea that it is a matter of convenience to have centralised personnel administering these types of activities.

Appointments. This activity is closely related to advertising for staff and selection, with the exception that in five organisations the personnel department is responsible for the coordination of all appointments in the organisation. In all cases these organisations have policies of making appointments from within the organisation if possible.

Advising Line Management. Three organisations wanted this included as a personnel practice. The reason for this is that in all three there were moves to give each line manager a responsibility in personnel management.

Employee Orientation and Career Advice. Three organisations reported sophisticated induction and career advice programmes. These have been introduced to reduce turnover and to improve skills of new staff.

Organisational Representation. This included activities such as being the organisation's representative on the Employers' Federation. The aim is to be able to communicate the feelings of the organisation so far as human resource matters are concerned to such external representative bodies.

Managing Change and Restructuring. Eight organisations reported that their personnel function is actively involved in the management of change. This involves the tackling of both structural and people issues. Personnel works alongside management groups and sometimes outside consultants are involved. There are a number of reasons given for the management of change including: to meet changing market demands, to meet changing technology, to be more client driven, and to have a more flexible approach to problem solving.

7.4.4 The Level of Employee Participation in Personnel Practice

In Part 3 of the structured interview the four questions were aimed at obtaining the following breakdowns: the number of organisations using ten specified formal participatory structures; the frequency of use of each of the ten different types of formal participatory structures in each of the personnel practices; and the frequency of organisations against each scale value of the degree of participation of employees in each practice. From these measures the mean participation scores and the standard deviations for each practice were calculated.

The level of employee participation in the personnel practices was analysed in terms of both formal and informal participatory structures. Table 7.22 is a summary of the frequency of organisations that reported the use of each formal participatory structure.

TABLE 7.22: USAGE OF FORMAL PARTICIPATORY STRUCTURES

Type	Number of Organisations	Percentage	Rank
Joint Consultative Committees	27	67.5%	3rd=
Periodic Reports to Staff	36	90.0%	1st
Team Briefings	27	67.5%	3rd=
Team Meetings	32	80.0%	2nd
Talkbacks	19	47.5%	5th=
Quality Circles	7	17.5%	9th
Productivity Gain Sharing	13	32.5%	7th
Collective Bargaining	19	47.5%	5th=
Co-Management Committees	11	27.5%	8th
Autonomous Work Groups	5	12.5%	10th

The most popular means of achieving participation is through periodic reports to staff. This is followed by the use of team meetings, joint consultative committees and team briefings. The least popular structures are the use of autonomous work groups and quality circles. Co-management committees and productivity gain-sharing plans are also used by less than 40 percent of the organisations. The organisations reported no other additional structures.

The results of the use of formal participatory structures in personnel practices are quite varied, and are summarised in Table 7.23. Each column in Table 7.23 is coded as follows:

1: Joint Consultative Committees
2: Periodic Reports to Staff
3: Team Briefings
4: Team Meetings
5: Talkbacks
6: Quality Circles
7: Productivity Gain Sharing
8: Collective Bargaining
9: Co-management Committees
10: Autonomous Work Groups

TABLE 7.23: USE OF FORMAL PARTICIPATORY STRUCTURES IN PERSONNEL PRACTICES BY ORGANISATIONS UNDERTAKING THOSE PRACTICES

Personnel Practices	1	2	3	4	5	6	7	8	9	10	None
Production of Labour Turnover Statistics		1	1	1	1				1		30
Employee Records											40
Advertising for Staff	2	3		2	2	1					32
Providing Accident Statistics and Reports	3	3		2					1		24
Involvement with Statutory Provisions for Safety	16	3	2	6		2			4		13
Salary and Wage Activities	6	2	2	4	3		3	7	2		20
Management for Further Education	1	2	2	5					2		28
Participation in Employee Associations	7	4	3	6	3				2		19
Employee Welfare	9	4	3	8	3			2	5		19
Job Evaluation	7	2	4	8				1	1		18
Performance Appraisal	4	4	4	6	1			1	1	1	24
Executive Development Programmes	2	1	2	5			1				22
Performance Counselling	2	1	2	4					2		28
Manpower Planning	2	1	5	4	2				1		23
Training Evaluation	5	4	3	7	3				3		21
Succession Planning	2		1	2							24
Job Enrichment/Enlargement	3		3	7	1			1	2		15
Joint Consultation	15	1	2	6			2	4	1		10
Grievance Procedures	13	3	4	4	1			4	2		17
Additional Practices											
Employee Communications	1	2	1	1		1	1				4
Public Relations Activities			1	1							1
Personnel Policy Review and Development	2	3	3	3	1				2		1
Salary and Benefit Advice	2	1		1					1		3
Industrial Negotiation and Relations	4	1	4	3	1			4	1		3
Staff Skills and Training	2		1	1							3
Occupational Health and Safety	2	1	2	1					1		1
Work Force Restructuring		3	3	3				1			3
Equal Employment Opportunity											3
Provision of Administrative Services				1							5
Appointments	1	1	1	1				1	1		2
Advising Line Management		1	1	2	1	1					2
Employee Orientation and Career Advice		2									2
Organisational Representation	2	1		1	1						
Managing Change and Restructuring	2	3	3	5				1	2		3

The overall trends indicate that the use of formal participatory structures in personnel practices is limited. The following practices tend to use formal participation either very sparingly or not at all: the production of labour turnover statistics, employee records, advertising for staff, performance counselling, executive development programmes, manpower planning, and succession planning.

However there are a number of practices in which over half the organisations reported the use of one or more participatory structures. For instance involvement with statutory provisions for safety, training evaluation, joint consultation, and grievance procedures are practices that used primarily joint consultative committees. Whereas the practices of participation in employee associations, job evaluation, and job enrichment/enlargement use mainly team meetings. Wage and salary activities use collective bargaining. Team meetings are also used in performance appraisal, although for that particular practice only 40 percent of the organisations use any form of participative structures.

TABLE 7.24: MEANS AND STANDARD DEVIATIONS OF RATINGS FOR LEVEL OF PARTICIPATION

Practice	N	Mean	Std Dev
Production of Labour Turnover Statistics	35	1.314	.676
Employee Records	40	2.425	1.196
Advertising for Staff	40	1.900	.928
Providing Accident Statistics and Report	31	2.133	.167
Involvement with Statutory Safety Provisions	38	2.487	.121
Salary and Wage Activities	40	2.450	.011
Management for Further Education	39	2.974	.972
Participation in Employee Associations	38	3.389	.964
Employee Welfare	40	3.050	.783
Job Evaluation	35	2.457	.950
Performance Appraisal	37	3.486	.692
Executive Development Programmes	29	2.862	.060
Performance Counselling	34	3.441	.705
Manpower Planning	31	1.871	.922
Training Evaluation	36	3.056	.860
Succession Planning	28	2.143	.008
Job Enrichment or Enlargement	18	3.211	.787
Joint Consultation	28	3.750	.518
Grievance Procedures	37	3.243	.011
Employee Communications	8	3.286	.113
Public Relations Activities	2	2.667	.577
Personnel Policy Review and Development	6	2.167	.169
Salary Benefits and Advice	7	2.286	.756
Industrial Negotiation and Relations	12	3.231	.927
Staff Skills and Training	5	3.400	.894
Occupational Health and Safety	4	3.500	.577
Work Force Restructuring	7	2.375	.302
Equal Employment Opportunity	3	3.500	.707
Provision of Administrative Services	6	2.500	.049
Appointments	4	1.500	.000
Advising Line Management	3	2.333	1.155
Employee Orientation and Career Advice	3	2.667	.528
Organisational Representation	3	2.667	.528
Managing Change and Restructuring	8	2.857	.900

The results of the personnel executives' ratings of each practice on the four point participation scale are summarised in Table 7.24. These mean scores relate to the amount of participation that employees have that is not the result of formal participatory structures. Inspection of Table 7.24 (Page 155) shows that there are a number of practices that have a high level of informal participation. These have been taken as mean ratings of 3.00 or above. These practices are: participation in employee associations, employee welfare, performance appraisal, performance counselling, training evaluation, job enrichment and enlargement, joint consultation, and grievance procedures.

Among the other practices (bearing in mind that the numbers reported are very small) those that had means of 3.0 and above were employee communications, industrial negotiation and relations, staff skills and training, occupational health and safety, and equal employment opportunity.

On the other hand there are a number of practices with mean ratings of less than two, indicating little or no participation. These are the production of labour turnover statistics, advertising for staff, manpower planning, and appointments. In the latter practice the number obtained is small.

7.4.5 The Degree of Proaction in Personnel Practices

Part 4 of the structured interview was designed to provide a measure of the level of proaction in the personnel practices in the sample organisations using the five point scale from low to high proaction. Table 7.25 shows the results of the executives' ratings of proaction in terms of mean ratings for each practice. If the midpoint is taken as three, then those practices rated highly on proaction across the sample of organisations are: salary and wage activities, management for further education, participation in employee associations, employee welfare, and all the other major practices, with the exception of grievance procedures. All the other practices detailed by organisations came out with mean ratings higher than 3.0, with the exception of the provision of administrative services.

TABLE 7.25: MEANS AND STANDARD DEVIATIONS OF RATINGS FOR LEVEL OF PROACTION

Practice	N	Mean	Std Dev
Production of Labour Turnover Statistics	35	2.714	1.319
Employee Records	40	2.525	1.198
Advertising for Staff	40	2.750	1.149
Providing Accident Statistics and Reports	31	2.633	1.326
Involvement with Statutory Safety Provisions	38	2.763	1.324
Salary and Wage Activities	40	3.675	.997
Management for Further Education	39	3.649	.978
Participation in Employee Associations	38	3.000	1.213
Employee Welfare	40	3.550	1.239
Job Evaluation	35	3.257	1.067
Performance Appraisal	37	3.730	.902
Executive Development Programmes	29	3.833	1.053
Performance Counselling	34	3.382	.954
Manpower Planning	31	3.387	1.116
Training Evaluation	36	3.600	.914
Succession Planning	28	3.714	1.243
Job Enrichment or Enlargement	18	3.263	1.368
Joint Consultation	28	3.379	1.347
Grievance Procedures	37	2.750	1.317
Employee Communications	8	4.000	1.155
Public Relations Activities	2	3.333	1.155
Personnel Policy Review and Development	6	4.333	.816
Salary Benefits and Advice	7	3.571	.976
Industrial Negotiation and Relations	12	3.583	1.084
Staff Skills and Training	5	3.000	.707
Occupational Health and Safety	4	4.000	1.155
Work Force Restructuring	7	4.250	.707
Equal Employment Opportunity	3	3.500	.707
Provision of Administrative Services	6	2.667	1.033
Appointments	4	4.000	.816
Advising Line Management	3	3.333	1.155
Employee Orientation and Career Advice	3	3.667	.577
Organisational Representation	3	4.000	1.732
Managing Change and Restructuring	8	4.000	.756

7.5 The Assessment of Tone in the Organisations

A categorisation of the organisations in terms of Purcell's five predominate management styles also extracted from the structured interview information. This was the subject of Part 5 of the structured interview. The breakdown of the assessment of tone (from the descriptions defined in Chapter 5) is shown in Table 7.26.

TABLE 7.26: THE ASSESSMENT OF TONE

Management Style	Frequency	Percentage
Traditional	1	2.5%
Constitutional	9	22.5%
Consultative	11	27.5%
Sophisticated human relations	15	37.5%
Opportunistic	4	10.0%

Relationships with the management style and certain characteristics of the organisations were investigated. These characteristics included the number of levels in the organisation, the size of the work force, the type of industry, and the position of the personnel executive. None of these relationships were found to be statistically significant. Therefore there were no relationships found between the tone of the organisation as measured by the Purcell typology and the shape of the organisation, nor the size of the work force, nor whether the personnel executive was a member of top-management or not. Neither did the type of industry have any affect on the management style of the organisation.

7.6 The Derivation of the Measures of Personnel Practices

The overall aim of the questions in the structured interview was to derive some meaningful measures of employee practice in each organisation. As discussed in Chapter 5, the structured interview generated data to derive three measures of personnel practice: the level of proaction; the level of participation; and, the tone of each organisation in the sample. These measures were applied to each organisation. This was relevant to the later stages of the analysis which involved identifying relationships between the independent and dependent variables in the research model.

It was considered important that the three indices reflect the practice of the whole of the personnel management function in each organisation. To this end it was necessary to derive some reasonably simple practice measures for each organisation. To achieve this the following measures were computed for each organisation:

a. The number of personnel practices conducted by the organisation. To compute this for each organisation a composite variable was created which summed the number of practices undertaken in each organisation.

b. The proportion of anticipatory practices conducted by the organisation. This was calculated as the number of practices that were identified as being anticipatory divided by the number of practices undertaken.

c. The number of formal participatory structures used. This was computed by the sum of the number of formal participatory structures used by the organisation.

d. The proportion of practices using some form of formal participation. This was computed by summing the number of practices that used either one or more participative structures divided by the number of practices undertaken.

e. The sum of the participation ratings for each practice divided by the total number of practices undertaken. This was called the mean participation score, and was computed by dividing the sum of the participation ratings for each organisation by the number of practices undertaken.

f. The sum of the proaction ratings for each practice divided by the number of practices undertaken. This was the mean proaction score, and was computed by dividing the sum of all the proaction ratings on each practice for each organisation by the number of practices undertaken.

TABLE 7.27: SUMMARY OF PRACTICES MEASURES RESULTS

Organisation	No. of Practices Undertaken	Proportion of Anticipatory Practices	No. of Participatory Structures Used	Proportion of Practices Using Score Formal Participation	Mean Participation	Mean Proaction Score
1	13.00	.15	4.00	.23	2.00	2.69
2	19.00	.84	6.00	.37	1.95	2.89
3	17.00	.35	6.00	.94	2.71	2.41
4	18.00	.39	6.00	.72	2.78	3.11
5	21.00	.57	6.00	.14	2.71	3.38
6	23.00	.13	7.00	.52	3.30	4.17
7	11.00	.27	6.00	.36	3.09	3.00
8	19.00	.89	4.00	.79	3.68	3.32
9	19.00	.53	4.00	.00	2.84	3.26
10	18.00	.67	9.00	.78	2.78	3.61
11	20.00	.65	8.00	.75	2.75	3.90
12	23.00	.39	4.00	.13	2.78	2.83
13	20.00	.20	7.00	.70	2.55	3.40
14	18.00	.28	5.00	.50	2.56	3.61
15	21.00	.43	5.00	.24	2.48	2.90
16	18.00	.44	1.00	.00	2.61	3.17
17	14.00	.36	6.00	.57	2.07	3.43
18	20.00	.60	6.00	.45	2.75	2.80
19	17.00	.24	4.00	.53	2.65	3.06
20	15.00	.27	1.00	.20	1.93	3.53
21	20.00	.50	4.00	.35	2.60	3.50
23	21.00	.33	7.00	.57	2.62	3.24
24	16.00	.38	5.00	.13	2.25	2.44
25	22.00	.18	5.00	.32	2.68	2.68
26	16.00	.38	4.00	.75	3.13	3.19
27	18.00	.22	3.00	.06	3.28	3.78
28	11.00	.36	2.00	.00	1.73	2.82
29	19.00	.42	1.00	.26	3.11	3.89
30	19.00	.68	5.00	.00	2.47	3.21
31	15.00	.47	4.00	.20	2.33	4.00
32	17.00	.29	3.00	.18	2.35	2.41
33	22.00	.59	9.00	.41	3.14	3.91
34	22.00	.73	7.00	.41	2.45	2.64
35	23.00	.43	3.00	.39	2.43	2.70
37	16.00	.56	4.00	.44	3.19	2.94
38	17.00	.41	3.00	.06	2.71	3.06
39	18.00	.67	4.00	.44	3.33	4.11
40	18.00	.78	6.00	.39	2.44	4.44
41	23.00	.87	8.00	.61	3.04	3.74
42	18.00	.22	4.00	.56	2.89	2.72

These were the measures of personnel practice used, and were taken at the organisational level of analysis. These measures are summarised in Table 7.27. It was these measures that were used in the final correlation matrix as the set of personnel practices' independent variables, together with the management style of the organisation categorised according to the Purcell typology.

As noted in Chapter 5, the dependent variable in the design of this research was productivity. The next chapter presents the results of the attempt to obtain measures of productivity, and describes the procedure undertaken to present the results in a meaningful way.

CHAPTER 8

THE RESULTS OF THE PRODUCTIVITY DATA

8.1 The Lack of Productivity Data

The return of the productivity information that was requested at the end of each structured interview was disappointing. Although a few organisations did respond well, the gaps in the final data set (see Appendix 7) are large. Only one variable in the data set had a consistently high return and that was the labour turnover measure, where 33 out of the 40 organisations supplied turnover data. Less than half the organisations were able to supply any absenteeism data, and only 17 organisations could provide any indication of direct labour efficiency using standard time.

