Organisational mobility: an empirical study of organisational career outcomes as indicated by changes in an individual’s job and job environment

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Organisational Mobility: An empirical study of organisational career outcomes as indicated by changes in an individual's job and job environment

by

C W ROUTLEDGE

A Doctoral Thesis

Submitted in partial fulfilment of the requirements for the award of

Doctor of Philosophy of the Loughborough University of Technology

July 1983
C W Routledge, PhD Thesis

Title: Organisational Mobility: An empirical study of organisational career outcomes as indicated by changes in an individual's job and job environment.

Key Words: Organisational mobility; Organisational careers; Career development.

Summary:

Organisational career outcomes are often related to organisational mobility which is described in the literature as movement of individuals between organisational positions. The outcomes are usually described in terms of rate, direction and patterns. Two factors suggest this is a narrow perspective of organisational mobility:

1) this simple description masks the variety in the situations which give rise to mobility outcomes;

2) this approach fails to explain the changes which can occur whilst an individual is within an organisational position.

These factors can be accommodated by considering organisational mobility outcomes in terms of changes in an individual's job and job environment. An analysis of the literature revealed the following dimensions to be the most appropriate descriptors of this change: job duties, organisational relationships, physical environment, remuneration, job opportunities and job involvements.

An empirical study of these changes over time revealed that organisational mobility outcomes can be meaningfully represented as a multi dimensional spectrum of change circumstances. An analysis revealed that several significant dimensions strongly influenced the variation amongst the sets of change circumstances. Relating the change circumstances to these dimensions identified several characteristic groupings of circumstances:

- associated with inter-positional changes;
- associated with organisation structure changes;
- associated with changes in job duties and organisational relationships;
- associated with cyclical or reoccurring duties;
- those characterised by very little change.

The analysis also revealed that the outcomes can be described at different levels of generality. This allows mobility patterns to be described in broad terms or in terms which reflect the variety of situations which give rise to mobility outcomes.
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Section 1  Introduction

Work organisations are facing increasing demands to systematise, rationalise and improve their policies and procedures regarding the career development of their employees. The state of the economy, changing technology and the demographic structure of the labour market create external pressures on organisations to increase human resources management and career development. In an economic recession there may be few opportunities for hierarchical promotions within organisations and few opportunities for inter-organisational moves. New technologies may bring new occupations and job opportunities. The increase in the number of women wishing to follow careers may induce employers to revise their career development policies. Internal pressures are created by employees with rising expectations who perhaps demand more from organisations than just a job (Hall, 1976).

In order to meet these internal and external demands, organisations must ensure that transfers between organisational positions and development of individuals within positions do not result from a random process. The movement and development of employees is a major aspect of human resources management, one that helps ensure that the right number and right kinds of people will be at the right places at the right time in the future, capable of doing the things needed so that organisations can achieve their goals (Miner and Miner, 1973).

The importance of movement and development to the individual as well as the organisation has been increasingly recognised (Hall, Hall and
and Hinton, 1978). Promotions, transfers, demotion and development can be used as rewards or punishment contingent on job performance. Therefore the control of movement and development has importance not only because of the consequences associated with the allocation of human resources but also indirectly through its influence on the attitudes and behaviour of employees.

Organisational mobility has been and is largely associated with movement of individuals between organisational positions. Ideas concerning the phenomenon of organisational mobility originated from studies in the fields of industrial, occupational and organisational sociology. (Caplow 1954, Levenson 1961, Miller and Form 1951, Prethus 1965, Glaser 1968, Slocum 1974). Career paths, the result of several consecutive inter-positional moves, were seen as a consequence of bureaucratic organisations. The concept of mobility, with its vertical and lateral components was first studied in connection with movements between occupations, reflecting change in status. This idea of vertical and lateral movement is now applied to changes in organisational position.

There have been few studies concerned solely with an examination of organisational mobility, and those that have are often based upon personal observation and distilled experience rather than objective research. (White 1952, Acton Society trust 1956, Dill, Hilton and Reitman 1962). Ideas and concepts associated with organisational mobility have often developed indirectly as a result of investigations into areas such as status, manpower planning, career planning or the
study of a particular occupation. Many of the findings of these studies have been concerned with the relationship between inter-positional moves and specific variables thought to influence these moves (e.g. technology, individual traits).

More recently attempts have been made to develop a comprehensive model of the process of organisational mobility, (Vardi 1980, Anderson et al 1981) outlining the contingent variables and describing how they influence mobility outcomes (mobility outcomes in the above studies refer to the rate and direction of movement of individuals between organisational positions).

The aim of this research is to examine the nature of organisational mobility outcomes by identifying, recording and analysing the changes which occur in an individual’s job and job environment. This approach will allow not only inter-positional changes to be examined but also the far more common intra-positional changes which have been invariably neglected in previous studies of organisational mobility. All organisational positions change and develop over time and so any comprehensive analysis of mobility outcomes cannot ignore these intra-positional changes. Also by examining the changes which occur in jobs and job environments the variety and impact of mobility outcomes can be studied.

In the light of this approach the thesis is structured in the following way.
In section 2 the concept of "career" is introduced and developed. Examination of the career literature introduces many of the ideas and concepts associated with organisational mobility. Different approaches to the study of careers are examined and the relationship of organisational mobility to careers and career outcomes is established. Section 3 contains a survey of the literature associated specifically with organisational mobility. Firstly a framework is developed within which organisational mobility can be examined. Then the nature of mobility outcomes are examined. Finally the contextual and individual variables which influence mobility outcomes are examined in turn. Section 4 contains a description of the objectives and methodology of the study, in particular the development of the questionnaire and interview and their use in obtaining a description of the changes taking place. Section 5 is closely associated with the previous section and contains a survey of the job analysis and managerial work literature. This was done to identify the various dimensions of jobs and their environments on which change might be measured. Section 6 contains an analysis of the results of the study. Section 7 contains a critical discussion of the results and compares them with similar findings in the literature, and also presents recommendations for future research.
Section 2 The Career Concept

2.1 Introduction

The term career is one which is instantly familiar to individuals in modern industrial societies. However most people would find difficulty in defining the concept outside a given context. It is a word which is given meaning by its situation. For example most people would associate a "business career" with such things as upward mobility and the associated status symbols which the mobility would bring. The term also suggests some degree of success with the incumbent finishing in an important position in an organisation. Career can imply something different when used in the context of "career nurse". This implies a lifelong occupation, someone who devotes his/her working life to a specific occupation. It does not necessarily imply upward mobility. Although the term career takes on different meanings in different scenarios there are some common notions about the concept which come through in all its uses.

Firstly careers are mostly acted out in the work setting. The term career is often used in similar contexts to the word occupation. It would also appear that career is usually applied to the more prestigious occupations - the professions eg the medical profession, teaching profession and the legal profession. It is only recently that the term career has been more widely applied to non professional occupations and even outside the traditional work situation (eg the career of the housewife and the mental patient).
Secondly career implies consistency and continuity. In both the former examples these aspects are implied. The business career suggests that the individual is always employed in the profession of business and commerce over the period of his working life, even if he moves from organisation to organisation. Similarly 'career nurse' suggests that nursing profession is the continuity running through the individual's working life irrespective of the number of jobs or organisations the individual is involved with. Career suggests a common theme running through a person's working life. It can be viewed as an organised or patterned path taken by an individual across time and space, or a series of separate but related events or experiences a person passes through in the course of his/her lifetime.

The third point, suggested by Van Maanen (1977), is that the term career conveys the notion of identity. It is obvious enough that the term medical career gives a sense of identification to an individual, ie it is a label which has meaning for other people. Van Maanen however suggests that the career is central to an individual's psychological identity. Erikson (1965) suggests that psychological identity grows out of life's experiences, that it is not gained once and for all, but is achieved continuously over a lifetime. Van Maanen therefore suggests that as the career provides much of a person's experiences in life it is very central to his sense of identity. Both the career and personal identity are built on the notion of time and emphasise both continuity and discontinuity of experience.
2.2 Approaches to the study of careers

The present day approach to the study of careers has developed through two major and distinct fields: the psychological and the sociological.

Occupational choice and vocational guidance have for a long time been the concern of many psychologists. Two approaches to the field can be distinguished in the psychological literature (Lancashire 1971).

The first approach looks at occupational choice as a matching process. The aim of the approach is to develop a theory which will allow jobs and people to be described by the use of similar terms. Satisfaction and stability of occupational choice is judged then by the congruence between the two sets of terms for any one individual. Roe (1957) and Holland (1973) are examples of this approach.

The second approach looks at occupational choice as a developmental process. The view implies that occupational choice is not something which occurs at one point in time but represents an evolving sequence of individual decisions. Ginzberg (1951) and Super (1957) are examples of this approach.

Psychologists have also approached the study of careers through the area known as organisational psychology. Issues of concern here have been work motivation, morale, work involvement and job satisfaction. Schein (1970), Leavitt (1972) and Porter et al (1974) are examples of this approach. One point worth mentioning concerning this approach
is that organisational psychologists have tended to concentrate on managerial problems and priorities ie. from the point of view of people working for organisations rather than being worked on by organisations.

Whilst the psychological approach to the study of careers has focussed on the person, sociologists have focussed on the setting in which a person develops his career. Sociologists have approached the study of careers through three sub-disciplines of sociology. The first sub-discipline, industrial sociology takes the point of view that membership of a task specific category (eg. a worker on a flow line) is the most important determinant of behaviour. Miller and Form (1951) is an example of this approach. The second approach is that of organisational sociology. In this approach membership of the organisation is regarded as the crucial element in determining behaviour. Salaman and Thompson (1973) is an example of this approach. The third approach, that of the occupational sociologist, deems membership of a particular occupation and its associated sub-culture as a primary determinant of behaviour. Slocum (1974) is an example of this approach.

Although these three sub-disciplines have tended to remain distinct in approach, in reality individuals tend to belong to all three categories.

Sociologists have provided rich descriptions of what it is like to be inside certain occupations. They have also recognised that there
are multiple realities available within the work arena, and choosing one depends upon a complex interaction of the individual and the situation. The career is a relative phenomenon which can be viewed from a variety of perspectives.

A feature of the development of the careers literature is that the psychological and sociological approaches have tended to remain independent. This has given rise to a certain contrast in the literature which has led Van Maanen (1977) to comment "On the one hand psychologists are saying people make careers and on the other hand sociologists are saying careers make people.

2.3 Internal and External Perspectives of the Career

A distinction has been made in the literature between the external career and the internal career. The external career is referred to as the objective career and it is the one which is directly observable by society. The internal career, sometimes referred to as the subjective career, is a more personal perspective concerned with a person's attitudes, feelings and sense of identity. This is not directly observable to society.

Several writers have referred to the external/objective career. Super (1957) has described the external career as "a series of positions occupied by a person as a means of preparing to earn, earning or withdrawing from the earning of a livelihood". Slocum (1974) has described the external career as "a structural aspect of an organisation consisting of hierarchical occupational positions in
an organisation that require successively more responsible performance of occupational skills".

Glaser (1968) has described the external career as being "a passage from one status to another through the type of social structure frequently called by sociologists either an organisation, a formal organisation, a complex organisation or a bureaucracy". Vroom (1968) has referred to the external career as being characterised by "the movement of employees among positions". Schein (1971) has described the external career as "the development of human resources, allocation of the right people to the right slots, optimum rate of movement through departments and levels". Walker (1976) has referred to the external career as "a patterned sequence of positions or roles usually related in work content".

The descriptions of the external career usually refer to an environmental setting such as an organisation or an occupation or the outcome of an individual who has interacted with the environment. The outcome is usually described in terms of properties of the environment. This is often in status terms, organisational position/role patterns or occupational patterns. The setting or outcome is always readily observable and often sanctioned by society.

Several writers have referred to the internal or subjective career. Super (1957) suggests that choices and success in a career are determined in part by the aptitudes, interests, values, needs, prior experiences and expectations of the person in question. Schein (1971)
refers to the internal career as "the individual moving through an organisation building up certain perspectives having to do with advancement, personal success, nature of the work and so on". Hughes (1974) describes the internal career as "the moving perspective in which the person sees his/her life as a whole and interprets the meaning of his various actions and the things which happen to him".

The descriptions of the internal career always stress the importance of the individual and how he interprets his various career experiences. Internal career outcomes are often couched in terms of feelings, attitudes and expectations rather than environmental settings (movement between positions). The internal career is only directly observable and meaningful to the individual in question.

Two writers have examined the dual nature of the career. Goffman (1961) suggests "the career concept is two sided. One side is linked to internal matters held dearly and closely such as image of self and felt identity. The other side concerns official positions, formal relationships and style of life and is part of the publicly accessible constitutional complex". Hall (1976) views the career as "the individually perceived sequence of attitudes and behaviours associated with work related experiences and activities over the period of a person's life.

Finally although some writers speak of the internal or external career as entities in themselves, it is more useful to look upon the two
aspects as perspectives rather than entities. In reality it is very
difficult to isolate one from the other.

2.4 Prescriptive and Descriptive aspects of the Career

Van Maanen (1977) has constructed a paradigm which demonstrates the
relationship between two major elements of a career. One of the
major elements of any career is the career outcome. This may be
viewed in both an internal and external perspective. Van Maanen has
called these outcomes the descriptive elements of a career. Internal
outcomes can consist of such things as career satisfaction, career
involvement, career attitudes etc. As noted in the last section, these
internal outcomes are viewed from the individual's perspective.
Examples of external outcomes are mobility patterns, amount of
productivity achieved in a career and salary or rank. The other major
element of the career is the "givens". This is the raw material of
which career outcomes are produced. Van Maanen calls this the
prescriptive element of a career. Again there are internal and
external prescriptive elements. The internal "givens" are such things
as cognitive orientation, learning style, personality traits, etc.
They are traits within the individual which predispose him to act in a
certain way. The external 'givens' are such things as environmental
setting, role, task, etc. Again these environmental aspects will
constrain the number and type of possible outcomes. The prescriptive
and descriptive elements are shown in the diagram below in their
relation to the internal and external perspective of the career.
2.5 Temporal aspects of careers

One of the most significant characteristics of a career is that it unfolds over time, often the working lifetime of an individual.

Erikson (1959) identified eight stages in a person's life cycle which appear to have important implications for an individual's career development. Erikson argued that a life cycle can be divided into eight meaningful stages, each one being characterised by a set of developmental tasks and associated with certain psychological issues. He also suggests that for normal development an individual must successfully work through the particular set of developmental tasks associated with each stage before he can move fully into the next stage. Four of Erikson's eight stages are based on the work of Freud (1964) and describe development in childhood which is not relevant to the world of work.

The fifth stage, adolescence, is concerned with achieving a sense of ego identity. The main danger at this stage can be role confusion.
This is the result of an individual's inability to settle on an occupational identity. It is a time of searching for values and an occupational niche. It may involve testing several occupations. The next stage is young adulthood during which the developmental task is inter-personal intimacy, becoming involved with groups and organisations. The seventh stage is adulthood and the developmental task is one of creativity and productivity. This may manifest itself in the world of work, building up organisations, developing creative theories discoveries or products that will endure; coaching sponsoring and developing younger colleagues. The eight and final stage is maturity. The developmental task being one of satisfaction with ones previous work and adjusting satisfactorily out of the world of work.

Several writers have identified career stages. Miller and Form (1951) have described five stages of a career cycle based more on actual job behaviours than on underlying developmental processes. The preparatory work period occurs in childhood and is concerned with images which are developed as a result of observation and listening to people in the world of work. The initial work period consists of part-time and occasional work (eg. student vocation work). The trial work period starts with a person's first full-time job and continues until he settles into a stable field of work. The stable work period extends from the end of the trial work period and continues until retirement. It is not possible to put a precise age scale against the various periods. This will differ from country
to country and between different education systems (differing school leaving age).

Miller and Form suggest that typical career patterns tend to emerge based upon the ways people have gone through (or have failed to go through) these work stages, with primary emphasis on stability or security of career. They go on to describe four such careers.

1) Stable career pattern
Individuals in this category have gone directly from schooling/higher education into work in which they have stayed. There are no trial jobs before the stable work period. Some managers and many professionals have careers with this pattern.

2) Conventional career pattern
With this career pattern the individual goes through the stages in the following sequence: initial jobs, trial jobs and stable employment. Many managerial careers are of this type.

3) Unstable career pattern
In this pattern the individual never really becomes established in one area, going from trial jobs to stable job and back to trial jobs again. He/she might be described as being laterally mobile.

4) Multiple trial career pattern
In this pattern the person does not stay in one field long enough to reach stability. He moves from one trial job to another.
Super et al (1957) have developed five stages in the realm of vocational behaviour which correspond to some extent to Erikson's concept of life stages. The developmental stages are:

1) Childhood
2) Adolescence
3) Young Adulthood
4) Maturity
5) Old Age

The main task in the childhood stage (up to age 14) is growth. In this stage the individual begins to fantasize about careers and develops vocational interests and capacities. During adolescence the individual begins to explore his own interests and different career opportunities. This corresponds to Erikson's identity stage. In young adulthood (age 25-44) the individual may initially flounder and eventually establish himself in a particular occupation. This corresponds to Erikson's intimacy stage with some hints of generativity (productivity) later. In the stage maturity (about 45-64) the individual continues to hold his own in a sort of career plateau. This stage is probably when generativity concerns would be most important. Old age (65 and on) is a period of disengagement. This would be the time ego integrity would be achieved if the person has resolved all the earlier stages.

In a study of the first five years of young managers careers Hall and Nougaim (1968) found some evidence to support a concept of career
stages. In the first year of employment with the organisation the main concern with a group of young executives was security and establishing oneself. However by the fifth year this need had considerably reduced, and the greatest need was for advancement/promotion. As the study was only for a duration of five years whether a maintenance stage followed the advancement stage could only be speculated. However, other studies have indicated a terminal plateau for most individuals in an organisation because of the shape of most hierarchies. Other studies have shown increased concern for achievement, autonomy and advancement between the 1st and 8th years of employment. (Bray, Campbell and Grant, 1974).

Hall and Nougaim's work led them to postulate a five stage theory of careers.

1) Pre-work
2) Establishment
3) Advancement
4) Maintenance
5) Retirement

Appendix (2.1) shows a summary of four life/career stages against an approximate age scale.

In addition to the career phases mentioned, a phase known as the "mid career crisis" has been referred to in the literature by several
writers. The phrase appears to occur between mid thirties and late forties and appears to be characterised by certain psychological and developmental issues. (Jacques, 1965; Levinson, 1969; Kutner, 1971; Dubin, 1973; Kaufman, 1974; Morrison, 1975).

The interactive nature of the career

Van Maanen and Schein (1976) have demonstrated how three major sets of career variables interact to produce career outcomes. The concept of a cube has been used to give the scheme a graphic representation.

There are three dimensions associated with the cube which must be conceived of as in continual interaction. Such interaction then leads to many kinds of career outcomes which can be located conceptually in the cells of the cube.

The first dimension represents major categories for classifying environmental settings, eg. cultures, roles, occupations, organisations.

The Career Cube

![Career Cube Diagram]

Life/Career Phases

Fig 2.2

Career Cube
The second dimension represents the internal variables related to the career eg. learning styles, intellectual ability, personality traits.

The third dimension represents the temporal/life cycle set of variables.

As a result of the interaction among the factors associated with each dimension career outcomes can be better understood and more meaningfully examined.

Hall (1976) has provided a useful classification of career outcomes which illustrates their number, variety and nature. He suggests that career outcomes have been defined in terms of performance, attitudes, adaptability and identity. It is the first two outcomes which have been given most attention in the literature.

Performance outcomes are most often associated with money and position. Position has been employed in the following ways: rank, level in hierarchy, number of promotions received in a given time period or length of time in present position and many other variants of these. Typical financial outcomes are present salary, average yearly increases etc. Other performance career outcomes are performance ratings, size of budget controlled, number of employees controlled and so on.
Another set of career outcomes is associated with the way the career is perceived and evaluated by the individual. This personal evaluation is part of a broader class of outcomes known as career attitudes, and covers job satisfaction and involvement.

A third category of outcome, and according to Hall seldom mentioned in the literature but becoming increasingly crucial, is that of career adaptability. Obsolescence and the acquiring of new skills are typical outcomes in this category.

The fourth type of outcome is concerned with a person's sense of identity. This outcome has two main components: firstly it entails the person's awareness of his values, interests, abilities and plans; secondly it is concerned with the degree of integration between past, present and future concepts of self - the person's sense of continuity and sameness.

Some examples may better illustrate the utility of the relationship between the three major career variables and career outcomes.

Two of the main career variables may be held constant whilst the variation in the third is studied in relation to particular career outcomes. For example in a study by Hall and Nougaim (1968) career outcomes of upward mobility, productivity and job satisfaction were examined for young managers in the first five years of full time employment (career phase fixed) in a particular organisational setting (environment fixed). The variation in career outcomes were then related to variations in individual traits.
Just one career variable may be held constant and the variation in career outcomes related to the variation in the other two major career variables. For example mobility patterns (Career outcome) of professional mechanical engineers have been examined in a study by Hutton and Gestl (1963). Here the occupational role or setting (mechanical engineers belonging to a professional body) has been fixed and the mobility outcomes can be related to variations in career cycle and individual traits.

Finally career outcomes of different individuals with no common career variable might be examined. For example career outcomes such as salary, upward mobility, job satisfaction and job involvement might be compared for a number of individuals employed in different occupational functions. The variation in career outcomes could then be examined and discussed in light of the differences in the major career variables, organisational setting, life cycle and individual differences. The case study method often utilises this approach.

The section began by remarking that the career defied definition and tended to be situation specific. The reason for this could well be the multitude of career variables operating in any situation which gives an uniqueness to every individual career. However as can be seen from this section, patterns, trends and relationships do exist in the field despite its complexity. The career cube is a conceptual
demonstration of how the career variables interact with one another to produce the enormous variety of career outcomes.

The model also provides a reference framework for research into career variables their relationships and their associated career outcomes.

2.7 The Nature and Scope of the Present Research

Hall (1976) has commented that the career outcomes most frequently mentioned and investigated in the literature are those associated with organisational positions (see page 19). Movements between organisational position and the changes which accompany them such as change in function, geographical location, grade, salary etc. are ways in which these outcomes are described. It is these career outcomes which have given rise to the phenomenon of organisational mobility, and they will be referred to as organisational mobility outcomes in this thesis.

It is the aim of this research to investigate not only the nature of mobility outcomes associated with inter-positional moves but also the nature of outcomes associated with changes that occur within an organisational position (this phenomenon will be developed and explained in section 3).

The process by which different career variables interact to influence career outcomes will be referred to as the organisational mobility process. By providing a clearer understanding of the nature of the mobility outcomes, further insight into the process of organisational mobility should be possible.
Section 3 Organisational Mobility

3.1 The Organisational Mobility Process

In its most generalised form the organisational mobility process can be viewed as the outcome from interactions between an individual and his/her environment. However the literature of the organisational mobility process is fragmented and characterised by a variety of perspectives. A coherent framework is needed to draw together many of these disparate views. The ideas of Milkovich, Greenhalgh and Anderson (1976) appear to have potential for structuring some of the recurrent themes in the research on the process of organisational mobility.

Milkovich et al argue that the organisational mobility process has two components: structure and flow. On the one hand mobility is an observable structural phenomenon which can be studied apart from the idiosyncratic work experience of individuals in that it relates to a relatively standardised and related set of roles to be performed. On the other hand it is concerned with the flow of individuals through these roles. These two aspects are highly interdependent. The structure of an organisational mobility path is identified and takes on meaning in terms of movement of individuals through the organisation. In turn the flows of individuals are patterned and regulated in terms of the structural properties. The dual concept is analogous to a script and stage setting for a play (structural aspect) and the play being interpreted and acted out by the cast of players (flow aspect).
Structure and flow are the two major variables determining the variation in mobility outcomes.

Two general contingency models of the organisational mobility process have been proposed which develop the ideas of Milkovich et al. Basically the idea of structure and flow interacting to produce mobility outcomes is inherent in both models. However the idea of structure is conceived as a number of environmental variables which provide the back-cloth against which the mobility process takes place. The idea of flow is conceived as a number of individual differences or attributes which may predispose individuals to certain mobility outcomes.

The models also demonstrate the inter-relatedness of the individual and organisational perspectives of the mobility process.

Vardi (1980) describes an integrative model of organisational mobility. The model (fig 3.1) consists of four horizontal facets and two vertical ones. The horizontal facets define the type of variable to be considered: (1) exogenous variables (environment); (2) independent input variables (contextual determinants); (3) mediating process variables and (4) dependent variables (actual mobility outcomes). Vertically the upper facet represents the organisational and the lower one the individual levels of analysis. The flow can be viewed separately for each level of analysis or simultaneously as an interaction of forces, thus the integrative nature of the framework.
Exogenous Variables (Environment)
- Labour market
- Product market
- Location
- Ownership
- Legal constraints etc.

Socioeconomic background
- Skill demands
- Culture
- Family etc.

Independent Variables (Characteristics)
- Size
- Technology
- Structure
- Unionization

Mediating Variables (Process)
- Mobility policy (from within, from outside)
- Locus of mobility decisions (close, remote)

Organizational Level

Individual Level
- Mobility attitudes, (interest, effort, opportunities)
- Mobility perceptions (requirements, satisfaction)
- Locus of control (internals, externals)
- Mobility behaviour (visibility, initiative)

Dependent Variables (Outcomes)
- Actual OCM. Indices:
  - Amount
  - Rate
  - Direction
  - Initiator

Fig 3.1

Vardi's integrative model of organisational mobility
Vardi defines mobility outcomes as the movement employees experience among organisational roles, and he describes four dimensions of these outcomes, the amount of mobility, the rate of mobility, the direction and initiator of mobility.

Vardi argues that the mobility outcomes are determined partly by the organisational characteristics and partly by individual characteristics.

The formal positions structure of the organisation is the focal domain for the study of the mobility process. It is within this system that mobility occurs both as a personal experience and as an organisational phenomenon. Vardi argues that the nature of different organisational roles and of the functional-structural dependencies among them is related to various contextual factors such as size of organisation, technology, degree of unionisation, etc. These factors in turn, are influenced by external events or forces in the environment such as product demand, labour market fluctuations, legal constraints and community characteristics.

Vardi argues that individual differences not only reflect variability between individuals but allow organisations to categorize individuals according to any given attribute common to a group of people. Consequently many personal and demographic characteristics become important in making decisions concerning the workforce. These decisions, in turn, are related directly to the type of mobility individuals experience in the organisation. For example employees
mobility patterns can be dependent on such factors as their age, sex, education, skill tenure and ability. From an organisation perspective, these variables become the contingencies on which certain kinds of role changes are dependent. From the individuals point of view, these become the requirements set by the organisation (implicitly or explicitly) for an employees career movement.

Vardi suggests in his model that there are mediating processes between organisation and individual characteristics and actual mobility patterns. These can be recognised at two levels, the organisation level and the individual level.

At the organisation level two variables mediate between an organisations characteristics and mobility patterns; company policy and locus of mobility decisions. Management's policies on filling vacancies can have a profound effect on mobility patterns irrespective of an organisation's size, technology and structure. Also the locus of the career decisions can have a profound effect on mobility patterns. Whether the decision is remote or close to the individual in question will affect mobility experiences and his related perceptions.

On the individual level of analysis career perceptions and behaviours such as attitudes to mobility, perceptions of mobility, locus of control, attempts to become visible and development of sponsors mediate the direct effect of the independent constraints (age, sex, education etc.) on actual career mobility patterns.
Anderson, Milkovich and Tsui (1981) have developed a model of intra-organisational mobility to help clarify the key variables, antecedents and consequences of the process, (fig 3.2). The model has a dual perspective, organisational and individual. The top half of the diagram is concerned with the variables and relationships denoting an organisational perspective. The bottom half of the diagram is concerned with the individual perspective.

For groups or organisations the main purpose of the model is to identify those factors that influence the mobility characteristics of a unit. In the model mobility is characterised as having a rate, direction and pattern. The model shows that rate, direction and patterns of mobility in organisation are largely a function of opportunities. The frequency and nature of these opportunities are largely a function of the economic environment, the organisations structure and technology and the characteristics of the workforce. The relationship between opportunities and actual mobility is often mediated by criteria established to regulate the allocation of vacancies eg. skills, seniority. However as the model indicates the criteria themselves often depend on the available opportunities, environmental constraints, development of bureaucracy and the nature of the existing workforce.

Applied to individuals the purpose of the model is to identify factors that determine individual mobility and to explain the consequences of mobility for the individual and the organisation. The variables used to describe the mobility characteristics of a unit (rate,
Model of intraorganisational mobility (Anderson, Milkovich and Tsui)
direction and pattern) can also be used to describe an individual's mobility. The model shows both direct and indirect effects of the independent variables on the actual mobility of individuals. Opportunities are again a major factor as is the match between criteria for mobility and the characteristics of the individual.

The model also specifies some of the consequences of mobility. Firstly actual mobility and the match between individual characteristics and mobility criteria are the major factors influencing the individual's desires, expectations and satisfaction with his/her mobility experience in the organisation. Secondly the actual mobility experience of the individual also influences other job attitudes and the match between actual mobility and perceptions of mobility influences, attitudes and behaviours. Finally job related attitudes also influence individual behaviours.

Although the two models differ slightly in perspective and in some aspects of detail, fundamentally they are very similar. Both describe how mobility outcomes are a consequence of the interaction between individuals and their organisational environments. Both models identify several aspects of the organisational environment and several individual attributes which influence and constrain mobility outcomes. Both models allow an organisational or individual perspective of the mobility process. The remainder of this section will examine the three main components of the models; the mobility outcomes, the effect of the organisational environment and contextual variables on mobility outcomes and finally individual differences as determinants of mobility outcomes.
3.2 Mobility Outcomes

Both of the models of organisational mobility previously discussed describe mobility outcomes as movements of individuals between organisational positions and suggest rate, direction and pattern as dimensions of this movement. Underlying this view of mobility outcomes are certain assumptions concerning organisational positions. This section will examine the nature of organisational positions and these assumptions. The nature of intra-positional change will also be examined. Finally the nature and use of patterns in mobility outcomes will be examined.

3.2.1 The Nature of Organisational Positions and Mobility Outcomes

Many writers in describing career patterns or the organisational mobility process have viewed the organisational environment as a series of discrete positions related in work content and differentiated vertically and horizontally. The idea of vertical and horizontal directions was first used by Sorokin (1947) and developed by Caplow (1954) in his model of social mobility. This idea of vertical and horizontal movement has been used frequently in the description of the organisational mobility outcomes.

Martin and Strauss (1956) suggest that organisational mobility is the vertical and horizontal movement of personnel through organisational positions. Strauss (1970) suggests that the mobility process is a natural consequence of the lateral and vertical division of labour in organisations. Becker and Strauss (1956) describe a model of flow through an organisation whereby individuals enter an
organisation at the bottom and move up through the ranks as they gain in age, skill and experience. Many leave on the way and the flow is complemented by people joining the organisation at various levels. They also suggest that downward and lateral movements make the process more complex.

Walker (1976) stresses the importance and complementary nature of vertical and lateral position moves. Idema (1978) describes career development as essentially vertical and lateral movement between a number of job positions. Wellbank, Hall, Morgan and Hammer (1978) describe career paths (the result of mobility) as a series of vertical and lateral moves between job positions.

A further dimension was added by Schein (1971) when he envisaged the organisation as a three dimensional cone. Movement within the cone can take place in three conceptually distinguishable dimensions; vertical (increasing or decreasing responsibility), circumferential (changing ones division, department or function) and radially (increasing or decreasing ones centrality or insider status).

This idea of the dimensions of mobility lacks precision when examined in the light of real organisations. Several different situations could be identified as vertical moves: a promotion within the same department and function; a promotion to a different department, but within the same function; a promotion to a different department within a different function; or even promotion to a different organisation. The possible situations are numerous. Similarly a
A horizontal move could be considered as a move to a job in the same function dealing with a different product, or it could entail a change of function, or organisation or geographical location. Again there are numerous different situations that could be classified as horizontal moves. Therefore to describe a positional move in terms of two or three dimensions gives only a very vague idea of what it entails. It is true that all moves can be seen as having these components, but more detail is required to make the description meaningful in an organisational context. A more useful description was provided by Watts (1981) who specifies six types of job change based on the idea of vertical and lateral moves in an organisation.

i) Sequential - in which training and experience in a previous job are used to acquire a post of greater responsibility in the same occupation, eg. an engineer becoming an engineering manager.

ii) Lateral - in which training and experience in a previous job are used to acquire a post of similar responsibility in the same occupation, eg. a design engineer becoming a development engineer on the same grade.

iii) Regressive - in which training and experience in a previous job are used, but a job of lesser responsibility is acquired in the same occupation, eg. an engineer manager reverting to an engineer.
iv) Spiralist - in which training and experience in a previous job are used to acquire a post of similar or greater responsibility in a related but different occupational field, thus facilitating entry into a different occupational field altogether, eg. an engineer moving into the apprentice training school with a view to becoming a general training officer.

v) Augmenting - in which training and experience in a previous job are 'invested' and a job of similar or lesser responsibility is acquired in a different occupation, which does not follow directly from previous training and experience but adds to their value, eg. an engineer moving into personnel with a view to eventually becoming administration manager in engineering.

vi) Recycling - in which training and experience in a previous job are abandoned and an altogether new occupation is entered, eg. an engineer becoming a computer programmer.

Louis (1980) has identified five inter-role career transitions which provide a useful perspective on the different types of move. Firstly individuals may enter or re-enter a labour pool. Secondly individuals may take on a different role in the same organisation. Thirdly individuals may move from one organisation to another. Fourthly individuals may change profession or function. Fifthly individuals may leave a labour pool.
Other writers have studied changes in particular aspects of positions such as changes in function, geographical location, status etc. When used alone or in conjunction these items of "organisational currency" add more meaning to the description of the mobility process.

Functional Moves

Many writers have used change of function i.e. a person's basic occupation, skill or discipline, as a specific example of a lateral move. Hamelman (1966) stresses the importance of studying cross functional career paths towards a target job of Plant Manager to identify the most suitable path for development purposes, whilst Clark (1966) notes the scarcity of cross functional moves among a sample of managers from N.W. England. Hutton and Gerstl (1963) and Collins (1977) consider various aspects of functional origins as they related to career development patterns. Chartrand and Pond (1968) discuss the use of the cross functional move in career development of public servants. Robertson (1970) lists similar approaches in managerial transfer practices in large American companies.

Other studies deal not with specific functions but classify jobs in more general terms such as administrative, managerial, supervisory, white collar, technical. For example Orth (1975) describes differing career development patterns among engineers based on such terms as supervisory, management, project, technical etc. Rapoport (1970) discusses moves from technical to general management of men in mid-career.
Inter-Organisational/Geographical Moves

As moves across organisations appear as natural breaks or boundaries, they are commonly mentioned in the literature, as are geographical moves. Inter-organisational and geographical moves of managers are examined by Clark (1966). Inter-organisational moves in connection with early career development (Marsland, 1975), and salary progression (Roche, 1973) have also been studied. Veiga (1973) identifies inter-organisational and geographical moves as significant mobility outcomes.

Status and its Correlates

Changes in status as reflected by changes in job grade, job title, salary etc appear to be common "currencies" in describing the mobility process.

Strauss (1970) describes the process as a regularised status passage.

"Membership in any enduring group or social structure inevitably involves passage from status to status. In order that a group persist and flourish, each status must be filled, jobs must be done. The incumbents of positions die, retire, leave, fail, and sometimes betray the organisation. New types of goals develop and so new positions are created. Other positions get hived off and persons who previously filled them must shift or be shifted elsewhere. Lengthy retention in a given status may hide a genuine shift of social position as old duties and prerogatives are dropped and new ones accrue. Unless a group were to be wholly undifferentiated, its members necessarily have to move up, down, sideways."
Wilensky (1960) suggests that an organisational career can be viewed as a succession of related jobs arranged in a hierarchy of prestige. Becker and Strauss (1956) suggest that the flow of personnel through an organisation can be seen as a number of streams to positions of high prestige and responsibility.

Lipset and Malm (1955) analyse individuals first jobs in relation to future progression (as measured by occupational status). Clements (1958) analyses the background and education (measures of status) as a correlate of career progression for managers in the Manchester conurbation. Chartrand and Pond (1968) analyse salary and grade progressions of civil servants as indicators of career development. Sofer (1970) notes the importance individual managers attach to promotions (in status terms) in two manufacturing organisations.

**Age and Length of Service**

Several writers have used age and length of service as indicators of developmental patterns. Martin and Strauss (1956) suggest there are timetables related to various routes and the people destined for senior positions often have accelerated timetables. Roth (1963) indicates that these timetables provide a set of reference points by which people can assess their own success within the organisation. Morgan (1971) demonstrates the utility of length of service and age measurements in the identification of career paths.

Simply to describe a job move has having a vertical or horizontal component is an attractive idea and in certain situations and for
certain purposes it is adequate. However, given the great variety and complexity of organisational situations it is not surprising that a considerable number of organisational "currencies" have been used to describe the organisational mobility outcomes. The choice of "currency" will depend very much on the purpose of the description. It must always be realised that any of the conventional descriptions of job moves are only convenient labels and narrow perspectives of the complex pattern of changes taking place.

The most frequently used "currencies" tend to be the ones which have stability over time. Particular organisational positions often change in nature or disappear altogether over time. However functions, organisations and status descriptions are meaningful over much greater time spans and are therefore much more useful in describing comparative studies.

3.2.2 The Nature of Change Associated with Organisational Mobility

In most descriptions of organisational mobility, change is seen as a discrete event i.e. there is an identifiable point in time when a person leaves one position and takes up another.

In a practical organisational situation events are not so clear cut. Even when it is possible to identify a specific event such as an individual starting work in a new organisation there is likely to be a transition period from one role to another. Louis (1980) likens this transition period to the encounter period in
D

organisational socialisation, during which reality testing by the newcomer and mutual adaptation of individual and organisational unit occur. The encounter period extends from the time of entry into the new situation or role, until substantial adjustment to and acceptance of the situation is reached by the individual.

Change associated with organisational mobility may be viewed in the same way. Thus a personnel file might record the date when a person takes up a new job, but it cannot capture the gradual development of the duties, relationships or obligations which follow that recorded event. Descriptions of the organisational mobility process tend to concentrate on the finite observable event and ignore the reality of subsequent experiences of the individual.

Many descriptions of mobility patterns describe the patterns as a series of occasional moves between stable positions. Martin and Strauss (1956) suggest mobility patterns become built into structures providing escalators for mobile individuals. Wilensky (1960) suggests patterns become institutionalised (socially recognised and sanctioned within some social unit) and have stability over time. This view suggests it is the individuals who are mobile and the structures are stable.

A corrective to this approach was provided by Dill, Hilton and Reitman (1962). They noted that:

"The impressive thing about the careers of young men in industry is not the consistent long run relationship between personality and performance even within a
single job situation. It is instead the sequence of short run interactions between a man, his job surroundings and others in the organisation. Such sequences can exert decisive long run influences on a man's career but generally only indirectly, by affecting the interactions which occur next. Thus there can be observed a continuing pattern of decisions, behaviours, observations of consequences, and learning which results in modification of future decisions and behaviours. The managerial aspirant is learning what is expected of him, what opportunities do and do not exist and how he can influence his chances for advancement. As he learns he makes decisions that affect his present and future career possibilities, and as he learns the personality seen by others changes."

This approach recognises that change takes place all the time, that job environments evolve and jobs also evolve in response to the environment. Changes in duties, relationships and rewards take place all the time without any action by the individual to change his job.

Louis (1980) recognises the existence of inter-role transitions (previously mentioned) and intra-role transitions. Environmental changes may cause adjustments to an individual's duties, responsibilities and relationships within a particular role. Estler (1981), investigating jobs with limited career opportunities, rather than finding frustration associated with these circumstances found in many cases that the jobs were not static but evolving around the individuals holding them. Jobs were viewed as bundles of responsibilities activities and privileges. Attached to these bundles are salaries or wage rates, titles and unwritten customs. The concept of an evolved job is one in which the bundle of duties have come to be
arranged in a large part to match an existing employee's perceived bundle of abilities and interests. The process of evolution is one in which both organisational factors and individual attributes interact to create an essentially different job than that for which the employee was originally hired.

Estler goes on to describe a hypothetical individual most likely to be found in an evolving job situation. He/she will be skillful in the use of his/her assertiveness, persistence, "savvy" and connections associated with job responsibilities to move the organisation to get things done. He/she will be characterised by intellectual curiosity demonstrated by an interest in problem solving, imagination in seeking solutions and tolerance of ambiguity. He/she will tend to use natural ability and formal training to execute responsibilities in a highly competent manner. Kirton (1976) has described a similar type of individual in his distinction between innovators and adaptors. The innovators tend to be individuals who use novel solutions, who can tolerate ambiguity and attempt to move the organisation in new directions.

Estler goes on to describe organisational conditions most favourable to the development of evolving jobs. These include organisational instability which could be produced by growth or decline or turnover. The environment might also be characterised by a high number of unresolved problems not attached to specific jobs. The environment may also be characterised by organisational slack with resources available for innovation.
This evolutionary change may so alter a person's job that it becomes necessary for the organisation to institutionalise and recognise the change (as may happen with a departmental reorganisation or the re-writing of a job description). Another feature of change associated with the mobility outcomes is the variation in the amount of change which takes place. For example an inter-organisational change could involve a total change in relationships, a total change in environment, a total change in duties, a change in the nature of the job and a total change in the status and reward structure. A cross functional move within the same organisation could involve a change in skills, some change in relationships, some change in the nature of the job and possibly a change in rewards. A vertical promotion however may only involve a slight change in relationships and status and reward structure (eg. an upgrading). The amount of change taking place will depend on the nature of the job move and on the particular organisational circumstances. Similarly there could be great differences in the amount of change associated with evolutionary job changes. At one extreme the amount of change could be so great as to necessitate a reorganisation, and at the other extreme the evolutionary change may be a slight change in the reward system.

Louis (1980 ii) argues that all kinds of transitions both inter and intra role have some common features. Among these are the differences between the old and the new role. Some of the differences are observable before the transition but some only after the individual has taken up the new role. Louis argues that the nature and magnitude of the pre and post-transition role differences can be estimated from the type of transition undertaken. For example, the transition from
school to work is likely to entail substantial differences between student and worker roles. However in contrast there would be fewer differences between roles of a sales person in company A moving to sales person in company B given similar product line and sales territory.

Louis also distinguishes between objective and subjective differences between roles. Objective differences (known as changes) are publicly noticeable and knowable in advance. Subjective differences (contrasts) are personally rather than publically noticed. Contrasts are perceptual products of the individuals experience in the new setting. Whether a particular feature of the new situation stands out or emerges as a contrast depends on its relative importance to the individual. For two people under-going the same objective change in role different contrasts will emerge. Unlike objective changes contrasts are generally not knowable in advance.

Louis also distinguishes differences that arise from discrepancies between an individual's anticipations of future situations and experiences and the subsequent happenings. Surprises may be positive or negative. They may result from either undermet or overmet, conscious or tacit anticipation about job and organisation and one's role in the organisation. Schein (1970) has described these expectations or anticipations as part of the psychological contract an individual has with an organisation. Surprises would be the consequence of a breaking of this psychological contract. In this situation individuals would form new psychological contacts with the
organisation on the basis of the individual's new perception of the situation.

Conventional labels associated with aspects of the mobility process such as promotion and side-ways move may not reveal the amount or type of change taking place. Also the amount of change accompanying evolutionary type of change may be underestimated or even ignored as there are no conventional labels for this type of transition. Orth (1975) recognised the varying amounts of change involved in cross functional moves by examining engineers in several different functions in regard to their primary motivation, dominant values, management skills and the uses of power. Orth demonstrated that these differences would have significance in the career development of engineers moving from one function to another. Other studies based on job descriptions give insights into the amount of change involved in moving from one position to another. Walker (1976) compared jobs in terms of content, skills/knowledge and behavioural demands. Clusters of similar jobs can thus be identified and the differences between clusters indicate the developmental change required.

Similarly Wellbank et al (1978) identified a method based on job evaluation of differentiating each job in an organisation in terms of its skills, knowledge and demands. In this way the amount of developmental change between each position can be identified and hence used for career and manpower planning purposes.
3.2.3 Mobility Patterns

The idea of order in the organisational mobility process and its consequent career patterns is a powerful one. Martin and Strauss (1956) suggest that mobility paths become institutionalised into structures "providing escalators for mobile individuals". They suggest that these routes provide people with career expectations. Wilensky (1960) defines an organisational career as a succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered (more or less predictable) sequence. Becker and Strauss (1956) suggest that the flow of personnel should be seen as a number of streams i.e. there may be several routes to senior positions.

Berlew and Hall (1966) and Rosenbaum (1979) analysed the vertical mobility of employees in a large corporation and find support for the hypothesis that mobility in the earliest part of one's career has an unequivocal relationship with many of the most important parameters of one's later career: career ceilings, career flows, probabilities of promotion and demotion.

Mahoney and Milkovich (1973) have shown how the organisational mobility process can be represented as a transitional probability matrix. Movement between organisational positions or job states can be represented both qualitatively and quantitatively. In any chosen time period, movement between job states is shown by the percentage of people who move from one position to another. Hence both the direction and density of movement can be identified. Mahoney and Milkovich suggest that in real organisations paths along which there
is greatest flow would be most likely to be institutionalised. (Appendix 3.1 shows three such paths for a hypothetical organisation; D-C-B-A; I-H-G-F-E; J).

These ideas suggest that patterns can become institutionalised and can have stability and recognition within an organisation. However, this situation does not account for organisational change, in particular change in structure and the nature of jobs. Specific organisational positions may have a limited life because of changing circumstances and hence a pattern described in these terms may be meaningless after a few years. For this reason patterns tend to be described in more permanent ways, i.e. functions and grade level patterns which tend to last much longer than individual positions.

Hamelman (1966) considered crossfunctional patterns of individuals who became plant managers. The data were taken from several hundred firms, and showed that there was no dominant career pattern for plant managers. One interesting point to come out of the study was that actual career patterns of plant managers within one organisation were often very different from the written requirements and norms.

Robertson (1970) studied crossfunctional transfers of managers in 250 large manufacturing companies. He analysed both originating and receiving functions by industry. Robertson found some functional moves occurred more frequently than others and this varied from industry to industry. Collins (1977) examined the functional histories of industrial relations practitioners. He identified patterns when he analysed his data by length of time individuals had
been in the function. Whilst Hamelman did not find any dominant pattern whereas Robertson and Collins did is due to some extent to the respective measures used. Had Hamelman looked at original functions of Plant managers he would have found, for instance, that two functions provide the majority of Plant managers. However he looked for similar patterns in three consecutive functions. Obviously the permutations here are much greater and much more diversity would be expected. The more detailed the description of career paths (number of transition points) the less likely it will be to detect similarities. No two career patterns are identical although some may be similar. It is the detailed description that highlights the differences. Where patterns are detected it is usually with simple general measures as was the case in the studies of Robertson and Collins.

It is perhaps not surprising that only patterns for discrete moves (moves between positions or functions) have been studied and not patterns in the more elusive evolutionary change.
3.3 The Effect of the Organisational Environment and Contextual Variables on Mobility Outcomes

The organisational environment has been identified as one of the two major components influencing mobility outcomes. The way in which any particular environment, at any particular time affects and constrains mobility outcomes is a complex problem. There are many variables within an environment which may contribute to a particular pattern of mobility outcomes. Few studies appear to have examined the combined or relative influence of organisational variables on mobility outcomes. However many writers have suggested a relationship between a single organisational variable and mobility outcomes. The nature of the evidence for these relationships varies considerably. Some writers have produced empirical evidence for such relationships. Other evidence is based on personal observation and distilled experience whilst some evidence is based on assumptions or hypothetical models. Further reference to the nature of the evidence will be made when considering the different studies and their impact on the understanding of mobility outcomes.

Of the variables to be considered several are associated with organisational structure: hierarchical and lateral relationships, occupational structure, organisational boundaries, organisational size and technology. The effects of organisational strategies and labour market pressures on mobility outcomes will also be examined.

3.3.1 Hierarchical and Lateral Relationships

Many of the descriptions of mobility outcomes (movement between positions) assume that the organisational environment is a rational
mechanistic type of structure differentiated hierarchically and laterally. These assumptions owe much to the concept of bureaucracy and the writings of the administrative theorists. Weber (1947) describes the main ideas embodied in the concept of bureaucracy. The writings of Fayol (1949), Barnard (1948), Taylor (1947), Follet (1941) are representative of the ideas of the administrative theorists. Their ideas are prescriptive in nature and are relevant to the practical running of an organisation. Child (1977) has highlighted the purely structural aspects implicit in the writings of Weber, Fayol, Taylor, Barnard and Follet. These are concerned with the hierarchical nature of organisations and the vertical and lateral relationships between organisational positions.

The ideas embodied in the concept of bureaucracy and the writings of the administrative theorists are in the main associated with order and stability. However they suffer the dysfunctions of rigidity, impersonality and excessive categorisation. Burns (1968) recognised the inadequacy of these ideas in rapidly changing environments. He describes two ideal types of management organisation which are the extreme points of a continuum along which most organisations can be placed. The mechanistic type of organisation is adapted to stable conditions and it conforms very closely to Webers idea of a rational-legal bureaucracy. The organic type of organisation is adapted to unstable conditions. There is continual adjustment and redefinition of individual tasks and the contribution rather than restrictive nature of specialist knowledge is emphasised. A much higher degree of commitment to the aims of the organisation needs to be developed.
Several writers have described mobility outcomes based on the assumption that the organisational environment is formal, and mechanistic. Martin and Strauss (1956) put forward arguments, based on observation and experience that the organisational structure of an industrial enterprise has dual interrelated functions. From the standpoint of management, structure provides for an orderly hierarchy of authority and responsibility and also the vertical and horizontal movement of personnel ensures the right people get to the right position. They argue that mobility is a natural consequence of bureaucratic structure. Wilensky (1960), based on personal observation, suggests that the following structural attributes appear to be at the root of organisational mobility.

: Organisations with tall hierarchies provide for careers with many stages. This can afford quick and steady career progression, resulting in much mobility and career opportunity.

: Organisations that have a high ratio of managers to managed have a high number of career positions. Again this gives rise to much mobility and career opportunity.

: Organisations that have a history and prospect of continued growth, for example organisations that have a wide range of products or an indispensable service in continuous demand produce opportunities for mobility. This leads to stable career opportunities and expectations.
Organisations that have prescribed training, eg. executive development, rotation programmes, professional schools give rise to stable career opportunity and expectations.

Organisations with multiple units, geographically scattered give rise to career opportunities with associated residential mobility.

Schein (1971), Walker (1976), Idema (1978) and Wellbank (1978) have all assumed the mechanistic type of environment in describing mobility outcomes as complementary vertical and lateral movements between positions.

Most of the studies which describe organisational mobility as movement between positions assume an organisational structure based on Weber's bureaucratic model of organisations or on the prescriptions of the administrative theorists such as Fayol. These type of structures are most suited to large organisations in stable environments. In small organisations or organisations in rapidly changing environments, discussions of mobility based solely on the bureaucratic rational type structure appears to be insufficient. Burns' organic type of organisation would appear to have some relevance. In this type of organisation the evolutionary type of mobility or the evolving job concept becomes more applicable. Real organisations will contain elements of both mechanistic and organic organisations and as such it is likely that both types of mobility will occur to a greater or lesser extent.
3.3.2 Occupational Environment

Roe (1957) defines an occupation as "whatever an adult spends most of his time doing ...... the major focus of a person's activities and usually of his thoughts."

Hughes (1965) sees the meaning of occupation in broad terms, he states "an occupation, in essence, is not some particular set of activities; it is the part an individual plays in any ongoing set of activities. The system may be large or small, simple or complex." Hughes here emphasises the social relationships surrounding an occupation not in order to minimise the economic side, but to keep it in perspective as part of a more inclusive set of social relationships. Slocum (1974) defines an occupation as "the kind of work an adult does on a regular basis. Usually it is performed for wages, salary, commissions or other forms of money income." Turner and Hodge (1970) defined an occupation in terms of "similarities of activities carried out within a general scheme of division of labour." Given this sort of definition, the number of possible occupational classifications is enormous, Hall (1975) suggests that the occupation is "the society that directly and/or indirectly yields social and financial consequences and that constitutes a major focus in the life of an adult."

These definitions suggest that an occupation is a set of activities defined by the division of labour; that it forms a major part of an individual's life and hence of the social structure; that an occupation is carried out for financial reward; and that occupations are also defined by patterns of social relationships.
Caplow (1954) has examined the development of modern occupations in the light of three phenomena: aggregation, differentiation and rationalisation. Aggregation is the increase in size of social groups, communities and organisations in modern industrial societies. Over the last century there has been a general movement from Agriculture to Manufacturing from rural to urban environments. This trend of increasing size of work groups appears common to the major part of manufacturing and service organisations. The expansion of the working group is reciprocally related to the expansion of "horizontal" associations such as labour unions and industrial institutes, and the integration of these associations into national and regional organisation on a still larger scale.

Alongside this expansion in work group size has been the development of a multitude of specialisms, and the sub-division of existing trades and professions (differentiation). The following example spectacularly demonstrates the great proliferation of specialisms which has taken place over the last century. In 1841 the occupational census of Great Britain listed 431 occupations. Exactly a century later the Occupational Dictionary compiled by the United States Census Bureau provided for the coding of about 25,000 occupational titles. With a growing organisation, the process of differentiation is, to a considerable extent the result of organisational requirements and the necessity of coping with larger and larger aggregations of people, things, functions and relationships, and with an increasingly more complicated and sophisticated environment. In addition to the horizontal differentiation of occupations, increasing vertical differentiation is taking place. Distinctions between operating
levels become more evident, e.g. "junior management", "senior clerk", "assistant sales manager."

Rationalisation is essentially the substitution of the formal control of behaviour for the informal, personal and spontaneous devices which regulate human activity in unplanned situations. It leads to a more precise specification of how, when and by whom work should be done. It also leads to a standardisation of the working environment and the substitution of impersonal judgements for the relationships which evolve out of close personal contact. Some degree of rationalisation is necessary in any organisation which attains a size where personal supervision in all situations becomes impossible.

This phenomenon of rationalisation is also one which is generally applicable to organisational development as well as occupational development.

The occupational structure in modern industrial societies has changed considerably since the industrial revolution and will continue to change in the future. Any examination of comparative employment figures over time demonstrates this point, (Faris, 1964; Baum, 1967; Rosenthal, 1973). The main changes detected are the shifts in employment from agriculture to industry and from industry to the service sector.

Bell (1973) has described the arrival of the "post-industrial" society and has suggested five dimensions of this era; creation of a service
economy: the pre-eminence of the professional and technical class; the primacy of theoretical knowledge; the fact that technology can be planned; the substitution of algorithms (problem solving rules) for intuitive judgements. Bell suggests these tendencies are the present and future context of occupations.

It is developments such as these that produce a constantly changing occupational structure. The reasons behind this changing structure can be related to the wider social structure; the education system, the political system, the product/market environment, changing expectations of consumers etc. (Hall, 1975).

One of the most important factors affecting the development of occupational structures is the development of technology, (Caplow, 1954; Miller and Forn, 1951; Slocum, 1974). Bright (1958) found that skill levels were affected by the introduction of automated equipment. Walker (1962) found similar results in a pipe factory. Mann and Hoffman (1960) found that jobs in automated power plants required more job knowledge than those in a traditional power plant. Woodward (1965) and Blau (1968) found that vertical and lateral differentiation of jobs in organisations was related to technology.

The foregoing discussion has suggested what the occupational environment means and how the number of occupations and specialisms has increased and changed in organisations in recent years. However what does this mean for the organisational mobility process? The increase in the number of specialism has implications for both lateral
and hierarchical movement in organisations. The number of vertical channels increases providing more routes through which employees may move or be developed. Secondly this increasing specialism gives a more precise meaning to lateral moves. Sometimes the meaning of a lateral move may be imprecise but the movement across occupational or specialist boundaries gives precise meaning to a lateral move (this is not the only meaning of a lateral move). The increase specialism will also give individuals more scope for lateral moves and hence career development and also organisations have more options in planning employees careers. They can be made of complementary vertical and lateral moves in order to by pass potential blockages in promotion.

Increasing specialism and its associated implications for mobility appears to be more relevant for large organisations. In rapidly changing environments particularly environments with changing technologies, a high level of specialism can bring the danger of obsolescence.

Small companies on the whole do not have a high degree of specialism. Differing skills and functions are often combined in one job. The trends of increased specialism are more in evidence in organisations with a high level of bureaucracy and hence the comments on mobility emanating from these trends are more relevant to organisations with a high levels of bureaucracy.
3.3.3 Size of Organisation

Several writers have suggested a relationship between mobility and the size of organisation. Grusky (1961) and Kriesburg (1962) suggest that rate of turnover in the top position of an organisation is related to the size of organisation. However, Gordon and Becker (1964) re-analysed and extended Grusky's work and found no evidence of a direct relationship. Levenson (1961) suggests that size is an important factor in mobility because succession (a major component of mobility) involves a chain of transaction rather than a single transaction. So the larger the organisation, the longer the chains and the more mobility. Gusfield (1961) and Vardi (1978) have also found size of organisation to be an important determinant of job mobility.

In the discussion of the effect of organisation size on the mobility process, the effect of bureaucracy cannot be ignored. Size of organisation bears a close positive relationship to the level of bureaucracy. In most studies it would be very difficult to separate out the effect of size from the effect of bureaucracy. Some of the studies reporting on the relationship of size of organisation on mobility may well have been reporting the effect of level of bureaucracy on mobility.

3.3.4 Organisational boundaries

Slocum (1974) has suggested that work organisations like other social systems have boundaries. Physical boundaries and territorial boundaries are obvious, but organisations also have social barriers eg. between people inside the organisation and people outside the
organisation; between people in different departments; between people in different functions; between people at different levels of the hierarchy. The organisational mobility process requires individuals to cross these boundaries. Therefore the number and nature of boundaries are very important to mobility outcomes. The concept of a boundary is a helpful device in visualising the nature of organisations. In real organisations individuals may experience these boundaries as selection criteria, as requirements in a job description.

Organisations use them as devices enabling the right individuals to get to the right positions. The boundaries may be determined by management policy eg. promotion from within, graduate only entry. In this way organisations see boundaries as necessary for survival and growth.

Schein (1971) identified three types of boundaries which characterise the internal structure of an organisation. These boundaries correspond to the three types of movement identified earlier (Section 3, page 32). Hierarchical boundaries separate vertical levels; functional or departmental boundaries separate circumferential groups; inclusion boundaries separate radial groups. Schein argues that the organisational mobility outcomes will differ from organisation to organisation because of:

a) the number of boundaries (how differentiated the structure is);
b) the permeability of the different boundaries (how easy it is to cross boundaries);

c) the filtering process which characterises the boundaries (the selection process operating at the boundaries).

Different types of boundaries will have different filtering criteria. Functional boundaries will be based more on skill and knowledge, whilst hierarchical boundaries will be based more on personality traits, loyalty, or the backing by sponsors. The nature of some boundaries with their corresponding filtering requirements will make them very impermeable, e.g. the functional boundaries between academic departments of a university. It is unlikely that any individuals in a chemistry department could fulfil the filtering criteria for the history department. Other functional boundaries could be highly permeable, e.g. the boundary between a production department and an engineering department. Filtering requirements are part mandatory and part discretionary. Functional boundaries are more likely to be governed by mandatory filtering requirements, whereas hierarchical ones are more likely to be governed by discretionary criteria. For example a company recruiting engineers from the outside labour market are quite likely to have fixed mandatory requirements such as qualifications, years of experience, membership of a professional body, familiarity with a certain technology. On the other hand the promotion of an engineering supervisor to engineering manager will more likely be governed by criteria such as inter-personal skills, leadership qualities, company attitudes etc. These criteria are much more flexible, open to interpretation and discretionary.
Several factors affect the balance between mandatory and discretionary filtering. Firstly, the mandatory requirements to cross a boundary may be technical, physical or psychological criteria (age, strength, intelligence) or some occupational requirement (e.g. membership of a professional body). These criteria may well be outlined in the job description. Secondly, personnel policy may well affect the filtering criteria used, for example giving graduates preferential promotional opportunities. Thirdly, manpower requirements and the manpower supply affect the filtering criteria. If there is a great demand for manpower this could lead to a reduction in the stringency of the filtering criteria, particularly if the supply does not match the demand. Conversely if there is a surplus of manpower, then the filtering criteria may become more stringent. Finally, every individual will operate filtering criteria depending on his own interpretation and opinion. This can lead to inconsistent operation of filtering criteria. There will always be partial discretion in operating filtering criteria but the amount of discretion will vary in light of the four points considered.