There was even a dearth of financial ratios, and in this respect only 16 organisations were able to supply the requested information. There was not a consistent pattern why the organisations were unable to supply the information. A common reason was that in many cases the organisation simply did not keep records. This was particularly so with absenteeism. Some organisations reported the difficulty in trying to provide any meaningful data on direct labour efficiency, primarily on the grounds of the nature of their work. A very small number of organisations indicated that they could not divulge any financial data because they were private companies. One company disputed the validity of the whole of the productivity data set suggesting that it was inappropriate, and that they had their own productivity indicators. A request for these, however produced no result from that particular company.

While a very few number of organisations may have been somewhat circumspect about producing the productivity data, the majority supplied what they could. It is also necessary to emphasise that of the data that was supplied, some of it was based on precise measurement, while some was based on estimates. Therefore as well as there being a paucity in the quantity of the data from organisations there are also concerns about its quality. The significant aspect to remember is that whatever measure of overall productivity is used, it is at best very crude. One of the difficulties was to try and obtain measures that were common across a variety of organisations. In this respect, the greatest hope lay with the indirect measures of absenteeism and labour turnover.

It was not clear in many cases whether the lack of information was due to no records or an inability or unwillingness to make the information available. The difficulties involved in trying to extract the productivity information from many of the organisations were great. In a significant number of organisations, the time period between the structured interview and the supplying of the productivity information was substantial running into a number of months. The cause of such tardiness is unknown, but it is assumed that for many organisations, much of the required information was not readily available. Some organisations went to considerable trouble to supply this information, and those organisations produced full data sets. It was disappointing however that on none of the productivity variables was a complete return received from all of the organisations in the sample.

Even though there are great gaps in the productivity data set the elimination of many of the organisations would greatly reduce the effectiveness of this project. Therefore to determine the productivity question it was considered that a methodology must be used to incorporate all organisations, even if their productivity information was nil.

8.2 The Assessment of Productivity Using Points Evaluation

In the absence of complete measures of productivity, it was agreed that the procedure adopted to categorise the productivity of each organisation would have to be subjective, nevertheless it would be systematic and consistent. Since many evaluations in human resource activities involve essentially the use of subjective judgements (e.g. job evaluation scales, performance rating scales, interviews in selection), the use of such methodology is therefore justifiable in a research study of this nature.

The methodology was a modified point rating system used in job evaluation exercises (British Institute of Management, 1970). A total of 500 points was available and this was broken down into weights as follows:

TABLE 8.1: POINTS' WEIGHTS FOR PRODUCTIVITY VARIABLES

Variable	Percent Weight	Total Points
Absenteeism	30%	150
Labour Turnover	20%	100
Productive Time	25%	125
Quality	15%	75
Profit	10%	50

The above weights were justified as follows:

Of all the five sets of variables, absenteeism is directly affected by the personnel policies of the organisation. Good policies also affect the accident rate, so it was considered that of all the factors absenteeism would be the most important. Also absenteeism is reasonably straight forward to record, and if statistics are not kept one must question the organisation's commitment to measuring its inputs.

Productive time is also considered to be very important, because many of the elements of non-productive time are directly related to personnel practices (e.g. supervision, training). Because the actual breakdown of non-productive time yielded sketchy data, it was felt that using the percentage of productive time (i.e. 100 percent less the total percentage nonproductive time) would be a better option. It was decided that productive time was not as important as absenteeism, and therefore it was weighted less.

Labour turnover is also important and is closely linked with productivity. If it is high then employee productivity will be affected because of the extra costs involved in acquiring and training replacements. However turnover is also affected by external economic conditions. Therefore it was decided that it should not be weighted as high as the first two.

While quality of product is also important, it is removed from the personnel policies of the organisation or department in that organisation. Therefore it was decided that it should be given a lower weighting.

Profit also is affected by factors other than employee productivity. For instance the profitability of an organisation can be affected by the share market, or a change in taxation. Therefore it was considered that the weighting given to this factor should be even smaller.

The next step was to decide how to weight the sub factors. This was done by considering the order of importance for each and then allocating the points accordingly. The final points allocation for each factor is given in Table 8.2.

TABLE 8.2: POINTS ALLOCATION FOR EACH FACTOR

Absenteeism	**Max Points**
Frequency of approved absence	75
Absence due to work injuries	50
Absence due to other reasons	25
Labour turnover	100
Productive time	125
Quality of product/service	
Scrap	37.5
Customer returns	37.5
Profit	
Earnings per share	25
Return on shareholders investment	25
Total Points allocated	500

The productivity data for each firm was studied and points were allocated according to the above evaluation system. Table 8.3 is a sample organisation and illustrates how the points were allocated.

TABLE 8.3: SAMPLE POINTS ALLOCATION

Factor A (Absenteeism): No Data				
	1. 0 2. 0 3. 0			= **0**
Factor B (Turnover): 5%			Points = .95*100	= **95**
Factor C (Productive Time): 81%			Points = .81*125	= **101**
Factor D (Quality) Scrap: 13%			Points = .87*37.5	= **33**
Returns: 4.87%			Points = .95*37.5	= **36**
Factor E (Profit)	EPS	Scale	80-99c = 25 60-79c = 20 40-59c = 15 20-39c = 10 1-19c = 5	
	RSI	Scale	20%+ = 25 15% = 15 10% = 10 5% = 5	
An EPS of 88c gives			.88*25	= **22**
An RSI of 12%				= **12**

Therefore the total points for this organisation is **299** points.

Two judges studied the productivity data sent by each organisation and assigned points using the above methodology. The final rankings based on these points are shown in Table 8.4 below:

TABLE 8.4: FINAL POINTS RANKINGS

Rank	Organisation	Points
1.	(4)	428
2.	(35)	418
3.	(39)	408
4.	(6)	401
5.	(33)	399
6.	(26)	379
7.	(19)	375
8.	(30)	360
9.	(31)	344
10.	(15)	341
11.	(21)	329
12.	(3)	319
13.	(1)	299
14.	(18)	292
15.	(29)	240
16.	(28)	234
17.	(2)	230
18.	(16)	227
19.	(40)	226
20.	(17)	222
21.	(37)	188
22.	(25)	187
23.	(11)	169
24.	(41)	149
24.	(10)	149
26.	(27)	129
27.	(5)	122
28.	(32)	120
29.	(23)	95
30.	(12)	92
31.	(7)	86
32.	(13)	84
33.	(34)	77
34.	(24)	71
35.	(8)	70
36.	(9)	0
36.	(20)	0
36.	(14)	0
36.	(42)	0
36.	(38)	0

This result was inspected and the organisations fell naturally into five broad bands, based on the points allocation groups shown in Table 8.5 below:

TABLE 8.5: POINTS ALLOCATION GROUPS

Band	Categorisation
350 - 500 points	(5) Very Good
240 - 349 points	(4) Good
130 - 239 points	(3) Sufficient
1 - 129 points	(2) Little
0 points	(1) None

It is emphasised that the assigned productivity categorisations are based solely on what information or lack of information was supplied by participating organisations. These categorisations do not purport to provide acccurate measures of productivity for these organisations, because there are so many unknowns due to missing data. Therefore the five categorisations relate purely to the bounds established in this project and cannot be interpreted beyond those bounds. The productivity categorisations are therefore the result of two dimensions and these will have affected the allocation of points on the various factors in the productivity assessment process. These dimensions are the amount of productivity information each organisation actually supplied and the accuracy of that information. Some of the data was based on real data, while others were based on the best estimates that could be made. The results must therefore be interpreted with these major limitations in mind.

It was decided to conduct a cross validation of the procedure by asking an independent judge to conduct a paired-comparison ranking of a selected sample of the above organisations. The judge was asked to compare each organisation on the basis of the productivity information supplied on the five original measures. The judge was not told the weighting basis used in the points evaluation procedure: how he utilised the productivity information was left to him. The sample was selected from each band, and because of the number of paired-comparisons that would be required, the sample was limited to ten organisations. This meant that the judge would have to undertake $n(N-1)/2$ or $10*9/2 = 49$ comparisons.

Once the ranking was completed, the judge was asked to assign each organisation to one of the five productivity categorisations used in the main study. The results are shown in Table 8.6 below:

TABLE 8.6: RESULTS OF INDEPENDENT JUDGE

Rank	Organisation	Information
1.	(4)	Good (4)
2.	(10)	Good (4)
3.	(30)	Good (4)
4.	(21)	Very Good (5)
5.	(18)	Good (4)
6.	(23)	Very Little (2)
7.	(17)	Very Little (2)
8.	(32)	Sufficient (3)
9.	(27)	Sufficient (3)
10.	(20)	No Information (1)

A Spearman rank correlation coefficient was calculated between the independent judge's rankings of the 10 organisations with the same organisations ranked by the points evaluation procedure. The obtained correlation of .782 was significant at the .01 level. Inspection of the rankings showed that the d_i squared of 8 of the 10 organisations were 4 or less. Consequently the greatest discrepancy was between just two organisations, this in effect shrunk the correlation from the .90's.

It was considered that the point method therefore produced consistent and replicable results. Table 8.7 contains the results of the points allocations and the labour turnover statistics. Since labour turnover was reported by 33 organisations it was included in the dependent variable measures.

8.3 The Results of the Inter Correlations Between Productivity and the Independent Variables

Having determined the best organisational measures possible for each of the variables in the model, an analysis was run to produce an intercorrelation matrix to identify the relationships between the independent and dependent variables. This analysis represents a first look at the data at the organisational level. The measures for each organisation that were correlated were the five mean beliefs about work scores, the organisational climate score, the six practice scores, and the three productivity measures of labour turnover, productivity points, and productivity category.

Table 8.7 shows these variables listed by organisation. Pearson correlation coefficients were calculated on these data and the resulting correlation matrix is shown in Table 8.8. The minimum significance level chosen throughout this study has been the .01 level of significance, and in this particular part, two tailed tests were selected because of the exploratory nature of the data (Norusis 1985).

Inspection of Table 8.8 shows that there are very few significant relationships among the variables. Most of the intercorrelations are very low, and in particular there are no significant relationships between any of the independent and the three dependent variables. The correlations that are significant are marked with asterisks. The correlation between the work ethic scores and the organisational belief scores are statistically significant and so is the correlation between the humanistic belief and organisational belief scores. The significant negative correlation between the Marxist belief score and organisational climate score may suggest the organisations whose work forces have a higher endorsement of the Marxist belief system may also have more negative feelings about the way they are being managed. The significant correlation between the number of formal participative structures and the proportion of practices that use formal participation simply suggests that the greater the number of different formal participative structures that are used in an organisation, the greater the likelihood that the personnel practices in that organisation will use formal participatory structures.

What is really significant from this table of intercorrelations is that there are no significant correlations between the independent variables and the dependent variables. The only highly significant correlation is between the productivity points and the productivity category. This is not surprising because this reflects that the productivity categorisation of each organisation was derived from the number of productivity points allocated.

Given the nature of these data, the significant correlations obtained between the independent variables may also be called into question, given the size of the matrix in the first place. The Bonferroni inequality (Harris 1985) suggests that if a number of significance tests are carried out over a number of variables then the greater is the chance that statistically significant results will be yielded by chance, therefore the greater the number of variables the greater is the probability of committing a type 1 error, if simple t tests or f ratios are used. Therefore it is necessary to make a Bonferroni Adjustment simply by dividing the critical value for Pearson r by the number of variables. In this case the significance level therefore becomes .01/16 or .0006. If this Bonferroni adjustment is applied to the matrix of intercorrelations, the only correlation that would meet this level of statistical significance is the correlation between productivity points and category, which is meaningless is practical terms since the dependent variable category is derived directly from the dependent variable productivity points.

TABLE 8.7: EMPLOYEE ATTITUDE, PERSONNEL PRACTICE, AND PRODUCTIVITY SCORES BY FIRM

Org.	Employee Attitude Results						Personnel Practice Results							Productivity Results		
FIRM	Work Ethic Mean Score WRKETHMN	Organisational Mean Score ORGANIMN	Marxist Mean Score MARXIMN	Humanistic Mean Score HUMANIMN	Leisure Mean Score LEISUMN	Org Climate Mean Score SCALETMN	No. of Practices PRACS	Proportion Proactive PROACS	Number of Structures PARSTRUC	Proportion of Participation PTPRACS	Mean Participation Score EMPRACS	Mean Proaction Score PRPRACS	'Tone' ORGSTYLE	LABTUNO	POINTS	CAT
1	2.6467	3.5200	2.7985	4.4187	3.2850	89.7382	13.00	.15	4.00	.23	2.00	2.69	2	5	299	4
2	2.4313	3.5079	3.0260	4.1548	3.3474	85.0591	19.00	.84	6.00	.37	1.95	2.89	4	17	230	3
3	2.4511	3.2573	2.8947	4.2977	3.1852	94.7911	17.00	.35	6.00	.94	2.71	2.41	2	17	319	4
4	2.5802	3.2598	2.8009	4.4481	3.4319	87.8621	18.00	.39	6.00	.72	2.78	3.11	5	17	428	5
5	2.5919	3.5297	2.8376	4.4023	3.0988	96.4690	21.00	.57	6.00	.14	2.71	3.38	4	19	122	2
6	2.8235	3.6601	2.8209	4.4059	3.3676	94.1765	23.00	.13	7.00	.52	3.30	4.17	3	0	401	5
7	2.5752	3.3635	3.0009	4.4870	3.4457	85.1102	11.00	.27	6.00	.36	3.09	3.00	2	14	86	2
8	2.6256	3.4100	3.0408	4.3724	3.4224	88.8171	19.00	.89	4.00	.79	3.68	3.32	4	30	70	2
9	2.6944	3.6420	2.8636	4.4173	3.2535	97.3287	19.00	.53	4.00	.00	2.84	3.26	5	.	0	1
10	2.6167	3.4280	2.8155	4.2195	3.3335	93.1021	18.00	.67	9.00	.78	2.78	3.61	4	.	149	3
11	2.6479	3.3149	2.7772	4.3549	3.4391	91.0012	20.00	.65	8.00	.75	2.75	3.90	4	20	169	3
12	2.5757	3.5947	3.1605	4.4216	3.2568	86.8461	23.00	.39	4.00	.13	2.78	2.83	3	8	92	2
13	2.5646	3.2686	3.2162	4.4743	3.5405	79.6785	20.00	.20	7.00	.70	2.55	3.40	1	16	84	2
14	2.7672	3.3818	2.6410	4.3756	3.4139	102.0603	18.00	.28	5.00	.50	2.56	3.61	2	.	0	1
15	2.6735	3.3532	2.8084	4.2857	3.6339	86.6429	21.00	.43	5.00	.24	2.48	2.90	4	28	341	4
16	2.5460	3.2790	3.0505	4.2311	3.4500	91.2000	18.00	.44	1.00	.00	2.61	3.17	4	35	227	3
17	2.6110	3.6200	3.3018	4.5260	3.1925	89.6897	14.00	.36	6.00	.57	2.07	3.43	5	27	222	3
18	2.6592	3.2540	3.1792	4.3767	3.3543	83.3394	20.00	.60	6.00	.45	2.75	2.80	2	19	292	4
19	2.6170	3.6413	2.9792	4.3514	3.2561	95.7680	17.00	.24	4.00	.53	2.65	3.06	3	15	375	5
20	2.6571	3.6991	3.1998	4.5222	3.3500	81.1072	15.00	.27	1.00	.20	1.93	3.53	4	.	0	1
21	2.4473	3.2674	2.6229	4.4750	3.3326	84.2652	20.00	.50	4.00	.35	2.60	3.50	3	23	329	4
23	2.4254	3.2160	3.0491	4.4622	3.4110	88.9792	21.00	.33	7.00	.57	2.62	3.24	4	15	399	5
24	2.5630	3.7288	3.1872	4.2471	3.0956	92.1176	16.00	.38	5.00	.13	2.25	2.44	3	29	71	2
25	2.6213	3.3775	3.2111	4.3622	3.4924	86.5038	22.00	.18	5.00	.32	2.68	2.68	4	13	187	3
26	3.1429	3.6543	3.0505	4.4833	3.3611	97.9832	16.00	.38	4.00	.75	3.13	3.19	4	28	379	5
27	2.6807	3.3464	2.7487	4.3471	3.4926	83.4706	18.00	.22	3.00	.06	3.28	3.78	4	47	129	2
28	2.5764	3.5441	3.0909	4.4448	3.3707	79.3971	11.00	.36	2.00	.00	1.73	2.82	2	10	234	3
29	2.8367	3.8108	3.2589	4.3619	3.6156	86.5238	19.00	.42	1.00	.26	3.11	3.89	3	16	240	4
30	2.7817	3.4550	3.0712	4.2214	3.3673	93.2381	19.00	.68	5.00	.00	2.47	3.21	4	18	360	5
31	2.7505	3.7007	3.4390	4.1884	3.3984	86.9582	15.00	.47	4.00	.20	2.33	4.00	2	68	344	4
32	2.8889	3.8603	2.9646	4.4333	3.3750	99.5623	17.00	.29	3.00	.18	2.35	2.41	3	30	120	2
33	2.6563	3.5891	2.9640	4.3148	3.3715	81.1676	22.00	.59	9.00	.41	3.14	3.19	4	9	399	5
34	2.6399	3.4657	3.1400	4.4076	3.3947	85.8388	22.00	.73	7.00	.41	2.45	2.64	3	23	77	2
35	2.8316	3.7093	3.2886	4.2171	3.2782	91.5626	23.00	.43	3.00	.39	2.43	2.70	5	9	418	5
37	2.8137	3.5845	3.4664	4.4348	3.4783	67.7903	16.00	.56	4.00	.44	3.19	2.94	2	36	188	3
38	2.4672	3.6102	3.1236	4.3204	3.3119	80.6605	17.00	.41	3.00	.06	2.71	3.06	2	.	0	1
39	2.6364	3.3064	2.8333	4.3808	3.3030	101.0055	18.00	.67	4.00	.44	3.33	4.11	4	26	408	5
40	2.7517	3.6487	3.4010	4.3204	3.3374	82.2118	18.00	.78	6.00	.39	2.44	4.44	3	16	226	4
41	2.5643	3.5928	3.0302	4.3705	3.5575	94.0866	23.00	.87	8.00	.61	3.04	3.74	3	3	149	3
42	2.5814	3.3372	3.2358	4.5212	3.4724	85.7851	18.00	.22	4.00	.56	2.89	2.72	3	.	0	1