One general observation might be made with respect to the number and nature of boundaries. With increasing size of organisation and level of bureaucracy the number of hierarchical and lateral boundaries will increase; with increasing specialisation the permeability of the lateral boundaries will tend to decrease (due to specialist knowledge, experience and qualifications required for positions).
With small flexible organisations the boundary mechanism will be less relevant. The concept of evolving jobs and evolutionary change may be more applicable. All real organisations will be a mixture of boundary mechanisms and the more flexible evolutionary type of mechanisms.

3.3.5 Technology

A number of studies have suggested that technology affects mobility outcomes in organisations. Martin and Strauss (1956) suggest that in one organisation with a complex technology the pattern of movement of mobile individuals is primarily vertical with little horizontal movement. However in another organisation with a relatively simple technology a mobility pattern with a high degree of horizontal mobility had developed. Whilst the authors did not argue that technology was the only variable producing the outcomes, it was seen to be a relatively strong determinant.

Vardi and Hammer (1977) report that technology as defined by Thompson (1967) can affect the patterned sequence of positions in an organisation and also the ratio of vertical to lateral moves. Stone (1953) also reported that different types of work system produced different vertical mobility patterns.

Two other points appear worth mentioning in relation to technology and mobility. Firstly technology as previously mentioned has had a great impact on mobility patterns through its impact on the development of occupational specialisms. Secondly Joan Woodward (1965) demonstrates how variations in technology produced different
organisation structures, in particular differences in the number of levels in the hierarchy, different spans of control, different ratios of direct to indirect workers. It has been shown earlier that structural aspects of organisations have a direct impact on mobility outcomes. Therefore given that technology affects structure it will in turn indirectly affect mobility outcomes.

3.3.6 Organisational Strategies

These strategies may be general strategies connected with growth or product/market development or they may be specific strategies connected with mobility decisions.

The first type of strategies will affect mobility outcomes indirectly eg. by increasing or decreasing the number of job opportunities (expansion or contraction). Becker and Strauss (1956) suggest that whether an organisation is expanding or contracting is a major determinant of variations in mobility patterns. Bennison (1979) also suggests that changes in size of the organisation can cause severe imbalances in the mobility process, in particular rapid expansion, steady contraction and short term growth not equal to long term growth are cited as three significant situations. Child (1977) has identified five organisational development strategies which would have important implications for the mobility process.

Growth in size per se

The existing activities of the organisation are expanded in order to meet the organisational objectives.
Growth via diversification

The organisation widens its scope of activities by moving into new markets or new products and/or services.

Technological development

Here the organisation aims at enhancing competitive power or public approval through increased efficiency or through incorporating technological progress.

Acquiring a secure domain

Here the organisation would aim at finding protected areas of activity, or negotiate these in the form of joint programmes with other organisations.

Creating organisational flexibility

Here the organisation would try to increase its ability to react flexibly to any potentially threatening external changes.

The second type of strategy affects mobility outcomes directly. In their theoretical work on the internal labour market, Doeringer and Piore (1971) have stated that organisations develop administrative rules, regulations and procedures to govern the allocation of resources within the firm. The following characteristics of these rules and regulations are considered important to the mobility process: the type of criteria used, the level of standards applied to those criteria, and the universality or particularism, with which the criteria are applied. Vardi (1980) argues that promotion from within
is one of the most important policies for generating mobility within an organisation, because of its "knock on" effect. Roth (1968) argues that the policies on amount of experience required will influence the rate, direction and pattern of mobility in the organisation. Reynolds (1951) proposed that aside from technological characteristics and degree of unionisation, management policies and practices regarding filling vacancies is a major determinant of intra-plant movement.

3.3.7 Labour Market Pressures and Age Characteristics of Workforce

Bennison (1979) has identified three labour market situations which could produce a serious imbalance in the mobility outcomes.

Many opportunities exist for employment outside the organisation.

The outside world is very unattractive to employees.

Significant improvement in the pay and conditions of a specific group of employees.

Rees (1973) argues that opportunities for mobility are influenced by the demand for labour, which is derived from the demand for products or services. Hansen (1967) suggests that the level of vacancies in an organisation is directly related to the labour market and the nature of the firms product markets. Gitelman (1966) studied the role of labour market conditions by classifying markets as either "loose, progressively tight or tight". The results indicated that under progressively tight and tight conditions, the mobility rates tend to increase. Conversely under loose conditions, mobility rates tend to be stable or decline.
Bennison (1979) suggests that age imbalances of the internal labour force will affect the occurrence of vacancies. There may be long periods with few vacancies followed by many vacancies occurring rapidly as an age imbalance works through the system. He quotes three types of imbalance situation.

: Recent growth creates a young age bulge.
: Growth 10-15 years ago creates a middle age bulge.
: Growth 30 years ago creates an old age bulge.

Morgan (1971) using a model based on age and grade has shown how different recruitment and promotion policies can affect mobility opportunities in organisations.
3.4 Individual Differences as Determinants of Mobility Outcomes

Individual members of an organisation differ on a range of attributes. This individuality may manifest itself, in relation to mobility outcomes in two ways. Firstly many studies have found that particular attributes of individuals appear to influence their mobility outcomes. Whilst this is an interesting phenomenon it is not always useful in predicting mobility outcomes. This is because individuals are made up of a composite of attributes and it is difficult to identify the relative influence of any one attribute in determining an outcome.

Also few studies have been done to show how a particular attribute dilutes or moderates other attributes and their effect on mobility outcomes. Secondly several writers have identified "career types". These types suggest that some individuals may be predisposed towards certain organisational mobility outcomes. These types represent a composite of attributes, a whole individual. This then would be a more useful concept in predicting mobility outcomes for particular individuals.

This section will deal firstly with the relationship of particular individual attributes to mobility outcomes and secondly with career types and their implications for the mobility process.

3.4.1 Individual Attributes

Many writers have found that mobility is related to particular individual attributes. Among the most frequently mentioned attributes are: age, seniority, level of education, sex and race.
Several writers find that mobility decreases with age Elliott (1966), Faulkner (1974), White (1974) although Dalton (1951) finds mobility to have no relationship with age. Jennings (1967) and Moore et al (1974) suggest that mobile individuals, especially managers, tend to have higher mobility the younger they are on entering an organisation.

Several investigators find that seniority (length of time employees spend with an organisation) affects their mobility patterns, Gitelman (1966), Grusky (1966), Hall et al (1970) and Wanous (1975).

Most research findings support the assumption that level of education is important to the mobility of an individual particularly level reached in the hierarchy. Dalton (1951), Stone (1953), Grusky (1966), McLennan (1967), Kaufman (1974), and Moore et al (1974).

Sex has been shown to be a significant variable in determining mobility outcomes. In particular several studies show how males experience greater mobility than females. Allan (1972), Basil (1972), Schein (1972), Grimm and Stern (1974) and Kanter (1977).

Similarly several studies have compared the mobility rates between black and white workers, Garbin and Ballweg (1965), Katzell et al (1970) and Butler (1976).
3.4.2 **Individual Types**

Several writers have identified types of individuals whose particular work or life style appear to have direct or indirect implications for mobility outcomes.

Schein (1975) suggests that individuals can be classified in terms of a syndrome of motives, values and self perceived talents which guide and constrain a person's career. These syndromes have become known as "career anchors". Schein identifies five distinct career anchors: managerial competence, technical - functional competence, security, creativity, autonomy and independence. He argues that each individual has a particular career anchor construct. Schein finds these constructs to be related to certain mobility outcomes and in particular an individual's choice of function.

Klimoski (1973) attempts to differentiate job incumbents on the basis of factors derived from a biographical inventory. The inventory is based on an attitude survey which is weighted towards interests, experiences and values. Klimoski finds different inventory patterns for three groups of individuals following three distinct types of engineering career. This would suggest that the inventory patterns are related to functional choice.

Kolb et al (1977) describe a typology which provides a grid for mapping individual differences in learning styles. They suggest that particular learning styles are appropriate to particular environmental demands. They argue that particular occupational/
functional environments would call for different learning styles. The experimental evidence they produce in fact confirms this. They suggest therefore that a particular learning style will predispose an individual towards a certain occupational function.

Gouldner (1957) suggests that people can be differentiated according to their dominant loyalties or orientations. Some individuals are orientated to the organisation ("locals") whilst others are orientated to their professional discipline or occupation ("cosmopolitan"). These orientations could well affect a person's judgement on whether or not to change jobs, function or organisation. A strong "local" orientation may well lead a person to change function or discipline to accommodate the organisation's wishes whereas a strong "cosmopolitan" orientation could lead a person to change organisation in order to pursue a basic interest in a chosen occupation.

Rotter (1966) distinguishes individuals on the basis of their locus of control. People characterised by internal controls believe that there is a relationship between their behaviour and rewards, and they perceive that they can have some impact on their environment. Externals believe that rewards are determined primarily by luck or fate and have no particular relationship to their behaviours or attributes. They do not perceive they can have an impact on their environment. Weiner (1972) also uses Rotter's concept and suggests that ability and effort are internal or have personal causality whereas luck and task difficulty are external or have an impersonal causality.
Rapoport (1970) in a study of the development of managers in mid
career identifies two types of development patterns, "Metamorphs"
and "Incrementals".

The manager who is characteristic of the metamorphic development
pattern is ambitious, creative, little concerned with security,
willing to take risks and to deal actively with new situations in
novel ways. If he cannot change a situation to enable him to function
more effectively he will change his organisation. He is often
energetic, demonstrates a sense of competence and leadership. His
career moves are usually outward and upward (spiralist).

The manager who is characteristic of the incremental development
pattern develops by cumulative steps along a given track. He is more
accepting of his organisation. He wishes to advance within a
structure without being impelled to change it. He is often willing
to be changed by his organisation rather than seek to change it.
When associated with managerial competence this type of career pattern
is characterised by steady advancement accompanied by a good deal
of personal satisfaction and happiness.

Bray (1974) in a longitudinal study of young managers, assesses them
on nine dimensions of lifestyle. He then compares and contrasts
the life styles of the more successful managers with those of the
less successful managers (success being measured by the number of
vertical promotions over an eight year period). The results are
embodied in two contrasting life styles, "Enlargers" and "Enfolders".
The enlarging life style is orientated towards the goals of innovation, change and growth. The enlarger moves away from tradition and emphasises adaption, self development and the extension of influence outward into the work and community sphere. The enlarger seeks responsibility both in job and community and his values and friendships can change dramatically.

The enfolding life style is orientated to the goals of tradition, stability and inward strength. The enfolder seeks to cultivate and solidify that which invites attention within his more familiar sphere. He tends not to seek positions of responsibility. He likes to settle in a job and see it through and gain great satisfaction in a job well done. Status considerations embarrass him, and he values informality, sincerity and genuineness in human affairs.

A thread of similarity runs through the typologies of Gouldner, Rotter, and Rapoport and Bray. Two characteristic patterns of development can be identified. The first type is characterised by an aggressiveness towards career development and a belief that a career is the individual's responsibility and is determined by his actions. Developmental patterns are characterised by revolutionary change and unpredictability and the individual tends to be intolerant of situations which he cannot change. The second type is characterised by a more accommodating approach to career development, and a belief that development is subservient to the needs of the organisation. Developmental patterns are characterised by evolutionary type of change and predictability.
The typologies are suggestive of two distinctive patterns of mobility outcomes. The first pattern, given an aggressiveness towards career development and an intolerance of situations he cannot change suggests a strong desire for upward mobility and a lack of patience to achieve this upward mobility. He may well be prepared to change both organisation and function in order to achieve his career ambitions.

The second pattern, given an accommodating approach, may well tolerate a lack of upward mobility for quite long periods. He may well use the "evolving job" situation to achieve his career ambitions, given company approval. He would probably only consider a change in organisation or function at the company's instigation or as a very "last resort" mechanism. He is likely to remain in one organisation and function throughout his career.

These patterns imply that an individual will display a consistent pattern of development over a long period of time. In particular, Bray argues that enlargers and enfolders demonstrate these characteristics consistently over time. Other researchers have been concerned to show how individuals may change. Hall (1971) suggests that "psychological success" is important in determining a person's approach to a job and career. A person who feels psychological success through good job performance will become more involved in and satisfied with it, and would therefore set himself more challenging goals and the process would build on itself, i.e. a person learns to be successful. Deci (1975) discussing locus of control in connection with intrinsic motivation makes the comment:
"One would expect that people who meet repeated failures could become low achievers and external controls even if they had initially been high achievers and internal controls. In short, interactions with the environment affect the way intrinsic motivation develops and changes."

Bray does acknowledge this view in commenting that the enlargers tend to get more challenging jobs, are successful at these and hence get further challenges whilst enfolders tend to get less challenging jobs, become demotivated, do not perform well and hence get less challenging assignments.

The different stages identified in the life and career cycle (Section 2, page 14) might also suggest that the typologies are not stable throughout the working life of an individual. Miller and Form (1951), Super (1957), Erikson (1957) and Hall and Nougaim (1968) all identified distinct stages in the life and career cycles. Each of the stages was characterised by its own set of development tasks. Dalton (1977) has identified four stages in the career of professional employees, each stage being characterised by a certain set of activities, relationships and psychological issues. Viega (1973) has identified phases in a manager's career when he is likely to be more mobile.

These studies suggest there are discernable stages in individual careers which are characterised by certain behaviour patterns and psychological issues. Failure to pass through appropriate stages at appropriate times may result in lack of adjustment in one's career.
So there is some evidence that the types are not stable and can be changed both by a person's interaction with the environment and his subsequent learning and as a person progresses through the stages of his life and career cycle.

In conclusion to this section on the mobility process it should be stressed that there is little evidence to suggest how the relative contributions of structure and flow operate in any situation. Neither is it known what factors affect the relative influence of any particular environmental variable or any particular individual attribute in determining mobility outcomes. The models of Vardi (1980) and Anderson et al (1981) are only indicative of the processes involved in organisational mobility. The main aim of the present thesis is to examine the nature of mobility outcomes and it is maintained that a clearer understanding of these outcomes should lead to a better understanding of the relationships between environmental variables, individual attributes and mobility outcomes.
Section 4     Objectives and Methodology

4.1 Introduction

The aim of this study is to examine the nature of organisational mobility outcomes. In much of the literature mobility outcomes are portrayed as instantaneous movements between organisational positions. These positions are related to one another both hierarchically and laterally. The organisations themselves are usually assumed to be stable, mechanistic environments characterised by a high degree of bureaucracy. The mobility outcomes are usually described in terms of rate of movement, direction of movement and patterns of movement over time. These fairly simple measures tend to be applied universally across the wide variations in individual, organisational and temporal situations.

However as argued in the previous section these assumptions concerning organisational positions and structures are not always valid, and the mobility outcomes described do not always present a comprehensive analysis of what is happening. This thesis maintains that any analysis of the organisational mobility process must recognise and account for the following observations.

Firstly organisations are not totally mechanistic and positions are not always stable. In reality two types of change are occurring, the instantaneous and the evolutionary. As well as individuals moving from position to position, positions themselves change and evolve in response to changes in the environment and changes in the job holder. The analysis therefore should recognise both types of change.
Secondly comparison of mobility outcomes in terms of rate, direction and pattern often gives no indication of the wide differences in organisation and individual circumstances associated with these outcomes. An analysis recognising this variation would provide useful additional insights into the mobility process.

Thirdly the organisational mobility process is both continuous and changing. The description of mobility outcomes should be capable of detecting meaningfully the presence or absence of mobility patterns.

In order to encompass these three points, it was decided to analyse changes which occur in an individual's job and job environment over time. These changes can be considered as the mobility outcomes. This approach is based on the assumption that jobs or organisational positions can be viewed as an amalgam of obligations, responsibilities, rewards etc with a particular job holder at a particular point in time. With the passage of time, changes in this amalgam will take place. No job remains totally static. Some of the changes may be small such as a slight change in relationships or a small change in the emphasis of one's duties or a slight change in the rewards associated with the job. However some changes may be much greater, such as a change from one organisational position to another or a major reorganisation of the company's structure. Each job holder in a particular organisational position over a particular period of time (3, 6 or 12 months) will be subject to certain changes. It is the objective of this thesis to identify and analyse these changes.
In order to accomplish this objective it is necessary to identify a sample of the significant aspects of a job and its environment which could change with the passage of time. The list of aspects would need to be as comprehensive as possible in order to be a representative indication of the change taking place, and also to cover all possible circumstances and contingencies.

It would then be necessary to identify and record the changes taking place for particular individuals in particular organisational circumstances during particular periods of time. The resultant changes could then be analysed for similarities and differences in order to gain insights into these mobility outcomes.

This approach would satisfy the three requirements, previously stated, for an adequate analysis of mobility outcomes.

Firstly by considering a comprehensive sample of changes that occur over time both the instantaneous and the evolutionary type of changes would be identified and recorded within the same reference framework.

Secondly the variation in the changes recorded would reflect the variation in organisational, individual and situational circumstances from which the changes are identified.

If the changes are monitored over different time periods or across different situations then similarities or differences between the changes could be an indication of the presence or absence of mobility patterns.
The remainder of this section will describe the detailed methodology of the study which should enable two specific objectives to be achieved.

Firstly it will determine which aspects or categories of jobs and their environments could change with the passage of time. Secondly it will describe how these changes might be identified and recorded.

4.2 Determination of Job Categories

In order to achieve the first objective a review of the job analysis and the managerial work literature was carried out. Six major characteristic categories of jobs and their environments were revealed: activities, relationships, job requirements, responsibilities, conditions and demands, and finally opportunities. Details of the literature search and the significance of the categories can be found in section 5.

Before these categories could be used as a basis for data collection, it had to be ascertained whether the population of individuals to be used in this present study would find these groupings of changes meaningful and be able to relate them to their own work situations.

It was decided to ascertain how samples of managers, typical of the population for the main study, would react to the classification found in the literature. However, in presenting the managers with this classification there could have been a danger of leading them into agreeing with it. To avoid this danger a more 'neutral' approach
was adopted. An open group discussion was initiated on the subject of "changes involved when one changes one's job". Gradually the discussion was broadened to include "aspects of jobs that can change over time". Individuals tended to trigger off thoughts in other group members and much wide ranging discussion was generated. Three such sessions were held with three different samples of managers. The samples were chosen from individuals attending the authors own classes who were sympathetic towards such an exercise. Each of the sessions was recorded and later analysed.

Although there was considerable similarity between the broad literature categories and the broad categories which emerged from the group discussions, the composition of the dimensions differed between the two sources. However it was possible to match the two sets of categories and the diagram below shows the relationship between them.

In the group discussion there emerged a significant category of changes which was labelled DUTIES. This covered items from Activities, Job Requirements and Responsibility from the literature search dimensions. The second category of changes to emerge from the group discussion was RELATIONSHIPS. This covered items mainly from the corresponding relationships group in the literature search but also some aspects of the category Responsibilities. The third category of changes from the group discussion was PHYSICAL ENVIRONMENT. Although this category is limited in scope, it was mentioned so often and consistently that it was decided it should stand as a distinct category. It corresponded to part of the
Conditions and Demands category in the literature search. In a similar way REMUNERATION was mentioned so often and consistently in the group discussion that it was included as a distinct category. Remuneration covered items from Responsibility and Conditions and Demands in the literature search. Finally there emerged from the group discussion a dimension INVOLVEMENT and OPPORTUNITIES which corresponded to categories Conditions, Demands and Opportunities in the literature search. Involvement and Opportunities were not consistently referred to by all members of the three samples, but the individuals who did considered them to be important. As they were distinct from the other four categories it was decided to include them as a separate category.

<table>
<thead>
<tr>
<th>Literature Search</th>
<th>Group Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>Duties</td>
</tr>
<tr>
<td>Relationships</td>
<td>Relationships</td>
</tr>
<tr>
<td>Job Requirements</td>
<td>Physical Environment</td>
</tr>
<tr>
<td>Responsibilities</td>
<td>Remuneration</td>
</tr>
<tr>
<td>Conditions, Demands</td>
<td>Involvement and Opportunities</td>
</tr>
<tr>
<td>Opportunities</td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 4.1

Literature search and Group discussion job categories.

In effect the categories which emerged from the group discussion were similar to the ones which emerged from the literature search. The main difference between the two sets of categories was how the different elements of change were grouped.
Having identified the broad categories of jobs and their environments which might change over time (duties, relationships, physical environment, remuneration, involvement and opportunities) it was then necessary to choose the most relevant detailed aspects under each of these headings for describing changes in jobs and their environments. This exercise was based on both the literature search and the group discussion, and the results are explained below. These detailed elements could then be used to draw up item pools of questions for use in a data collecting exercise (using a questionnaire or interview).

The main criteria for the inclusion of a particular item in any of the broad categories was that they should be meaningful and as unambiguous and universally applicable as possible. Some of the items are easily identified because they are factual and unambiguous. Others are more open to interpretation and dependent on the context in which they are used.

Duties
The first two items were readily identifiable because of their unambiguity and frequency of usage: "job title" and "job function". Two other items were frequently mentioned and again were unambiguous; "skills and knowledge connected with the duties" and "work load". Four other items were included because they were judged to be important in identifying change in duties, were frequently mentioned in the literature and because they could be applied to all jobs; "the number of duties performed;" "the percentage of time spent on
each duty"; "the nature of the duties" (managerial, technical etc) and "the product or service dealt with". It was felt however that a certain ambiguity in meaning surrounded these four items.

One criticism that may be levelled at the inclusion of some of these items is that they are much more affected by the jobs holders perception that items under other broad dimensions (relationships, physical environment and remuneration). Whilst this may be true, it is a problem to be dealt with under data collection.

Relationships

The detailed relationships that individuals have in organisations are well documented in the literature. Basically four distinct relationships were identified, "superior", "subordinate", "others in own organisation" and "people external to the organisation". The next question was what aspects of the relationships were important in indicating change. For the superior/subordinate it was felt that a distinction should be made between position and person, i.e. a person may leave a position but the position remains the same, however a position and a person may change (due to a reorganisation). Also it was felt that "severity" of relationship was an important factor ("frequency of contact", "length of contact"). For the other two categories it was felt they should not be broken down any further into sub groups or the detail may begin to mask the main trends in change. For these two categories it was felt that "the number of people dealt with", "the level in the hierarchy of people dealt with", "the function of people dealt with" and "the purpose of contact with
people dealt with" were important aspects in reflecting changes in relationships.

Physical Environment

This was probably the most simple category to draw up. It is based on an enlarging geographical area reflecting anything from "a change in one's immediate environment (office)" to "a change in one's country". It was also considered that a change in "one's personal residence" could indicate a change in job circumstances.

Remuneration

Most of the items included in this category were factual and unambiguous. The items were associated with grade, various components of earnings (gross earnings, increments, bonus etc), methods of calculating earnings and fringe benefits.

Involvements and Opportunities

References to involvements and opportunities were rather fragmented in the literature and not consistently mentioned. Most of the items chosen for this section were the result of suggestions in the group discussion. "Time spent with family and friends" was a surprising inclusion but one strongly and consistently mentioned. "Opportunities for training" and "opportunities for future career moves" were also mentioned. Many individuals suggested the idea of changes connected with "trade union status" and "professional body status" during the group discussion.
It seems appropriate at this point to comment on the process of choosing the detailed items on which to describe changes in jobs and their environments over time and in particular the use of the literature search and the group discussions. The nature of the literature search and the group discussions did not produce definitive answers on the way jobs might be described. They were really only indicative. Inferences had to be made from both the literature and the group discussion in order to arrive at the final list of items. These inferences in some cases were based on frequency of mention but in other cases were made on the authors own judgement.

4.3 Identification and Recording of Changes

The second objective of the methodology is the identification and recording of changes in any of the above mentioned categories. Two types of approach were considered; a case study approach and a dimensional approach.

The case study approach usually involves a depth interview with the subject under investigation. It can provide a large amount of rich detail. It allows a two way interaction between the subject and interviewer, and consequently the interviewer could become aware of facts and information not previously suspected. It is a very open ended approach allowing flexibility in the type and amount of information gathered. This is useful where perhaps one interviewee may be able to provide detailed information in one particular area such as a change in function whereas another interviewee may be able to provide detailed information about an change of organisation.
The case study approach also allows the interviewee to explain reasons behind certain information and actions which obviously increases the value of the information. In the case of organisational mobility where there is such a variety of circumstances surrounding the process, this approach could be of value.

However the case study approach can be a very time consuming exercise. This will inevitably mean a limitation on the number of subjects chosen for investigation. Therefore there will be a greater risk of missing some significant aspects of the process. There is also an additional problem with the case study approach in that the type of individuals who take part will be those with the time and inclination to do so. Although this is a limitation of other forms of data collection, the case study approach suffers particularly in this respect. There are always likely to be limitations for generalising results from the case study approach. The results from the case study tend to be anecdotal and probably more subjective and value laden than the dimensional approach.

A dimensional approach, whilst not producing the richness and variety of information as the case study, does allow a statistical treatment of the data collected, which in turn might suggest patterns and relationships within the data.

Questionnaires or interviews could be used to collect data in a dimensional approach. The interview however is less suited to the dimensional approach. Coding information collected from an interview
is usually difficult despite techniques such as content analysis. Interviews are usually more time consuming than questionnaires and this has implications for the sample size and subsequently on how representative the results can be considered.

The questionnaire only collects information that has previously been identified as important and specifically included in the questionnaire whereas the interview may reveal information not previously suspected. The administration of questionnaires is less time consuming than the interview and hence larger samples of respondents can be used. This makes the data more amenable to statistical treatment. The standard format of the questionnaire ensures consistency in the data collection. This consistency is more difficult to ensure in an interview. As the questionnaire in general is less time consuming than the interview from the point of view of the respondent then he is more likely to complete a questionnaire than take part in an interview.

As far as this study is concerned it was decided to combine the two approaches. The main data collection exercise was a dimensional approach using a questionnaire to extract the data. A number of reasons contributed to this decision. Firstly the dimensions along which jobs change had been thoroughly investigated in the literature search and group discussions. Secondly in the career development and organisational mobility literature there appeared few dimensional studies. Most studies were of the case study or anecdotal type. Thirdly it was hoped that any results would be widely applicable, and this would be more likely with a large sample. A large sample
was also readily available at the writer's place of work. Fourthly my own personal preference and inclination was for a dimensional approach.

In addition to the dimensional approach it was decided to interview a much smaller sample of individuals who had already completed a questionnaire. This would firstly help confirm any results suggested by the data from the questionnaire and secondly it would hopefully provide some insights into the richness of detail and variety associated with the mobility process.

Design of the Questionnaire

The objective of using the questionnaire is to determine which aspects of the respondents job and job environment changed over a particular time period. In the design of the questionnaire two aspects were considered; the format of the questions and the general layout and appearance of the questionnaire.

It was decided to use closed dichotomous questions. The following criteria were used in reaching this decision.

a) Problems of respondent interpretation.

b) Ease of administration and respondent motivation to complete the questionnaire.

c) The subsequent method of analysis.
The dichotomous question appears to have a number of advantages. Firstly it lends itself to easy coding and hence amenable to statistical analysis. A dichotomous question minimises misinterpretation. The respondent is faced with a relatively simple choice of deciding whether a change has taken place or not within a certain time period. This has a distinct advantage over open ended questions whereby not only can the respondent misunderstand the question but the analyst can misunderstand the answer. This lack of ambiguity can have another benefit in as much as the respondent will find the questionnaire easier to complete and hence this should increase the motivation of the respondent by minimising the effort involved in completing the questionnaire. This should result in a greater number of completed questionnaires.

The main items of possible change in the job and job environment (identified from the literature and group discussion) were used to draw up item pools of questions. The respondent was asked whether change had taken place or not on the above items. The questions were examined for consistency and duplication and a draft questionnaire was assembled. The first problem that was encountered was that not all questions could be phrased in a strict dichotomous manner. It was impossible in some areas (particularly in the section on Relationships) to cover all the possible contingencies of change without using the Likert type of scale (eg. questions 42-45 on page 3 of the questionnaire, Appendix 4.1). Therefore it was necessary to use a mixture of dichotomous questions and the Likert type of multiple choice questions. In the initial draft of the questionnaire the respondent was required to deal with two different formats for the
questions. With the dichotomous questions he was required to indicate that a change had taken place by circling the appropriate question number. An uncircled number meant no change had taken place. With the multiple choice questions the respondent was asked to mark a particular point on a scale to indicate which level of change had taken place.

The questionnaire was administered to three pilot samples. The first was to six colleagues who then gave their comments on ambiguity, consistency and ease of completion. The second and third were given to groups of managers typical of the main sample to be surveyed. Again similar comments were elicited. As a result of the three pilot surveys four changes were made. Firstly several questions were modified to make them less ambiguous. Secondly a general section was introduced at the beginning of the questionnaire containing the five most prominent changes that could occur. It was suggested that people being surveyed would expect questions on job employer etc. to be prominent, and that they would find these questions the easiest to deal with at the beginning of the questionnaire. This modification appeared to improve the "face validity" of the questionnaire. Thirdly an open ended section was included at the end of the questionnaire for any other changes and comments. It transpired from the pilot surveys that respondents had wanted to qualify their answers and although in most cases the comments were not relevant it certainly seemed to help the motivation aspect of completing the questionnaire. Fourthly it was decided to use one type of layout for the questions, that of the dichotomous question. So a multiple choice question,
with five possible choices appeared on the questionnaires as five consecutive dichotomous questions, requiring the respondent to merely circle the number of the question if a change had taken place. The type face of the questions distinguishes the multiple choice questions from the purely dichotomous ones. Respondents in the pilot surveys suggested they would have found it easier to deal with a single format (the dichotomous type). Also it was suggested that this format was much easier for transferring the data to punch cards.

The layout of the questionnaire was dictated by the following considerations:

a) Motivation of the respondent to complete it.

b) Ease of analysis.

The motivation involved in a respondent completing a questionnaire can be improved if the person can instantly see the objective and the extent of the information required. The instructions are short and explicit. By grouping the questions into meaningful sections and varying the type face, the main features of the questionnaire can be emphasised (Appendix 4.1). The layout of the questionnaire facilitated the transfer of data directly onto punched cards thus eliminating the need for coding sheets.

Selection of Population

The three major considerations in selecting a population were the relevance of the change process, the ease of access to the population and the general applicability of the results.
It was decided to limit the population to individuals with managerial, supervisory, professional or technical jobs. These individuals are more likely to relate to the idea of having a career and the idea of the change process. These ideas may well have had less relevance for individuals in manual occupations.

It is rare to have ready access to large numbers of individuals in the above population, so it was decided to sample students on part time managerial and professional courses at a college of higher education in West Yorkshire. (Appendix 6.1.1.4-6.1.1.7). This means of collecting the data provided easy access and willing participation.

It is difficult to say to what extent any results would be applicable to the general population of managerial and professional employees in the United Kingdom. The following points suggest ways that the samples may not be representative of the general population. Firstly the samples were chosen from individuals attending part time professional and managerial courses. These individuals may not be representative of the general population in as much as they are motivated to attend such courses. Secondly the organisations where the individuals work are mainly located in West Yorkshire but are not necessarily representative of organisations in West Yorkshire and certainly not representative of organisations in the United Kingdom. Thirdly the occupations and positions of the sample may not be representative of positions and occupations of managerial and professional employees in the United Kingdom. Fourthly there
are no older people in their late careers in the samples as would be expected from the source of the sample. There are very few people in the middle age range and mid career. Most individuals in the sample are in the early part of their careers or have recently undergone a transition in their careers. These individuals are obviously not representative of the total population of managerial and professional employees in the United Kingdom.

Administration of the Questionnaire

The main constraint in administering the questionnaire was access to the sample. As all the individuals in the sample were part time students on managerial/professional courses, the questionnaires were completed during a class session. This obviously helped the response rate although the exercise was purely a voluntary one. Before the data collecting session a letter was sent to each of the potential respondents explaining the nature and purpose of the data collection. It is re-assuring to me that no one opted out of any of the sessions over the whole data collecting period (over 600 questionnaires were completed). In all twelve different groups were chosen. The details of the groups are shown in appendix (6.1.1.7).

The groups were asked to complete questionnaires up to 6 times at 3 monthly intervals. Some groups however could not complete six due to the termination of their courses. Also some questionnaires were not completed because individuals were absent during data collecting sessions. Details of the groups and questionnaires are given in appendix (6.1.1.1).
The first time any group completed the questionnaire, the session was started with a discussion of the questions and appropriate examples were given to illustrate the meaning of questions. It was found that this helped both the motivational aspects of completing the questionnaire and helped to reduce respondent misinterpretation particularly with these items more open to interpretation. In subsequent sessions there appeared to be few problems and most people filled in the questionnaire unaided, although help was always available to clear up any queries.

One problem that had to be resolved was the frequency of sampling. The factors considered relevant were that the period between sampling must be long enough to encompass meaningful changes, and short enough to enable the respondent to recall all the relevant facts. Also, if the frequency of sampling was too great the exercise could have become tiresome and hence affected the motivation of the respondents. Three month periods appeared to be the best compromise.

Follow-up interview
A small sample of individuals who had completed the questionnaire were asked to undergo a follow up interview. The choice of individuals in the sample was dictated by the willingness of the respondents and the availability of a suitable time in which to conduct the interview. In all about thirty interviews were conducted.
The content of the interview covered the same ground as the questionnaire but more detail was elicited from the interview as well as explanations and background information to the respondents and situations. On average the interviews lasted about forty minutes. The conduct of the interview was relatively informal. The interviews were all recorded and analysed later.
5.1 Introduction

It was mentioned in the last section that the first part of the methodology was concerned with identifying a comprehensive sample of significant aspects of jobs and their environments which might change over time. The purpose of this section is to examine the appropriate literature to determine what these aspects or categories might be. Basically this means identifying the most common and meaningful categories on which to describe jobs and their environments. Articles will be reviewed which are concerned with the way jobs can be described or with the nature of jobs. Any common perspectives and usages will be examined to see if any consensus exists on ways to describe jobs and their environments.

There appear to be two main areas of the literature which seem relevant. Firstly the job analysis literature deals with practical and useful ways of describing jobs for a variety of uses in Personnel Management eg. recruitment and selection, training and job evaluation etc. Secondly there has recently emerged a growing body of research on the nature of managerial work. It was considered that this would be particularly useful given the make up of the population used in this research.

5.2 Job Analysis

Roff and Watson (1971) have defined Job Analysis as "the study and statement of all the facts about a job which reveal its content and
all the modifying factors which surround it". They go on to suggest that there are basically two main requirements of a job analysis:

i) To collect and record evidence of the nature of the job.

ii) To sift this recorded data to discover those aspects of the job which are important in relation to the problems which have prompted the undertaking of the analysis.

Boydell (1973) stresses that job analysis is a process of examining a job which gives rise to certain types of job description which are necessary for equipment design, methods improvement, work measurement, job evaluation and training needs analysis.

Wellans (1972) suggests the output of job analysis may be on three different levels of detail. The first analysis simply describes the job as a number of component tasks either without any further description at all or with perhaps one sentence description. The next analysis firstly nominates the component tasks and then describes them in detail. The description of the tasks is often laid out in objective terms outlining what has to be done. The final level of analysis is a full scale skills analysis based on a complete understanding of every piece of sensory information input, every manipulative motor movement, every decision making point and every piece of sensory feedback in the skills sequence.
The National Institute of Industrial Psychology (1973) have provided a check list of items of information that might be collected from a job analysis exercise. The main areas of information appear to be connected with duties, responsibilities, relationships, conditions and opportunities (Appendix 5.1).

In addition to this general approach to analysing jobs there are a number of specific approaches which have been used.

One of the most comprehensive analyses of jobs has been provided by the United States Department of Labour (DOL). The department published a "Handbook for Analysing Jobs" (US Department of Labour 1972). Based on several years of job analysis research, the handbook delineates methods and procedures useful in generating a considerable amount of job information, eg.

:What the work does in relation to data, people and things.
:The methodologies and techniques employed in doing the job.
:The machines, tools, equipment and work aids used.
:The materials, products, subject matter, or services which result.
:The traits required of the worker.

The Handbook provides complete guidelines for using the procedures in any work setting. The heart of the DOL job analysis technique is a description of what the worker does - Worker Functions. The three kinds of Worker Functions that can be generalised across jobs are as follows:
<table>
<thead>
<tr>
<th>Data</th>
<th>People</th>
<th>Things</th>
</tr>
</thead>
<tbody>
<tr>
<td>0. Synthesising</td>
<td>0. Monitoring</td>
<td>0. Setting Up</td>
</tr>
<tr>
<td>1. Coordinating</td>
<td>1. Negotiating</td>
<td>1. Precision</td>
</tr>
<tr>
<td>2. Analysing</td>
<td>2. Instructing</td>
<td>Working</td>
</tr>
<tr>
<td></td>
<td>Signalling</td>
<td>4. Manipulating</td>
</tr>
<tr>
<td></td>
<td>7. Serving</td>
<td>5. Tending</td>
</tr>
<tr>
<td></td>
<td>8. Taking</td>
<td>6. Feeding/</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td>Offbearing</td>
</tr>
<tr>
<td></td>
<td>- Helping</td>
<td>7. Handling</td>
</tr>
</tbody>
</table>

**Figure 5.1**

**Worker Functions DOL job analysis**

Jobs are coded under the three headings. The document also contains a narrative portion which then indicates the finer details of the job and discriminates between levels in the hierarchy. The contents are very detailed to allow the technique to be used for different purposes such as job classification manpower planning, recruitment, appraisal, training etc. The DOL approach stresses information concerned with duties and relationships.

McCormick and his co-workers (1974) developed a procedure for the quantitative description of jobs in terms of worker activities known as the Position Analysis Questionnaire (PAQ). The procedure assesses the following kinds of activities:

- Information Input - where and how the worker gets the information he uses in performing the job.
Mental Processes - reasoning, decision making, planning and information processing activities involved in performing the job.

Work Output - physical activities the worker performs and the tools and devices he uses.

Relationships with other Workers - relationships with other workers in performing the job.

Job Context - physical and social contexts in which work is performed.

Other Job Characteristics - activities or characteristics other than those described above relevant to the job.

The PAQ procedure involves rating a job on the basis of 194 descriptors (made up from the six categories described above). These descriptors are elements of work activity and the degree to which the element is present in the job is judged by the analyst. The non-narrative nature of PAQ allowed a factor analysis of the data, which isolated the major underlying dimensions of job behaviour across a large number of jobs.

From the factor analysis of 536 different jobs in relation to the 194 elements in the PAQ, it was discovered that jobs tend to differ from each other on five important dimensions.
Having decision making/communication/social responsibilities.
Performing skilled activities.
Being physically active/related environmental conditions.
Operating vehicles/equipment.
Processing information.

The PAQ has produced a useful procedure in as much as it can describe or compare a large number of jobs with a constant set of descriptors.

Two job coding schemes have provided a useful approach to the analysis of jobs. CODOT (Classification of Occupations and Directory of Occupational Titles) is a single axis classification scheme. IMSSOC (Institute of Manpower Studies System of Occupational Classification) is a multi axis system of job classification. The basic principle of CODOT is the classification of jobs by work content or activity. Occupations are defined according to what the worker does and are grouped according to similarity of work done. IMSSOC classifies each job on the basis of four separate axes, job activity, job activity level, job authority and Job Knowledge. Jobs can be described and distinguished in terms of activity or duties.

Many approaches to position descriptions have emphasised the more mechanical aspects of job function and duties. Austin (1977) advocates that position descriptions should emphasise those portions of a position which directly and concretely contribute to an employee's job and personal talents. He suggests that to do this would require the restructuring of the more conventional type of job.
analysis format. Austin suggests that it should be possible to create position descriptions based upon the amount of expertise developed by the occupants of these various jobs. Austin suggests that the categories of skills contained in the position description should cover Analytical skills (problem solving, decision making), Personal Development skills (leadership, motivation, team work) and Social skills (communication, conflict, resolution, facilitation). Austin argues that this new approach would have many benefits in the areas of Job Evaluation, training, appraisal, discipline and motivation.

5.3 Approaches to the description of Managerial Jobs

Carlson (1951) studied the activities, relationships and behaviour patterns of a group of executives. He asked the executives to fill out time diaries to record their daily activities. For each activity they noted:

- Place of work.
- Contacts with persons or institutions.
- Method of communication.
- Nature of question handled (field of activity, functional area).
- Kind of action taken (taking decisions, giving orders etc).

Carlson analysed these activities and he summarises his conclusions under three headings:
:Working Time

He suggests the working day of executives is very fragmented and constantly interrupted. He also suggests that work loads are very heavy.

:Communication Patterns

Carlson suggests that executives initiate far fewer activities than they are required to respond to. He also analyses time spent with different types of visitors.

:Work Content

In this area Carlson is far less sure of his results, suggesting that interpretations of the definition of work content made it difficult to compare the work content of different executives. The information collected is somewhat superficial.

Burns (1954, 1957) published the results of two diary studies. In the first one (1954) he analyses the relationships between four closely associated middle managers. Firstly, the managers estimated their future time allocation and then used the diary method to record their actual activities over a five week period. Burns' second study (1957) involved 76 senior and middle managers in eight middle sized companies (500-900 employees). Two of Burns' main findings were to be verified in virtually all the subsequent studies. Firstly, a high portion of time is spent in conversation. Secondly, a high proportion of communication is horizontal (with colleagues, peers, etc). Burns also notes the tendency of managers to spend considerable
time with a select group of other managers. Burns also studied work activity and work content, but as with Carlson's studies he presents no firm conclusions in this area, although he does discuss at length that discrepancies occurred in one third of the cases between accounts of different people attending the same meeting. He also finds that managers are poor judges of their own time allocation, particularly that spent on 'relationships'.

Horne and Lupton (1965) obtained activity records from 66 managers and their secretaries and assistants for a time span of one week. The managers were from 10 firms varying widely in size, (170 to 40,000 employees), product and technology; they were mostly at middle levels of responsibility, but their functional areas ranged widely over many 'specialities' (engineering, controlling, personnel, sales, purchasing, etc). One activity record form was completed for each work activity no matter where it occurred. Respondents indicated by means of checklists the following nine types of information about each work episode.

<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>:Method and means used</td>
<td>Telephone, meeting, letter, etc.</td>
</tr>
<tr>
<td>:Time and duration</td>
<td>Time of day and time encompassed.</td>
</tr>
<tr>
<td>:Location</td>
<td>Office, home, other company.</td>
</tr>
<tr>
<td>:Time relationship</td>
<td>For past, present or future.</td>
</tr>
<tr>
<td>:Level relationship</td>
<td>Organisational unit dealt with.</td>
</tr>
<tr>
<td>:Contacts</td>
<td>Person, group, organisation.</td>
</tr>
<tr>
<td>:Purpose</td>
<td>Giving, seeking, reviewing, etc.</td>
</tr>
<tr>
<td></td>
<td>information, plans, advice, etc.</td>
</tr>
</tbody>
</table>
The conclusions of the research are summed up by Horne and Lupton.

"Managers talk most of the time, and mostly face to face. They do not seem to be over-whelmed with paper or formal meetings. They swap information and advice and instructions mostly through informal face to face contact in their own offices. Middle management does not seem on this showing, to require the exercise of remarkable powers to analyse, weigh alternatives and decide. Rather it calls for the ability to shape and utilise the person to person channels of communication, to influence, to persuade, to facilitate."

Horne and Lupton's study emphasises the importance of relationships in the managerial job.

Stewart (1967), in studying the differences and similarities in managerial jobs, asked a sample of 160 managers to record all job behaviour incidents of more than five minutes on a standardised recording form. The managers came from a variety of functions (sales, production, accounting, engineering and research) and companies ranging in size from 12 to 30,000. Each of the 160 cooperating managers provided records of all job incidents and episodes over a four week span of time.

The outstanding feature of the results obtained by Stewart is the great diversity in the things different managers do with their time. Her respondents varied enormously in where they spent most of their
time, with whom they spent it, and what they did. Overall the results agree with those of Horne and Lupton discussed earlier. The managerial job - on average - is conducted in one's office and involves primarily information transmission in face to face situations. However the more important facet by far of Stewart's results involves the large differences between various jobs in the broad ranges in the way the various respondents spent their time.

In order to investigate more thoroughly the different types of managerial jobs, Stewart scored each of the 160 jobs on 25 variables such as:

- Total number of hours worked.
- Percentage of time spent alone.
- Percentage of time spent travelling.
- Percentage of time spent with subordinates.
- Percentage of time spent in committees.

Using cluster analysis Stewart examined the similarities and differences between every possible pair of jobs. Five clusters were found and jobs in each cluster were relatively similar in the way managers allotted their time but different from jobs in other clusters (Appendix 5.2).

Guest (1955) reports the results of an observational study of 56 foremen for one day each. Minute by minute records were kept of incident, time, topic, activity involved, place, contact and nature
of interaction. The subjects average 583 incidents per day (range 237-1,043), which meant on average a foreman was doing something different every 48 seconds. Guest notes the lack of idle time in their jobs, the constant interruption and the need to deal with pressing problems simultaneously. He also highlights the variety of foreman contacts in a day (rarely fewer than 25 and often more than 50), and the number of persons dealt with in operating and service departments. He concludes that horizontal and lateral relationships consumed about two hours per day.

Hemphill (1959, 1960) seeks to describe fully the similarities and differences in a number of executive jobs. To do this he asked 93 executives to complete a 575 item Executive Position Description Questionnaire (EPDQ). Each respondent used an eight step scale to indicate the extent to which each element (of the 575) was part of his job. Hemphill performed a factor analysis on his results and obtained ten groupings of jobs that were similar to one another, but different from those in other clusters.

The ten groups were:

- Providing a staff service in non operational areas.
- Supervision of work.
- Business control.
- Technical concerns with products and markets.
- Human, community and social affairs.
- Long-range planning.
Exercise of broad power and authority.
Business reputation.
Personal demands.
Preservation of assets.

Hemphill provides three descriptive or behavioural elements most characteristic of the jobs making up each cluster and a brief account of the major responsibilities of the jobs in the cluster. The major significance of this study for the present research is the emphasis on duties, responsibilities and relationships in the description of similarities and differences between the jobs.

Hemphill also developed scoring keys comprised of the 50 items most relevant to each dimension and established norms for each of the dimensions based on the responses of the 93 executives participating in the study. It is now possible to use the EPDQ to describe a managerial job and profile it along the 10 dimensions. (Although it does not appear to have been used at all).

Sayles (1964) examines the work of 75 lower and middle level managers in a large American corporation. His approach is anthropological, using observation and interview techniques. He provides no hard data and his findings are not backed up with much evidence from the field.

"We make no pretence of having conducted a scientific experiment, so we are not proposing scientific hypotheses backed by systematically collecting validating data. Rather we have looked and pondered for a long time and then developed a scheme of analysis, by which we mean simply that minimum number of concepts which would explain what was happening."
Sayles describes three aspects of managerial work in his analysis:

1) The manager as a participant in external work flows.
2) The manager as leader.
3) The manager as monitor.

As a participant in external work flows, the manager engages in seven basic relationships with people outside of his immediate managerial responsibility:

Trading relationships: Purchasing and selling arrangements with other members of the organisation to get the work done.

Work flow relationships: Contacts concerning the work preceding or following that supervised by the manager.

Service relationships: Contact concerning the giving or receiving of service or support by specialist groups (for example, typing or maintenance departments).

Advisory relationship: Provision of counsel and advice to line managers by experts (for example, industrial relations department).

Auditing relationships: Contacts with those who evaluate or appraise organisational work (for example, quality control).

Stabilisation relationships: Contacts with those who are empowered to limit or control the manager's decisions in accordance with organisational policy (for example, production scheduling).

Innovative relationships. Contacts with groups especially isolated to perform a research function.
Sayles stresses that these external contacts are time-consuming and that they require negotiation rather than the use of authority. The manager's concern for these relationships reflects his quest for stability and the avoidance of internal disruptions in the pace of work.

The leadership role focuses on the manager's relationships with his subordinates - his hierarchical, as opposed to horizontal and lateral duties. Sayles points to three basic types of leadership behaviour:

1) Leadership as direction, getting subordinates to respond simultaneously to the actions of the manager.

2) Leadership as response to initiations from subordinates who are seeking aid or support.

3) Leadership as representation or as intervention for subordinates in contacts with other parts of the organisation.

As monitor, the third aspect of his work, the manager appraises his internal and external relationships, looking for situations requiring his intervention. Sayles argues that monitoring is carried on, not by measuring results, but by following the progress of work through the system. The manager initiates verbal or observational checks, receives subordinate reports, and reviews numerical records. He detects variations. If he decides that they are not random, but that significant shifts are occurring, he initiates action.
The main significance of Sayles work for the present research is in the identification of the great variety in relationships both internal and external to the organisation.

Mintzberg (1973) studied the work of five chief executives in middle to large sized organisations. The organisations were of very different types (public, consumer, consultancy, etc). The executives had all been in their positions sufficient time to assume a stable work pattern. Before the actual study Mintzberg familiarised himself with a typical month's scheduled appointments, information about the organisation and information about the executive. The method of study was observation. The observations were analysed under chronological records (describing activity patterns, which also cross referenced the other records), mail records, (describing each piece of incoming and outgoing mail) and contact records (describing each verbal contact). Mintzberg's analysis attempts to answer the following three questions in relation to managerial work:

1) What are the distinguishing characteristics of managerial work?

2) What basic roles can be inferred from a study of a manager's activities?

3) What variations exist among managerial jobs?
Mintzberg found six main characteristics of managerial work.

Due to the open ended nature of managerial work executives have to cope with a great quantity of work at an unrelenting pace.

Managerial work is characterised by brevity, variety and fragmentation.

Activities tend to be current, specific and well defined, non routine.

Executives demonstrate a strong attraction to the verbal media.

Managerial work consists of a great variety communication relationships.

Managerial involvement is a balance between elements that he cannot control and elements he can exert control over.

Managers' Working Roles

From his analysis Mintzberg proposes that managerial activities can be described by the concept of roles. The ten roles he proposes which are concerned primarily with interpersonal relationships, information processing and decision making, are:
The work of all managers may be described in terms of these ten observable roles which form an integrated whole. The three interpersonal roles (figurehead, liaison and leader) derive from the manager's formal authority and status; these in turn give rise to the three informational roles (monitor, disseminator and spokesman); and these in turn enable the manager to perform the four decisional roles (entrepreneur, disturbance handler, resource allocator and negotiator).

Variations Among Managerial Jobs
From his analysis Mintzberg suggests that four sets of variables account for the differences in managerial jobs:

Environmental variables: the characteristics of the industry, the organisation, the technology, etc.
Job variables: the level of the job and the function and task supervised.

Person variables: personality and style characteristics of the incumbent in the job.

Situational variables: temporal features of an individual job.

Mintzberg suggests that a number of managerial job types encompass most of the variations. The eight job types each stress different managerial roles. The figure 5.2 below lists the eight managerial job types and their corresponding key roles:

<table>
<thead>
<tr>
<th>Managerial Job Type</th>
<th>Key Roles</th>
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</thead>
<tbody>
<tr>
<td>Contact Man</td>
<td>Liaison, figurehead</td>
</tr>
<tr>
<td>Political Manager</td>
<td>Spokesman, negotiator.</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>Entrepreneur, negotiator</td>
</tr>
<tr>
<td>Insider</td>
<td>Resource allocator</td>
</tr>
<tr>
<td>Real-time Manager</td>
<td>Disturbance handler</td>
</tr>
<tr>
<td>Team Manager</td>
<td>Leader</td>
</tr>
<tr>
<td>Expert Manager</td>
<td>Monitor, spokesman</td>
</tr>
<tr>
<td>New Manager</td>
<td>Liaison, monitor</td>
</tr>
</tbody>
</table>

Figure 5.2
Managerial job types and key roles.
Stewart (1976) sought to answer the following questions:

- What demands does a job make on the manager's behaviour?
- What does he have to do apart from the technical aspects of his work?
- How do these demands vary in different jobs?
- Can one classify manager's jobs into types according to these demands?
- Can one evaluate both the nature and the amount of these demands?
- What kind of choices do managerial jobs offer?

The research occurred in three stages. The first was an exploratory study of the demands made upon the manager's behaviour in a wide variety of jobs in industry and commerce. This produced a questionnaire which was used in the next stage in interviews with 274 managers, selected to cover jobs that were diverse in their function, level and industry. The aim of this stage was to produce a typology of these jobs. The last stage was an intensive study of 16 jobs. The main aim here was to produce a classification and evaluation of behavioural demands, using these jobs as illustrations. The main demands that were studied were those stemming from different types of human relationships, from the pattern of activities that a job may impose and by an aspect of responsibility called 'exposure'.
In her analysis Stewart identified twelve patterns of contact, summarised in Appendix 5.3.

The twelve types are divided into three divisions and four groups. The three divisions are distinguished by the importance of external contacts in the job. The first division is for jobs with few or no external contacts. The second is for jobs which contain more external contacts but where they do not form a major part of the job. The third division is for jobs where external contacts are essential to success.

The four groups are distinguished by the time spent in contact with other people and with different types of contacts. The first group is called Hub. It is the most common type of management job and involves a wide variety of contacts in the organisation. The second is called Peer Dependent. Such a job holder would spend as much or more time with people at the same level, as with any other type of contact. The third group is called Man Management, almost all the contacts being with subordinates or boss. The fourth is called Solo, because it spends less time than the others in contact with people.

The 250 managers in the sample were allocated to one of these types. The contact types are a broad guide to social skills required.

Stewart also produced a typology of managerial jobs based on pattern of work. She suggests that the pattern of work is made up of the following characteristics.
Duration of activities.

Time span of problems or decisions.

Periodicity and other recurrent work.

Expected, compared with unexpected work.

Incidence of urgent work and crises.

Extent to which work has to be done to time deadlines that are not self imposed.

Origin of activities; how far these stem from the need to respond to others, or to a system, and how far they are self generated.

An analysis of the work patterns of the sample showed four main types:

Systems Maintenance. This was characterised by recurrent activities, a very fragmented day and more trouble shooting than in any other job types.

The second type, Systems Administration, has, like the first much recurrent work, but is distinguished from the first by the high proportion of work that has to be done to deadlines.

The third type of work pattern, Project, is characterised by long-term, mainly non-recurrent work, needing sustained attention and much of it generated by the individual.

The fourth type, Mixed, has no marked characteristics and allows the job holder more choice in the pattern of his work than other types.
Relationships Demands

In this part of the analysis Stewart assessed the difficulty of the demands that can be made on managers by his contacts: subordinates, boss, peers, other seniors, other juniors, and external contacts. The 16 jobs were used as a way of testing the classification of demands and helped in rating them. The 16 jobs differed both in the nature of, and in the difficulty of their relationship demands.

The analysis suggests that there are three aspects to be considered in the relationship demands of a job.

i) Which relationships are demanding?

ii) What characteristics of the relationships make it demanding?

iii) How demanding are the overall relationships of the job?

In Stewart's analysis the term exposure was introduced to describe a particular behavioural demand of a management job. Exposure as defined by Stewart was explored by the following questions:

"What are the worst possible consequences of a mistake that you could make?"

"Would such a mistake be clearly your responsibility?"

"If you have a serious problem, are there people you can consult?"

"How often would you have time or opportunity to do so?"
Analysis of the 16 jobs in the intensive study showed marked variations in exposure.

Stewart also analysed choices that managers have within their jobs and found that most managers were not sufficiently aware of the choices available and yet this awareness was an important contribution to the effectiveness of the job.

It may seem that undue weight is given to the studies of Mintzberg (1973) and Stewart (1976) in relation to determining the major dimension on which jobs might be described. However both studies will be referred to again in connection with the results of the present study and so it is felt that these two studies require a fuller treatment than some of the others in the section.

5.4 Job Analysis: Discussion and Summary

Much detail emerged from the literature review. In order to evaluate the usefulness of the articles it seems necessary to attempt to classify some of this detail. In the author's opinion there appear to be six significant categories of job dimension. These categories accommodate all the detail referred to in the articles. Whilst these categories may not be the only ones which might be used, they appear to represent a certain consensus and frequency of usage in the literature. The categories are:
Activities

Relationships

Job Requirements

Responsibility

Conditions and Demands

Opportunities

Significance and Scope of Dimensions

Activities

There appear to be two approaches to the treatment of job activities. The first describes job activities as a series of component duties or major tasks. The second deals with more specific aspects of job activities such as fragmentation and time span of activities.

The first approach is more characteristic of the traditional approach to job analysis and falls into two main types: the task descriptions which are specific such as interviewing, teaching or machining and secondly, the task descriptions which have a more global or managerial connotation such as planning, organising or decision making. Examples of the first type can be seen in the traditional job descriptions (Appendix 1), in Wellan's studies (1972), in the DOL procedures for job analysis (1972), in the Position Analysis Questionnaire (1974) and in the ISSMOC classification system. Examples of the second type can be seen in Doulton and Hays' approach (1969) in Horne and Lupton's study (1965) and in Hemphill's study (1960).

Examples of the second approach (brevity fragmentation, etc.) are seen in Carlson's study (1951), Burns' study (1957), Horne and
Lupton's study (1965) and Guest and Jainski's studies (1956), which all cite the fragmentary nature of managerial work, the brevity of the activities and high work load and unrelenting pace of managerial work. Mintzberg (1973) found no recurring pattern in managerial activities particularly in the short term but found that the activities were characterised by brevity, variety and fragmentation. Stewart (1971) studied the apportionment of time to various duties as well as fragmentation and periodicity of activities, and also studied whether the activities were self generated or not. Stewart devised a typology of activities based on these three characteristics.

The first approach to activities (description of tasks) is somewhat subjective and ambiguous as the meanings of the descriptions of activities are often peculiar to companies, departments, or even individuals. This has been reported by Carlson (1951), Burns (1957) and Horne and Lupton (1965).

The second approach to activities (brevity, fragmentation, etc.), whilst more limited than the first, is more useful in comparisons between organisations and departments, as the terms used are less ambiguous and subjective.

Relationships

This was probably the most frequently and consistently mentioned job dimension. Virtually all the studies referred to relationships as a vital ingredient in the analysis of any job, particularly managerial jobs. Some of the studies however, referred to particular types of
relationships. Stewart (1967, 1976), Hemphill (1960), Sayles (1964) and Mintzberg (1973) analysed the time spent in superior-subordinate relationships. Carlson (1951), Burns (1954, 1957), Horne and Lupton (1965), Stewart (1967, 1976), Guest (1955), Jaimski (1956), Hemphill (1960), Sayles (1964) and Mintzberg (1973) all stress the importance of relationships with peers (horizontal lateral, colleagues, fellow managers). This refers to relationships with other people in the organisation outside the manager's own sphere of influence (department). Significant variables in these studies are level and function of the peers and also the amount of time devoted to peer relationships. Hemphill (1960), Sayles (1964), Stewart (1967, 1976), and Mintzberg (1973) refer to external contacts (relationships with people outside an incumbent's organisation) as an important aspect of managerial jobs. Again the function and level of these contacts and the amount of time devoted to these contacts appeared to be significant variables.

Job Requirements

Three aspects of job requirements, skill, knowledge and experience, appear to be key dimensions in the analysis of jobs. The approach is to describe the job by the requirements of an incumbent in terms of skill, knowledge and experience. Traditional job descriptions place much emphasis on skill, experience and knowledge (Appendix 1), however in some job descriptions these aspects are implicit in such features as the job title and the departmental function. The DOL handbook approach to job analysis describes worker traits necessary to do the job, under which skills knowledge and experience are
analysed. Skill, knowledge and experience are described in the Position Analysis Questionnaire (1974) under the dimension 'Performing skilled activities'. Two of the IMSSOC (1972) dimensions for classifying jobs are 'activity level' (level of skill required) and 'job knowledge'. Austin (1977) refers to five analytical skills as a job requirement.