TABLE 8.8: INTERCORRELATION MATRIX

PEARSON CORRELATION COEFFICIENTS

	Work Ethic Mean	Organisational Mean	Marxist Mean	Humanistic Mean	Leisure Mean	Org Climate Mean	No of Practices	Proportion Proactive
Work Ethic Mean	1.0000							
Organisational Mean	.5175**	1.0000						
Marxist Mean	.1668	.4026*	1.0000					
Humanistic Mean	.4067	-.0882	-.0376	1.0000				
Leisure Mean	.1579	-.2402	.0571	.0706	1.0000			
Org Climate Mean	.2184	.0702	-.4944**	-.1225	-.3344	1.0000		
Number of Practices	-.0272	-.0204	-.1168	-.2096	.1669	.1348	1.0000	
Proportion Proactive	-.0860	-.0247	.0714	-.3985*	-.0039	-.0173	.2804	1.0000
Number of Structures	-.2073	-.2960	-.2090	-.0773	-.0418	.0792	.3656	.3122
Proportion Participative	-.0132	-.3401	-.1068	.1773	.0986	.1389	.1420	.1268
Mean Participation Score	.2134	-.1828	-.1769	.1046	.2857	.0958	.3408	.1654
Mean Proaction Score	.1817	.0560	-.1105	-.0375	.2063	.0435	.1475	.2474
Tone	.0954	.0343	-.1769	-.1093	-.1265	.3097	.3012	.2379
Labour Turnover	.1813	.0130	.2027	-.2443	.0900	-.0877	-.3007	.0650
Productivity Points	.1695	-.1003	-.0970	-.2300	-.0082	.1170	.1352	.0098
Productivty Category	.2185	-.0622	-.0489	-.2377	.0173	.1236	.1695	.0784

	No of Structures	Proportion Participatory	Mean Participation Score	Mean Proaction Score	Tone	Labour Turnover	Productivity Points	Productivity Category
Number of Structures	1.0000							
Proportion Participative	.5598**	1.0000						
Mean Participation Score	.1616	.3382	1.0000					
Mean Proaction Score	.1963	.1132	.3417	1.0000				
Tone	.0276	-.0029	.0387	.1315	1.0000			
Labour Turnover	-.3471	-.1996	.0394	.1063	.0094	1.0000		
Productivity Points	.1345	.2039	.0433	.1519	.2193	-.1128	1.0000	
Productivity Category	.1946	.2628	.1053	.2083	.2024	-.2033	.9787**	1.000

* significant at .01 level
** significant at .001 level

8.4 The Results of Beliefs About Work and Productivity

The second objective of the research study was to investigate the relationship between people's beliefs about work, the climate within organisations and the productivity of organisations. In other words, do work beliefs and organisational climate affect productivity? The analysis of this question involved the measurement of the impact of the beliefs about work scores and the Litwin and Stringer score on the dependent variables. The results of the intercorrelation matrix (Table 8.8) suggest that there is no relationship between the mean belief scores and mean climate scores and the three dependent variables at the organisational level of analysis. Since the productivity points are based on incomplete productivity data, the only real indication is that there is no relationship between these measures and turnover in this survey.

An issue is whether there is any relationship between the amount of productivity information given by the organisation and the mean beliefs and climate scores obtained in that organisation. The argument being that those organisations that have productivity information available are more sophisticated in their approach to personnel practice and in turn may have a better rapport with their employees. To investigate this it was decided that a discriminant analysis be carried out on the mean organisational scores obtained by each of the organisations' employees and the substance of the organisation's productivity data.

Discriminant analysis is a multivariate procedure involving continuous independent variables and a discrete dependent variable. The aim of this procedure is to differentiate statistically between two or more groups, and to determine how well membership of these groups is predicted by the scores on the continuous independent variables.

The five point categorisation for each firm is shown in Table 8.5. These categories are based on prescribed ranges of the total points allocated on the substance of the productivity data supplied by each organisation. This five point categorisation was recoded into two categories; enabling the classification of organisations as having either sufficient productivity data (categories 5, 4, and 3) and insufficient data (categories 2 and 1).

The purpose therefore is to determine whether the mean beliefs about work scores and the mean organisational climate scores can distinguish statistically between the organisations in terms of the amount of productivity information supplied. The discriminant analysis produces linear combinations of the independent variables (the mean organisation belief scores on each of the five belief systems and the mean organisation climate score) which are used as the basis for classifying each case (the 40 organisations) into one of these two groups (Norusis 1985).

The utility of using a multivariate approach is that it takes into consideration the fact that some of the independent variables may be correlated. There are some moderate correlations shown in the matrix in Table 8.8. The number of cases is forty and the number of discriminating variables is six. In discriminant analysis the total number of cases must exceed the number of variables by at least two (Klecka 1980). To accommodate the relationships between independent variables a stepwise discriminant analysis procedure allows for the examination of every step of the importance of the variables which have been included and those which are to be

included. It operates in principle like a stepwise multiple regression, because one variable is included in the discriminant function at each step, being the variable that results in the most significant F ratio after adjusting for the relationships that variables may have with variables already in the model. The procedure continues until there is no significant gain in discrimination achieved with the inclusion of more variables, as determined by the partial F ratios. What this means essentially is that a variable that at a univariate level may have appeared to be an important discriminator, may become less important because of its own relationship with other independent variables in the data set.

Table 8.9 shows the group means and standard deviations for the six variables.

TABLE 8.9: GROUP MEANS AND STANDARD DEVIATIONS

Group 1: Organisations with insufficient Productivity Data

Group 2: Organisations with sufficient Productivity Data

GROUP MEANS

	Work Ethic Mean	Organis Belief Mean	Marxist Belief Mean	Humanist Belief Mean	Leisure Ethic Mean	Organis Climate Mean
Group 1.	2.6378	3.5308	3.0096	4.4022	3.3424	89.1590
Group 2.	2.6592	3.4828	3.0396	4.3503	3.3828	88.6174
Total	2.6521	3.4988	3.0296	4.3676	3.3693	88.7980

GROUP STANDARD DEVIATIONS

	Work Ethic SD	Organis Belief SD	Marxist Belief SD	Humanist Belief SD	Leisure Ethic SD	Organis Climate SD
Group 1.	0.1062	0.1757	0.1873	0.0729	0.1367	7.6150
Group 2.	0.1570	0.1768	0.2268	0.1003	0.1111	6.7740
Total	0.1410	0.1756	0.2125	0.0944	0.1200	6.9689

Inspection of the means and standard deviations allows a univariate overview and this suggests that there is very little discrimination between the two groups on each of the independent variables. In Table 8.10 the univariate F ratios are summarised and the significance of the group mean differences are listed. In no independent variable is there a statistically significant F ratio. The Wilks' Lambda statistic is the ratio of each of the independent variable's within group sum of squares to the total sum of squares.

A Lambda value of unity means therefore that the observed group means are identical. Conversely Lambda values that approach zero occur when the within-groups variability is small compared to the total variability, in other words most of the variability is attributable to differences between the group means (Norusis 1985). The high values of Lambda shown in Table 8.10 suggest that most of the variability is attributable to within the two groups.

TABLE 8.10: WILKS' LAMBDA (U-STATISTIC) AND UNIVARIATE F-RATIO

VARIABLE	WILKS' LAMBDA	F	SIGNIFICANCE
Work Ethic Mean	0.9947	0.1960	0.6606
Org Belief Mean	0.9829	0.6426	0.4279
Marxist Mean	0.9954	0.1695	0.6829
Humanistic Mean	0.9312	2.7320	0.1068
Leisure Ethic Mean	0.9742	0.9797	0.3287
Org Climate Mean	0.9986	0.5103	0.8225

Table 8.11 shows the pooled within-groups correlation matrix which represents the averaging of the separate covariance matrices for each of the groups, and the resulting correlation matrix (Norusis 1985). Inspection of this matrix suggests that there is evidence that some of the independent variables are correlated suggesting that a multivariate procedure is appropriate.

TABLE 8.11: POOLED WITHIN-GROUPS CORRELATION MATRIX

	Work Ethic Mean	Organis Belief Mean	Marxist Belief Mean	Humanist Belief Mean	Leisure Ethic Mean	Organis Climate Mean
W/E Mean	1.0000					
Org Mean	0.5283	1.0000				
Marx Mean	0.1778	0.4484	1.0000			
Huma Mean	0.0919	-0.0919	-0.0645	1.0000		
Leis Mean	0.1618	-0.2082	0.0265	0.0839	1.0000	
O/C Mean	0.2175	0.0566	-0.4898	-0.1294	-0.3273	1.0000

The results of the stepwise discriminant analysis are summarised in Table 8.12. Only two of the six independent variables made it into the discriminant function using the default tolerance levels of SPSS[X]. These were the humanistic and leisure mean scores. The obtained canonical discriminant function does not provide any separation between the two groups, and the canonical correlation coefficient (eta) indicates that the obtained function explains only 10 percent of the variance in the dependent variable. The lack of significance indicates that the obtained discriminant function cannot be generalised beyond this particular sample. Table 8.13 shows that if this particular function was used to classify organisations into the groups, the obtained classifications are little better than chance. Consequently these results indicate that there is no differentiation on the basis of the amount of productivity information provided by the organisations attributable to the belief and climate scores.

TABLE 8.12: DISCRIMINANT ANALYSIS

Summary Table

Step	Action Entered	Action Removed	Vars In	Wilks' Lambda	Sig.
1	Humanistic Mean		1	.9312	.1068
2	Leisure Mean		2	.9021	.1566

Canonical Discriminant Functions

Function	Eigenvalue	Percent Of Variance	Cumulative Percent	Canonical Correlation
1*	0.1085	100.00	100.00	.3129

After Function	Wilks' Lambda	Chi-squared	D.F.	Significance
0	0.9021	3.7085	2	0.1566

Standardized Canonical Discriminant Function Coefficients

	FUNC 1
Humanistic Mean	0.87255
Leisure Mean	-0.56715

TABLE 8.13: CLASSIFICATION RESULTS

Actual Group	No. Of Cases	Predicted Group Membership 1	2
GROUP 1	3	9 69.2%	4 30.8%
GROUP 2	26	13 50.0%	13 50.0%
UNGROUPED CASES	1	1 100.0%	0 0.0%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 56.41%

8.5 The Results of Personnel Practice and Productivity

The third objective of this research was to determine whether there is a relationship between personnel practice and productivity in organisations. To address this objective it is necessary to determine whether there are any significant relationships between the personnel practice measures developed in this investigation and the dependent variables. Inspection of Table 8.8 suggests that there are none (as is the case with the work attitude measures discussed in Section 8.4 above). To see if there are any relationships on the basis of the amount of the productivity information, an identical procedure to the procedure adopted in Section 8.4 was undertaken. This time the discriminant analysis involved the seven personnel practice measures and the objective was to see whether any of these was able to discriminate between the two groups of organisations; those classified as providing insufficient productivity information and those that provided sufficient productivity information.

TABLE 8.14: GROUP MEANS AND STANDARD DEVIATIONS

Group 1: Organisations with insufficient Productivity Data

Group 2: Organisations with sufficient Productivity Data

Group Means

	No of Practices	Proact Propn	No of Structs	Particl Prop	Partic Score	Proact Score	Tone
Group 1	18.1539	0.4178	4.4615	0.2809	2.7072	3.1271	3.0769
Group 2	18.5000	0.4799	5.1539	0.4321	2.6563	3.3278	3.4231
Total	18.3846	0.4592	4.9231	0.3817	2.6733	3.2609	3.3077

Group Standard Deviations

	No of Practices	Proact Propn	No of Structs	Particl Prop	Partic Score	Proact Score	Tone
Group 1	3.1582	0.2093	1.7614	0.2530	0.4561	0.4430	1.1152
Group 2	3.1145	0.2018	2.1483	0.2451	0.4206	0.5517	0.9868
Total	3.0917	0.2038	2.0311	0.2548	0.4274	0.5209	1.0299

TABLE 8.15: WILKS' LAMBDA (U-STATISTIC) AND UNIVARIATE F-RATIO

Variable	Wilks' Lambda	F	Significance
No. of Practices	0.99714	0.1061	0.7465
Propn Proactive	0.97879	0.8019	0.3763
No. of Structures	0.97350	1.007	0.3221
Propn Participative	0.91971	3.230	0.0805
Participation Score	0.99676	0.1202	0.7308
Proaction Score	0.96617	1.295	0.2624
Tone	0.97424	0.9785	0.3290

Tables 8.14 and 8.15 provide the univariate statistics. Inspection of the group means and the Wilks' Lambdas and their corresponding F ratios suggests that like the work attitudes, none of the independent variables discriminate between the two groups.

TABLE 8.16: THE POOLED WITHIN-GROUPS CORRELATION MATRIX

	No of Practs	Propn Proac	No of Strucs	Propn Parti	Parti Score	Proac Score	Tone
Practs	1.0000						
Prop p	0.2771	1.0000					
Struct	0.3619	0.2880	1.0000				
Prop P	0.1357	0.1147	0.5554	1.0000			
Parti	0.3477	0.1945	0.1804	0.3641	1.0000		
Proac	0.1390	0.2030	0.1624	0.0864	0.3784	1.0000	
Tone	0.2963	0.2150	-0.0020	-0.0456	0.1038	0.0990	1.0000

Inspection of Table 8.16 shows that some of the independent variables are correlated, therefore a discriminant analysis was run as in Section 8.4. Table 8.17 shows the results of the discriminant analysis.

TABLE 8.17: RESULTS OF THE DISCRIMINANT ANALYSIS

Summary Table

Step	Action Entered	Removed	Vars In	Wilks' Lambda	Sig.
1	Participation Proportion		1	.9197	.0805
2	Participation Score		2	.8940	.1332
3	Proaction Proportion		3	.8481	.1194
4	Tone		4	8238	.1482

Canonical Discriminant Functions

Function	Eigenvalue	Percent Of Variance	Cumulative Percent	Canonical Correlation
1*	0.2138	100.00	100.00	0.4197

After Function	Wilks' Lambda	Chi-Squared	D.F.	Significance
0	0.8238	6.7825	4	0.1478

Standardized Canonical Discriminant Function Coefficients

	FUNC 1
Participation Proportion	0.8600
Participation Score	-0.6864
Proaction Proportion	0.5498
Tone	0.4077

In a similar fashion to the results obtained for beliefs about work and productivity, only four of the seven independent variables entered the discriminant function. The obtained eta indicates that this function explains only about 16 percent of the variance in the dependent variable and these results are not significant. Therefore in another sample of organisations it is likely that the function would be quite different. These results indicate that there is little differentiation on the basis of the amount of productivity information provided by the organisations attributable to the personnel practice scores.

8.6 The Results of Personnel Practice and Organisational Climate

The fourth objective of this research was to establish whether there is any relationship between the personnel practices undertaken in organisations and the perceptions that employees have about their organisations. In other words do the way organisations conduct their personnel practices have an affect on organisational climate. The intercorrelation matrix (Table 8.8) contains no significant relationships between each of the seven personnel practice measures and the mean organisational climate score. However a moderate negative correlation between tone and organisational climate was obtained. Tone is a categorical variable so to have a closer look at a possible relationship with organisational climate, a one-way analysis of variance for an interval level dependent variable and one categorical level independent variable was used.