Job function (e.g. personnel, finance, marketing) describes skills, knowledge and experience necessary to do the job, i.e. it tells much about worker requirements. Carlson (1951), Burns (1954, 1957) and Horne and Lupton (1964) collected information on the functional aspects of managers' jobs. Job function was a major variable in Hemphill's study (1965).

Responsibility (Level, Authority)

This job dimension appears to be most meaningful in the organisational context. The traditional job analysis approach often describes responsibility or level by job title, grade, salary range or position in an organisation structure. These descriptions are often peculiar to a particular organisation. Although comparisons across organisations can be made, care must be taken in interpretation of terms used. The traditional job description often reserves a section for responsibility (Appendix 1) where the main responsibilities of the job are outlined. This is in addition to the normal status descriptions such as job title, grade, etc. Responsibility is qualitatively described in the DOL approach (1972) as it was found difficult to code responsibility. The Position Analysis Questionnaire
describes responsibility on one of its job dimensions 'Having responsibilities for decision making/communication/social aspects'. The IMSSOC job classification scheme describes responsibility along one of its four axes (authority level).

The studies on managerial work do not really attempt to describe authority level except by implication. The authority level of their samples are described vaguely, eg. middle and senior managers, chief executives.

Conditions and Demands
This section can be considered under four sub divisions, physical conditions, economic conditions, location and demands made upon an employee's private life, health, etc.

Traditional approaches to job descriptions emphasise physical and economic dimensions. Roff and Watson (1971) list "working conditions" as one of the three job characteristics for a job evaluation scheme. The Position Analysis Questionnaire describes physical conditions under the job dimension 'Being physically active/related environmental conditions'.

Location, as a job dimension, is mentioned in many traditional job descriptions (Appendix 1) and by Carlson (1951), Horne and Lupton (1965), Stewart (1967, 1976) and Mintzberg (1973).
Several studies on job analysis have examined the demands that jobs make on the job holder's private life, health, etc. Most of the studies on managerial jobs referred to the demands that their jobs make on their time. Most managers in the studies were not able to distinguish between organisational life and private life. Carlson (1951), Burns (1954, 1957), Stewart (1967, 1976), Horne and Lupton (1965) and Mintzberg (1973) all referred to the long hours involved in managerial jobs and the unrelenting pace of the jobs. Austin (1977) looks at the behavioural demands made upon a job holder in the social, analytical and developmental aspects of his job. Stewart (1976) has developed the concept of exposure to describe the behavioural demands of managerial jobs in the context of decision making.

Opportunities

Traditional job descriptions sometimes mention opportunities as a job dimension (Appendix 1). Implicit in Austin's approach to job analysis (1977) is one of employee opportunities inherent in the job. Mintzberg (1973) discusses self initiating activities, i.e. opportunities within jobs. Stewart (1976) refers to choices and opportunities in managerial jobs.

The figure 5.3 below summarises the way in which each article/approach reviewed in this section contributes to the six job categories identified.
### Summary Table: Major job categories - literature search

<table>
<thead>
<tr>
<th>Categories</th>
<th>Activities</th>
<th>Relationships</th>
<th>Skill</th>
<th>Responsibility</th>
<th>Conditions and Demands</th>
<th>Opportunities</th>
</tr>
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<tr>
<td>article approach</td>
<td></td>
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<tr>
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Summary Table continued: Major job categories - literature search

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6.1 Introduction

As explained in section 4 the objective of the present study is to examine the nature of mobility outcomes by identifying, recording and analysing the changes, that occur over time, in individuals' jobs and job environments.

Each individual involved in the study was asked to complete a questionnaire in order to ascertain which aspects of his job and job environment had changed in the previous three months. A sample of these individuals was also interviewed after they had completed the questionnaire in order to explain and expand the information given on the questionnaire and to verify the information given.

A set of changes was derived from each completed questionnaire or interview for each individual in a particular set of organisational circumstances over a particular three month period. These sets of changes could be any permutation of up to 62 variables identified on the questionnaire or in the interview.

The main objective of the analysis of the results is to detect and explain similarities and differences amongst the sets of changes.

The analysis of the questionnaires and interviews will be treated separately but the analyses will be integrated in a final summary and conclusions section.
6.2 Analysis of the Questionnaires

The analysis of the questionnaires will be discussed as follows.

1) Samples and sampling procedure used in the study.

2) Raw data.

3) Principal coordinates analysis.

4) Cluster analysis.

5) Cluster analysis superimposed on plots of the principal coordinates.

6) Other analyses.

7) Verification of the results.

6.2.1 Samples and Sampling Procedure

During the data collection sessions 656 questionnaires were completed by 259 respondents over a period of 21 months (seven 3 month periods). In the subsequent analysis it was decided to use two sub-samples of questionnaires to cross check results found. The size of these sub-samples was determined by two statistical packages used in the data analysis (cluster analysis and principal coordinates analysis). The maximum number of cases possible was 250 per sample.
In order to draw up these two sub-samples, 500 questionnaires were selected from the original 656 collected. 149 of the questionnaires eliminated were from groups of part time students who had been inconsistent attenders. The balance (7) were selected randomly from individuals who had only completed one questionnaire. The significance of removing inconsistent attenders from the population will be examined later in the section.

The 500 questionnaires selected to form the two sub-samples had been collected from 169 individuals. The individuals in the sample completed between one and six questionnaires. This distribution (appendix 6.1.1.1) was determined by how often the individuals attended the data collection sessions and in many cases the length of the course the students were pursuing.

The average number of changes registered in each questionnaire is 12.2 but varies between 0 and 49 (appendix 6.1.1.2). The percentage frequency that each change is registered in the sample is shown as a profile in appendix (6.1.1.3).

In appendices (6.1.1.4 - 6.1.1.6) the 169 individuals are analysed by age, function and industry. The age profile of the sample falls mainly in the range 20-40 years. Only 5% of the sample fall outside that range. As explained in section 4 this is not entirely unexpected. Most of the individuals in the sample were attending a part time college course and tended to be in the early part of their careers with a small proportion perhaps starting a second career or
perhaps taking a course in their mid career. However the average age of students attending courses in the present sample was 29. This restriction in age range might have some affect on the overall results. However there is no evidence in the literature to suggest that the nature of mobility outcomes differs for different age groups. The evidence suggests that the balance and distribution of mobility outcomes may vary across age ranges. Elliott (1966), Viega (1973), Paulkener (1974), White (1974).

Distribution of the individuals by occupational function shows a bias towards production (30%), engineering (27%) and personnel (27%). It may be that this bias is influencing the results. However there is no evidence or reason to suggest that the occupational functions in the present sample should show different kinds of mobility outcomes to other occupations or the same occupations in other parts of the country. In fact some of the individuals are employed in nationwide organisations such as banks, building societies and local and national government offices where policies towards career development are the same.

Distribution of individuals by industry shows a bias towards textiles (20%), engineering (24%), local government (13%) and chemical (13%). Again this bias may influence the overall results. It might be argued that many textile and chemical companies are peculiar to this region (West Yorkshire). However just as many individuals in the sample are employed by national companies and organisations which have common policies to career development.
Whilst it is impossible to suggest from the present study how representative the sample is, there appears to be no evidence that the nature of any outcomes found will be any different from those found with any other sample. The evidence suggests any difference in the results between this sample and any other sample would manifest itself in the balance and frequency of occurrence of the outcomes. However this could only be verified by actual studies.

The distribution of individuals by academic grouping is shown in appendix (6.1.1.7).

The 500 questionnaires are split into two sub-samples (A and B) each containing 250 questionnaires. The split is based on the academic group of the individuals. Appendices 6.1.2.7 and 6.1.3.7 show the distribution of individuals by academic group for the samples A and B respectively. The samples have been chosen in this way to avoid the possibility of any individual appearing in both samples. This is considered important if patterns in the individual sets of changes are to be studied.

Sample A contains 250 questionnaires collected from 105 individuals. Sample B contains 250 questionnaires collected from 64 individuals. The two samples are analysed by the number of changes registered in each questionnaire (appendices 6.1.2.2 and 6.1.3.2) and by the frequency with which each change is mentioned (appendices 6.1.2.3 and 6.1.3.3).
Age, industry and occupational function distributions have been drawn up for the individuals in each sample (appendices 6.1.2.4 - 6.1.2.6) and 6.1.3.4 - 6.1.3.6).

It could be argued that the number of questionnaires per individual in a sample may affect the response pattern of the sample in some way. In order to test the argument a sample X has been selected from the 500 questionnaires. This was done by choosing one questionnaire per individual from the sample of 500. This gives a sample size of 169. The particular questionnaire chosen for this sample (when there was more than one per individual) was the first one to be completed by the individual.

Sample X is analysed by the number of changes per questionnaire (appendix 6.1.4.1) and the percentage frequency each change is registered (appendix 6.1.4.2). Age, industry and occupational function profiles for the individuals who completed the questionnaires in sample X are the same as those for the total sample (appendix 6.1.1.4 - 6.1.1.6).

It was mentioned earlier in this section that 149 questionnaires were removed from the original 656 collected. These 149 questionnaires were selected on the basis that the individuals completing them had been poor attenders at the data collecting sessions (the 149 questionnaires were collected from 105 individuals: 61 completing 1 questionnaire and 44 completing 2 questionnaires). It might be argued that there is something characteristic about this group of
individuals which could affect the results. This final sample is labelled sample Z.

Sample Z is analysed by the number of changes per questionnaire (appendix 6.1.5.2) and the percentage frequency each change is registered (appendix 6.1.5.3). Also age, industry and occupational function profiles are drawn up for the individuals who completed the questionnaires in sample Z (appendices 6.1.5.4 - 6.1.5.6).

In order to compare and contrast the results between the four samples it was decided to test the significance of differences between two aspects of the questionnaires and between three aspects of the individuals who completed the questionnaires in each of the samples.

The four samples (A, B, X and Z) are compared on the following attributes, the distribution of the number of changes per questionnaire and the percentage frequency each change is mentioned. There appears to be no significant difference between the distributions of the number of changes per questionnaire amongst the four samples i.e. as regards this attribute the samples appear to be drawn from the same population ($X^2 = 23.4; \text{N/S, } p = 0.1$), appendix 6.1.6.1). There appears to be very few significant differences in the percentage frequency with which each change is mentioned in the four samples. These significant differences could well be expected on the basis of chance (appendix 6.1.6.2). Again as regards this attribute the four samples appear to be drawn from the same population.
Age, industry and occupational function profiles of the individuals from each of the four samples are compared (appendices 6.1.6.3 - 6.1.6.5). There appears to be no significant differences in the age distribution ($X^2 = 12.70; \ N/S, \ p = 0.1$) or the industry distributions ($X^2 = 22.3; \ N/S, \ p = 0.1$) or the occupational functions ($X^2 = 2.3; \ N/S, \ p = 0.1$).

The inference from these significance tests are that the questionnaires from the four samples appear to be drawn from the same population on the basis of number of changes per questionnaire and the frequency with which each change is mentioned across the samples. The individuals who completed the questionnaires in each sample also appear to be drawn from the same population on the basis age, industry and occupational distributions. It follows that the grouping of questionnaires in samples A and B on the basis of academic group does not appear to be significant. The number of questionnaires per sample again does not appear to be a significant factor. Finally the removal of 149 questionnaires on the basis of the respondents being inconsistent attenders at the data collection sessions does not appear to affect the make up of the samples.

**6.2.2 Raw Data**

Two samples A and B are used in the analysis. However initially only the results from one sample (A) will be discussed. The results of sample B will be compared and contrasted to those of A in order to cross check the results found. This will be done later in section 6.2.7.
The raw data, from sample A consists essentially of 250 questionnaires (cases) each containing a set of changes which could be any permutation of up to 62 changes (number of variables on the questionnaire). The print out of the raw data gives a visual impression of the variation in the changes across the 250 cases. The cases appear in no significant order and it is difficult to visually detect any pattern, regularities, similarities or differences in the data.

The data may be summarised by a 250 x 62 matrix. The complexity and sheer volume of data suggest that in order to detect any similarities or differences, the raw data needs to be simplified.

6.2.3 Principal Coordinates Analysis

The first method chosen to simplify the data is a principal coordinates analysis. This is chosen in order to express the data in a fewer number of dimensions than the original 62 variables.

Principal coordinates analysis, like the associated and more common technique principal components analysis, seeks to obtain a representation of the original p-dimensional data in a reduced number of dimensions, say p* whilst maintaining as far as possible in some sense the structure present in the original space (appendix 6.2.1).

Principal coordinates analysis was chosen rather than principal components because it is not as restrictive. In particular it is not necessary to consider only data sets for which Euclidean distance is considered appropriate. Principal coordinates analysis also has
the advantage of being directly applicable to data in the form of a distance or similarity matrix.

A principal coordinates analysis was carried out on sample A. Initially 6 dimensions were extracted. This is the limit of the program capacity using 250 cases. The 6 dimensions account for 17, 5, 4, 3, 2.9 and 2.8 percentage of the variance in the original variables respectively (appendix 6.2.2.1).

In order to interpret the transformed dimensions, each one of 250 cases was expressed in terms of the new dimensions. This enabled a series of two dimensional plots to be produced giving a visual representation of the data. As the first dimension accounts for by far the largest amount of variance in the original variables it was decided to plot this dimension against all the others. So a distribution of cases was produced for dimension 1 against dimension 2, dimension 1 against dimension 3 and so on up to dimension 1 against dimension 6 (appendix 6.2.4.1 - 6.2.4.5).

These two dimensional distributions of the cases were used to interpret the 6 transformed dimensions in terms of the original variables in the following way. Two sets of twelve cases one at either end of the dimension were isolated. The changes described within each set were examined to detect any similarity. Then the two sets of changes were contrasted to detect any differences between the two sets of responses. In the interpretation, some of the dimensions
might be expressed meaningfully in terms of the original variables. However there is no reason why this should always be the case. The variables which weigh heavily on a particular dimension may not always suggest a meaningful interpretation.

Appendix (6.2.4.1.1) shows the plot of dimension 1 against dimension 2. Dimension 1 is associated with the amount of change taking place (the number of changes registered). Cases at one extreme of the dimension show little or no change taking place. Cases at the other extreme of the dimension show the most change in the sample. In fact there is a direct correlation between position along dimension 1 and the number of changes registered (appendix 6.2.5.1).

Dimension 2 appears to be related to variables associated with job duties, in particular "the number of duties", "skill of person doing the job", "skill required to do the job", and "work load". The plot of dimension 2 against dimension 1 shows an arch shaped distribution. The variables associated with dimension 2 vary across the spread of the arch. The cases at the bottom of the first leg of the arch show very little mention of the 4 variables. On progression through the arch the frequency of mention of the variables increases as does the level of change indicated in the variables (all the variables are multi response type variables with different degrees of change associated with them). Cases at the bottom end of the second leg of the arch show consistent mention of the four variables with the highest levels of change indicated.
Examination of a plot of dimension 1 against dimension 3 shows that dimension 3 appears to be associated with the predominance of lateral or vertical internal relationship variables. Eight variables on the questionnaire are associated with vertical relationships i.e. with superior or subordinate relationships and four variables with lateral, colleague type relationships. Cases at one end of the dimension appear to be characterised by changes in variables associated with vertical but not lateral relationships whilst cases at the other end of the dimension appear to be characterised by changes in variables associated with lateral relationships but not vertical (appendix 6.2.4.1.2).

Examination of a plot of dimension 1 against dimension 4 suggests the dimension is associated with the occurrence of changes in several opportunity variables in particular "opportunities for internal training", "opportunities for external training", "opportunities for more career moves" and "opportunities for increased variety of career moves". All these variables are described on the questionnaires with two levels of change, low and high. Cases at one end of dimension 4 show little mention of these variables. Across the dimension frequency of mention increases as does the level of change (low to high). Cases at the other end of the dimension are characterised by consistent mention of changes in these variables at a high level of change (appendix 6.2.4.1.3).

An examination of the plot of dimension 5 against dimension 1 shows that dimension 5 is associated with changes in involvement variables.
in particular "involvement with friendship groups at work", "involvement with friendship groups away from work", and "time spent with family". All these variables are described on the questionnaire with two levels of change, low and high. Cases at one end of the dimension show few changes in these variables. Across the dimension frequency of mention increases as does the level of change (low to high). Cases at the other end of the dimension are characterised by consistent mention of changes in these variables at a high level of change (appendix 6.2.4.1.4).

An examination of the plot of dimension 6 against dimension 1 shows that dimension 6 is related to the occurrence of changes in four variables associated with relationships external to the organisation. These variables again are described by different levels of change (low to high). Cases at one end of dimension 6 show no changes in these variables. Across dimension 6 the frequency of mention of changes in these variables increases as does the level of change (low to high). Cases at the other end of the dimension are characterised by consistent mention of these variables at high levels of change (appendix 6.2.4.1.5).

The percentage of the variance of the original variables accounted for by the six dimensions is relatively low. Dimensions which account for relatively large amounts of variance in the original variates are accounting for variance which is common to all the cases. Dimensions accounting for low amounts of variance are more likely to be accounting for variance peculiar to a particular case (unique variance). Certainly when the variance associated with a dimension
is less than that accounted for by one of the original variables, it is likely to be unique to a particular case. 35% of the variance of the original variables is accounted for by the first 6 dimensions. It is likely in this situation that much of the variance associated with the original variable is unique to particular cases. This low common variance might be explained by the diversity of individual and organisational circumstances of the cases which make up the sample.

An important factor in consideration of the low amounts of variance is the level of detail inherent in the original variables. It was mentioned in section 3 that patterns in organisational mobility were much easier to detect when measures were simple and uncomplicated. For example it was much easier to detect patterns in originating and receiving functions (Robertson 1970) than to find patterns in three or four consecutive functions (Hamelman 1966). The more detailed the description the less likely it will be to detect similarities or patterns. The more detail inherent in the description the more likely that differences rather than similarities can be highlighted. In a similar way, given 62 descriptions of possible changes, the potential for highlighting detailed difference is considerable. This could then explain the low amounts of variance associated with the dimensions.

In light of the low amounts of variance associated with the dimensions, the significance of the interpretation of the dimensions must be considered. The first 6 dimensions were found to be associated with "the number of changes taking place", "job duties", 
"internal organisational relationships", "involvements", "opportunities", "external relationships".

These interpretations are made at a higher level of generality than the original variables. The interpretations have been made in the broad areas of change rather than in terms of specific detail. As such the interpretations are suggestive, the relationship between the dimensions and the original variables is tentative rather than precise. The importance of the dimensions interpreted in terms of the original variables cannot be expressed accurately from this analysis alone.

Special mention should perhaps be made of the first dimension extracted (related to the number of changes occurring). Relatively speaking this dimension for outweighs all the others in accounting for variance in original variables (17%); whereas the next highest was 5%). This suggests that this particular factor will be very influential in explaining the variation amongst the cases.

It seems pertinent at this stage to comment on the number of dimensions extracted in the principal coordinates analysis. In analysing the 250 cases in sample A it was decided to use only the first six dimensions extracted. A combination of factors lead to this decision. It was decided that it would not be useful to extract more than fifteen dimensions as the fifteenth dimension accounted for less variance than one of the original variables. A plot of the percentage trace of the dimensions (Scree test) shows that the curve
flattens out after the sixth dimension indicating that dimensions above the sixth are associated with unique rather than common variance (appendix 6.2.3). The dimensions above the sixth were not readily interpreted in terms of the original variables. In order to extract up to fifteen variables the number of cases in the sample used had to be reduced to below 100. For these reasons only the first 6 dimensions were used in the analysis.

6.2.4 Cluster Analysis

In the principal coordinates analysis several factors were identified which explained some of the variation amongst the sets of changes of the 250 cases. In order to simplify the data and gain further insights into its nature it was decided to group the cases together on the basis of similarity of their response patterns (i.e. how closely do the different sets of changes match one another). In order to do this a non hierarchical cluster analysis was carried out on the data.

The clustering routine calculates a matrix of similarity between the cases using the measure of similarity outlined in appendix (6.3.1). The sample of cases (250) is then split into a pre-stated number of clusters on a random basis. The routine then uses an algorithm to transfer cases from one cluster to another in order to maximise the within cluster similarity. In the initial analysis sample A was split into 4 clusters (the reason for the choice of 4 clusters will be discussed later in the section).
With the cases split into four clusters on the basis of similarity of matching of the changes registered in each case, it was possible to look for broad differences between the clusters and similarities within the clusters.

A most noticeable difference between the four clusters is the average number of changes per questionnaire (appendices 6.3.2.1.1, 6.3.2.2.1, 6.3.2.3.1 and 6.3.2.4.1). The average number of changes per case increases progressively from cluster A to cluster D, as does the standard deviation. (This will be discussed further in connection with the results of the cluster analysis super-imposed on the plots of the principal coordinates). The amount of change would appear to be an important factor in determining overall similarity between the different sets of changes. It can be seen however that the distributions of the number of changes per case for the clusters overlap (some to a considerable extent) which would indicate that the amount of change is not the only factor determining the similarity between the sets of changes.

Appendices (6.3.2.1.2, 6.3.2.2.2, 6.3.2.3.2 and 6.3.2.4.2) show an analysis of the percentage frequency of mention for each variable (change) within each of the four clusters. Therefore the changes which characterise the cases in each cluster and their relative importance can be described.

Cluster A contains cases which are characterised by little change. Only two changes are mentioned in more than 20% of the cases ("gross income" and "work load"), (appendix 6.3.2.1.2).
Cluster B contains cases which are characterised by changes connected with job duties ("work load" 82% of cases, "personal skills" 75% of cases, "percentage of time spent on duties" 48% of cases, "number of duties" 40% of cases). Individuals in this cluster see their jobs and their environments changing mainly in terms of job duties (appendix 6.3.2.2).

Cluster C contains cases which are characterised not only by changes connected with job duties but also by changes connected with organisational relationships, particularly those relationships internal to the organisation. A significant number of cases in this cluster report changes in departmental organisational structure (36%), (appendix 6.3.2.3.2).

Cluster D contains cases characterised by the most change. They are characterised not only by changes in job duties and organisational relationships but also with changes in organisation structure and changes in position (appendix 6.3.2.4.2).

It has been shown above how each cluster of cases is characterised by a certain set of changes which have been mentioned with a certain frequency. However these overall frequencies reveal nothing about the variation of changes amongst individual cases within each cluster. To investigate this variation the analysis needs to be taken further by combining the results of the principal coordinates analysis and the cluster analysis.
6.2.5 Cluster Analysis super-imposed on the Principal Coordinates plots

The principal coordinates analysis identified six dimensions which account for some of the variation amongst the changes identified on the questionnaires. These dimensions were interpreted in terms of the original changes: amount of change taking place, job duties, internal organisational relationships, job involvements, job opportunities, and external job relationships.

The cluster analysis split the sample of cases into four clusters on the basis of matching change patterns. Each of the four clusters were found to be characterised by broad groups of changes: cluster A, by very little change, cluster B, by changes connected with job duties, cluster C by changes connected with job duties and internal organisational relationships and cluster D by a wide range of changes including job duties, organisational relationships, organisation structure and position changes.

By super-imposing the cluster analysis onto the principal coordinates plots, further insights into the variation of the changes amongst the cases within each cluster might be gained.

In this way the variation amongst the sets of changes within each cluster can be examined in terms of the six dimensions identified in the principal coordinates analysis.

Appendices 6.2.4.1 - 6.2.4.5 show the cases in sample A identified by cluster (A, B, C or D), super-imposed onto five principal coordinates plots (1 against 2, 3, 4, 5 and 6 respectively).
Dimension one, the amount of change taking place, is by far the most influential dimension in determining the variation in response pattern, so the variation in the other dimensions are examined in conjunction with dimension one.

Cluster A appears to be a tightly packed group of cases, suggesting little variation amongst the sets of changes. The cluster is characterised by very little change. The cases which register most change in the cluster are more likely to register changes associated with job duties such as "work load", "number of duties", "percentage of time spent on duties". Where there is only one or two changes mentioned these are likely to be concerned with rewards or work load. Mention of relationships in this cluster is very infrequent and occasionally occurs in some of the outlying cases (usually the ones associated with the most change). Little mention is made in this cluster of changes in involvement. Any mention of opportunity changes in this cluster is usually concerned with "opportunities for training outside the organisation" (probably associated with attendance on a part time management course). Very few cases in cluster A mentioned changes in relationships external to the organisation.

As mentioned earlier cluster B was characterised mainly by variables connected with job duties. The main variation amongst the cases in cluster B was again connected with the amount of change taking place (number of variables identified as changing). The range of the change taking place in cluster B was greater than that in cluster A (standard deviation (B) = 2.9; standard deviation (A) = 2.3.)
Examination of the cases in the cluster shows that the incidence of job duties changes increases with increasing change. Cases at the boundary of cluster B with cluster C show a consistent mention of changes associated with job duties variables in particular with "number of duties", "personal skills", "skills required to do the job", "work load" and "percentage of time spent on each duty".

In cluster B there is some mention of changes in organisational relationships but the distribution of these changes appears to be associated with the amount of change taking place. In the principal coordinates plot of dimension 1 against dimension 3 the cases in cluster B which register most change are the ones most likely to be characterised by organisational relationships changes and these changes are more likely to be connected with vertical relationship changes.

In cluster B any change associated with opportunity is likely to be connected the individual's attendance at a college of higher education, as the only variable mentioned was "opportunity for training external to the company". There was very infrequent mention of changes connected with any other opportunity variable. There appears to be no association between the way individuals responded to changes in "involvement" and "organisational relationships external to the organisation" and the variation in amount of change amongst the cases in the cluster.
Cluster C was characterised not only by changes in variables associated with job duties but also organisational relationships. Again the main variation amongst the cases in cluster C is the amount of change taking place. The amount of change taking place in cluster C is considerably greater than in cluster A and B as in the range of the change. (Average number of changes in cluster C = 16.3, standard deviation = 3.9).

Examination of the cases in cluster C shows that the degree of change associated with job duties variables "number of duties", "personal skills", "skills required to do the job", "work load" increases (each of these variables has more than one level of change associated with it) as the amount of change associated with the cases increases.

In cluster C the occurrence of changes in lateral organisational relationships variables appears to be associated with the amount of change taking place. The incidence of changes in lateral organisational relationship variables increase with increasing change in cluster C as does the degree of change associated with these variables (lateral organisational relationship variables have more than one level of change associated with them). At the boundary of cluster C and D the cases show frequent mention of changes in organisation structure accompanied by the greatest change in organisational relationships.

In cluster C changes in opportunity variables are more likely to be associated with the number and variety of career opportunities as the amount of change per case increases. There appears to be no
association between the way individuals responded to changes in "involvement" and "organisational relationships external to the organisation" and the variation in the amount of change amongst the cases in the cluster.

The cases in cluster D are characterised by most change, and also there is a wide variation in the amount of change taking place (average number of changes per case = 30, standard deviation = 6.9).

Examination of the cases in cluster D shows that the changes in job duties are frequently registered at the highest level of change taking place (e.g. "a complete change in duties", "a significant change in work load" etc). Similarly the variables connected with organisational relationships show the highest level of change for both vertical and lateral relationships.

Changes in opportunity variables are usually connected with both training and career but particularly with career. There tends to be the highest levels of change in involvement variables both with family and friendship groups.

Many other changes occur in cluster D which are associated with a change in position; remuneration changes, changes in immediate environment as well as the others previously mentioned. The amount of change occurring within cluster D seems to be influenced by the occurrence of two particular changes; a change in function and a change in organisation. Four distinct groups (characterised by differing
amounts of change) can be identified. Firstly there are intra-organisational position moves with no change in function. Secondly there are intra-organisational position moves with a change in function. Thirdly there are inter-organisational position moves with no change in function. Finally there are inter-organisational position moves with a change in function. The four groups show increasing amounts of change respectively.

It seems appropriate at this stage to recap and develop some of the ideas which have emerged from the last three analyses. The sample of 250 questionnaires (sample A) represents 250 sets of change circumstances. These sets of change circumstances can be looked upon as being drawn from a much larger set of possible change circumstances i.e. any permutation of up to 62 changes identified in the questionnaire.

By far the most significant factor accounting for the variation amongst the sets of changes appears to be the amount of change taking place. This factor can then be used to structure these possible sets of changes. The idea of a spectrum of change circumstances with the amount of change varying from zero at one end of the spectrum to change on all 62 variables at the other end seems a useful one. However this single factor (amount of change) does not entirely explain the variation in the sets of changes. Five other dimensions, one associated with job duties, one with relationships, one with opportunities, one with involvements and one with relationships external to the organisation, also appear to influence the variation
in response pattern. Therefore the concept of a multi-dimensional spectrum of change seems appropriate in describing the variation amongst and structure of the sets of change circumstances.

Theoretically any possible set of change circumstances can be located within this multi-dimensional spectrum of change.

The cluster analysis and the cluster analysis superimposed onto plots of the principal coordinates have helped to identify some of the more meaningful sets of change circumstances in the spectrum; those circumstances characterised by little change; those characterised by changes in job duties; those characterised by changes in internal relationships; those characterised by changes in organisation structure; those characterised by changes in position (this last one has been sub-divided into changes of position involving function and/or organisation).

It now seems necessary to return to the question raised earlier concerning the choice of a four group cluster analysis. Why is a four group cluster analysis more appropriate than any other? The reason for a broad classification rather than a more detailed one is connected with the amount of common variance within the data. It has been shown earlier that much of the variance is unique to each set of change circumstances and the common variance is low. In these circumstances an analysis at a higher level of generality is more likely to reveal patterns than a more detailed analysis which is more likely to reflect the differences. This argument may be compared
with a topographical example. If an observer is located at ground level in a city suburb he may observe a number of features such as trees, grassed areas, roads, buildings etc. but observe no pattern in these features. However if the observer rises above the suburb he will get a broader view revealing the landscape to be composed of essentially built up areas and open spaces. Patterns may only become discernible on rising above the fine detail. To support this view a seven group and ten group cluster analysis was carried out on sub sample A. Many of the clusters in the seven and ten group cluster analysis were not readily interpretable or distinguishable from each other. This was particularly so with the middle clusters characterised by job duties and relationship changes. Eventually the seven group and ten group cluster analysis lead to the same conclusion as the four group cluster analysis just as the observer at ground level might conclude eventually, if he walks far enough, that the landscape is composed of open spaces and built up areas. However the process was more difficult. The four group cluster analysis brought out the main features of the data to light in a more obvious way.

6.2.6 Additional Analyses from the Cluster Analysis

The industry, age and occupational function profiles of individuals who completed the questionnaires in each of the four clusters A, B, C and D were analysed (appendices 6.3.2.1.3 - 6.3.2.1.5, 6.3.2.2.3 - 6.3.2.2.5, 6.3.2.3.3 - 6.3.2.3.5 and 6.3.2.4.3 - 6.3.2.4.5).

Overall there appeared to be no significant differences in the industry profiles of the individuals whose questionnaires appeared
in each cluster ($X^2 = 13.95; \text{N/S, } p = 0.1$). However if the industry profile of individuals in cluster A is compared with that of any of the others (B, C or D) e.g. B the difference is significant ($X^2 = 9.45; \ p = 0.1$. [Appendix 6.3.6.1.2].

53% of individuals from cluster A were from local government, civil service, large public utilities or financial institutions (banks, building societies and insurance companies). In clusters B, C and D the percentage of individuals from these industry classifications were 30, 30 and 25 percent respectively. The organisations falling into the above categories are all very large bureaucratic nationwide organisations.

There were no significant differences in the age profiles of individuals in the four clusters ($X^2 = 8.07; \text{N/S, } p = 0.1$). [Appendix 6.3.6.1.1].

There were no significant differences in the occupational function profiles between the four clusters ($X^2 = 0.7; \text{N/S, } p = 0.1$). [Appendix 6.3.6.1.3].

One of the most frequently studied phenomena associated with organisational mobility is that of mobility patterns. It has been shown in numerous studies (section 3) that individuals show some order or consistency in mobility outcomes over time.

It was decided therefore to examine sequences of clusters for the various individuals in samples A and B to see whether any patterns
might be evident. However the time period during which the data were collected was only 21 months. So it is obvious that no long term patterns in individual change circumstances could be examined. Appendices (6.1.2.1 and 6.1.3.1) shows the number of questionnaires completed by each individual in samples A and B. Given also that the number of questionnaires registered for each individual might not be consecutive there does not appear to be sufficient consecutive sets of change circumstances to reveal meaningful patterns for the individuals in the survey.

It was decided to examine overall sequences of any consecutive pairs of change circumstances for each individual. Therefore any consecutive pair of change circumstances for any individual was identified by clusters. These were summarised in a simple Markov analysis (appendix 6.3.8.1).

The analysis revealed that out of sixteen possible sequences of any two clusters, four sequences account for 60% of the total (A to A, A to B, B to A and B to B). Cases in these clusters are associated with the least change.

It was considered that certain sub-samples of the main sample (A and B) might reveal some patterns or order. It was decided to sub-divide the cases into those from individuals above thirty and these below thirty (based on the assumption that age has a major influence on career patterns). However the same kind of patterns were revealed as with the total sample (A and B) with four sequences accounting for nearly 60% of the total. Again when the cases were sub divided
into manufacturing and non-manufacturing (based on the assumption that type of industry might influence patterns) a similar result was revealed (appendix 6.3.8.2).

6.2.7 Verification of the Results

Earlier in the section it was mentioned that 2 sub-samples of 250 cases each (samples A and B) were selected so that sample B might be used to verify the findings of sample A. Also a sample X was drawn up containing one questionnaire per individual to examine what effect, if any, the number of questionnaires per individual might have on the results. A sample Z was also used in the analysis to check if the questionnaires (and the individuals who completed them) excluded from the two main samples might show some significant characteristics which differentiate them from those of the other samples.

Firstly a principal coordinates analysis was carried out on samples B, X and Z. Six dimensions were extracted and plots (similar to the ones for sample A) of dimension 1 against dimensions 2, 3, 4, 5 and 6 respectively were produced (appendices 6.2.4.2 - 6.2.4.4). The dimensions extracted for samples B, X and Z accounted for similar percentages of the variance of the original variables as did the dimensions extracted for sample A (appendices 6.2.2.2, 6.2.2.3 and 6.2.2.4).

The plots of samples B, X and Z gave a similar visual impression as the plots for sample A. An examination of the distribution of cases along the six dimensions for samples B, X and Z lead to similar interpretations of these dimensions in terms of the original
variables as with the dimensions of sample A. The interpretations for samples X and Z were not as clear cut as the interpretations for samples A and B.

A four group cluster analysis was performed on samples B, X and Z. The following analyses were carried out on the questionnaires in each of the four clusters in each of the three samples: the number of changes per questionnaire and the percentage frequency with which each change was mentioned. These analyses can be seen in appendices 6.3.3.1.1 and 6.3.3.1.2, 6.3.3.2.3 and 6.3.3.2.4, 6.3.3.3.1 and 6.3.3.3.2, 6.3.3.4.1 and 6.3.3.4.2 (sample B), 6.3.4.1.1 and 6.3.4.1.2, 6.3.4.2.1 and 6.3.4.2.2, 6.3.4.3.1 and 6.3.4.3.2, 6.3.4.4.1 and 6.3.4.4.2 (sample X), 6.3.5.1.1 and 6.3.5.1.2, 6.3.5.2.1 and 6.3.5.2.2, 6.3.5.3.1 and 6.3.5.3.2, 6.3.5.4.1 and 6.3.5.4.2 (sample Z).

The most noticeable difference between the four sets of results is the variation in the distribution of cases between the four clusters. There are quite large differences in the percentage of cases in each of the clusters across the four samples. However a comparison of the number of changes per questionnaire for each of the clusters across the four samples and the frequency with which each change is mentioned in each cluster across the four samples shows considerable similarity. These two distributions are statistically compared in appendices 6.3.7.1.1 and 6.3.7.1.2 - cluster A, appendices 6.3.7.2.1 and 6.3.7.2.2 - cluster B, appendices 6.3.7.3.1 and 6.3.7.3.2 - cluster C and appendices 6.3.7.4.1 and 6.3.7.4.2 - cluster D.
Age, industry and occupational function profiles were drawn for the individual who completed the questionnaires in clusters A, B, C and D for samples B, X and Z respectively. These appear in appendices 6.3.3.1.3 - 6.3.3.1.5, 6.3.3.2.3 - 6.3.3.2.5, 6.3.3.3.3 - 6.3.3.3.5, 6.3.3.4.3 - 6.3.3.4.5 (sample B), 6.3.4.1.3 - 6.3.4.1.5, 6.3.4.2.3 - 6.3.4.2.5, 6.3.4.3.3 - 6.3.4.3.5, 6.3.4.4.3 - 6.3.4.4.5 (sample X), 6.3.5.1.3 - 6.3.5.1.5, 6.3.5.2.3 - 6.3.5.2.5, 6.3.5.3.3 - 6.3.5.3.5, 6.3.5.4.3 - 6.3.5.4.5 (sample Z).

As has been mentioned in connection with sample A there appeared to be no significant difference between the industry profiles of individuals across the four clusters for samples B, X and Z (appendices 6.3.6.2.2, 6.3.6.3.2 and 6.3.6.4.2). However it was mentioned in connection with sample A that when the industry profile of individuals in cluster A was compared with any of the other three industry profiles (B, C or D) there was a significant difference. It was speculated that this might be due to the fact that a large percentage of individuals in cluster A came from large bureaucratic organisations. However although some difference between the industrial profile of individuals from cluster A for samples B, X and Z is noticeable, there appears no statistically significant difference between the profile from cluster A and any other profile (B, C or D) for samples B, X and Z.

As was found for sample A there appeared to be no significant differences between the age profiles of individuals in the four clusters for samples B, X and Z (appendices 6.3.6.2.1, 6.3.6.3.1, 6.3.6.4.1).
Again as was found for sample A there appeared to be no significant differences between the occupational function profiles of individuals in the four clusters for samples B, X and Z (appendices 6.3.6.2.3, 6.3.6.3.3, 6.3.6.4.3).

Given the similarity of the results for the cluster analysis and the principal coordinates analysis between the four samples A, B, X and Z, it is not surprising that the interpretation of the cluster analysis superimposed on the principal coordinates plots for samples A, B, X and Z should be similar.

In comparing the results of the cluster and principal coordinates analysis for the four samples it is not felt necessary to explore the detailed differences particularly in relation to the interpretation of the dimensions in terms of the original variables. The inferences made from the results are done at a higher level of generality than that of the original variables. The variables characterising the clusters are described as groups of variables rather than specific variables. Similarly the dimensions from the principal coordinates are interpreted in terms of groups of the original variables. The comparisons are made in terms of tendencies rather than strict equalities. The detailed differences which exist do not affect the interpretations.

Basically the results from sample B confirm the results from sample A. The analysis of sample X suggest that the number of questionnaires per individual is not a significant factor in determining the present findings. The analysis of sample Z suggests that the individuals
and the questionnaire which were removed from the original sample were not significantly different from the individuals and questionnaires of samples A and B.

A note of caution must be sounded in any attempt to generalise the findings. The results can only be said to be valid for the sample of individuals who took part in the present study. Although it might be speculated that these findings are valid in a wider context, confirmation of this would be the subject of further study.

6.3 Analysis of the Interviews

A number of depth interviews were carried out as described in section 4. This was done firstly to gain further insights into the nature of the mobility process and secondly to confirm the data collected in the questionnaire.

The information sought in the interviews covered the same area as the questionnaire. However more detail, background information and explanation was sought in the interviews. A short synopsis of a sample of the interviews is given in appendix 6.4. Much of the information obtained from the interviews confirmed the findings of the questionnaires. Three significant points which emerged from the interviews will be described in this section.

The most vivid impression gained from the interviews was the diversity of situation which gave rise to the different change circumstances. The overriding feeling gained was the uniqueness of each set of
circumstances. Even two sets of circumstances which have identical sets of changes could arise from very different individual, organisational and environmental circumstances. The impression of diversity reinforces the idea of a multi-dimensional spectrum of change. It also conveys the complexity associated with human behaviour in organisations and the difficulty involved in adequately describing and measuring this complexity and detail.

Although the accounts in the appendices are subjective and only summaries of the data obtained, they do provide a powerful demonstration of the variety of circumstances associated with the mobility process.

An important point which emerged from the interviews but not from the questionnaires concerned the permanency of job duties changes. Many of the interviewees referred to aspects of their job which changed but reoccurred later either in a regular manner or a random manner. Duties such as budgeting or stock taking were examples of duties which reoccurred in a regular manner. Budgeting and stock taking in many organisations were done at certain periods of the year or month on a regular cycle. There were also duties which changed and reoccurred in a random manner according to the demands of the job, outside the job holder's control (trouble shooting type of activity). The frequency of reoccurrence varied from job to job.

Three types of situation could be distinguished in the interviews. Firstly there were individuals whose job duties varied very little
either in the short term or the long term. These change circumstances were characteristic of cluster A (Ms 153, Ms 165), appendices 6.4.9 and 6.4.11. Secondly there were individuals whose job duties varied and changed in the short term (day to day, week to week, month to month) but who had a stable pattern of duties and relationships over the longer term. The circumstances were associated with the reoccurring duties mentioned previously and were characteristic of cluster B (Mr 71, appendix 6.4.4; Mr 10, appendix 6.4.1; Ms 109, appendix 6.4.6; Mr 13, appendix 6.4.2). In these situations the individuals had indicated job duties as changing but seldom indicated changing relationships. Thirdly there were individuals whose job duties and relationships underwent permanent changes. This could be where a job is developing in response to environmental changes (Ms 178, appendix 6.4.12) or where an individual has sufficient direction to shape and develop the pattern of his job duties and relationships, (Ms 162, appendix 6.4.10). The change circumstances are more characteristic of cluster C and invariably involve some type of relationship change.

The important distinction between the first two situations and the third situation is connected with the permanency of the changes. The first two situations are associated with reoccurring circumstances (no permanent change) but the third situation is associated with permanent change.

Another important point to emerge from the interviews is concerned with the duration of changes. In certain situations one particular
change could result in many other associated changes which may take place a considerable time after the initial change. An example of this was the change circumstances of Mr 115, (appendix 6.4.7). These contained a change in organisation structure which affected his department. However many of the changes which were associated with that change in structure only manifested themselves after a considerable time period. During this time period changes in duties and relationships were taking place until a new pattern of duties and relationships had established themselves.

As mentioned earlier one function of the interviews was to validate the information collected from the questionnaires. Although there were a few discrepancies between the information gathered from the questionnaire and the information gathered from the interviews, these never amounted to more than one or two errors in completing the questionnaires (sometimes omissions, sometimes including changes which had not occurred). This would not have had much effect on the overall interpretation of the results of the principal coordinates analysis and the cluster analysis. Details of these discrepancies can be seen in the synopses of the interviews in appendix 6.4. The reasons for the discrepancies were either simply mistakes or the individual completing the questionnaire had not given sufficient thought to the process or did not have sufficient insight into the change circumstances.

6.4 Summary and Conclusions

Organisational mobility outcomes can be described as sets of changes which occur in a person's job and job environment over time. In this
study sets of changes have been monitored for individuals in particular situations over three month periods. These sets of changes consist of permutations of up to 62 possible changes in an individual's job and job environment. Theoretically these sets of change circumstances can be viewed as a multi-dimensional spectrum of change. Any possible set of change circumstances can be located within this spectrum. The potential variety amongst the sets of change circumstances is very large. This reflects the enormous variation in personal, organisational and environmental circumstances which give rise to these sets of changes.

The most significant dimension determining the variation amongst the sets of change circumstances is the amount of change taking place (the number of changes registered in each questionnaire). Hence the spectrum can be viewed as sets of change circumstances with one end of the spectrum describing those circumstances with little change and the other end of the spectrum describing those circumstances with the most change.

However amount of change is not the only dimension influencing the variation amongst the change circumstances. Other dimensions found to influence the variation were:

a) Several changes associated with job duties.

b) Several changes associated with internal vertical and lateral organisational relationships.
c) Several changes associated with opportunities.

d) Several changes associated with involvements.

e) Several changes associated with relationships external to the organisation.

Along this multi-dimensional spectrum of change several meaningful sets of change circumstances can be identified.

i) There are individuals whose pattern of job duties and relationships are very stable. Their circumstances are characterised by very little change. There is little variation in their duties in the short term. Any changes in the circumstances of these individuals are usually associated with remuneration and/or work load.

ii) There are individuals whose patterns of duties and relationships are stable in the long term but within the short term there is variation within their duties. Some of their duties could be cyclical, occurring at certain times of the month or year (or appropriate time period). Some could occur in a random manner in response to demands in the job and job environment. The change circumstances are not characterised by any permanent change.
iii) There are individuals whose pattern of duties and relationships is not stable but permanently changing or developing in response to some environmental or personal factors. These changes could range from minor ones such as the replacement of a single subordinate, to quite major changes such as the addition of a significant number of duties to an individual's job. Where changes in job duties are permanent they are almost invariably accompanied by changes in relationships. These relationship changes vary from being predominantly vertical in nature to predominantly lateral in nature. Where the amounts of change taking place are greater, changes in involvements at the individual's place of work and home are more likely to occur.

iv) There are individuals whose change circumstances are brought about by a change in structure of their department or organisation. These changes in structure can vary as to their impact. On the one hand they may consist of quite minor changes in duties and relationships. On the other hand their impact can be so great for an individual as to be synonymous with a job change. The structure changes are more likely to involve both vertical and lateral relationship changes or predominantly lateral changes. Structure changes are likely to be accompanied by changes in involvement with both friendship groups and family. They also are likely to be accompanied by changes in opportunities for training and career.
There are individuals who, irrespective of any changes occurring within their job duties, relationships or environments, move from one position to another. Within this group of individuals four sets of circumstances were recognisable. There are individuals who change position but not function or organisation. There are individuals who change position and function but not organisation. There are individuals who change position and organisation but not function. Finally there are individuals who change position, function and organisation. Frequently changes in position are accompanied by a whole series of changes in duties, relationships, remuneration, involvement and opportunities.

The findings do not categorise the individual change circumstances into discrete groups. The different areas of the spectrum described above are tendencies and not every set of change circumstances fits the above descriptions neatly. There is still a significant amount of variation within and around these broad categories. The concept of a multi-dimensional spectrum of change with amount of change being a significant factor in the structure of the spectrum, seems appropriate for conveying broad patterns amongst the detailed variation.
Section 7 Discussion and Recommendations

7.1 Introduction

The main conclusion of this study is that organisational mobility outcomes can be represented as a multi-dimensional spectrum of change. Within the spectrum some significant distinctions can be made and several broad sets of change circumstances can be identified and meaningfully described so as to give a logical and comprehensive structure to the spectrum.

The aim of this section is to examine the implications of the present findings in the light of the relevant organisational mobility literature and to recommend areas of research which might extend and complement the findings.

The section is organised in five parts:-

1) The direct results of this study will be examined and compared and contrasted with pertinent findings in the literature.

2) Certain findings in the literature will be discussed and expanded in the light of my results.

3) More speculative considerations will be discussed based on my own personal observations while conducting the research.

4) Recommendations for future research.

5) Implications of the study.
Amongst the sets of change circumstances contained in the multi-dimensional spectrum, several significant ones have been identified and described. Also some important distinctions can be made concerning the change circumstances. Not all of these sets of circumstances and distinctions are mutually exclusive. Some are encompassed by others or related to each other in some way. This interrelationship is one of the main features of the results, and is portrayed in the diagram below.

Figure 7.1

Interrelationship of change circumstances in the multi-dimensional spectrum of change
The relationship between the different sets of change circumstances can be described in two directions (represented laterally and vertically in the diagram). From left to right in the lateral direction the change circumstances are characterised by increasing change. The vertical direction represents different levels of generality. The descriptions of the change circumstances become more specific from top to bottom.

The most generalised description of the sets of change circumstances is at the top of the diagram. Here the change circumstances are represented as a spectrum (permutations of up to 62 changes) increasing in amount of change from left to right of the spectrum. No distinctions, other than the amount of change, are made in describing the spectrum.

In section 6 a distinction was made concerning the nature of the change taking place. Some of the change that occurred over the three month periods was not permanent. Some changes occurred regularly in a cyclical manner. Activities such as stock-taking and budgeting were of this nature. These changes could also occur in a random manner. "Trouble-shooting" is an example of such a change. A production manager may have to deal with material shortages every now and again. These shortages may occur at unpredictable times but may take up such time in the managers work pattern to constitute a change in duties. These type of changes will always occur but in a random manner. Dealing with customer complaints may be part of a sales-managers job. Again there will always be complaints and they will constitute a significant part of the managers job but their
occurrence is unpredictable. Both these types of changes can occur within a stable pattern of duties and relationships. These types of changes re-occur within the stable pattern.

On the other hand there are changes which occur that are more permanent in nature and alter the pattern of duties and relationships within the job. These changes arise from a variety of sources and vary considerably in their impact. Very slight permanent changes may occur in remuneration or relationships and have very little impact on the existing pattern of duties and relationships. However considerable changes in the environment may lead to permanent changes in organisation structure and/or the creation of new positions or removal of old ones.

Circumstances characterised by an absence of change and the circumstances characterised by the reoccurring changes are characteristic of a stable pattern of duties and relationships. Circumstances characterised by permanent changes can be said to be characteristic of an unstable pattern of duties and relationships.

Therefore an important distinction can be introduced into the spectrum of change circumstances; stable working patterns and unstable working patterns.

At a lower level of generality the unstable working patterns can be subdivided into change circumstances associated with inter-positional change and change circumstances associated with intra-positional
changes. In a similar manner the stable working patterns can be subdivided into circumstances associated with variable duties within a stable working pattern and those circumstances characterised by an absence of change.

At an even lower level of generality the intra positional change circumstances can be subdivided into those change circumstances associated with permanent changes in duties and responsibilities and those change circumstances associated with changes in organisational structure. The inter-positional changes can also be further subdivided into changes circumstance associated with an internal move only, or change circumstances associated with a change in function or change circumstances associated with a change in organisation.

These classifications and distinctions represent ideal types within the spectrum of change circumstances. The actual change circumstances vary to a greater or lesser extent around these types. The classification can be viewed as areas of high density within the spectrum with the density decreasing as variation from the ideal type increases.

Viewed in the light of these two dimensions the structure of the multi-dimensional spectrum of change circumstances becomes apparent. It is within this framework that the results of the study can be examined.
Before discussing some of the change circumstances within the spectrum, a major characteristic of mobility outcomes needs to be considered. In the organisational mobility literature the descriptions of mobility outcomes tend to be either uni-dimensional or limited to a few dimensions. Some studies describe mobility outcomes in terms of vertical and lateral inter-positional moves, Walker (1976), Idema (1978), Wellbank et al (1978), Schein (1971). Others describe them in terms of change of function, Hamelman (1966), Clarke (1966), Hutton and Gerszl (1963); some in terms of inter-organisational moves, Marsland (1975), Viega (1973); some in terms of change in status, Lipsett and Malm (1955), Clements (1958), Chartrand and Pond (1968); some in terms of changes in age and length of service Roth (1963), Morgan (1971). Although most of these studies describe mobility outcomes on one or two dimensions, taken as a whole they suggest that there are many dimensions to mobility outcomes.

Dill, Hilton and Reitman (1962) suggest that the sequence of short run interactions between an individual, his job, his environment and others in the organisation can exert decisive influences on a person's career. It might be inferred from this that a sequence of changes takes place in a person's job, relationships and environment over time. This again suggests mobility outcomes are multi-dimensional.

The approach taken in this study found that mobility outcomes can be described on 62 variables. This perspective is supported in the literature, although not widely used.
Inter-positional changes in the present study appear to fall most naturally into groups characterised by changes in function, changes in organisation, changes in both function and organisation or by changes in neither of the two variables. Change in organisation and function appear to be very influential on the amount of change taking place. Whilst changes in both these characteristics are mentioned in the literature as indicators of organisational mobility (section 3), it is direction of movement that appears to be the most universal descriptor of inter-positional moves (vertical and lateral).

The terms vertical and lateral are often ambiguous. They tend to overgeneralise the variety of situations described. The terms are not always mutually exclusive. Often an inter-positional move can be partially vertical and partially lateral. This rather reduces the utility of the descriptors. Also the distinction gives no indication of the amount of change taking place. However it can be argued that the main use of the terms is to distinguish between those inter-positional moves which have an element of increased responsibility/status and those that do not.

Description of inter-positional moves by change of organisation and function is obviously a less ambiguous distinction and it does meaningly reflect differences in amount of change taking place. However the terms do not indicate if any increased responsibility is accruing to an individual. This is obviously a limitation of this classification. It would be useful to obtain a larger sample.
of inter-positional moves and to see whether a more detailed analysis would reveal a vertical dimension. It may well be however that the vertical/lateral dimension is not directly related to the amount of change taking place nor the others factors found to influence the variation amongst the change circumstances.

In conclusion it would seem that both the methods of describing inter-positional changes are complementary rather than alternatives.

A group of change circumstances were identified in the spectrum which were labelled intra-positional changes. These circumstances were subdivided into changes in duties and relationships and organisation structure changes.

The first type of intra-positional change describes permanent changes in duties and relationships. An important distinction can be made in the origin of these changes. An individual job holder may be called upon to react directly to certain changes in the environment; technological changes, market changes, economic changes, legal changes. These changes could have implications for his/her pattern of work. The origin of this type of change is in the organisational environment. However changes in work patterns may be initiated by the job holder. He or she may make a conscious decision, because of personal preference or political reasons or personal style or a combination of all three to adopt a particular work pattern, to emphasise certain duties and relationships and not others. Here the origin of the changes is in the individual job holder. There is
evidence in the literature to support this distinction; Dill, Hill and Reitman (1962), Louis (1980) and Estler (1981).

The second type of intra-positional change is associated with organisation structure changes. From time to time in organisations conscious decisions are taken formally or informally to alter the duties and particularly relationships of a group of people. Sometimes structure changes are in direct response to changes in the environment, other times they are a result of a planned change in strategy initiated by the management of the organisation. The impact of these structure changes varies enormously. On the one hand the impact may be restricted to two or three people and have little effect on patterns of duties and relationships or the impact may be very dramatic and involve almost everyone in the organisation.

It is useful to examine the inter-play between the inter-positional and intra-positional change circumstances. Superficially it might be suggested that the inter-positional changes could be described as instantaneous and the intra-positional changes as evolutionary.

However a closer inspection of the nature of these changes reveals that the reality is not quite as simple.

There appears to be a difference between the nature of the changes identified on the questionnaire. Some changes are plainly instantaneous, unambiguous and easily recognised. Typical of this type of change are all the changes in the "Physical Environment" and
"Remuneration" sections of the questionnaire. Change in "Job Title" is plainly another example. These changes can be identified as becoming fully operative at a particular time.

Other changes on the questionnaire vary in the time period over which they occur and are more ambiguous and difficult to observe than the instantaneous changes. Changes in "duties", "organisational relationships", "involvements" and "opportunities" fall into this category.

Theoretically when a person changes his job all his duties and relationships change at the time he takes up his new job. However in practice his pattern of duties and relationships may continue to change and evolve for some considerable time after he has started his job. Some examples using the distinction developed earlier, of stable and unstable work patterns, may illustrate the point.

The most readily observeable type of change is of an inter-positional type where the instantaneous changes such as job title, salary and physical environment occur at a particular time and so end a stable work pattern. When the individual starts his new job, his duties and relationships continue to change over a period of time, particularly in a complex job. The person has to develop his own pattern of duties, relationships and ways of working. During this period his work pattern is unstable. This pattern continues until he develops a stable pattern of duties and relationships. So the inter-positional change circumstances are associated with both instantaneous and evolutionary changes.
Another example is that of the change circumstances surrounding a change in organisation structure. Such a change may consist of a number of instantaneous changes such as the announcement of new reporting relationships, new grades, new salaries etc. This could end a stable work pattern. This would be followed by an unstable work pattern where individuals affected by the re-organisation adjust to their new duties and relationships until new stable work patterns are established.

On the other hand there may be the situation where a person's duties and relationships have been changing due to changes in the organisational environment. Here an unstable work pattern is not following an instantaneous change but is merely a response to external changes. (The organisation may in time sanction these changes by a change in job description or salary or even structures).

Two types of evolutionary change can be distinguished from the above examples. The first follows some type of instantaneous change such as an inter-positional move or a change in structure. This type of change forms an unstable working pattern but it tends to be associated with an individual suddenly finding himself in a new situation and adjusting to it.

The second type of evolutionary change is associated with an individual in a particular job responding directly to changes in the environment. These changes may or may not be sanctioned by the organisation at a later date.
Evolutionary changes are associated with unstable work patterns. Without the evolutionary changes (irrespective of their origin), mobility patterns would be a series of stable working patterns punctuated by sets of instantaneous changes. The nature, sequence and balance of instantaneous and evolutionary changes are important factors in determining the nature of mobility patterns.

A comparison might be made between the instantaneous and evolutionary changes discussed above and the objective and subjective changes referred to by Louis (1980). She argues that in any kind of transition some changes are objective and readily observable before the transition, whereas other changes associated with a transition are subjective, the perceptual products of an experience in the new situation. The instantaneous change is more readily associated with Louis's objective change, although there may be some differences between the anticipated and the reality. The evolutionary changes are more readily associated with the subjective changes. Although some of the evolutionary changes are not entirely unexpected, ie one knows he or she will have certain duties and relationships, the meaning and implication of these will only become apparent to the individual after he has experienced them.

That part of the spectrum associated with stable working patterns is assumed to be characterised by no permanent change. However it is unlikely that any environment is completely static, although changes might not be recognised over the short term and probably cause no significant disruption of the stable working patterns. Over the longer term however changes may well be observable. Most jobs would
look somewhat different if viewed five or ten years into the future of past, no matter how static they may appear. The unstable working patterns are the ones caused by the more significant changes. This should not disguise the fact that small imperceptible changes are happening all the time. It is likely that stable working patterns are affected by small changes in the environment which in the short term go unnoticed.

The most common use of mobility outcomes in the literature appears to be the description of mobility patterns. The framework suggested in figure 7.1 page 168, appears to have considerable advantages over the traditional methods of describing aspects of inter-positional moves.

Firstly the framework allows mobility patterns to be described in terms of both inter and intra positional changes. Secondly the framework allows patterns to be described at different levels of generality. For instance it may be more meaningful to describe patterns in terms of stable vs unstable trends or intra vs inter changes than look for detailed patterns in changes of function or organisation.

It is perhaps not surprising that it is the readily observeable instantaneous changes that are more commonly used to describe mobility patterns. Changes in salary, organisation and geographical location are easy to identify and relatively unambiguous. The evolutionary changes are more difficult to use as descriptors of mobility patterns as they tend to be subjective and more difficult to identify and monitor.
7.3 Certain findings in the literature can be discussed in light of the present results. It was argued in section 3 that certain aspects of the organisational environment and certain individual traits and attributes could influence and constrain organisational mobility outcomes.

The distinction between mechanistic and organic structures was used to demonstrate how the organisational environment can affect mobility outcomes. This distinction can be further examined in light of the multi-dimensional spectrum of change circumstances. One of the main reasons for the distinction between organic and mechanistic structures was to demonstrate how organisations react differently to change. The mechanistic organisation is more suited to stable environments and approximates to Weber's rational bureaucracy. The organic structure however is more adapted to unstable conditions with continual adjustment and redefinition of individual tasks and contributions.

It is perhaps tempting to suggest that organic organisations would be characterised by the evolutionary type of change and mechanistic organisations by the lack of such change. However the situation requires closer examination. Although mechanistic organisations are more suited to stable environments, change in the form of individuals leaving, retiring or dying must inevitably take place. Bureaucracies tend to have rules and procedures governing such eventualities. Therefore, as was argued previously, when an individual takes up a new position he has to adjust to the new set of duties and relationships. So in this sense mechanistic structures will undergo evolutionary change following an instantaneous change such as a job move. On some
occasions mechanistic organisations may undergo a reorganisation in structure. Following such a change, job incumbents will need time to adjust to new roles. As such evolutionary change will take place during this adjustment.

Organic organisations will also be subject to the replacement of individuals when they retire, leave or die. So in these circumstances instantaneous change followed by evolutionary change will take place. However it is the way organic organisations continually adjust to environmental change which distinguishes them from the mechanistic organisations. Positions in organic structures will be characterised by continual changes in duties and relationships. Mechanistic structures on the other hand rather than continually absorbing such changes will from time to time accommodate them by such mechanisms as interpositional moves or the creation of new posts, or the reorganisation of positions.