TABLE 8.18: GROUP MEANS AND STANDARD DEVIATIONS

Group	N	Mean	Std Dev	Std Error	Min	Max	95 Pct
Traditional	1	79.68					
Constitutional	9	85.54	9.75	3.25	67.79	102.06	78.05 TO 93.03
Consultative	11	89.74	5.60	1.69	82.21	99.56	85.98 TO 93.50
Sophisticated Human Relations	15	89.72	5.97	1.54	81.11	101.01	86.41 TO 93.02
Opportunistic	4	91.61	4.10	2.05	87.86	97.33	85.09 TO 98.54
TOTAL:	40	88.72	6.90	1.09	67.79	102.06	86.52 TO 90.93

TABLE 8.19: ANALYSIS OF VARIANCE

Source	D.F.	Sum Of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	232.7240	58.1810	1.2557	.3058
Within Groups	35	621.6163	46.3319		
Total	39	1854.3403			

Multiple Range Test (Scheffe Procedure) Ranges For The 0.010 Level:-

5.59 5.59 5.59 5.59

The Ranges Above Are Table Ranges.
The Value Actually Compared With Mean(J)-Mean(I) Is..
4.8131 * Range * DSQRT(1/N(I) + 1/N(J))
- No Two Groups Are Significantly Different At The 0.010 Level

The results of the oneway analysis of variance are shown in Tables 8.18 and 8.19. The differences between each type of tone (based on the Purcell typology) are not significant on the climate measure. From these results it is argued that the type of organisation in terms of its tone or management style has no effect on the mean climate scores obtained by that organisation.

8.7 The Results of the Congruency between Personnel Practices and Beliefs About Work

The fifth objective of this research was to investigate the degree of congruency between personnel practice and work attitude of the employees in the subject organisations. The rationale here is that if the congruency is high then satisfaction will be high. For example if the personnel practice is congruent with the prevailing work attitude expressed in the organisation, then measures that are related to job satisfaction such as absenteeism and turnover should be affected. If the congruency is high, then all other things being equal absenteeism and labour turnover should be lower in organisations than in those where the congruency is less.

The result that the humanistic belief system is the predominant belief about work in New Zealand implies that members of the work forces in each of the organisations see work primarily as a means to enhancing their own personal development. Buchholz (1976) concludes that work must be made meaningful and fulfilling for employees and allow them to discover their potential as human beings. One way of achieving this is to encourage participation in the workplace and in the personnel management practices that affect them.

TABLE 8.20: HUMANISTIC SCORES FOR EACH ORGANISATION

Org	N	Humanistic Mean
1	25	4.4187
2	42	4.1548
3	19	4.2977
4	30	4.4481
5	43	4.4023
6	17	4.4059
7	46	4.4870
8	29	4.3724
9	36	4.4173
10	90	4.2195
11	71	4.3549
12	100	4.4216
13	105	4.4743
14	45	4.3756
15	28	4.2857
16	45	4.2311
17	50	4.5260
18	70	4.3767
19	35	4.3514
20	15	4.5222
21	32	4.4750
23	67	4.4622
24	34	4.2471
25	115	4.3622
26	18	4.4833
27	17	4.3471
28	29	4.4448
29	21	4.3619
30	42	4.2214
31	96	4.1884
32	18	4.4333
33	72	4.3148
34	125	4.4076
35	41	4.2171
37	23	4.4348
38	103	4.3204
39	66	4.3808
40	93	4.3204
41	72	4.3705
42	86	4.5212

The mean humanistic scores obtained in each of the 40 participating organisations are listed in Table 8.20. They are all high. However there was no relationship between the correlations of these humanistic scores and the two measures of participation (See Table 8.8). The obtained correlation between the humanistic mean score and labour turnover was -.2443. This was not significant but may indicate a slight tendency for organisations with weaker humanistic scores to have a higher turnover in this sample, but any such result cannot be generalised.

8.8 The Impact of Beliefs About work on Organisational Climate

The results in Table 8.8 indicate that at the organisational level of analysis, there may be an inverse relationship between the Marxist mean scores and the mean organisational climate scores. That is, those organisations who obtained higher scores on the Marxist belief system record lower mean climate scores. This was worthy of further investigation at the individual level of analysis, by regressing the individual beliefs about work scores on the individual climate scores. The procedure used was a multiple linear regression analysis using the organisational climate score as the dependent variable and the five beliefs about work scores as the independent variables. The basic question here is to measure the impact of these five belief systems on the variable organisational climate. This will provide some understanding as to the effect of certain beliefs that employees have about work on the perceptions that they have towards the management within the particular organisations they work.

TABLE 8.21: SUMMARY OF REGRESSION ANALYSIS -ALL VARIABLES ENTERED AT THE SAME TIME

Step	MultR	Rsq	AdjRsq	F(Eqn)	SigF	RsqCh	FCh	SigCh
1								
2								
3								
4								
5	.4125	.1701	.1682	86.189	.000	.1701	86.189	.000

	Variable	BetaIn	Correl	
In:	LEISURE	-.1764	-.1764	The Leisure Ethic Score
In:	ORGANISA	.1183	.1172	The Organisational Belief System
In:	WRKETHIC	-.0470	-.0226	The Work Ethic Score
In:	HUMANIS	.0486	.0714	The Humanistic Belief System Score
In:	MARXIST	-.3680	-.3483	The Marxist Belief System Score

Regression Coefficients

Variable	Unstandardised	Standardised
Leisure Ethic	-2.557893	-.09313
Organisational Belief	5.508607	.19586
Work Ethic	-.677739	-.02725
Humanistic Belief	1.050500	.02744
Marxist Belief	-9.142716	-.36799
(Constant)	102.761510	

The results of the first regression run where all variables are entered are shown in Table 8.21. The obtained R Square of 0.4125 suggests that the combined effect of the beliefs about work scores on the organisational climate score accounts for 17.01 percent of the variance in the dependent variable. This result is highly significant. The unstandardised equation for predicting organisational climate scores from the scores obtained from the Beliefs about Work Scale is given by:

$$Y = 102.76 - 2.56(\text{Leisure Score}) + 5.51(\text{Organisational Score}) - 0.68(\text{Work Ethic Score}) + 1.05(\text{Humanistic Score}) - 9.14(\text{Marxist Score})$$

The above procedure does not determine the contribution of each of the beliefs about work scores to the dependent variable. To investigate this each independent variable was entered in one at a time using multiple enter commands. The order of the entry was determined by the value of the Beta In for each variable. The results are summarised in Table 8.22 below.

TABLE 8.22: SUMMARY OF REGRESSION ANALYSIS - VARIABLES ENTERED IN ORDER OF THEIR OBTAINED BETA IN VALUES

Step	MultR	Rsq	AdjRsq	F(Eqn)	SigF	RsqCh	FCh	SigCh
1	.3483	.1213	.1209	290.794	.000	.1213	290.794	.000
2	.3617	.1308	.1300	158.414	.000	.0095	22.997	.000
3	.4107	.1687	.1675	142.293	.000	.0378	95.784	.000
4	.4116	.1694	.1678	107.242	.000	.0008	1.904	.168
5	.4125	.1701	.1682	86.189	.000	.0007	1.812	.178

Variable	BetaIn	Correl	
In: MARXIST	-.3483	-.3483	The Marxist Belief System Score
In: LEISURE	-.1002	-.1764	The Leisure Ethic Score
In: ORGANISA	.1997	.1172	The Organisational Belief
In: HUMANIS	.0288	.0714	The Humanistic Belief Score
In: WRKETHIC	-.0272	-.0226	The Work Ethic Score

The most interesting result from Table 8.22, is the column headed RsqCh (Change in R Squared). This statistic describes the change in Rsq (R Squared) as a result of the addition of the variable entered. The overall Rsq is the same and accounts for 17.01 percent of the variance in the dependent variable. The RsqCh for the Marxist belief system scores accounts for 12.13 percent of the variance in the

dependent variable, which is almost three times the contribution of the other four belief dimensions. The next most important belief system is the organisational belief system which explains 3.79 percent of the variance in the dependent variable. The other three beliefs make little if any impact on the dependent variable. Consequently the relationship between beliefs about work and organisational climate is explained mainly in terms of the Marxist belief system. The majority of the variance obtained in organisational climate is attributable to factors other than people's beliefs about work.

8.9 The Weakness of the Productivity Points System

The results of this research in the light of the five objectives raise a number of implications, particularly in terms of the quality of the data collected. It has already been stated in 8.2 above that the productivity categorisation based on the points system did not purport to measure productivity as defined in Chapter 4.

The weakness of the points system is acknowledged. While its derivation and resultant weightings are justified in 8.2 above, it remains at best a very crude and subjective assessment of the quantity and quality of productivity information provided by the participating organisations. Under the circumstances, however, it was the best measure available, given the paucity of other information. The fact that a subjective assessment had to be generated is a reflection of the quality of basic productivity data supplied by organisations.

This raises a number of implications concerning field research. These implications are discussed in full in the next chapter.

CHAPTER 9

DISCUSSION

9.1 Introduction

This investigation was originally envisaged as an exploratory study across a sample of New Zealand organisations. The principal aim being to assess the contribution and role of personnel management in the organisation through an empirical examination of some of the major variables in the organisation, and how the personnel function affects them. To make this assessment the development of measures for the personnel management activities investigated was necessary. Up to now in New Zealand, while there has been a great deal of discussion about the relationship between the nature of management and productivity in organisations, no real attempt has been made to explore directly what the relationships are.

Because personnel management involves both policies and practices and peoples' perceptions about their work environment and the ways in which they are managed, the research model was developed using employee attitude and personnel practice as the independent variables, and productivity as the dependent variable. While no relationships were identified between the independent and dependent variables in the research model, the results of this empirical investigation raise a number of issues and implications for personnel management, especially its utility.

9.2 Levels of Analysis

An issue that was apparent right from the beginning was the problem of selecting the appropriate level of analysis. In most psychological research investigations, measurement is at the individual level of analysis. Yet in measuring management and productivity, the most common measures are at the organisational level of analysis, and this was the case for this study.

The problems of mixing measures at the individual and organisational levels of analysis have been well documented (Robinson 1950, Langbein and Lichtman 1978). Langbein and Lichtman suggest that in the past researchers have computed statistics about individual behaviour from data collected for groups or "aggregates". The

assumption here being that statistics computed for such aggregate measures have the same value as corresponding measures computed from individual level data. The work of Robinson (1950) suggested that data collected at the aggregate level cannot be used to make inferences about the behaviour of individuals. He described incorrect inferences about individual behaviour from grouped data as an "ecological fallacy".

Since Robinson's work, a number of investigators have attempted to develop computational techniques to get around this problem of "ecological fallacy" and to determine the reasons for differences between statistics computed at the aggregate and individual levels of analysis (Goodman 1959, Hammond 1973, Hannan and Burstein 1974, Irwin and Lichtman 1976, and Smith 1977). In their review of this whole measurement issue, Langbein and Lichtman (1978) conclude that irrespective of the technique used, any cross level estimates of how individuals behave may be misleading if the process of collecting the aggregate data alters the specification error of parameter estimates. In other words statistical manipulations may or may not work depending on the individual and contextual variables.

Because of these difficulties with mixing levels of analysis, it was clear that in the main part of the analysis in this study that the measures should be taken at the organisational level. The problem here is that individual measures for both personnel practices and productivity simply do not exist in most organisations. This meant that the richness of the individual data was lost. Industries at the present time do not keep the level of measurement required by disciplines like psychology to make inferences about the impact of personnel practices on productivity.

9.3 Discussion of the Results at the Individual Level of Analysis

The appropriateness of using a measure like the Beliefs About Work Scale was justified and construct validity in a cross-national context was successfully demonstrated by replicating the same factor analytic structure obtained in studies in America and Scotland. It would be interesting to compare results from other countries with these to see whether the patterns are established or whether different dimensions operate.

The establishment of a replicable measure of organisational climate was not possible. However, the use of factor analysis produced an overall measure of climate in terms of a generally positive or negative feeling about management resulting in a modified Litwin and Stringer Organisational Climate Questionnaire, consisting of those 34 items that loaded on a single general factor.

The factor analytic studies of both the beliefs about work and organisational climate scales demonstrate the power, precision, and utility that contemporary statistical packages such as SPSS^{X} offer to assess the reliability and validity of such measuring instruments. Clearly the technology is now such that the problems associated with precise indications of error and bias can successfully be overcome at the multivariate level.

In the analysis of the construct validity of the Beliefs About Work Scale (Section 6.2.1) it was noted that the published reports of overseas studies have failed to convey basic results to enable the conducting of confirmatory factor analysis. This meant that a number of assumptions about the nature of the overseas data had to be made. From a scientific point of view this is far from ideal. The position is that there is insufficient detail reported in the literature to be able to replicate previous studies. This fact has a number of implications.

The essence of science is the ability to replicate research. If the information is not published, to do this must lead to a slowing in the development of knowledge.

The question therefore centres on the minimum needs that are required to serve replicability in factor analysis. Ideally access to the original data base would solve this problem. This is feasible given present day technology. As far as minimum reported requirements for journals are concerned, variance accounted for by factors, the communalities, and the loadings for different variables are a bare minimum.

Gorsuch (1983) makes reference to the adequacy of reporting of results in factor analytic studies. For instance it is often assumed that the factors from one factor analytic study are <u>the</u> factors and therefore one goes searching for solutions that will replicate by the use of "little jiffy computer programmes". Also research studies often fail to report what was actually done in sufficient detail so that the studies can be approximated in another study. This is certainly the case in this study, a number of assumptions about the actual procedure in some of the reported studies on the BAWS had to be made.

An implication here is that psychologists need to report research with more care, and that while psychology is a science, there is a danger that it may leave itself open to the criticism that it is just a pseudo science. Without complete disclosure of the basic data in studies, a discipline cannot progress.

Despite these technical concerns, the results from the Beliefs About Work Scale showed that the beliefs about work of New Zealanders are basically the same as for other Western nations that have used this particular measure. They also suggest some differences between certain categories of employees.

The finding that females have a stronger work ethic than do males, suggests that the selection of females in preference to men could be justified because of their greater work ethic, but of course would have to be limited because of the Equal Employment Opportunity provisions of the Human Rights Commission Act in New Zealand. The exhibition of stronger Marxist-related beliefs by woman than by men, may be a result of the feelings possessed by women in New Zealand society concerning their lack of numbers in senior management. Because there are so few women in these positions, they may have stronger feelings of exploitation. The higher organisational belief scores obtained by women implies that they have a greater desire to conform in organisations. This could be explained by the fact that by and large women occupy lowly positions in organisations which in turn means they have little opportunity to be unconventional. This may be reason why Maori and Pacific Islanders' scores are of a similar level.

There also appears to be a stronger work ethic in Maoris compared to Europeans. The significantly higher score on the work ethic scale by Maori people compared to Europeans, suggests that one of the problems for Maori people, as far as productivity is concerned, is the way that work is organised. Maori people prefer working cooperatively and in groups, than is generally so for Europeans (Ritchie 1968, Firth 1973). It could be therefore if attention is paid to the organisation of work in institutions where the work force is largely Maori, significantly greater output might result.

The finding that semi-skilled workers have significantly stronger beliefs in the work ethic than do managerial staff is surprising. This could be attributed to the often imprecise nature of managerial work. It is probably much easier to have a stronger work ethic for tasks which are easier to complete, such as those that require a minimum level of skill. Much managerial work can be frustrating, and may often fail to provide immediate reinforcement for the time and effort expended.

The most important results by socio-economic level relate to the Marxist-related beliefs of the various groups. Unskilled, semi-skilled, and supervisory staff, have significantly higher Marxist-related belief scores compared to the managerial group. An explanation could be that, traditionally, employees below managerial level see themselves as exploited by management and this perhaps is best illustrated by the current mistrust of employers by unions, because of the desire of many employers to remove national awards and have site agreements. It would seem that there have been too many instances of broken trust in the past which have led to an increased belief in Marxist-related type views of work. To reduce this will not be easy.

These results also have implications for the future of work and employment policies. Handy (1984) notes that the following trends are already occurring: the movement from a full employment society to a part employment society, the change in work force requirements from labour to knowledge skills, the move from single to multiple careers, and much less rigidity between sex roles. The transition from the industrial to post-industrial society is already in progress. Organisations are themselves changing from hierarchies and bureaucracies to networks and partnerships. The collective effect of these changing patterns adds up to a "...frontal assault on our view of work, the way in which it is organised, and the place that it occupies both in our lives and in the way that society is run."

The structured interviews showed that there is a greater tendency for hierarchical organisational structures to have larger work forces, compared to organisations with "flat" structures. The larger the size of the organisation, in terms of the numbers of employees, the more hierarchical it would seem to be. It seems then that some of the classical ideas of structure are still apparent in larger organisations in New Zealand. Yet given the intensive restructuring that has occurred in very recent times, it may be that such hierarchical characteristics are on the decline even for larger enterprises.

Therefore it is contended that peoples' attitudes towards work are of central importance in changing from an employment to post employment society, and will contribute to the success or failure of this transition. In terms of these findings, work policies and practices that emphasise individual growth and development on the job, rather than focussing on the output of work may be more in tune with the predominant attitude to work in this country. This is not to downplay the importance of productivity, but simply to suggest that a humanistic belief about work does not assume that employees' main aim is improved productivity. Therefore improved

organisational productivity may only be achieved if personnel practice puts a greater emphasis on providing more scope for individual growth and development on the job. Such policies would emphasise making jobs more meaningful and fulfilling for individuals (Buchholz 1977).

As discussed in Chapter 3, contemporary organisation theory suggests a contingency approach to the influence of the organisation on the personnel function. In other words the appropriateness of the particular configuration of personnel practices will depend on both the environment and the people in the organisation. Contingency theory recognises the multivariate nature of organisations, therefore their resultant productivity will depend on the relationship between the employees (attitudes) and the way they are managed (practices). Applying this to the results suggests that predominant attitudes towards work, as measured through the Beliefs About Work Scale, can be effectively measured, and may provide a useful tool for assessing the attitudes of employees in organisations, and to select appropriate personnel management practices to optimise employee motivation and productivity.

9.4 The Productivity Dilemma

The problems encountered with the incomplete productivity data supplied by the organisations illustrates the dilemma that faces the researcher. On the one hand it is essential that the data is forthcoming given the small number of cases; yet on the other the researcher is in no position to make demands on organisations. So in this study an attempt was made to make sense of the missing information through the use of productivity points to improve its nature.

The lack of relationships between the independent and dependent variables in this study could mean one of two possibilities. The first is the reality that the results suggest, that despite all the theory, there is little if any relationship between work beliefs, personnel practice, and productivity. The second possibility is the very opposite of the first, and that is the relationships exist but have not been demonstrated because of the measurement problems encountered in the research, and the paucity of detail in the final data sets.

The fact that the dependent variables had to be derived from measures that were incomplete was a source of error in itself, and consequently is probably the main reason why no meaningful relationships were found between the independent and dependent variables. This does not mean that no relationships exist, simply that none could be found given the measures selected.

Perhaps the most significant outcome of this research is the fact that many of the organisations were simply unable to supply the basic productivity data requested. Only one variable in the data set had a consistently high return and that was the labour turnover measure, where 33 out of the 40 organisations managed to supply it. Even then it was poor. Less than half the organisations were able to supply any absenteeism data, and only 17 organisations could provide any indication of direct labour efficiency using standard time. There was even a dearth of financial ratios of profit obtained in the form of return on owners' equity, and earnings per share. Here only 16 organisations were able to supply the requested ratios. There was no consistent pattern why the organisations were unable to supply the information. It is difficult to accept that organisations do not know what their profit indicators are.

Also some of the data that was supplied was based on estimates rather than precise measurement. Therefore as well as there being a paucity in the quantity of the data from organisations there are also concerns about its quality. The significant aspect to remember is that given the current state of productivity assessment in New Zealand whatever measure of overall productivity is used, it is very crude. One of the difficulties is to try and obtain measures that are common across a variety of organisations. Even with measures such as turnover and absenteeism, many organisations simply had kept no records and therefore had to rely on subjective estimates.

As noted in Chapter 2, personnel management in New Zealand has been primarily concerned with administration rather than evaluation, and the results indicate that at this stage effective evaluation is still elusive, given the poor productivity data available. It is interesting to speculate in terms of Fitz-enz's three reasons for non-measurability outlined in Chapter 4 with respect to the quality of the productivity data that was obtained in this research. Could it be that the organisations did not know how to measure, or was it a case of some of them being unwilling. This may be the case particularly with the five organisations who could not supply a single piece of the requested productivity data. However because the real reasons are unknown, such conclusions must remain purely speculative. However one thing is clear and that is that unless organisations attempt to measure productivity, the effectiveness of the personnel management process will remain largely unknown.

9.5 The Implications For Measurement

The underlying theme in this thesis is the importance of measurement. In Chapter 4 the point was made that the poor image that personnel managers have in relation to other business managers is a result of their apparent inability to demonstrate their effectiveness. While there are difficulties in reaching common definitions of concepts like productivity, work attitudes, and personnel practice, this is no excuse to simply shrug the measurement issue off as being too difficult, irrelevant to personnel managers, or undesirable.

In Chapter 2 it was contended that psychology provides the means to measure the behaviour of an organisation's human resources, and in Chapter 4 the three sources of data available as measures were specified. The most common source of data as productivity measures are judgemental, and in this study the best measures of productivity obtained were crude and full of error. Industry and commerce need to pay attention to the measurement of the performance of its staff. This does not imply simply a repeat of measures like piece-work developed in the hey day of scientific management by Taylor (1947), but the development of objective performance related appraisal systems, which focus on both performance processes and outcomes.

Human beings appear to be naturally irrational when making decisions and tend to follow rules which may lead to poor decisions. Such rules include the over-weighing of information that is vivid and also equating correlations with causes. The purpose of evaluation therefore is to combat such decision irrationality (Boudreau 1990a). The essential feature of this type of evaluation is to show that certain personnel management practices and programmes produce consequences or outcomes that have value. This is the whole basis of utility or cost-benefit analysis.

The relationship between productivity and the personnel function is vital because of the importance of people as a resource. It is in this area that personnel management has received its strongest critics. The language of business is dollars yet personnel managers seem unable to communicate in this language, and therefore find themselves treated as fire-fighters and rubbish collectors (Gilbertson 1984). There is the mythology about personnel that it cannot be measured. This is clearly false. The technology to do so certainly exists. As shown in the multivariate analyses undertaken in this research, the sophistication of psychometrics is such that provided the measurements are appropriate, reliable, and valid, complex research questions can be answered, and replicated, provided there is full disclosure of the results. So a central question is whether personnel specialists are willing, or able, to measure the outcomes of their personnel practices.

Boudreau (1990b) suggests that cost-benefit analysis addresses questions like whether the return on the expenditures of personnel management programmes are adequate to justify their investments, and which of several different options for personnel management will maximise the return on investment. The value of measurement is that data can be used to assess the productivity of the work force. Productivity measurement like any other can include error and bias, therefore the definition has to be carefully prescribed and the data carefully recorded and collated.

The way that productivity is measured and reported is partly determined by the perspectives of the people using it. The simple input/output perspectives tell us little about effectiveness, they are efficiency orientated definitions. Productivity is therefore best thought of as a family of measures reflecting a balance between doing things right (efficiency) and doing the right things (effectiveness). In other words productivity is the process that produces the desired results (Brinkerhoff and Dressler 1990).

The challenge for future research with respect to measurement is to develop objective measures of individual productivity that can be used in organisations of different types. This implies that carefully designed procedures of performance appraisal are designed, implemented and tested. The accurate measurement of individual and team performance is essential to the eventual solution of the productivity dilemma.

9.6 The Challenge for Personnel Management

As a consequence of the significance of measurement in personnel management the role of mathematics (the language of measurement in terms of increasing productivity) is of central importance. The curricula of personnel management courses needs to be thought through carefully. The role of mathematics needs to be emphasised so that personnel specialists are in a position to be able to apply the principles of measurement. As demonstrated in such procedures as utility analysis (Hunter and Schmidt 1983, Catano 1988) and cost-benefit analysis (Boudreau 1990b), there are substantial gains in doing so. It is fair to say that the large proportion of people in personnel management have been non-numerate. It is significant that none of the personnel executives interviewed during this study reported the use of sophisticated statistical procedures for evaluating the efficacy of their personnel management programmes and practices. Selection and training are obvious areas where measurement and evaluation can be undertaken. While most of the personnel

executives reported that their organisations undertook training evaluation, most relied solely on comments from those personnel who complete the training courses. Only a minority use any formal evaluation.

This legacy of non-numeracy that is endemic in the personnel field is partly due to the two traditions that have influenced its development as well as the quality of some of the people who have been involved in the function. The anti-mathematical legacy is reflected in the apparent dislike of cognitive tests by personnel staff for selection in New Zealand, and the preference for more subjective devices such as the interview (George 1989). Despite the evidence on the lack of reliability and validity of the interview as a selection device, most organisations prefer it to any other device. This attitude also stems from national beliefs in equity that are misguided when applied directly to the use of cognitive tests. So many cognitive tests are seen as culturally biased, a belief that flies in the face of reality, when one considers the evidence of meta-analytic studies (Hunter, Schmidt, and Jackson 1982). The point may be however that the meta-analyses that have been conducted may have been using a monocultural measurement of productivity. It is wrong therefore to blame cognitive tests for just being successful at predicting the monocultural productivity measure. It may be possible to derive successful cognitive tests for other cultural groups. It is also important in this context to focus on the possibility of designing alternative culturally sensitive productivity measures, which could mean alternative methods of industrial organisation.

Shackleton and Taylor (1988) surveyed in seventy major United Kingdom companies, the perceptions of the professional training of personnel managers. One of the questions asked the respondents to indicate the importance of training in interviewing techniques and psychometrics for recruitment. Ninety three percent considered training in interviewing techniques as being either essential or very important, while only twenty one percent put an understanding of psychometrics in the same category. Thirty one percent of the sample considered training in psychometrics to be not important at all. Attitudes to measurement such as these expressed by senior personnel managers are alarming.

It is interesting to speculate that like psychologists, where every one considers themselves an amateur psychologist, personnel specialists may suffer the same fate. All managers see themselves to some extent as specialists in human behaviour. Their expertise is built on their lifetime experiences as managers; the fact that many of these people have had no formal training or education in the human resource function does

not have any impact on the confidence of individuals to do human resource management jobs. Nobody would dare to call themselves mathematicians however without gaining the necessary educational qualifications. On the other hand, everyone thinks they understand people and this is a problem.

To enhance the measurement orientation in the teaching of human resource management, papers need to be introduced at University level which focus on both measurement and personnel management. Such papers need to build on the basic introductory business statistics papers that are taught in the first year core of business studies degrees. Measurement papers taught at the second and third years of undergraduate majors in human resource management, will ensure that graduates in human resource management will have received the necessary academic training in both measurement and personnel management. Such initiatives will provide a major step in rectifying what has been identified in this thesis as a major deficiency in personnel management education and training in New Zealand.

Personnel management has not been concerned with profitability. In a speculative paper on key human resource issues, Boxall (1989b) suggests that one of the key challenges for personnel specialists in the 1990's will be to add value to organisations by developing personnel practices that are able to create the basis for sustainable competitive advantage. To demonstrate this added value there will be the need for much better measurement of human resource effectiveness in organisations. This is certainly a view shared by a number of the personnel executives interviewed during this research. There is a definite move in some companies to devolve some of the operational personnel management functions to line managers with the resultant effect of making personnel departments much smaller. Most report that there is now the increasing expectation from chief executives for personnel specialists to prove their utility. Herein lies the challenge of productivity and personnel managers. Personnel managers have to become numerate and this numeracy must be used to improve productivity.

The key to effective measurement as a means to enhancing productivity is through the use of effective personnel management information systems. The keeping of personnel records is a traditional pastime of personnel management that has been expected by senior managers and often endured by personnel managers (Nankervis 1989). The impact of micro-computers and personal computers have according to Nankervis changed these roles in many Corporations. Much of the traditional personnel data is now collected by line managers who report directly to top managers.

What place then will personnel managers have? He suggests that a more concerted effort must be made by personnel practitioners to make projections, cost processes, and continually review records for relevance and collection techniques.

In the United States alone there are well over 300 micro-computer based programmes for personnel management applications (Frantzreb 1987). While in the New Zealand study there is a definite move towards computerising employee records in the organisations, at the time of the structured interviews over half the organisations sampled still maintained a manual records system. The problem at the present time is that personnel managers tend to have minimal computer sophistication (Tannenbaum 1990). The danger is that if they do not improve these skills it is likely that as decentralisation of information increases in organisations through the introduction of computerised human resource information systems, the increasing expectations by line managers and top managers for advice and expertise from personnel specialists will not be realised. A computerised personnel management information system that contains appropriate and relevant personnel data and productivity information will provide the necessary technology for comprehensive evaluation of personnel management programmes, policies, and practices. It is therefore essential that the personnel specialist is trained in the use and the development of such systems.

It is contended that the pivotal role in this kind of management process will be played by the personnel manager. This is not to deny that the line manager has an input, but this is very much restricted to the everyday operational concerns of the enterprise. The personnel manager of tomorrow will be responsible largely for providing the necessary data-based activities to provide for the effective utilisation of the human resource. To do this effectively and to be able to define and settle on productivity indicators and then to set about measuring these will require the personnel manager to be numerate. It is only then that the full potential of the personnel function will be achieved, and the image of personnel management enhanced.

9.7 Conclusions

This research has shown that New Zealanders are no different from American and Scottish people in their predominate beliefs about work. There is little evidence to support the idea that the predominate work attitude in this country is one centering around a leisure ethic. While there is great variation among individuals, New Zealanders collectively, like those sampled overseas, tend to perceive work as being the way in which they discover and fulfill themselves as human beings. Therefore

individual growth and development are more important on the job than the output of the work process itself. What happens to people in the workplace is more important to them than productivity. Therefore work is an indispensable human activity that cannot be eliminated but it must be made meaningful and fulfilling for individuals. This has important implications for psychology and the practice of managing personnel.

What then are the implications for psychology? If the predominate belief about work is to achieve self-development and self-fulfillment, then the challenge for psychology, given the fact that there is going to be a shift from employment economies to post-employment economies, is to assist individuals within societies to learn ways of achieving these goals in other ways than the current dependency on the forty hours or so a week spent at work. Psychology has already made a number of inroads in helping people in personal development. The definitions of work need to be reassessed to include much broader contexts than are currently in vogue. Through the application of the scientific process, psychology has much to offer in assisting society to reshape its basic attitude towards traditional notions of what constitutes work and non-work.

What then are the implications for personnel management? The results from the structured interviews suggest that the structure of the organisation in terms of size, shape, and layers of management has no effect on whether the personnel manager is considered a member of top management or not. In this study a much greater proportion of the personnel executives interviewed reported directly to the chief executive officer in their organisations, than was the case in previous studies (APMA 1968, NZIPM 1978).

The main conclusion from the data concerning personnel practice collected in the structured interviews is that the personnel department in most New Zealand organisations still maintains responsibility for the majority of personnel practices. Even traditional practices such as employee welfare are still seen as the responsibility of the personnel specialist. The major implication of this finding is that the movement of operational personnel management practices to line management is therefore still some way off in many New Zealand organisations.

The results indicate that many personnel practitioners want to be more proactive in their approach to personnel management in New Zealand. Many of the personnel executives interviewed emphasised that they used these practices in a proactive rather than in a reactive way. The results also suggest that participation in practices is not as prevalent as one would have expected. Formal participation is not used in a conscious way, but is used spontaneously depending on the nature of the personnel practice.

This research shows that the quality of the data on productivity kept by organisations is not good. This raises a more fundamental concern. Organisations talk about success, excellence, and productivity, because these concepts are related to dollars and cents. When an attempt is made to apply this to the human resource function many of the adequate measures do not exist. Many organisations do not keep the basic data that is needed to measure the effectiveness of their personnel management practices.

Therefore it begs the question how organisations can actually talk about excellence in personnel management, if they have no measures. How for instance can comparisons be made between organisations, and different styles? One of the greatest challenges for personnel practitioners in this decade is to identify ways of actually measuring what has been written about by such popular management writers as Peters and Waterman (1982) and closer to home Inkson, Henshall, Marsh,and Ellis (1986).

Peters and Waterman suggest that there are a number of principles that have been the feature of successful American companies in terms of being top performers in their industries over a period of time. These principles include having a bias for action, autonomy and entrepreneurship, and staying close to their customers. The management styles of these organisations emphasise the creation of productivity through the employees, with a minimum of bureaucracy, and staying with the business that each company knows best with a strong value driven organisational climate. The key property of these organisations is the achievement of results through the employees. However it must be said that while these principles are appealing, the evidence to support these is predominately anecdotal and based on examples from these high profile companies.

The same can be said about Inkson, Henshall, Marsh, and Ellis's survey of successful New Zealand organisations. They suggest that the key to excellence in New Zealand management consists of six factors that are phonetically derived from the letter 'K', hence the "Theory K" model. These factors are similar to the Peters and Waterman (1982) principles, and are about keeping control simple, being conscious about the customers, having a clear mission (kite), gathering information (keeping in contact), having a family culture (kith and kin), and continuous innovation. Their model while intrinsically simple, catchy, and therefore appealing to some, is also derived from largely anecdotal evidence. It is also interesting to note that some of the high profile New Zealand companies discussed in the study have fallen from grace since the stock market crash of 1987.

The point is that until real measures of individual productivity are used in New Zealand organisations, such theories and models of effective management will remain purely speculative. Putting it more directly, steps now need to be taken to design, develop, and implement procedures to obtain the necessary data by the introduction of personnel management information systems. The language of measurement must be introduced to the educational and training curricula of personnel specialists. It is only then that these speculations can be tested, and that the personnel management function can truly be scientific, and throw off the magic and mystique that has shrouded it for so long.