It is in this way that the nature and pattern of mobility outcomes can be said to differ between organic and mechanistic structures.

Mintzberg (1973) has suggested that differences in the nature of jobs account for most of the variation in managerial work. Although there is no tight definition as to which work is managerial and which is not there are some indicators which are suggestive such as level in the hierarchy, number of subordinates, responsibility and authority. It is obvious that some jobs will have more managerial characteristics than others. Probably managerial and non managerial jobs are best described on a continuum rather than as two discrete types. This
variation in the nature of jobs may help explain some parts of the multi dimensional spectrum of change circumstances. Mintzberg (1973) has suggested that managerial work is characterised by brevity and variety and is non routine. This may provide an explanation of the distinction made amongst the stable working patterns of the multi-dimensional spectrum. The first component of the stable work pattern consisted of little change and little variation in duties and relationships in the short term (i.e. one day was very much like any other). The other component contained variety of duties within a stable working pattern. This variety could be cyclical in nature or random. This variation in change circumstance could well reflect the variation in the nature of managerial work. The jobs with less managerial characteristics epitomise the first component of the stable work patterns and the jobs with more managerial characteristics epitomise the second component of the stable work patterns. The present study has provided some evidence in support of this proposition. From the sample of individuals in this study, 27 were identified whose jobs could be categorised into "jobs with predominantly managerial characteristics" and "jobs with minimal managerial characteristics" and whose work patterns were stable. Appendix 7.1 shows there are few managerial jobs which show no variability in work pattern although there are a significant number of non managerial jobs which show no variability. However the vast majority of managerial jobs show variability in work pattern. A significant number of non managerial jobs show some variability in work pattern. This evidence is by no means conclusive. The sample is small, and the classification of managerial and non managerial jobs is somewhat subjective.
Stewart (1976) has suggested that two important characteristics of managerial work are firstly the extent to which targets are self imposed and secondly how much work is self generated. These two characteristics suggest that some managerial jobs may allow their incumbents to determine the direction of their jobs and to shape their pattern of duties and relationships. It could be inferred from this that some of the permanent changes in duties and relationships identified in the spectrum of change circumstances arise from these characteristics. As has been previously mentioned in this section the motivation for such an approach to a job could be political or personal inclination.

Both Mintzberg and Stewart have identified typologies of managerial jobs. Mintzberg has identified eight managerial types based on combinations of ten managerial roles. Stewart has identified twelve managerial job types based on their relationship patterns. It would be interesting to see whether these different managerial job types are characterised by different frequencies and patterns of mobility outcomes as described in the multi-dimensional spectrum of change circumstances.

Individual traits and types were seen to be important factors influencing mobility outcomes (section 3).

Age appears to be a frequently mentioned variable in the mobility literature, Miller (1951), Nougain (1968), Super (1956) and Viega (1973). Many of the results of such studies indicate that mobility outcomes change in nature and the frequency with which they occur
with increasing age. The present results did not reflect these findings. Age of individuals in the sample studied did not appear to influence the variation in change circumstances (appendix 6.3.6.1.1).

Several factors may have some bearing on this finding. The vast majority of the sample investigated (86.5%) were aged between 20 and 34. Only 4% were aged above 40. Approximately only one third of the working age range was represented in the sample. However Bray et al (1974) suggest that mobility outcomes of individuals in their early twenties may be different from those in their early thirties. Any possible differences might have been masked by the fact that all the sample were attending part time management/professional courses which might reflect a common career stage. This factor may be more influential in determining mobility outcomes than age. The studies that do suggest differences between individual career outcomes of individuals in their twenties and thirties do observe that age bands are approximate and subject to wide variation. Any study attempting to detect variation in mobility outcomes across age ranges would have to take into account the effects of other variables which might influence the outcomes.

There also appears to be some comparison between certain career types identified in the literature and certain distinctions made in the multi-dimensional spectrum of change circumstances.

In section 3 the works of Rotter (1966), Bray (1974) and Rapoport (1970) were examined and characteristic patterns of development
emerged. The first type was characterised by an aggressiveness towards career development and a belief that a career was the individual's responsibility and was determined by his actions. His developmental patterns were characterised by revolutionary change and unpredictability. The individual was intolerant of situations he could not change. The second type was characterised by a more accommodating approach to career development and a belief that personal development was subservient to the needs of the organisation. Developmental patterns were characterised by evolutionary change and predictability.

Earlier in this section the distinction between stable and unstable working patterns was developed. It seems possible to describe the two developmental types in terms of stable and unstable working patterns.

The first developmental type is likely to have a strong affinity for the unstable working pattern. He is likely to be intolerant of long periods of stable working patterns. This type of development pattern is likely to be characterised by permanent changes in duties and relationships, organisational structure changes and inter-positional moves. His response to periods of stable working patterns could be two fold. Firstly he is likely to attempt to initiate change by emphasising particular duties, expanding his job, creating new relationships, modifying existing relationships and possibly even initiating structural changes or hiving off static parts of his job. Secondly if he is not free to bring about any of these changes he
is likely to change his position. He is probably not averse to changing either his organisation or function.

The second developmental type is likely to have a strong affinity for a stable working pattern. He probably only disrupts this pattern because of the wishes or demands of his organisation; for example if he becomes caught up in a company reorganisation or perhaps has to modify his job because of changes in the environment. He is much more likely to spend his career in one organisation and in one function. He is likely to be tolerant of and even content with long periods of stable working patterns, and probably sees this as the best way of fulfilling the organisations goals. He is unlikely to initiate unstable working patterns (permanent changes) to further his own career or developmental experiences. His career is likely to consist of long periods of stable working patterns punctuated occasionally by changes initiated by the organisation.

Consideration was given to the stability of career types in section 3. Taking Rotters concept of the internal and external, opinions were cited as to whether the internal in a situation of enforced stability would eventually become an external or whether an external could similarly become an internal if subjected to rapid and prolonged change. It was also considered whether an individual’s orientation may change over time according to the demands of his/her life/family cycle. This present study was not designed to examine these particular questions, but the findings do perhaps offer an indication of how this change in orientation might be observed.
If the first development type is considered as being orientated to unstable working patterns and the second development type to stable working patterns, then a process of change from one orientation to the other might be described as follows. An individual who had a predominantly unstable working pattern and was orientated to unstable patterns might through family or financial considerations accept longer periods of stable patterns. He may remain longer in one organisation or one function. For security reasons (or political) he may decide not to initiate changes in his job or structure of his department. Over time the person may "learn" to accept stable patterns. Similarly a person orientated to stable working patterns may be forced into unstable working patterns through a number of reorganisations. He may also be forced through redundancy to change his job and organisation and possibly his function. He may "learn" to accept and seek more unstable working patterns.

If it is the balance between stable and unstable working patterns which reflects the orientation of an individual then a change in working patterns over a long period could be indicative of a change in orientation.
7.4 In the third part of this discussion section, consideration will be given to the more speculative aspects of the research. Section 3 began with a global perspective of the organisational mobility process in examining the models of Vardi (1980) and Anderson et al. (1981). Both these perspectives examined the variables which influenced mobility outcomes. The main body of the present research has been aimed at examining mobility outcomes and proposing how they might be described. It now seems appropriate at the conclusion of the discussion to return to the global perspective of the organisational mobility process and suggest a model of the process in the light of the present findings.

In the models of Vardi (1980) and Anderson et al. (1981) the variables influencing mobility outcomes have been grouped under two main types, those associated with the individual and those associated with the environment.

The present findings would suggest that there are three significant factors which could explain the variability amongst the sets of change circumstances which make up the multi-dimensional spectrum. These are the amount of change in the organisational environment, the amount of variability and discretion within the job and finally the orientation of the individual to stable or unstable environments.

Like the two aforementioned models this suggested model can have both an organisational and an individual perspective. Mobility can be examined for a part or the whole of the organisation. It can also
be examined from a single individual's perspective or that of a group of employees.

The suggested model however differs from Vardi's and Anderson's in three ways. Firstly the range of mobility outcomes considered is greater (encompassing intra as well as inter-positional change). Secondly there are three factors rather than two factors which are seen as influencing outcomes. The nature of the job is separated out from the general "environmental" variables. Thirdly the three factors are expressed in such a way as to allow some measure of the factor to be expressed.

The first factor is associated with the amount of change taking place in the environment. This factor can be quantified on a scale of increasing change. The origin of this change can be found in the external environment or within the organisation itself. External changes in the product market, the labour market, the economic environment, the technological environment, the legal environment, the social environment may have a direct influence on mobility outcomes, by changing duties and relationships or creating the need for new structures or jobs. Factors internal to the organisation such as change in strategy and policy could also have a direct impact on mobility outcomes. The external changes mentioned above may also indirectly affect mobility outcomes by bringing about changes in strategy and policy.

The greater these changes the greater will be the impact on mobility outcomes. This impact however will be determined to a certain extent
by the characteristics of the organisation. Such characteristics as size of the organisation, technology, structural relationships, occupational structure, union structure and whether the organisation can be described as mechanistic or organic will all influence the impact that the changes in the environment will have on mobility outcomes.

Generally as the amount of change in the environment increases, then pressure on jobs to react to that change grows. This could lead to changes in duties and relationships associated with organisational positions. The greater the environmental change, the greater will be its impact on organisational working patterns. When the level of environmental change increases to such an extent that it is difficult for existing jobs to absorb that change, then structural changes may occur as well as new jobs being created and old jobs disappearing.

Variations across organisations will occur because differing organisational characteristics will modify the response to change. Also there will be variations within organisations. Some jobs are more central to the operation of an organisation than others. The impact of environmental change on these jobs may be far greater than on jobs which are more peripheral to the organisation.

The second factor in the model is associated with the nature of organisational positions. Jobs in organisations tend to be characterised by differences in the variability of work patterns. Some jobs are very routine in nature. The pattern of duties and
relationships is the same from one day to another. Other jobs have more variable work patterns, with duties and relationships changing in a cyclical or random manner. The jobs with most scope for variety in duties and relationships are those in which the job holder has the discretion to shape his own pattern of duties and relationships (characteristic of many managerial jobs). The second factor reflects this variation in jobs. These differences can be quantified on a scale with the most routine jobs at one end and jobs with work patterns totally within the discretion of the job holder at the other end.

The implications of this factor for mobility outcomes is probably most noticeable among stable working patterns. It is this factor which is likely to distinguish the stable working patterns with no variability and those stable working patterns with variability in duties. The jobs which are characterised by working patterns within the discretion of the job holder are more likely to give rise to mobility outcomes in that part of the spectrum associated with permanent change in duties and relationships.

The third factor in the model is associated with the orientation of the individual to stable or unstable working patterns. The two types of orientation have already been identified and their implications for mobility outcomes discussed earlier in this section. The scale quantifying this factor would measure the position between the two idealised orientations.
The interaction of these three factors provides a contingency model of organisational mobility outcomes. Within this framework the nature, frequency and patterns of organisational mobility outcomes can be examined and explained.

**Figure 7.2**

Factors influencing the mobility outcomes described in the multi-dimensional spectrum of change circumstances.
Recommendations

The present study has provided a perspective on organisational mobility which describes mobility outcomes in terms of changes that can occur in an individual's job and job environment. In the light of this perspective some of the variables which influence these outcomes have been examined.

Future research might be directed firstly to refining the ideas and findings associated with the mobility outcomes and secondly to examining how these outcomes are related to some of the variables which influence the process of organisational mobility.

The main finding of this study is that mobility outcomes can be expressed as sets of change circumstances. These sets of changes can be viewed as a multi-dimensional spectrum of change. Several sets of change circumstances were identified which give a structure to the spectrum and enable any set of change circumstances to be located and explained within the spectrum.

Future studies might be aimed at confirming the validity of the various groups of change circumstances. In the present study the various sets of change circumstances were identified through the analysis of 62 variables associated with a job and its environment. It may be possible to develop a more practical and appropriate method of identifying the various groups.

Inter-positional changes are frequently mentioned in the literature, however few studies appear to have produced a typology or
classification of this type of change. This appears to be an area to be researched. It would be interesting to see how such a typology might accommodate inter-positional changes associated with a change in function and a change in organisation.

Many inter-positional changes in the literature are described in terms of direction (vertical and lateral). Future studies might examine inter-positional moves in these terms to test the utility and comprehensiveness of the distinction.

A group of change circumstances were identified in the multi-dimensional spectrum of change that were associated with changes in organisation structure. There was some evidence that a distinction might be made between structure changes associated with vertical relationships and those associated with lateral relationships. Investigation of this distinction might form the basis of a study or a more comprehensive typology of structure changes might be investigated.

Perhaps the most difficult group of change circumstances to observe are the ones associated with evolutionary change. In the present study, changes in job duties and relationships appeared to be the two major characteristics along which this type of change would be identified. Future research might examine some very obvious forms of this change in order to examine its characteristics, and the most appropriate methods of identifying it.
A group of change circumstances were identified which appeared to have a varied pattern of duties within a stable working pattern. The duties varied in either a cyclical or random pattern. Future research might examine the nature of this variation and in particular any patterns which may be evident.

An important area for future studies would appear to be the influence of environmental variables and individual traits on mobility outcomes. However it seems a difficult task to establish a direct relationship between a single variable (such as size of organisation or age of individual) and particular mobility outcomes. There are many variables influencing mobility outcomes and it would be difficult to isolate the effect of any single one. Also the relationship of any particular variable with mobility outcomes may be modified by variations in other variables.

An alternative approach could be to introduce intervening factors into the relationship. Earlier in this section a model of the organisational mobility process was proposed. This in effect introduces three intermediate factors between the environmental, job and individual variables and the mobility outcomes. This establishes two sets of relationships: the one between the environmental, the job and individual variables and the corresponding intervening variables and one between the intervening variables and mobility outcomes (Fig 7.3). Future studies may be pursued in two directions. Firstly research can be carried out to establish how the relevant environmental, job or individual variable affects the corresponding
intervening variable. Secondly studies can be undertaken to establish how the three factors interact and determine and influence mobility outcomes.

Such factors as changes in the product market, changes in technology, changes in economic activity and changes in management strategy and policy can be examined to see how they bring about pressure for change on working patterns. Studies might also be carried out to determine
what effects organisational characteristics such as size, technology occupational structure might have on the way organisations respond to such pressure.

Studies might be carried out to determine what effect such factors as level in the hierarchy, job function, and managerial characteristics have on the variability of work patterns.

Studies might also be carried out to examine the relationships between such variables as age, sex, personality etc. to an individual’s orientation to stable/unstable environments.

Finally the model of organisational mobility might be used to examine the mobility outcomes that result from various interactions of the three intervening variables. Alternatively the model could be used to explain observed patterns of mobility outcomes.
7.6 Implications of Organisational Mobility

The pace and complexity of organisational change demands more flexible and effective managers. These can only be produced by realistic approaches to the development of managers and their careers. These developmental approaches will be supported by increasing knowledge of the organisational mobility process and its related issues.

In times of expansion and growth, organisations satisfy their demand for managers by promotion from within, or, where the potential within does not exist, by recruiting from the managerial labour market. Individual managers develop their own careers through internal promotions until they reach a target job or competition becomes too great or the organisation decides they have no further potential. They can also pursue their careers by changing organisation.

However periods of recession and negative growth reveal the inadequacies of reliance on these traditional methods of career development. Rather than creating new positions, organisations are cutting out or amalgamating existing positions. Organisations find they can no longer develop managers by a series of vertical promotions. Individuals suffer by becoming frustrated at the lack of promotional opportunities. The option of recruiting from other organisations is curtailed as individuals are less likely to change a secure job for an unknown one. The present approach to organisational mobility outcomes may provide a basis for organisational strategies which would resolve some of these problems.
One of the most intractable problems facing organisations during periods of recession is that of manpower planning and in particular of planning the development of managers. Often there is not the flexibility within the organisation to give managers different job experiences to develop them for more senior jobs. A change in economic activity may find the organisation unable to take full advantage because of the lack of trained and experienced managers. The change circumstances in the multi-dimensional spectrum recognises intra-positional changes as well as inter-positional moves. Organisations can change the emphasis of their development strategies to development within jobs rather than development through changing jobs. By evaluating the actual and potential development experiences within jobs, organisations may find they need less inter-positional moves to develop their managers. This will lead to more effective decisions being made about fewer inter-positional moves available. Benefits of inter-positional moves can be evaluated in terms of new developmental experiences to be gained, rather than assuming that all "promotional" moves must be beneficial. This change of emphasis could be the basis of more effective and productive manpower planning.

Many managers and potential managers expect a career structure as an organisational reward. Any reduction in promotion opportunities could have serious implications for the motivation of managerial staff. The range of mobility outcomes identified in the multi-dimensional spectrum of change and the variables influencing these outcomes could be used as the basis for career counselling. This
would allow individual managers to examine alternatives to inter-
positional moves and to assess more realistically what form their
development is likely to take. This is a positive way in which
organisations can help to change individual managers' attitudes towards
career development.

Many organisations from time to time need to change their
organisational structure. Other organisations, from time to time,
may audit the effectiveness of their structures. These would seem
ideal opportunities to examine the effect of structures and job
design on the way managers are developed. Both the design of
structure and jobs affects the potential organisations have for
developing managers. The number of levels in the hierarchy, the
amount of specialisation, the amount of discretion to develop one's
job, the way structures respond to change all affect the type of
developmental experience available to organisations and job
incumbents. Opportunities do exist for organisations to take positive
steps to plan developmental experiences for their managers.

Recognition of the developmental experiences within jobs gives an
added dimension on which to judge the match between individuals and
jobs. Comparison of the type of developmental experiences available
in a job with the development experiences of an individual's previous
jobs will enable the gains for the organisation and the individual
to be more fully explored during a selection procedure. Recognition
of the factors influencing mobility outcomes should enable a better
decision to be made on the suitability of potential candidates.
These examples demonstrate the utility of the present approach in the development of managers careers as well as the broader issue of bringing together theoretical models of organisational behaviour and the practical concerns of the personnel manager.
## Summary of career stage models

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<th>Super</th>
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Transitional Matrix Representing Organisational Careers

(Mahoney and Milkovich 1973)

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<th>D</th>
<th>E</th>
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# QUESTIONNAIRE CHECK LIST

Please circle any of the following items, connected with your employment, which have changed in the last three months.

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<td>7. Function (e.g. teaching, personnel, accounting, engineering)</td>
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<td>16. Skills and knowledge required to do your job <em>(changed completely)</em></td>
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<tr>
<td>17. Skills and knowledge required to do your job <em>(changed significantly)</em></td>
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<td>18. &quot; &quot; &quot; &quot; &quot; &quot; &quot; <em>(changed slightly)</em></td>
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Please circle any of the following items, connected with your employment, which have changed in the last three months.

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</tr>
<tr>
<td>20. &quot; &quot; &quot; &quot; &quot; &quot; <em>(changed slightly)</em></td>
<td>20</td>
</tr>
<tr>
<td>21. Work Load <em>(changed significantly increase or decrease)</em></td>
<td>21</td>
</tr>
<tr>
<td>22. &quot; &quot; <em>(changed slightly increase or decrease)</em></td>
<td>22</td>
</tr>
</tbody>
</table>

**ORGANISATIONAL RELATIONSHIPS**

23. Your organisation position                                            | 23     |

**SUPERIOR POSITION**
24. The organisational position immediately above you in the hierarchy  | 24     |
25. The person immediately above you in the hierarchy                    | 25     |
26. The average frequency of contact with your immediate superior       | 26     |
27. The average time span of these contacts                              | 27     |

**SUBORDINATE POSITION**
28. Subordinate organisational positions directly below you *(all of them)* | 28     |
29. " " " " " " *(not all but a significant number)*                    | 29     |
30. " " " " " " *(just a small proportion)*                             | 30     |
31. People in direct subordinate positions to you *(all of them)*        | 31     |
32. " " " " " " *(not all but a significant number)*                    | 32     |
33. " " " " " " *(just a small proportion)*                             | 33     |
34. The average frequency of contact with all your direct subordinates *(increased significantly)* | 34     |
35. " " " " " " " " " " " *(decreased significantly)*                    | 35     |
36. Average frequency of contact with some but not all of your direct subordinates *(increased significantly)* | 36     |
37. " " " " " " " " " " " *(decreased significantly)*                    | 37     |
38. Average length of contact with all your direct subordinates *(increased significantly)* | 38     |
39. " " " " " " " " " " *(decreased significantly)*                      | 39     |
Please circle any of the following items, connected with your employment, which have changed in the last three months.

**Question**

40. Average length of contact with some but not all of your direct subordinates
   (increased significantly)

41. Average length of contact with some but not all of your direct subordinates
   (decreased significantly)

**PEOPLE IN OWN ORGANISATION**

42. The number of people you deal with directly in your organisation (increased significantly)

43. The number of people you deal with directly in your organisation (increased only slightly)

44. The number of people you deal with directly in your organisation (decreased significantly)

45. The number of people you deal with directly in your organisation (decreased only slightly)

46. The level in the hierarchy of the people you deal with in your organisation (most/all higher)

47. The level in the hierarchy of the people you deal with in your organisation (not all but a significant number higher)

48. The level in the hierarchy of the people you deal with in your organisation (only a few higher)

49. The level in the hierarchy of the people you deal with in your organisation (most/all lower)

50. The level in the hierarchy of the people you deal with in your organisation (not all but a significant number lower)

51. The level in the hierarchy of the people you deal with in your organisation (only a few lower)

52. The function of the people you deal with in the organisation (most/all)

53. The function of the people you deal with in the organisation (not all but a significant number)

54. The function of the people you deal with in the organisation (a few)

55. The purpose of contact with people you deal with in the organisation (most/all)

56. The purpose of contact with people you deal with in the organisation (not all but a significant number)

57. The purpose of contact with people you deal with in the organisation (only a few)

58. Method of contact changed significantly, (i.e. person to person, telephone, individual vs group)

**PEOPLE EXTERNAL TO OWN ORGANISATION**

59. The number of people you deal with outside the organisation in the course of your work (increased significantly)
   (These people could be customers, buyers, salesmen, specialists, local and national government officials, educationalists, general public)

60. The number of people you deal with outside the organisation in the course of your work (increased only slightly)

END OF CARD ONE
Please circle any of the following items, connected with your employment, which have changed in the last three months.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The number of people you deal with outside the organisation in the course of your work (decreased significantly)</td>
<td>1</td>
</tr>
<tr>
<td>2. • • • • • • • • • • • • (decreased only slightly)</td>
<td>2</td>
</tr>
<tr>
<td>3. Purpose of contact with people outside the organisation (all/most)</td>
<td>3</td>
</tr>
<tr>
<td>4. • • • • • • • • • • • • (not all but a significant number)</td>
<td>4</td>
</tr>
<tr>
<td>5. • • • • • • • • • • • • (with only a few)</td>
<td>5</td>
</tr>
<tr>
<td>6. The level in the hierarchy of the people you deal with outside the organisation (most/all increased)</td>
<td>6</td>
</tr>
<tr>
<td>7. • • • • • • • • • • • • (not all but a significant number increased)</td>
<td>7</td>
</tr>
<tr>
<td>8. • • • • • • • • • • • • (only a few increased)</td>
<td>8</td>
</tr>
<tr>
<td>9. • • • • • • • • • • • • (most/all decreased)</td>
<td>9</td>
</tr>
<tr>
<td>10. • • • • • • • • • • • • (not all but a significant number decreased)</td>
<td>10</td>
</tr>
<tr>
<td>11. • • • • • • • • • • • • (only a few decreased)</td>
<td>11</td>
</tr>
<tr>
<td>12. The function of the people you deal with outside the organisation (all/most)</td>
<td>12</td>
</tr>
<tr>
<td>13. • • • • • • • • • • • • (not all but a significant number)</td>
<td>13</td>
</tr>
<tr>
<td>14. • • • • • • • • • • • • (only a few)</td>
<td>14</td>
</tr>
</tbody>
</table>

**PHYSICAL ENVIRONMENT**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Your immediate environment (office/room)</td>
<td>15</td>
</tr>
<tr>
<td>16. Local environment (building)</td>
<td>16</td>
</tr>
<tr>
<td>17. Factory/Site</td>
<td>17</td>
</tr>
<tr>
<td>18. Town/City</td>
<td>18</td>
</tr>
<tr>
<td>19. County</td>
<td>19</td>
</tr>
</tbody>
</table>
Please circle any of the following items, connected with your employment, which have changed in the last three months.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Country</td>
<td>20</td>
</tr>
<tr>
<td>21. House</td>
<td>21</td>
</tr>
</tbody>
</table>

**REMUNERATION**

22. Your job grade
23. The method of paying your salary (monthly vs weekly) (wage packet vs direct to bank)
24. Gross Earnings
25. Average bonus/performance earnings
26. Number of increments you are paid
27. Gross Earnings due to cost of living increase
28. Job change increase (promotion, transfer, regrading, etc.)
29. Average overtime payment
30. Method of calculating bonus/performance payments
31. Method of calculating/paying overtime
32. Job Evaluation Scheme
33. Method of negotiating remuneration (e.g. Union recognition)
34. Fringe benefits (due to job change)
35. Fringe benefits (not due to job change)

**INVolvement & opportunities**

36. Time spent with family (increase)
37. " " " " (decrease)
38. Involvements in friendships/groups at work because of job
39. Involvements in friendships/groups away from work because of job
40. Opportunities for 'in-company' training (increase)
41. " " " " (decrease)
Please circle any of the following items, connected with your employment, which have changed in the last three months.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>42. Opportunities for external training, e.g. day release <em>(increase)</em></td>
<td>42</td>
</tr>
<tr>
<td>43. &quot; &quot; &quot; &quot; &quot; &quot; &quot; &quot; <em>(decrease)</em></td>
<td>43</td>
</tr>
<tr>
<td>44. Number of potential career moves <em>(increase)</em></td>
<td>44</td>
</tr>
<tr>
<td>45. &quot; &quot; &quot; &quot; &quot; &quot; <em>(decrease)</em></td>
<td>45</td>
</tr>
<tr>
<td>46. Variety of potential career moves <em>(increase)</em></td>
<td>46</td>
</tr>
<tr>
<td>47. &quot; &quot; &quot; &quot; &quot; &quot; <em>(decrease)</em></td>
<td>47</td>
</tr>
<tr>
<td>48. Trade Union Status</td>
<td>48</td>
</tr>
<tr>
<td>49. Professional body/institute status</td>
<td>49</td>
</tr>
</tbody>
</table>

If there are any other factors which have changed which you think are significant please list them below.
### Abbreviations of Variables

<table>
<thead>
<tr>
<th>Variable No.</th>
<th>Variable</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Job</td>
<td>JOB</td>
</tr>
<tr>
<td>2</td>
<td>Employer</td>
<td>EMP</td>
</tr>
<tr>
<td>3</td>
<td>Company/Organisation</td>
<td>COM</td>
</tr>
<tr>
<td>4</td>
<td>Organisation structure of your department</td>
<td>ORGDEP</td>
</tr>
<tr>
<td>5</td>
<td>Organisation structure of your company</td>
<td>ORGCOM</td>
</tr>
<tr>
<td>6</td>
<td>Job title</td>
<td>JOBT</td>
</tr>
<tr>
<td>7</td>
<td>Function</td>
<td>FUNC</td>
</tr>
<tr>
<td>8</td>
<td>Number of types of duties</td>
<td>DUT</td>
</tr>
<tr>
<td>9</td>
<td>% of time spent on duties</td>
<td>DUTPER</td>
</tr>
<tr>
<td>10</td>
<td>Nature of duties</td>
<td>DUTNAT</td>
</tr>
<tr>
<td>11</td>
<td>Product or service dealt with</td>
<td>PROD</td>
</tr>
<tr>
<td>12</td>
<td>Skill and knowledge required to do the job</td>
<td>SKIJOB</td>
</tr>
<tr>
<td>13</td>
<td>Skill and knowledge of person/job holder</td>
<td>SKIPER</td>
</tr>
<tr>
<td>14</td>
<td>Work load</td>
<td>WL</td>
</tr>
<tr>
<td>15</td>
<td>Your organisational position</td>
<td>OGPN</td>
</tr>
<tr>
<td>16</td>
<td>Organisational position immediately above you</td>
<td>OGPNA</td>
</tr>
<tr>
<td>17</td>
<td>Person immediately above you</td>
<td>PERA</td>
</tr>
<tr>
<td>18</td>
<td>Frequency of contact with immediate superior</td>
<td>SUPPC</td>
</tr>
<tr>
<td>19</td>
<td>Average time span of these contacts</td>
<td>SUPTS</td>
</tr>
<tr>
<td>20</td>
<td>Subordinate positions below you</td>
<td>SUBP</td>
</tr>
<tr>
<td>21</td>
<td>People in direct subordinate positions</td>
<td>SUB</td>
</tr>
<tr>
<td>22</td>
<td>Frequency of contact with your direct subordinates</td>
<td>SUBFC</td>
</tr>
<tr>
<td>23</td>
<td>Average timespan of these contacts</td>
<td>SUBTS</td>
</tr>
<tr>
<td>24</td>
<td>Number of people dealt with in own organisation</td>
<td>NOPEOG</td>
</tr>
<tr>
<td>25</td>
<td>Level in hierarchy of people dealt with in own organisation</td>
<td>LEPEOG</td>
</tr>
<tr>
<td>26</td>
<td>Function of people dealt with in own organisation</td>
<td>PUPEOG</td>
</tr>
<tr>
<td>27</td>
<td>Purpose of people dealt with in own organisation</td>
<td>PUPEOG</td>
</tr>
<tr>
<td>28</td>
<td>Method of contact</td>
<td>MCON</td>
</tr>
<tr>
<td>29</td>
<td>Number of people dealt with outside organisation</td>
<td>NOPEX</td>
</tr>
<tr>
<td>30</td>
<td>Purpose of contact with people outside organisation</td>
<td>PUPEX</td>
</tr>
<tr>
<td>Variable No.</td>
<td>Variable</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td>31</td>
<td>Level in hierarchy of people dealt with outside organisation</td>
<td>LEPEX</td>
</tr>
<tr>
<td>32</td>
<td>Function of people dealt with outside organisation</td>
<td>FUPEX</td>
</tr>
<tr>
<td>33</td>
<td>Your immediate environment</td>
<td>ENV</td>
</tr>
<tr>
<td>34</td>
<td>Local environment</td>
<td>BULD</td>
</tr>
<tr>
<td>35</td>
<td>Factory/Site</td>
<td>FACT</td>
</tr>
<tr>
<td>36</td>
<td>Town</td>
<td>TOWN</td>
</tr>
<tr>
<td>37</td>
<td>County</td>
<td>COUNT</td>
</tr>
<tr>
<td>38</td>
<td>Country</td>
<td>COURY</td>
</tr>
<tr>
<td>39</td>
<td>House</td>
<td>HOUSE</td>
</tr>
<tr>
<td>40</td>
<td>Your job grade</td>
<td>GRAD</td>
</tr>
<tr>
<td>41</td>
<td>Method of paying your salary</td>
<td>MEPAY</td>
</tr>
<tr>
<td>42</td>
<td>Gross earnings</td>
<td>GROSS</td>
</tr>
<tr>
<td>43</td>
<td>Average bonus/performance earnings</td>
<td>ABON</td>
</tr>
<tr>
<td>44</td>
<td>Number of increments</td>
<td>INCR</td>
</tr>
<tr>
<td>45</td>
<td>Gross earnings due to cost of living</td>
<td>GROSS CL</td>
</tr>
<tr>
<td>46</td>
<td>Job change increase</td>
<td>JCI</td>
</tr>
<tr>
<td>47</td>
<td>Average overtime payment</td>
<td>AOP</td>
</tr>
<tr>
<td>48</td>
<td>Method of calculating bonus or performance payments</td>
<td>MC BON</td>
</tr>
<tr>
<td>49</td>
<td>Method of calculating overtime payment</td>
<td>MCOT</td>
</tr>
<tr>
<td>50</td>
<td>Job evaluation scheme</td>
<td>JES</td>
</tr>
<tr>
<td>51</td>
<td>Method of negotiating remuneration</td>
<td>MNR</td>
</tr>
<tr>
<td>52</td>
<td>Fringe benefits due to job change</td>
<td>FBJC</td>
</tr>
<tr>
<td>53</td>
<td>Fringe benefits not due to job change</td>
<td>FBNJC</td>
</tr>
<tr>
<td>54</td>
<td>Time spent with family</td>
<td>TSF</td>
</tr>
<tr>
<td>55</td>
<td>Involvements in friendship groups at work</td>
<td>INWW</td>
</tr>
<tr>
<td>56</td>
<td>Involvement in friendship groups away from work</td>
<td>FINVA</td>
</tr>
<tr>
<td>57</td>
<td>Opportunities for &quot;in company&quot; training</td>
<td>COPRG</td>
</tr>
<tr>
<td>58</td>
<td>Opportunities for external training</td>
<td>ETRG</td>
</tr>
<tr>
<td>59</td>
<td>Number of potential career moves</td>
<td>PCAR</td>
</tr>
<tr>
<td>60</td>
<td>Variety of potential career moves</td>
<td>VCAR</td>
</tr>
<tr>
<td>61</td>
<td>Trade union status</td>
<td>TUS</td>
</tr>
<tr>
<td>62</td>
<td>Professional body/Institute status</td>
<td>TUS</td>
</tr>
</tbody>
</table>
Check List of Information Required from a Job Study

1) Identification of job: Company, Division, Department, etc.