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APPENDIX 1

Faculty of Business Studies
Massey University
Palmerston North

ATTITUDE TO WORK QUESTIONNAIRE

Introduction

A national survey of attitudes to work is being conducted by a research team from the Faculty of Business, Massey University. Your employer has very kindly consented to enable you to participate in this survey, provided you do so willingly.

The object of this research, among a number of things, is to see if there is a basic attitude to work that is distinctly "kiwi" in nature, and if so, what form it takes. To achieve this objective it is necessary to obtain the opinions of a variety of people in the workforce, representing a variety of occupational groups as well as different positions in the organisations. Some 60 or so organisations from both the private and public sectors are participating in this research, representing the major types of business activity in the New Zealand economy today.

The questionnaire has been designed in four parts with the minimum amount of writing for you to do. In most cases you are asked simply to indicate your answer with a tick, cross, or number on the questionnaire form. It is a bit like filling out one those questionnaires that appear from time to time in popular magazines that no doubt you have had a go at.

The first part is simply designed to obtain some basic demographic data, so we can categorise your responses into a number of different aspects such as age, sex, length of employment and so on. The second part is designed to measure how you feel about work in general, and the third part is designed to see how you feel about the way you are being managed in the organisation that is employing you. The fourth part is designed to enable you to make any comments you may wish to add about the survey, work, or anything else.

It is emphasised that this survey is anonymous. Please do not put your name on this questionnaire. Your employer will not be seeing any of your individual results. Once the completed questionnaires have been coded for computer analysis, they will be destroyed.

It is intended to pool the results of your questionnaire, and then compare these with some of the personnel practices that are being undertaken in your organisation. With this information we hope to get a picture nationally of how well current personnel practices in New Zealand work organisations match the attitudes to work expressed by members of the New Zealand workforce. Note that we are interested in your underlying attitudes or beliefs about work in general, not in your attitudes to your particular job. We do appreciate however that your prevailing work attitude may affect your job attitude or vice versa. It would help therefore if you could think of work in general terms, rather than in terms of your current job or assignment.

Please provide an answer to every question in Parts 1 to 3. Even if you are not sure, put down the one that best describes how you feel out of the alternatives that are given. If there are any questions that you do not understand what is meant, do not hesitate to ask your supervisor or the person who is conducting the session.

Part 1: Biographical Details

Instructions: Please answer the following questions by marking a tick in the appropriate box, or describing very briefly as may be indicated.

1. What sex are you? Male....[1] Female...[2]
   Select appropriate number and enter in box ----------> 1[ ]

2. What age range do you belong to?

   15-19 [1]; 20-24 [2]; 25-29 [3]; 30-34 [4];
   35-39 [5]; 40-44 [6]; 45-49 [7]; 50-54 [8];
   55-59 [9]; 60-64 [10]; 65+ [11].

   Select appropriate number and enter in box ----------> 2[ ]

3. What is your ethnic origin?

   European ..... [1]
   Maori ..... [2]
   Pacific Island Polynesian ..... [3]
   Other Ethnic Group ..... [4]

   Select appropriate number and enter in box ----------> 4[ ]

4. What is your family status?
   Single....[1]; Married....[2];

   Select appropriate number and enter in box ----------> 5[ ]

   Number of dependent children ----------> 6[ ]

5. What is your job title?

   _____ 7[ ]

6. In which of the following categories would you classify your job?

   Unskilled ..... [1]
   Semi-skilled ..... [2]
   Skilled ..... [3]
   Supervisory ..... [4]
   Managerial ..... [5]

   Select appropriate number and enter in box ----------> 9[ ]

7. What are the conditions of your present appointment?

   Full time ....[1]
   Part time ....[2]

   Select appropriate number and enter in box ----------> 10[ ]

8. How long have you been employed by your present employer?

   0-1 year [1]; 1-2 years [2]; 2-3 years [3]
   3-4 years [4]; 4-5 years [5]; 5-6 years [6]
   6-7 years [7]; 7-8 years [8]; 8-9 years [9]
   9-10 years [10]; 10 years or more [11]

   Select appropriate number and enter in box ----------> 11[ ]

Part 2: Beliefs About Work

Instructions: With the following 45 items, you are asked to indicate the extent to which you may agree or disagree with each statement. Please read the statement then decide whether you strongly disagree, mildly disagree, neither agree nor disagree, mildly agree, or strongly agree with the statement. Once you have made your decision, please indicate your response according to the following numerical scale:

Strongly Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Mark the box that corresponds to the number on the scale on the right of each statement with a cross (X). It is important that you answer every item. Even if you are not sure, mark the box that best describes how you feel.

Statements:

			1	2	3	4	5
1.	By working hard a person can overcome every obstacle that life presents	13	[ ]	[ ]	[ ]	[ ]	[ ]
2.	Management does not understand the needs of the worker	14	[ ]	[ ]	[ ]	[ ]	[ ]
3.	Better decisions are made in a group than by individuals	15	[ ]	[ ]	[ ]	[ ]	[ ]
4.	One must avoid dependence on other persons wherever possible	16	[ ]	[ ]	[ ]	[ ]	[ ]
5.	Increased leisure time is bad for society.	17	[ ]	[ ]	[ ]	[ ]	[ ]
6.	A person can learn better on the job by striking out boldly on his/her own than he/she can by following the advice of others	18	[ ]	[ ]	[ ]	[ ]	[ ]
7.	Only those who depend on themselves get ahead in life	19	[ ]	[ ]	[ ]	[ ]	[ ]
8.	Work can be made satisfying	20	[ ]	[ ]	[ ]	[ ]	[ ]
9.	One's contribution to the group is the most important thing about one's work	21	[ ]	[ ]	[ ]	[ ]	[ ]
10.	One should take an active part in all group affairs	22	[ ]	[ ]	[ ]	[ ]	[ ]
11.	One should work like a slave at everything one undertakes until one is satisfied with the results	23	[ ]	[ ]	[ ]	[ ]	[ ]
12.	The less hours one spends working and the more leisure time available the better	24	[ ]	[ ]	[ ]	[ ]	[ ]

13.	Workers should be represented on the board of directors of companies	1	2	3	4	5
		25[ ]	[ ]	[ ]	[ ]	[ ]
14.	The work place can be humanized	1	2	3	4	5
		26[ ]	[ ]	[ ]	[ ]	[ ]
15.	Factories would be run better if workers had more of a say in management	1	2	3	4	5
		27[ ]	[ ]	[ ]	[ ]	[ ]
16.	Success means having ample time to pursue leisure activities	1	2	3	4	5
		28[ ]	[ ]	[ ]	[ ]	[ ]
17.	Work can be made interesting rather than boring	1	2	3	4	5
		29[ ]	[ ]	[ ]	[ ]	[ ]
18.	It is best to have a job as part of an organisation where all work together even if you don't get individual credit	1	2	3	4	5
		30[ ]	[ ]	[ ]	[ ]	[ ]
19.	Work can be a means for self-expression	1	2	3	4	5
		31[ ]	[ ]	[ ]	[ ]	[ ]
20.	The present trend towards a shorter work week is to be encouraged	1	2	3	4	5
		32[ ]	[ ]	[ ]	[ ]	[ ]
21.	Leisure time activities are more interesting than work	1	2	3	4	5
		33[ ]	[ ]	[ ]	[ ]	[ ]
22.	Working with a group is better than working alone	1	2	3	4	5
		34[ ]	[ ]	[ ]	[ ]	[ ]
23.	Work takes too much of our time, leaving little time to relax	1	2	3	4	5
		35[ ]	[ ]	[ ]	[ ]	[ ]
24.	Work can be organised to allow for human fulfillment	1	2	3	4	5
		36[ ]	[ ]	[ ]	[ ]	[ ]
25.	Survival of the group is very important in an organisation	1	2	3	4	5
		37[ ]	[ ]	[ ]	[ ]	[ ]
26.	The most important work in New Zealand is done by the labouring classes	1	2	3	4	5
		38[ ]	[ ]	[ ]	[ ]	[ ]
27.	The working classes should have more say in running society	1	2	3	4	5
		39[ ]	[ ]	[ ]	[ ]	[ ]
28.	Wealthy people carry their fair share of the burdens of life in this country	1	2	3	4	5
		40[ ]	[ ]	[ ]	[ ]	[ ]

29.	The rich do not make much of a contribution to society	1	2	3	4	5
		41[ ]	[ ]	[ ]	[ ]	[ ]
30.	One should live one's own life independent of others as much as possible	1	2	3	4	5
		42[ ]	[ ]	[ ]	[ ]	[ ]
31.	The group is the most important entity in any organisation	1	2	3	4	5
		43[ ]	[ ]	[ ]	[ ]	[ ]
32.	The job should be a source of new experiences	1	2	3	4	5
		44[ ]	[ ]	[ ]	[ ]	[ ]
33.	Work should enable one to learn new things	1	2	3	4	5
		45[ ]	[ ]	[ ]	[ ]	[ ]
34.	The work of the labouring classes is exploited by the rich for their own benefit	1	2	3	4	5
		46[ ]	[ ]	[ ]	[ ]	[ ]
35.	More leisure time is good for people	1	2	3	4	5
		47[ ]	[ ]	[ ]	[ ]	[ ]
36.	Workers should be more active in making decisions about products, financing, and capital investment	1	2	3	4	5
		48[ ]	[ ]	[ ]	[ ]	[ ]
37.	Work should allow for the use of human capabilities	1	2	3	4	5
		49[ ]	[ ]	[ ]	[ ]	[ ]
38.	One's job should give one a chance to try out new ideas	1	2	3	4	5
		50[ ]	[ ]	[ ]	[ ]	[ ]
39.	To be superior a person must stand alone	1	2	3	4	5
		51[ ]	[ ]	[ ]	[ ]	[ ]
40.	Work can be made meaningful	1	2	3	4	5
		52[ ]	[ ]	[ ]	[ ]	[ ]
41.	Work is a means to foster group interests	1	2	3	4	5
		53[ ]	[ ]	[ ]	[ ]	[ ]
42.	Conformity is necessary for an organisation to survive	1	2	3	4	5
		54[ ]	[ ]	[ ]	[ ]	[ ]
43.	The trend towards more leisure is not a good thing	1	2	3	4	5
		55[ ]	[ ]	[ ]	[ ]	[ ]
44.	The free enterprise system mainly benefits the rich and the powerful	1	2	3	4	5
		56[ ]	[ ]	[ ]	[ ]	[ ]
45.	Workers get their fair share of the economic rewards of society	1	2	3	4	5
		57[ ]	[ ]	[ ]	[ ]	[ ]

Part 3: Organisational Climate

Instructions: In this part of the questionnaire you are asked to respond to 50 statements about the way you feel about the Organisation that you are currently working in. As you did for Part 2 of the questionnaire, you are asked to read each statement and to indicate whether you disagree or agree with the statement. You indicate your level of agreement by selecting one of the four levels of agreement:

Definitely Disagree (1)	Inclined to Disagree (2)	Inclined to Agree (3)	Definitely Agree (4)

Note that unlike the preceding part there is no middle category in this particular scale. Mark the box that corresponds to the number on the scale on the right of each statement with a cross (X). It is important that you respond to every item. Please do not leave any out. If you are uncertain mark the box that is most appropriate to you.

			1	2	3	4
1.	The jobs in this Organisation are clearly defined and logically structured.	58	[ ]	[ ]	[ ]	[ ]
2.	In this Organisation it is sometimes unclear who has the formal authority to make a decision.	59	[ ]	[ ]	[ ]	[ ]
3.	The policies and organisation structure of the Organisation have been clearly explained.	60	[ ]	[ ]	[ ]	[ ]
4.	Red-tape is kept to a minimum in this Organisation.	61	[ ]	[ ]	[ ]	[ ]
5.	Excessive rules, administrative details, and red-tape make it difficult for new and original ideas to receive consideration.	62	[ ]	[ ]	[ ]	[ ]
6.	Our productivity sometimes suffers from lack of organisation and planning.	63	[ ]	[ ]	[ ]	[ ]
7.	In some of the projects I've been on, I haven't been sure exactly who my boss was.	64	[ ]	[ ]	[ ]	[ ]
8.	Our management isn't so concerned about formal organisation and authority, but concentrates instead on getting right people together to do the job.	65	[ ]	[ ]	[ ]	[ ]
9.	We don't rely too heavily on individual judgment in this Organisation; almost everything is double checked.	66	[ ]	[ ]	[ ]	[ ]
10.	Around here management resents you checking everything with them; if you think you've got the right approach you just go ahead.	67	[ ]	[ ]	[ ]	[ ]

11.	Supervision in this Organisation is mainly a matter of setting guidelines for your subordinates; you let them take responsibility for the job.	68	1 [ ]	2 [ ]	3 [ ]	4 [ ]
12.	You won't get ahead in this Organisation unless you stick your neck out and try things on your own sometimes.	69	1 [ ]	2 [ ]	3 [ ]	4 [ ]
13.	Our philosophy emphasizes that people should solve their problems by themselves.	70	1 [ ]	2 [ ]	3 [ ]	4 [ ]
14.	There are an awful lot of excuses around here when someone makes a mistake.	71	1 [ ]	2 [ ]	3 [ ]	4 [ ]
15.	One of the problems in this Organisation is that individuals won't take responsibility.	72	1 [ ]	2 [ ]	3 [ ]	4 [ ]
16.	We have a promotion system here that helps the best person rise to the top.	73	1 [ ]	2 [ ]	3 [ ]	4 [ ]
17.	In this Organisation the rewards and encouragements you get usually outweight the threats and criticism.	74	1 [ ]	2 [ ]	3 [ ]	4 [ ]
18.	In this Organisation people are rewarded in proportion to the excellence of their job performance.	75	1 [ ]	2 [ ]	3 [ ]	4 [ ]
19.	There is a great deal of criticism in this Organisation.	76	1 [ ]	2 [ ]	3 [ ]	4 [ ]
20.	There is not enough reward and recognition given in this Organisation for doing good work.	77	1 [ ]	2 [ ]	3 [ ]	4 [ ]
21.	If you make a mistake in this Organisation you will be punished.	78	1 [ ]	2 [ ]	3 [ ]	4 [ ]
22.	The philosophy of our management is that in the long run we get ahead fastest by playing it slow, safe, and sure.	79	1 [ ]	2 [ ]	3 [ ]	4 [ ]
23.	Our business has been built up by taking calculated risks at the right time.	80	1 [ ]	2 [ ]	3 [ ]	4 [ ]

Card No. 2

24.	Decision making in this Organisation is too cautious for maximum effectiveness.	1	1 [ ]	2 [ ]	3 [ ]	4 [ ]
25.	Our management is willing to take a chance on a good idea.	2	1 [ ]	2 [ ]	3 [ ]	4 [ ]
26.	We have to take some pretty big risks occasionally to keep ahead of the competition in the business we're in.	3	1 [ ]	2 [ ]	3 [ ]	4 [ ]

27.	A friendly atmosphere prevails among the people in this Organisation.	4	1 [ ]	2 [ ]	3 [ ]	4 [ ]
28.	This Organisation is characterised by a relaxed, easy-going working climate.	5	1 [ ]	2 [ ]	3 [ ]	4 [ ]
29.	It's very hard to get to know people in this Organisation.	6	1 [ ]	2 [ ]	3 [ ]	4 [ ]
30.	People in this Organisation tend to be cool and aloof toward each other.	7	1 [ ]	2 [ ]	3 [ ]	4 [ ]
31.	There is a lot of warmth in the relationships between management and workers in this Organisation.	8	1 [ ]	2 [ ]	3 [ ]	4 [ ]
32.	You don't get much sympathy from higher-ups in this Organisation if you make a mistake.	9	1 [ ]	2 [ ]	3 [ ]	4 [ ]
33.	Management makes an effort to talk with you about your career aspirations within the Organisation.	10	1 [ ]	2 [ ]	3 [ ]	4 [ ]
34.	People in this Organisation don't really trust each other enough.	11	1 [ ]	2 [ ]	3 [ ]	4 [ ]
35.	The philosophy of our management emphasizes the human factor, how people feel, etc.	12	1 [ ]	2 [ ]	3 [ ]	4 [ ]
36.	When I am on a difficult assignment I can usually count on getting assistance from my boss and co-workers.	13	1 [ ]	2 [ ]	3 [ ]	4 [ ]
37.	In this Organisation we set very high standards for performance.	14	1 [ ]	2 [ ]	3 [ ]	4 [ ]
38.	Our management believes that no job is so well done that it couldn't be done better.	15	1 [ ]	2 [ ]	3 [ ]	4 [ ]
39.	Around here there is a feeling of pressure to continually improve our personal and group performance.	16	1 [ ]	2 [ ]	3 [ ]	4 [ ]
40.	Management believes that if the people are happy, productivity will take care of itself.	17	1 [ ]	2 [ ]	3 [ ]	4 [ ]
41.	To get ahead in this Organisation it's more important to get along than it is to be a high producer.	18	1 [ ]	2 [ ]	3 [ ]	4 [ ]
42.	In this Organisation people don't seem to take much pride in their performance	19	1 [ ]	2 [ ]	3 [ ]	4 [ ]
43.	The best way to make a good impression around here is to steer clear of open arguments and disagreements.	20	1 [ ]	2 [ ]	3 [ ]	4 [ ]

44.	The attitude of our management is that conflict between competing units and individuals can be very healthy.	21	1 [ ]	2 [ ]	3 [ ]	4 [ ]
45.	We are encouraged to speak our minds, even if it means disagreeing with our superiors.	22	1 [ ]	2 [ ]	3 [ ]	4 [ ]
46.	In management meetings the goal is to arrive at a decision as smoothly and quickly as possible.	23	1 [ ]	2 [ ]	3 [ ]	4 [ ]
47.	People are proud of belonging to this Organisation.	24	1 [ ]	2 [ ]	3 [ ]	4 [ ]
48.	I feel that I am a member of a well functioning team.	25	1 [ ]	2 [ ]	3 [ ]	4 [ ]
49.	As far as I can see, there isn't much personal loyalty to the company.	26	1 [ ]	2 [ ]	3 [ ]	4 [ ]
50.	In this Organisation people pretty much look out for their own interests.	27	1 [ ]	2 [ ]	3 [ ]	4 [ ]

Office Use

28 [ ]35

Part 4: Additional Comments.

If you wish to make any comments about this questionnaire or the research study, please feel free to write them in the space below.

Appreciation. We would like to express our gratitude to you for agreeing to participate in this survey, and for taking the trouble to fill out this questionnaire. Your assistance is very much appreciated.

APPENDIX 2

PERSONNEL PRACTICES ASSESSMENT

INTERVIEW SCHEDULE

Instructions

This interview schedule is to be given to the executive in the organisation who has overall responsibility for the personnel function.

Part 1: General Details About the Organisation

1. What type of organisation are you employed by:

   A sole unit organisation? [1]

   The headquarters or main unit of an organisation that has more than one unit? [2]

   A branch or subsidiary or division of a ancilliary to an organisation which has more than one unit? [3]

   All units in a multi-unit organisation? [4]

   Any other? - if so please describe_____

   _____

   _____

   _____

   Place appropriate code number in box ----------> $_1$[ ]

2. What area(s), in which the unit(s) for which you are completing this schedule, are you located?

   Auckland: Northland, Auckland Province down to and including Gisborne [1]

   Wellington: Wellington Province, Taranaki, and Hawkes Bay [2]

   Christchurch: Canterbury, Marlborough, Nelson, Westland and South Canterbury [3]

   Dunedin: Otago and Southland [4]

   Place appropriate code number in box ----------> $_2$[ ]

   Indicate the dominant location of your unit(s)

   Urban [5]
   Rural [6]
   Provincial [7]

   Place appropriate code number in box ----------> $_3$[ ]

3. In the unit(s) for which you are completing this schedule, how many people are employed (all levels)

Male ----------> $_{4}$[ ]

Female ----------> $_{9}$[ ]

Record actual numbers in boxes above

4. What is the ethnic composition of the people employed (Percentages only)

Maori ----------> $_{14}$[ ]
Pacific Islander ----------> $_{16}$[ ]
European ----------> $_{18}$[ ]

5. Here are some questions on the structure of your organisation:

How many departments are included in your organisation? $_{20}$[ ]

What are numbers of levels of management? ----------> $_{22}$[ ]

Is the organisational structure:
centralised [1] or decentralised [2]? ----------> $_{24}$[ ]

6. How would you describe your position in the organisation?

Top level management [1]
Middle level management [2]
Firstline management [3]

Record number of choice in box ----------> $_{25}$[ ]

7. Circle the code beside the description of the types(s) of industry in which the organisation is involved in.

1. AGRICULTURE, HUNTING, FORESTRY, FISHING, MINING, AND QUARRYING:
Examples: Farming, Nursery Gardening, Agricultural Services, Logging, Ocean and Coastal Fishing, Oil Exploration, Iron and Non-Ferrous Mining, Stone Quarrying, Chemical Mining

2. MANUFACTURING - FOOD BEVERAGES AND TOBACCO
Examples: Meat Slaughtering, canning vegetables and fish, grain mill products, animal feeds, wine industry, biscuit making

3. MANUFACTURING - TEXTILE CLOTHING AND LEATHER
Examples: Knitting mills, carpets, rope, tanneries, footwear (excluding vulcanised, molded rubber or plastic)

4. MANUFACTURING - WOOD, WOOD PRODUCTS (EXCLUDING FURNITURE) PAPER PRODUCTS, PRINTING AND PUBLISHING
Examples: Saw Mills, Veneer Products, caneware

5. MANUFACTURING - BASIC METAL INDUSTRIES FABRICATED METAL PRODUCTS, MACHINERY, TRANSPORT EQUIPMENT, PROFESSIONAL AND SCIENTIFIC EQUIPMENT.
   Examples: Iron and Steel basic industry, electrical manufacture, furniture, structural metal products, engines, accounting machinery, television, motor vehicles and cycles, photographic and optical goods, watches

6. MANUFACTURING - CHEMICALS AND CHEMICAL PETROLEUM COAL RUBBER AND PLASTIC PRODUCTS: NON METALLIC MINERAL PRODUCTS AND ALL OTHER MANUFACTURING INDUSTRIES NOT ELSEWHERE CLASSIFIED
   Examples: industrial chemicals, drugs, paints, perfumes, petroleum, refineries, tyres, pottery, glass, clay tiles, cement, fibrous plaster, jewelry, sporting goods, brushes

7. CONSTRUCTION
   Examples: carpentry, architectural activities, civil engineering, trade contracting, hydroelectric plant installation

8. TRANSPORT, STORAGE AND COMMUNICATION
   Examples: passenger, freight, pipeline, loading of vessels, airfield operation, air transport, warehousing, Air New Zealand

9. WHOLESALE AND RETAIL TRADE AND RESTAURANTS AND HOTELS
   Examples: timber merchandising, licensed premises, provision of logging

10. COMMUNITY, SOCIAL AND PERSONNEL SERVICES (NON-GOVERNMENT)
    Examples: health and veterinary services, welfare institutions, labour associations, religious organisations, recreational and cultural services, personal and household services, international and extra-territorial bodies

11. GOVERNMENT (EXCLUDING LOCAL AUTHORITIES)
    Examples: All government departments, councils, commissions, corporations, education, government health services, railways, post office

12. FINANCING, INSURANCE, REAL ESTATE AND BUSINESS SERVICES
    Examples: monetary institutions, financial services, legal services, data processing, engineering, advertising services, equipment leasing

13. LOCAL BODIES, AUTHORITIES (NOT GOVERNMENT DEPARTMENTS ETC)
    Examples: hospital boards, harbour boards, power boards

14. MUNICIPAL CORPORATIONS

15. OTHER INDUSTRY

Specify _____

_____

_____

Record number code of selection in box ----------> 26[ ]

Part 2: Personnel Practices Undertaken in the Organisation

In this part of the interview, the interviewee is to be interviewed with the aid of cards.

"HERE IS A LIST OF PERSONNEL PRACTICES THAT WERE CONSIDERED TO BE THE MOST COMMONLY PRACTISED IN THE LAST NATIONAL SURVEY OF PERSONNEL PRACTICES IN NEW ZEALAND. THIS SURVEY WAS CARRIED OUT IN 1978."

Hand the Card number 1 to the respondent and allow sufficient time to be read.

Question 1:

"Which of these practices are carried out in your organisation?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 1

		Code
1.	Production of labour turnover statistics	28[ ]
2.	Employee records	29[ ]
3.	Advertising for staff	30[ ]
4.	Providing accident statistics and reports	31[ ]
5.	Involvement with statutory provisions for safety	32[ ]
6.	Salary and wage activities	33[ ]
7.	Management for further education	34[ ]
8.	Participation in employee associations	35[ ]
9.	Employee welfare	36[ ]

Question 2:

"Which of these practices are you responsible for?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 1

		Code
1.	Production of labour turnover statistics	37[ ]
2.	Employee records	38[ ]
3.	Advertising for staff	39[ ]
4.	Providing accident statistics and reports	40[ ]
5.	Involvement with statutory provisions for safety	41[ ]
6.	Salary and wage activities	42[ ]
7.	Management for further education	43[ ]
8.	Participation in employee associations	44[ ]
9.	Employee welfare	45[ ]

Question 3:

"Which of these practices are carried out by another part of your organisation?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 1

		Code
1.	Production of labour turnover statistics	46[ ]
2.	Employee records	47[ ]
3.	Advertising for staff	48[ ]
4.	Providing accident statistics and reports	49[ ]
5.	Involvement with statutory provisions for safety	50[ ]
6.	Salary and wage activities	51[ ]
7.	Management for further education	52[ ]
8.	Participation in employee associations	53[ ]
9.	Employee welfare	54[ ]

When this has been completed, give the respondent Card Number 2. Allow sufficient time for it to be read.

"DURING THAT SAME SURVEY, SOME NEWER PRACTICES WERE FOUND TO BE ON THE INCREASE. THESE ARE LISTED ON THIS SECOND CARD."

Question 4:

"Which of these practices are carried out by your organisation?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 2

		Code
10.	Job evaluation	55[ ]
11.	Performance appraisal	56[ ]
12.	Executive development programmes	57[ ]
13.	Performance counselling	58[ ]
14.	Manpower planning	59[ ]
15.	Training evaluation	60[ ]
16.	Succession planning	61[ ]
17.	Job enrichment/enlargement	62[ ]
18.	Joint consultation	63[ ]
19.	Grievance procedures	64[ ]

Question 5:

"Which of these practices are your responsibility?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 2

		Code
10.	Job evaluation	65[ ]
11.	Performance appraisal	66[ ]
12.	Executive development programmes	67[ ]
13.	Performance counselling	68[ ]
14.	Manpower planning	69[ ]
15.	Training evaluation	70[ ]
16.	Succession planning	71[ ]
17.	Job enrichment/enlargement	72[ ]
18.	Joint consultation	73[ ]
19.	Grievance procedures	74[ ]

Question 6:

"Which of these practices are carried out by another part of your organisation?"
(Code 0 for No and 1 for Yes)

CARD NUMBER 2

		Code
10.	Job evaluation	75[ ]
11.	Performance appraisal	76[ ]
12.	Executive development programmes	77[ ]
13.	Performance counselling	78[ ]
14.	Manpower planning	79[ ]
15.	Training evaluation	80[ ]
		Card No. 2
16.	Succession planning	1[ ]
17.	Job enrichment/enlargement	2[ ]
18.	Joint consultation	3[ ]
19.	Grievance procedures	4[ ]

"NOW LOOK AT BOTH CARDS AND ANSWER THE FOLLOWING QUESTIONS"

Question 7:

"Tell me if there are dominant personnel practices in your organisation that do not appear on either of these cards?"

List down any additional practices that the interviewee may identify.

Question 8:

"Please indicate whether the responsibility for these additional practices is yours."

Record the responses to questions 7and 8 as follows:

(Code practice in first box and 1 if your responsibility otherwise 0).

Additional Practice (Specify)

		Code	
20.	---------->	5[ ]	7[ ]
21.	---------->	8[ ]	10[ ]
22.	---------->	11[ ]	13[ ]
23.	---------->	14[ ]	16[ ]
24.	---------->	17[ ]	19[ ]
25.	---------->	20[ ]	22[ ]
26.	---------->	23[ ]	25[ ]
27.	---------->	26[ ]	28[ ]
28.	---------->	29[ ]	31[ ]
29.	---------->	32[ ]	34[ ]

Question 9:

"Please indicate which of the practices that you have indicated are carried out in your organisation, including any that you have added, you consider to be reactive to problems when they occur. Then indicate the practices that enable you to anticipate problems before they occur."

On the recording sheet, record as follows:
(Code 0 for Neither, 1 for Reactive and 2 for anticipatory.)

Practice 1	---------->	35[ ]
Practice 2	---------->	36[ ]
Practice 3	---------->	37[ ]
Practice 4	---------->	38[ ]
Practice 5	---------->	39[ ]
Practice 6	---------->	40[ ]
Practice 7	---------->	41[ ]
Practice 8	---------->	42[ ]
Practice 9	---------->	43[ ]
Practice 10	---------->	44[ ]
Practice 11	---------->	45[ ]
Practice 12	---------->	46[ ]
Practice 13	---------->	47[ ]
Practice 14	---------->	48[ ]
Practice 15	---------->	49[ ]
Practice 16	---------->	50[ ]
Practice 17	---------->	51[ ]
Practice 18	---------->	52[ ]
Practice 19	---------->	53[ ]
Practice 20	---------->	54[ ]
Practice 21	---------->	55[ ]
Practice 22	---------->	56[ ]
Practice 23	---------->	57[ ]
Practice 24	---------->	58[ ]
Practice 25	---------->	59[ ]
Practice 26	---------->	60[ ]
Practice 27	---------->	61[ ]
Practice 28	---------->	62[ ]
Practice 29	---------->	63[ ]

Question 10:

"Taking each practice in turn, please describe briefly how each is conducted in your organisation and why you conduct each practice in that particular way. Describe how your employees respond to each practice."

Practice 1

Practice 2

Practice 3

Practice 4

Practice 5

Practice 6

Practice 7

Practice 8

Practice 9

Practice 10

Practice 11

Practice 12

Practice 13

Practice 14

Practice 15

Practice 16

Practice 17

Practice 18

Practice 19

Practice 20

Practice 21

Practice 22

Practice 23

Practice 24

Practice 25

Practice 26

Practice 27

Practice 28

Practice 29

Part 3: Level of Employee Participation in Personnel Practices

To obtain a measure of level of participation it is necessary to ask the interviewee to try to match the list of practices (made up of those on the cards as well as those that have been added by the interviewee) with a list of structures that are used as worker participatory mechanisms.

Give the interviewee the following card (number 3) and allow sufficient time for the interviewee to study it.

Question 11:

"Looking at these practices, do you use any of the structures listed on card number three?"

(Code 0 for No and 1 for Yes)

CARD NUMBER 3

		Code
1.	Joint consultative committees	64[ ]
2.	Periodic reports to staff (eg annual reports)	65[ ]
3.	Team briefing sessions	66[ ]
4.	Team meetings	67[ ]
5.	Talkbacks	68[ ]
6.	Quality circles	69[ ]
7.	Productivity gain sharing	70[ ]
8.	Collective bargaining	71[ ]
9.	Co-management committees	72[ ]
10.	Autonomous work groups	73[ ]

Question 12:

"Are there any other participative structures that you use that are not listed?

11.	.....	74[ ]
12.	.....	76[ ]
13.	.....	78[ ]
14.	.....	80[ ]
		Card No. 3
15	.....	1[ ]
16.	.....	3[ ]

Question 13:

"Which of all the practices used, involve participative structures and what kind?"

(Record in boxes - Code blank for practices not used, code 0 for none, code number code for structure used.)

Practice	Code
(1)	5[ ]
(2)	7[ ]
(3)	9[ ]
(4)	11[ ]
(5)	13[ ]
(6)	15[ ]
(7)	17[ ]
(8)	19[ ]
(9)	21[ ]
(10)	23[ ]
(11)	25[ ]
(12)	27[ ]
(13)	29[ ]
(14)	31[ ]
(15)	33[ ]
(16)	35[ ]
(17)	37[ ]
(18)	39[ ]
(19)	41[ ]
(20)	43[ ]
(21)	45[ ]
(22)	47[ ]
(23)	49[ ]
(24)	51[ ]
(25)	53[ ]
(26)	55[ ]
(27)	57[ ]
(28)	59[ ]
(29)	61[ ]

Question 14:

"Using the following scale, rate the level of participation of your employees in each of these practices."

NONE:	NO INPUT AT ALL BY EMPLOYEES.....	(1)
LOW:	VERY LITTLE INPUT BY EMPLOYEES	(2)
MEDIUM:	SOME INPUT BY EMPLOYEES	(3)
HIGH:	A LOT OF INPUT BY EMPLOYEES	(4)

Record the responses to this question on the following scale:

(Code Blank for No Practice and Code Number for those practiced)

Practice	Code
(1)	63[ ]
(2)	64[ ]
(3)	65[ ]
(4)	66[ ]
(5)	67[ ]
(6)	68[ ]
(7)	69[ ]
(8)	70[ ]
(9)	71[ ]
(10)	72[ ]
(11)	73[ ]
(12)	74[ ]
(13)	75[ ]
(14)	76[ ]
(15)	77[ ]
(16)	78[ ]
(17)	79[ ]
(18)	80[ ]
	Card No. 4
(19)	1[ ]
(20)	2[ ]
(21)	3[ ]
(22)	4[ ]
(23)	5[ ]
(24)	6[ ]
(25)	7[ ]
(26)	8[ ]
(27)	9[ ]
(28)	10[ ]
(29)	11[ ]

Part 4: Assessment of Level of Proaction

Using the combined list of practices that has been produced by the interview so far, ask the interviewee to answer the following questions.

Question 15:

"Looking at each practice in turn, please consider the extent that the practice followed enables the personnel function to anticipate and solve problems by using new and creative strategies and the removal of or limitation of administrative barriers to the solution of personnel problems. In this sense it is really the opposite of the usual way of handling things, that is a problem occurs, and then the personnel department must find a solution, by a reactive procedure."

Then rate this extent according to the following scale:

LOW ----------> HIGH
(1) (2) (3) (4) (5)

(Code scale value if practised, or 9 if not)

Practice	Code
(1)	12[ ]
(2)	13[ ]
(3)	14[ ]
(4)	15[ ]
(5)	16[ ]
(6)	17[ ]
(7)	18[ ]
(8)	19[ ]
(9)	20[ ]
(10)	21[ ]
(11)	22[ ]
(12)	23[ ]
(13)	24[ ]
(14)	25[ ]
(15)	26[ ]
(16)	27[ ]
(17)	28[ ]
(18)	29[ ]
(19)	30[ ]
(20)	31[ ]
(21)	32[ ]
(22)	33[ ]
(23)	34[ ]
(24)	35[ ]
(25)	36[ ]
(26)	37[ ]
(27)	38[ ]
(28)	39[ ]
(29)	40[ ]

Part 5: Assessment of Tone

Give the interviewee the following five cards, and ask the interviewee to indicate which description best describes the organisation.

CARD NUMBER 1

"Labour is viewed as a factor of production and employee subordination is part of the 'natural order' of the employment relationship. Unions are kept at arms length."

CARD NUMBER 2

"Employee subordination is considered necessary especially for unskilled and semi-skilled workers; unions are accepted as inevitable. Employee relations policies centre on the need for stability, control and the institutionalisation of conflict. Collective agreements are specific and management prerogatives are defended, and careful attention is paid to the administration of collective agreements. The importance of management control is emphasised with the aim of minimising union constraints on line and corporate managements."

CARD NUMBER 3

"Attempts are made to build constructive relationships with unions and incorporate them into the organisational fabric. Broad ranging discussions are held and extensive information is provided to unions on a whole range of decisions and plans. The right to enhance individual employee commitment to the firm and the need to accept change.(This occurs through such mechanisms as share option schemes, profit-sharing, briefing systems, joint working parties, and quality or productivity circles).

CARD NUMBER 4

"Employees are viewed as the organisation's most valued resource. The organisation has above-average pay, clear internal labour market structures, and periodic attitude surveys to harness employees' views. Emphasis is placed on flexible reward structures, employee appraisal systems linked to merit awards, internal grievance,disciplinary and consultative procedures, and extensive networks and methods of communication. The aim is to inculcate employee loyalty, commitment and dependency, and to make unionisation unnecessary or unattractive."

CARD NUMBER 5

"The approach to employee relations is pragmatic. Unions are recognised in all parts of the business. Employee relations is viewed as the responsibility of operational management at the unit/division level. The importance attached to employee relations policies changes in the light of circumstances. When unions are strong or labour markets are buoyant, negotiation and consultation is emphasised. When unions are weak, or product markets become unfavourable or major technical change threatens existing practices, unions are 'rolled-back' and management re-establishes its prerogatives."

Record the interviewee's choice below. Note that the closest description should be selected.

Interviewee's selection : Card Number ----------> $_{41}$[ ]

APPENDIX 3

PRODUCTIVITY ASSESSMENT

Introduction

A set of productivity measures will be utilised. These are as follows:

Direct labour efficiency

Quality of product or service

Profit

Employee turnover

Employee absenteeism

The information necessary for these, will be requested during the interview with the company representative responsible for the personnel function.

Part 1: Employee Absenteeism

While there are alternative measures of absenteeism, frequency is the most reliable measure. Therefore the information sought from the organisation will be as follows:

a. Frequency of unapproved absence

b. Frequency of approved absence due to work injuries.

c. Frequency of approved absence due to other reasons.

The measure used will be man hours lost divided by the man hours rostered, averaged over the last twelve months.

Part 2: Employee Turnover

The most commonly used measure of turnover is the separation or labour turnover (LTO) rate. This is defined as follows:

$$LTO = \frac{\text{No. of Separations over specific time period}}{\text{Average no. employed over same time period}}$$

While this measure has some disadvantages, given the variation in sizes of organisations, it is the most appropriate. It will be calculated over the past twelve months.

Part 3: Direct Labour Efficiency Using Standard Time

The overall measure applied in most firms is total man hours available for work. From this various performance indices can be calculated giving information on employee effectiveness. The simplest method of obtaining the required information is to determine the measures of direct labour efficiency expressed as percentages of the total clock hours.

The percentages required are as follows:

a. Non-productive time, which is broken down into the following:

   1. Supervision. This is the clock hours spent supervising on the job, expressed as a percentage of total clock hours.

   2. Rework. This is the total hours spent reworking products that have come from other departments, expressed as a percentage of total clock hours.

   3. Training. This is the estimated lost time due to learning effects expressed as a percentage of total clock hours.

   4. Set Up (Make-ready Time). This is the time required for preparing machines or processes for production, expressed as a percentage of total clock hours.

   5. Machine Breakdown. This is time spent waiting while the machine or process is down.

   6. Other. This includes such things as supply shortage (or stock shortage), rectification (i.e. time spent rectifying errors within a department), cleaning and inspecting.

b. Productive Time. This the percentage of time spent working on the job. It is calculated by dividing the difference between total clock hours available and non-productive time by total clock hours, expressed as a percentage.

Part 4: Quality of Product/Service

This can be measured in terms of the resources used in the production of unacceptable output. These resources include the following:

a. Scrap. This is total time to produce items that are later classified as scrap, expressed as a percentage of total clock hours.

b. Customer returns. This is unacceptable out-of-plant products returned, expressed as a percentage of total output in one year.

Part 5: Profit

Two financial ratios will be used as measure of profit and they are as follows:

a. Earnings per share.

b. Return on shareholders investment or net profit divided by total shareholders funds.

Some organisations will by nature of their industry have different measures of productivity. However where possible, it is important to endeavour to utilise the above measures. If there are no records of these, then it is requested that organisations advise the researcher what other measures may be appropriate.

Massey University Department of Human Resource Management

PALMERSTON NORTH, NEW ZEALAND

TELEPHONES: 69-079, 69-089, 69-099
DATEX: NZ 30974, Mas Uni

In reply please quote:

Dear

I am currently undertaking some research on attitudes towards work and personnel practices in New Zealand. The main objective of this research is to establish what effects work beliefs and personnel practices have on productivity.

To build a representative national sample, I aim to survey approximately 60 organisations representing the major industry types. Since (Company Name) is a major employer with a well established personnel function and a leader in the industry, I am very keen that you participate in the research study.

The project involves three parts. These are as follows:

a. A self-administering questionnaire on attitudes towards work to be given to a representative sample of your workforce. This sample should include management as well.

b. A structured interview with the person who is responsible for the personnel function in your organisation. This will be conducted by me during a visit to your organisation.

c. Productivity measures that are reasonably common across New Zealand work organisations.

I have enclosed descriptions of these three sets of measures with this letter. If you agree to participate, I would like to gather the data between now and the end of February 1988, over the university summer vacation.

Usually the self-administering questionnaires have been distributed through the personnel department, and then I visit you and conduct the structured interview. The productivity information can be supplied at a later date. It is appreciated that the measurement of productivity is a difficult area and very sensitive. This is why I have opted for a set of measures, and I will basically use whatever you can give me. The visit should not take more than two to three hours.

You have my absolute assurance that the confidentiality of both the participating organisations and individual employees will be maintained. The identities of the organisations and the ownership of the productivity information will be known only to myself and my research associates.

This research is about national trends. However, once the main study is over I can if you wish, let you know the results in relation to your own organisation.

The Institute of Personnel Management (New Zealand) has provided financial backing for the research, and I have a grant from Massey University Research Fund. Given the present economic circumstances in New Zealand, and some of the changes that are already in motion as a result of deregulation, a study of work attitudes and personnel practices is timely.

I hope therefore you are able to participate. I would therefore appreciate if you could let me know soonest, so that I can make arrangements to get things underway.

I look forward to your reply.

Yours faithfully

P K Toulson
Senior Lecturer in Personnel Management

Encl.

Massey University Department of Human Resource Management

PALMERSTON NORTH, NEW ZEALAND

TELEPHONES: 69-079, 69-089, 69-099
DATEX: NZ 30974, Mas Uni

In reply please quote:

To the Employee

Dear Sir/Madam

I am currently undertaking a national survey of attitudes to work to see if we have any distinctly New Zealand work attitudes, and to find out what relationship they have on the way personnel management is practiced in New Zealand. I am also looking at the effect on productivity and effectiveness. This research has the support of the Institute of Personnel Management which has contributed to the costs of the research.

The front page of the questionnaire gives further detail on the aims and design of this research. You have been invited to participate in this research to help make up the national sample, and I would be most grateful if you could respond to the attached questionnaire.

I do stress that your responses will remain absolutely confidential and neither you nor your company will be identified in the research report. The personnel department has kindly assisted me in the selection of the sample from your company and the distribution of these questionnaires. Individual responses will be known only to me, and I do not know who you are! The biographical information on the first page is necessary purely because I am also looking at what effects things like sex, age, ethnic origin, and occupation have on attitudes.

I appreciate that you may find filling out questionnaires tiresome or frustrating, particularly when you feel that your individual response does not quite fit the categories given. To make comparisons with overseas research findings, I have to use standard questions that have been successfully used in earlier research. So please answer every question giving the response that best fits (when in doubt). The results will help us to understand better the important interactions between you as employees and the organisations that you work in. It will also enhance our understanding of what we as New Zealanders think of work in relation to studies that have been completed in countries like the United States and United Kingdom.

Participation by you is entirely voluntary. Simply fill out your responses to the questions, and if you would like to add any additional views at the end, please do so in space provided in Part 4. Then post it direct in the envelope provided (Postage has already been paid).

Since I have a number of organisations to do, the results will be some time off in the future. You will appreciate that this is a big project and I will not be able to start the analysis off until I get all the results in.

Thank you for your assistance.

Yours sincerely

(P K TOULSON)
Department of Human Resource Management
MASSEY UNIVERSITY

Encl

APPENDIX 6

BELIEF SYSTEM STATEMENTS AND FACTOR LOADINGS FROM AMERICAN STUDIES COMPARED WITH NEW ZEALAND RESULTS

	Beliefs About Work Statements	1st US Study (Buchholz 1977) Factor Loadings	2nd US Study (Buchholz 1978a) Factor Loadings	New Zealand Study Factor Loadings
	WORK ETHIC			
1.	By working hard a person can overcome every obstacle that life presents	.17	.41	.31
4.	One must avoid dependence on other persons wherever possible	.46	.42	.43
6.	A person can learn better on the job by striking out boldly on his/her own than he/she can by following the advice of others	.44	.42	.39
7.	Only those who depend on themselves get ahead in life	.60	.52	.58
11.	One should work like a slave at everything one undertakes until one is satisfied with the results	.35	.44	.31
30.	One should live one's own life independent of others as much as possible	.46	.42	.45
39.	To be superior a person must stand alone	.62	.54	.45
	ORGANISATIONAL BELIEF SYSTEM			
3.	Better decisions are made in a group than by individuals	.30	.43	.38
9.	One's contribution to the group is the most important thing about one's work	.68	.59	.56
10.	One should take an active part in all group affairs	.48	.45	.44
18.	It is best to have a job as part of an organisation where all work together even if you don't get individual credit	.35	.41	.41
22.	Working with a group is better than working alone	.59	.49	.50
25.	Survival of the group is very important in an organisation	.49	.45	.51
31.	The group is the most important entity in any organisation	.65	.59	.65
42.	Conformity is necessary for an organisation to survive	.24		.32
41.	Work is a means to foster group interests	.41	.40	.37

	MARXIST-RELATED BELIEFS			
2.	Management does not understand the needs of the worker	.29	.53	.41
13.	Workers should be represented on the board of directors of companies	.50	.68	.46
15.	Factories would be run better if workers had more of a say in management	.50	.58	.47
26.	The most important work in New Zealand is done by the labouring classes	.35	.61	.44
27.	The working classes should have more say in running society	.10	.74	.58
28.	Wealthy people carry their fair share of the burdens of life in this country	.38	.62	-.47
29.	The rich do not make much of a contribution to society	.35	.51	.54
34.	The work of the labouring classes is exploited by the rich for their own benefit	.39	.74	.70
36.	Workers should be more active in making decisions about products, financing, and capital	.56	.57	.47
44.	The free enterprise system mainly benefits the rich and the powerful	.41	.72	.60
45.	Workers get their fair share of the economic rewards of society (R)	.38	.66	-.58
	HUMANISTIC BELIEF SYSTEM			
8.	Work can be made satisfying	.39	.48	.46
14.	The work place can be humanized	.52	.46	.45
17.	Work can be made interesting rather than boring	.51	.58	.53
19.	Work can be a means for self-expression	.48	.52	.50
24.	Work can be organised to allow for human fulfillment	.58	.60	.54
32.	The job should be a source of new experiences	.58	.59	.51
33.	Work should enable one to learn new things	.59	.63	.54
37.	Work should allow for the use of human capabilities	.56	.54	.57
38.	One's job should give one a chance to try out new ideas	.63	.49	.55
40.	Work can be made meaningful	.72	.60	.66

LEISURE ETHIC

5.	Increased leisure time is bad for society.(R)	**.56**	**.61**	**-.48**
12.	The less hours one spends working and the more leisure time available the better	**.28**		**.56**
16.	Success means having ample time to pursue leisure activities	**.27**	**.40**	**.38**
20.	The present trend towards a shorter workweek is to be encouraged	**.67**	**.55**	**.65**
21.	Leisure time activities are more interesting than work	**.35**		**.36**
23.	Work takes too much of our time, leaving little time to relax	**.24**		**.52**
35.	More leisure time is good for people	**.73**	**.72**	**.70**
43.	The trend towards more leisure is not a good thing (R)	**.79**	**.65**	**-.66**

APPENDIX 7

THE PRODUCTIVITY DATA SET

Company	Absenteeism (a)	(b)	(c)	LTO	Non-Productive Time (1)	(2)	(3)	(4)	(5)	(6)	Prod Time	Quality Scrap	Returns	Profit EPS	RSI
1.				5%	4.7%	3.8%	3.2%	2.7%	1.7%	3%	81%	13%	4.87%	88c	12%
2.	.05%	.28%	3.85%	17%											
3.	Nil	.5%	5%	16.5%	2.5%		0.1%	25%		2.5%	69.9%				
4.	.004%	.03%	.057%	16.9%	2.8%	.008%	2.0%	0.56%	.008%	.008%	95.12%	.009%	.00001%		
5.				18.6%											
6.	.57%	.41%	2.3%	.33%	5.7%	4.5%	5%	1.25%	1.5%	1%	85%	6%	1.2%	12c	4%
7.				14%											
8.				30%											
9.															
10.					8.33%		3.43%	1.15%			92.17%			37c	24.49%
11.		.0322%		20.4%	10%	0.1%	2.5%	1%	0.2%	1.5%	75.7%	0%	.005%	42.9c	13.9%
12.				8%											
13.				15.93%											
14.															
15.		.1%	1.5%	28.3%	10%	1%	5%	1%	1%	1%	81%	1%	1%	32.5c	11.2%
16.				35%							103%		1.2%		
17.	.05%	.6%	1.47%	27.09%											
18.	4%	3%	8%	19%	40%		1%		1%		58%				
19.				15%							90%			34.23	13.88%
20.															
21.			8.5%	23%	8.0%	9.3%	8.0%	<1%	10%	62%	<1%				
22.				15%											10%
23.				29.25%											
24.				13%						80%					
25.	.08%	.3%	.26%	28.3%	.17%		1.38%			2.08%	96.37%		.117%		10.7%
26.	1%			47%											-7%
27.				10%											
28.	2.75%	.886%	1.468%	16.3%										N/A	13%
29.	.05%	.05%	2.3%	18%	15%		20%		4%		85%			25c	12.2%
30.	2%	.2%	5%	68%	6.2%	.5%	1.7%	3.0%	0.6%	4.0%	84%		.5%	22c	12.6%
31.			1.29%	30%										35.3c	11.5%
32.	0.6%	0.6%	15.54%	9.35%	5%		2%	9.5%	8%	4.5%	71%	1%			
33.				23.2%											
34.	.03%	3.0%	7.8%	9.0%	8%	0	2.65%	1.55%	2.5%	0	85.3%	2.5%	0%		
35.															
36.		.5%	1.3%	35.6%											
37.															
38.				26%							72%		8%		30%
39.				16%										60c	48.44%
40.	8.3%			2.9%							88.2%		2.9%	40c	16.1%
41.															
42.															