2) Job Title:

3) Accountable to: position of supervisor; frequency of supervision; closeness of supervision.

4) Main purpose of job: major job objectives; standards of performance required.

5) Duties: into what major task does the job break down?

   frequency of each task?
   importance of each task?
   difficulty of each task?
   sequence of task?
   how long task takes/should take?
   where task is done?
   who task is done for?
   methods used to accomplish task?
   job aids/equipment used?
   assistance given - if so, by whom?
   task paced or unpaced?
   why is task done?
   what standards of performance are required?
Appendix 5.1 (continued)

6) Responsibilities:

for people? (number, level, frequency of supervision, degree of authority).

for money (amount, frequency of responsibility).

for equipment (what, where, value, action in case of breakdown).

for materials (what, how much, value action in case of loss/shortage).

for time-keeping, target setting, deadline setting/meeting.

for policy making (in what areas, to what extent).

for safety.

for company image.

7) Relationships:

contacts within the firm; formal structured

v v

contacts outside the firm; informal unstructured

frequency of contact.

number of people involved.

level of people involved.

type of contact (person to person v telephone, etc).

purpose of contact.
Appendix 5.1 (continued)

8) **Judgement**: is job holder required to exercise judgement/discretion.
   
   if so, why?
   
   when? over what?
   
   how frequently?
   
   how important is the judgement - what happens if it is incorrect?
   
   who makes the decision if the job holder is absent?
   
   on what information is the judgement/decision made?
   
   how soon after the decision will the results/consequences show?

9) **Physical working conditions**:  
   
   a) environment - place of work
      
      lighting
      
      heating
      
      noise
      
      vibration
      
      humidity
      
      cleanliness
      
      danger hazards

   b) physical load

   c) psychological load (stress, vigilance, etc.)
Appendix 5.1 (continued)

d) posture - standing
   sitting
   bending
   walking
   stretching

10) Social working conditions:
    size of work group
    level of work group
    cohesiveness of work group
    attitudes of work group
    nature of rewards affecting work group

11) Travel: does the job involve travel?
    frequency of travel
    method of travel
    duration of travel
    purpose of travel

12) Economic working conditions:
    length of employment contract, and conditions.
    hours of work (full-time, part-time, overtime).
    pay (average earnings, salary scale, nature and reason of increases).
    holidays.
Appendix 5.1 (continued)

absenteeism (benefits and allowances).
fluctuations in availability of work.
methods of determining basic pay.
payments (to sick schemes, social clubs, pension schemes etc.).
additional payments (bonuses, danger/dirt money, long service awards, profit sharing, payment by results, etc.).
facilities (car parks, canteen, sports/social clubs, first aid, etc.).

13) **Prospects:**
what opportunities for advancement does the job offer?
what opportunities for transfer?
what opportunities for further training?
is there a staff appraisal scheme?
is there a career development scheme?
Appendix 5.2

Managerial job group I

Number of jobs: 45

Characteristics of time expenditure: These managers travelled a great deal and made contacts mostly with customers and officials from other companies or public institutions. They also attended many conferences and exhibitions.

Representative job titles:
Sales director
Sales manager
Marketing manager
General manager
Group works manager
Works and purchasing manager

Managerial job group II

Number of jobs: 33

Characteristics of time expenditure: These managers spent relatively more time by themselves, reading, writing, and dictating reports and memorandums. They made fewer group contacts and tended to work with relatively specialised or technical matters.

Representative job titles:
Section head, computing
Head office engineer
Works manager
Chief accountant
Assistant company secretary
Production manager
Payroll manager

Managerial job group III
Number of jobs: 35
Characteristics of time expenditure: These managers spent their time in the same way as that shown by the averages for all managers in Stewart's sample. They spent most time with other colleagues at their same organisational level and undertook a diverse sample of activities and functions.
Representative job titles:
Chief accountant
Office services manager
Financial director
Works engineer
Sales manager
Public relations officer

Managerial job group IV
Number of jobs: 33
Characteristics of time expenditure: These managers made more short, fleeting contacts than managers in other groups. They were called upon to cope more with crises, problems needing immediate solutions and actions. Their work time was highly fragmented, and they spent relatively more time in inspections and within hierarchical relationships.
Appendix 5.2 (continued)

Representative job titles:

Works manager
Factory manager
Maintenance engineer
General manager, manufacturing
Chief engineer
Brewer in charge

Managerial job group V

Number of jobs: 14

Characteristics of time expenditure: These managers spent most time in group discussions and in committee meetings. Their contacts were nearly all within their own companies and dealt relatively more with questions related to personnel.

Representative job titles:

Production manager
Factory services manager
Principal, training school
Director, production planning
Technical officer
### Appendix 5.3

<table>
<thead>
<tr>
<th>Description of Common Characteristics</th>
<th>Internal</th>
<th>Internal/External</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Man Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer contacts low.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little or no dependence on people over whom he has no authority, external contacts expected.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact time under 50%</td>
<td><strong>Man Management 1</strong></td>
<td><strong>Contact time 60% + nearly all with subordinates.</strong></td>
<td><strong>Man Management 2a (Apex)</strong></td>
</tr>
<tr>
<td>Fragmented work pattern</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solo</strong></td>
<td><strong>Solo 0 (Solo Stable)</strong></td>
<td><strong>Contact time 30% or less.</strong></td>
<td><strong>Man Management 2b</strong></td>
</tr>
<tr>
<td>Contact time under 50%</td>
<td><strong>Solo 1 (Solo Specialist)</strong></td>
<td><strong>Varied contacts.</strong></td>
<td></td>
</tr>
<tr>
<td>Much work is to time deadlines.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustained attention is needed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationships make low demands.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is subject to low level level of uncertainty.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little contact with boss.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide range of external contacts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice in time spent with subordinates.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice in time spent alone, but under 50%.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In charge of separate unit.</td>
<td></td>
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<tr>
<td>Personal risk taking.</td>
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<tr>
<td>External contacts limited in range.</td>
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<tr>
<td>Bargaining important.</td>
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<tr>
<td>Contact time over 50%.</td>
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Appendix 5.3 (continued)

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<td><strong>Hub</strong></td>
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<td>Hub 1</td>
<td>Hub 2</td>
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<tr>
<td>Man Management takes more time than other internal contacts.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Contacts with peers, other seniors and other juniors.</td>
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</tr>
<tr>
<td>Jobholder dependent upon cooperation of people in other departments.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Contact time over 50% usually much more.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Peer Dependent</strong></td>
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<td>Peer Dependent 1</td>
<td>Peer Dependent 2</td>
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<td>Contacts with people at the same level are high, taking as much or more time than those with subordinates.</td>
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<td>Very important for jobholder to get cooperation from people over whom he has no authority.</td>
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<td>Contact time over 50% usually much more.</td>
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<tr>
<td>Conflicting demands usual.</td>
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### Description of Raw Data (Total Sample)

#### 6.1.1

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#### 6.1.2

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<td>30 - 34</td>
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<td>35 - 39</td>
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Average No. of changes registered = 12.2  
Standard Deviation = 10.0
### 1.1.3 No. of Questionnaires registering change

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### Appendix 6.1.1 (continued)

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Average Age = 29.2  
Standard Deviation = 5.9
### Appendix 6.1.1 (continued)

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Appendix 6.1.2 Description of Raw Data (Sample A)

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### 6.1.2.2

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Average No. of changes registered = 12.0
Standard Deviation = 9.8
### Appendix 6.1.2 (continued)

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### Appendix 6.1.2 (continued)

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Average Age = 29.6  
Standard Deviation = 6
Appendix 6.1.2 (continued)

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<td>18</td>
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<td>Chemicals</td>
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Appendix 6.1.3 Description of Raw Data (Sample B)

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3 | COM | 15 | 6.0
4 | ORGDEP | 64 | 25.0
5 | ORGCOM | 34 | 13.0
6 | JOBT | 31 | 12.0
7 | FUNC | 44 | 17.0
8 | DUT | 149 | 59.0
9 | DUTPER | 98 | 39.0
10 | DUTNAT | 46 | 18.0
11 | PROD | 28 | 11.0
12 | SKIJOB | 103 | 41.0
13 | SKIPER | 132 | 52.0
14 | WL | 150 | 60.0
15 | OGPN | 36 | 14.0
16 | OGPNA | 34 | 13.0
17 | PERA | 39 | 15.0
18 | SUPFC | 73 | 29.0
19 | SUPTS | 53 | 22.0
20 | SUPB | 53 | 22.0
21 | SUB | 78 | 31.0
22 | SUBFC | 72 | 29.0
23 | SUBTS | 69 | 27.0
24 | NOPEOG | 100 | 40.0
25 | LEPEOG | 85 | 34.0
26 | FUPEOG | 77 | 31.0
27 | PUPEOG | 67 | 27.0
28 | MCON | 44 | 17.0
29 | NPOEX | 60 | 40.0
30 | PUPEX | 41 | 16.0
31 | LEPEX | 82 | 33.0
32 | FUPEX | 39 | 16.0
33 | ENV | 72 | 29.0
34 | BULD | 32 | 13.0
35 | FACT | 20 | 8.0
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37 | COUNT | 5 | 2.0
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39 | HOUSE | 15 | 6.0
40 | GRAD | 36 | 14.0
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Average Age = 29.0
Standard Deviation = 5.8
### Appendix 6.1.3 (continued)

#### 6.1.3.5 Industry

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Appendix 6.1.4  Description of Raw Data (Sample X)

Sub sample X contains 1 questionnaire/individual
No. of questionnaires = 165

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Average No. of changes registered = 12.4
Standard Deviation = 9.9

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Appendix 6.1.5  Description of Raw Data (Sample Z)

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Average No. of changes registered = 12.5
Standard Deviation = 10.2
### Appendix 6.1.5 (continued)

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Standard Deviation = 6
Appendix 6.1.5 (continued)

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### Appendix 6.1.6 (continued)

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\[X^2 = 12.70; \text{ N/S; } p = 0.1\]

#### 6.1.6.4 Industry

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\[X^2 = 22.3; \text{ N/S; } p = 0.1\]
### Appendix 6.1.6 (continued)

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\[ x^2 = 2.3; \text{ N/S; } p = 0.1 \]
Appendix 6.2  Principal Coordinates Analysis

5.2.1 The principal coordinates analysis consists of finding linear transformations \( y_1, y_2, \ldots, y_p \) of the original variables \( x_1, x_2, \ldots, x_p \) that have the property of being uncorrelated. The \( y \) variables are chosen in such a way that \( y_1 \) has maximum variance, \( y_2 \) has maximum variance subject to being uncorrelated with \( y_1 \), and so on. The transformation is obtained by finding the latent roots of the correlation matrix. The latent roots, arranged in descending order of magnitude are equal to the variances of the corresponding \( y \) variates, these being the principal coordinates. The total variance of the new variables is given by the trace of the matrix which is simply the sum of the elements in its main diagonal. The trace is equal therefore to the sum of the latent roots.

Appendix 6.2.2  Trace and Latent Roots of the Principal Coordinates Analysis for samples A, B, X and Z

6.2.2.1 Sample A

Trace = 139.327

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Trace</td>
<td>16.6</td>
<td>21.4</td>
<td>25.2</td>
<td>28.4</td>
<td>31.3</td>
<td>33.9</td>
</tr>
</tbody>
</table>
### 6.2.2.2 Sample B

Trace = 142.542

<table>
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<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Trace</td>
<td>16.9</td>
<td>22.1</td>
<td>25.4</td>
<td>28.6</td>
<td>31.5</td>
<td>34.1</td>
</tr>
</tbody>
</table>

### 6.2.2.3 Sample X

Trace = 95.483

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<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Roots</td>
<td>16.506</td>
<td>4.772</td>
<td>3.349</td>
<td>2.971</td>
<td>2.70</td>
<td>2.452</td>
</tr>
<tr>
<td>% Trace</td>
<td>17.3</td>
<td>22.3</td>
<td>25.88</td>
<td>29.0</td>
<td>31.83</td>
<td>34.40</td>
</tr>
</tbody>
</table>

### 6.2.2.4 Sample Z

Trace = 83.266

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<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Roots</td>
<td>14.077</td>
<td>3.970</td>
<td>3.020</td>
<td>2.933</td>
<td>2.534</td>
<td>2.497</td>
</tr>
<tr>
<td>% Trace</td>
<td>16.9</td>
<td>21.7</td>
<td>25.3</td>
<td>28.8</td>
<td>31.9</td>
<td>34.9</td>
</tr>
</tbody>
</table>
Appendix 6.2.3 Scree Test
Note accompanying appendices 6.2.4.1.1 - 6.2.4.4.5

The following principal coordinates plots serve a dual purpose. Firstly they are used to interpret the first six dimensions. In this capacity the different symbols used to designate the points are not significant and in fact all the points could have been designated by a single symbol. Secondly they are used to interpret the cluster analysis superimposed onto the principal coordinates plots. In this capacity the points are designated according to which cluster they belong (hence the four different symbols). To cut down on the number of appendices one set of plots have been used.
Appendix 6.2.4.1.1  Principal Coordinates Plot (Sample A)
Appendix 6.2.4.1.4 Principal Coordinates Plot (Sample A)

- △ Cluster A
- X Cluster B
- □ Cluster C
- ○ Cluster D

Vector 1

-0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7
Appendix 6.2.4.1.5  Principal Coordinates Plot (Sample A)

Cluster A
Cluster B
Cluster C
Cluster D
Appendix 6.2.4.2.1  Principal Coordinates Plot (Sample B)
Appendix 6.2.4.2.2 Principal Coordinates Plot (Sample B)
Appendix 6.2.4.2.3 Principal Coordinates Plot (Sample B)
Appendix 5.2.4.2.4 Principal Coordinates Plot (Sample B)
Appendix 6.2.4.2.5
Principal Coordinates Plot (Sample B)

Cluster A
Cluster B
Cluster C
Cluster D
Appendix 6.2.4.3.1 Principal Coordinates Plot (Sample X)

Cluster A
Cluster B
Cluster C
Cluster D
Appendix 6.2.4.3.2 Principal Coordinates Plot (Sample X)
Appendix 6.2.4.3.3  Principal Coordinates Plot (Sample X)
Appendix 6.2.4.3.5 Principal Coordinates Plot (Sample X)
Appendix 6.2.4.4.1  Principal Coordinates Plot (Sample Z)
Appendix 6.2.4.4.2 Principal Coordinates Plot (Sample Z)

Cluster A
Cluster B
Cluster C
Cluster D
Appendix 6.2.4.4.3  Principal Coordinates Plot (Sample Z)
Appendix 6.2.4.4.5  Principal Coordinates Plot (Sample Z)
Sample B

No. of changes registered

Distance along dimension 1

+0.72  +0.54  +0.36  +0.18  0  -0.18  -0.36  -0.54  -0.72
No. of changes registered

Sample X

Distance along dimension 1
Sample Z

No. of changes registered

Distance along dimension 1

+0.72  +0.54  +0.36  +0.18  0  -0.18  -0.36  -0.54  -0.72
Appendix 6.3.1 Coefficient of Similarity

The data comprise two types of variable. Firstly there is a dichotomous variable e.g. questions 1-7 on the questionnaire. A response of 0 would indicate no change and a response of 1 would indicate a change in this variable. Secondly there is a qualitative variable which has two or more distinct states e.g. the variable "duties" which has five levels of change (questions 8-12). A response of 0 would indicate no change and a response of 1, 2, 3, 4 or 5 would indicate a certain level of change in "duties".

The coefficient of similarity between any two cases is computed by matching the corresponding variables of the two cases.

<table>
<thead>
<tr>
<th>Variable type</th>
<th>Match</th>
<th>Score</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Dichotomous</td>
<td>Both unchanged</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Responses differ</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Both change</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Qualitative</td>
<td>Both unchanged</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Responses differ</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Responses agree</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Coefficient of Similarity = \[
\frac{\text{total score}}{\text{total weight}}
\]
Example

Consider two cases each containing 6 dichotomous variables and 4 qualitative variables with 4 levels of change.

<table>
<thead>
<tr>
<th>CASE 1</th>
<th>CASE 2</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>dichotomous</td>
<td>qualitative</td>
<td></td>
</tr>
<tr>
<td>0 0 1 0 1 1</td>
<td>0 1 2 4</td>
<td></td>
</tr>
<tr>
<td>1 0 1 1 1 0</td>
<td>0 0 4 3 4</td>
<td></td>
</tr>
</tbody>
</table>

Total Score = $\frac{0 + 0 + 1 + 0 + 0 + 0 + 0 + 0 + 1}{1 + 0 + 1 + 1 + 1 + 1 + 0 + 1 + 1 + 1}$

Similarity Coefficient = $\frac{3}{8} = 0.26$. 
Appendix 6.3.2 Description of Clusters (Sample A)

3.2.1 CLUSTER A

3.2.1.1

<table>
<thead>
<tr>
<th>No. of changes registered</th>
<th>No. of Questionnaires</th>
<th>% of Questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>51</td>
<td>66</td>
</tr>
<tr>
<td>5 - 9</td>
<td>25</td>
<td>32</td>
</tr>
<tr>
<td>10 - 14</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>77</td>
<td>100</td>
</tr>
</tbody>
</table>

Average No. of changes/questionnaire = 3.8
Standard Deviation = 2.3

3.2.1.2

<table>
<thead>
<tr>
<th>Variable No.</th>
<th>Variable</th>
<th>No. of Questionnaires registering change</th>
<th>% of Questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>DUT</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>9</td>
<td>DUTPER</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>13</td>
<td>SKIPER</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>14</td>
<td>WL</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>PERA</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>24</td>
<td>NOPEOG</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>42</td>
<td>GROSS</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>45</td>
<td>GROSS CL</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>
### Appendix 6.3.2 (continued)

#### 3.2.1.3

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Respondents</th>
<th>% of Respondents</th>
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</thead>
<tbody>
<tr>
<td>20</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>25 - 29</td>
<td>14</td>
<td>36</td>
</tr>
<tr>
<td>30 - 34</td>
<td>17</td>
<td>43</td>
</tr>
<tr>
<td>35 - 39</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>40</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>

Average Age = 29.0  
Standard Deviation = 5.8

#### 3.2.1.4

<table>
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<th>Industry</th>
<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Engineering</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Local Government</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Chemicals</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Finance</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Civil Service</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>

#### 3.2.1.5

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<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Engineering</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Personnel</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>Local Govt. Off.</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Technical</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Teaching</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>
Appendix 6.3.2  Description of Clusters (Sample A)

6.3.2.2  CLUSTER B

<table>
<thead>
<tr>
<th>No. of changes registered</th>
<th>No. of Questionnaires</th>
<th>% of Questionnaires</th>
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</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>5 - 9</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>10 - 14</td>
<td>41</td>
<td>44</td>
</tr>
<tr>
<td>15 - 19</td>
<td>8</td>
<td>9</td>
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<tr>
<td><strong>TOTAL</strong></td>
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</table>

Average No. of changes registered = 9.5
Standard Deviation = 2.9

<table>
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<th>Variable No.</th>
<th>Variable</th>
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<th>% of Questionnaires registering change</th>
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<tbody>
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<td>12</td>
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<td>5</td>
<td>ORGCOM</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>DUT</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td>9</td>
<td>DUTPER</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>10</td>
<td>DUTNAT</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>SKIJOB</td>
<td>41</td>
<td>45</td>
</tr>
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<td>13</td>
<td>SKIPER</td>
<td>70</td>
<td>75</td>
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<td>14</td>
<td>WL</td>
<td>76</td>
<td>82</td>
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<td>25</td>
<td>27</td>
</tr>
<tr>
<td>21</td>
<td>SUB</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>24</td>
<td>NOPEOG</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>29</td>
<td>NPOEX</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>31</td>
<td>LEPEX</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>42</td>
<td>GROSS</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>45</td>
<td>GROSS CL</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>54</td>
<td>TSF</td>
<td>37</td>
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</tr>
<tr>
<td>56</td>
<td>INW</td>
<td>17</td>
<td>18</td>
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<tr>
<td>56</td>
<td>FINVA</td>
<td>13</td>
<td>14</td>
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</table>
### 3.2.2.3 Age Distribution

<table>
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<tr>
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<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>25 - 29</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>30 - 34</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>35 - 39</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>40</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>

Average Age = 29.2  
Standard Deviation = 5.9

### 3.2.2.4 Industry Distribution

<table>
<thead>
<tr>
<th>Industry</th>
<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Engineering</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Local Govt.</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Chemicals</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Health</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Retail</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Finance</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>

### 3.2.2.5 Function Distribution

<table>
<thead>
<tr>
<th>Function</th>
<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Engineering</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>Personnel</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>Local Govt. Off.</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Sales</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Teaching</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Technical</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>
### Description of Clusters (Sample A)

#### CLUSTER C

<table>
<thead>
<tr>
<th>No. of changes registered</th>
<th>No. of Questionnaires</th>
<th>% of Questionnaires</th>
</tr>
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<tbody>
<tr>
<td>5 - 9</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>10 - 14</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>15 - 19</td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td>20 - 24</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>25 - 29</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>44</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Average No. of changes registered = 16.3  
Standard Deviation = 3.9

<table>
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<th>Variable</th>
<th>No. of Questionnaires registering change</th>
<th>% of Questionnaires registering change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JOB</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>ORGDEP</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>JOBT</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>DUT</td>
<td>35</td>
<td>80</td>
</tr>
<tr>
<td>9</td>
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<td>84</td>
</tr>
<tr>
<td>10</td>
<td>DUTNAT</td>
<td>15</td>
<td>34</td>
</tr>
<tr>
<td>12</td>
<td>SKIJOB</td>
<td>29</td>
<td>66</td>
</tr>
<tr>
<td>13</td>
<td>SKIPER</td>
<td>30</td>
<td>66</td>
</tr>
<tr>
<td>14</td>
<td>WL</td>
<td>39</td>
<td>89</td>
</tr>
<tr>
<td>20</td>
<td>SUBP</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
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Average Age = 28.0  
Standard Deviation = 5.7
### Appendix 6.3.2 (continued)

#### 5.3.2.3.4

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### 3.2.4 CLUSTER D

#### 3.2.4.1 No. of changes registered vs. No. of Questionnaires

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Average No. of changes per questionnaire = 30  
Standard Deviation = 6.9

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#### 6.3.2.4.3 Age Distribution

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Average Age = 29<br>Standard Deviation = 5.8

#### 6.3.2.4.4 Industry Distribution

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#### 6.3.2.4.5 Function Distribution

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Appendix 6.3.3 Description of Clusters (Sample B)

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Average No. of changes/questionnaire = 3.9
Standard Deviation = 2.3

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Appendix 6.3.3 (continued)

### Appendix 6.3.3.1.3

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Average Age = 30  
Standard Deviation = 5.5

### Appendix 6.3.3.1.4

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Appendix 6.3.3  Description of Clusters (Sample B)

### 6.3.3.2 CLUSTER B

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Average No. of changes registered = 9.7
Standard Deviation = 2.8

### 6.3.3.2.2 Variable No. of Questionnaires registering change % of Questionnaires registering change

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Average Age = 29.5  
Standard Deviation = 5.7

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Appendix 6.3.3 Description of Clusters (Sample B)

### 6.3.3 CLUSTER C

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Average No. of changes registered = 16.4  
Standard Deviation = 3.9

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Appendix 6.3.3 (continued)

### Table 3.3.3.2

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### Table 3.3.3.3

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Average Age = 30  
Standard Deviation = 5.6
### Appendix 6.3.3 (continued)

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### Description of Clusters (Sample B)

#### 3.3.4 CLUSTER D

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Average No. of changes per questionnaire = 30  
Standard Deviation = 10

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## Appendix 6.3.3 (continued)

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Appendix 6.3.3 (continued)

### 6.3.4.3

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<th>% of Respondents</th>
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</tr>
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Average Age = 29  
Standard Deviation = 5.9

### 6.3.4.4

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<td>20</td>
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<td>12</td>
</tr>
<tr>
<td>Chemicals</td>
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<td>12</td>
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<td>Distribution</td>
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<td>12</td>
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<td>Technical</td>
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Appendix 6.3.4 Description of Clusters (Sample X)

3.4.1 CLUSTER A

3.4.1.1

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Average No. of changes/questionnaire = 3.9
Standard Deviation = 2.3

3.4.1.2

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<td>17</td>
</tr>
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<td>SKIJOB</td>
<td>6</td>
<td>13</td>
</tr>
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<td>13</td>
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### Appendix 6.3.4 (continued)

#### 3.4.1.3

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Average Age = 29.2  
Standard Deviation = 5.4

#### 3.4.1.4

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</tr>
<tr>
<td>Engineering</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Local Government</td>
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<td>22</td>
</tr>
<tr>
<td>Chemicals</td>
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<td>10</td>
</tr>
<tr>
<td>Finance</td>
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<td>10</td>
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<tr>
<td>Civil Service</td>
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<tr>
<td>Personnel</td>
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<tr>
<td>Local Govt. Off.</td>
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<td>19</td>
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<td>Technical</td>
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## Description of Clusters (Sample X)

### 6.3.4.2 CLUSTER B

#### 6.3.4.2.1

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<td>10 - 14</td>
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<tr>
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Average No. of changes registered = 9.7
Standard Deviation = 3.0

#### 6.3.4.2.2

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<th>% of Questionnaires registering change</th>
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### Appendix 6.3.4 (continued)

#### 6.3.4.2.3

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Average Age = 29.0  
Standard Deviation = 5.8

#### 6.3.4.2.4

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<td>Local Government</td>
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<td>Chemicals</td>
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<td>Health</td>
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<td>7</td>
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<td>Retail</td>
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#### 6.3.4.2.5

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<td>3</td>
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Appendix 6.3.4 Description of Clusters (Sample X)

### 6.3.4.3 CLUSTER C

#### 6.3.4.3.1

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Average No. of changes registered = 16.5  
Standard Deviation = 4.0

#### 6.3.4.3.2

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### Appendix 6.3.4 (continued)

#### 6.3.4.3.2

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#### 6.3.4.3.3

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Average Age = 30  
Standard Deviation = 5.8
### Appendix 6.3.4 (continued)

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<tbody>
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<td>32</td>
</tr>
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<td>Local Government</td>
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<td>14</td>
</tr>
<tr>
<td>Chemicals</td>
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<td>10</td>
</tr>
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<td>Finance</td>
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### Appendix 6.3.4 Description of Clusters (Sample X)

#### 6.3.4.4 CLUSTER D

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<td>25 - 29</td>
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Average No. of changes per questionnaire = 31  
Standard Deviation = 7

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5.3.4.4.2 No. of Questionnaires registering change

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<td>18</td>
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Appendix 6.3.4 (continued)
### 6.3.4.3 Age Distribution

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Average Age = 29.2  
Standard Deviation = 5.7

### 6.3.4.4 Industry Distribution

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<td>Engineering</td>
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<td>17</td>
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<td>Local Government</td>
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<td>Retail</td>
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<td>Health</td>
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<td>13</td>
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### 6.3.4.5 Function Distribution

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<tr>
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<td>35</td>
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<tr>
<td>Personnel</td>
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<td>26</td>
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<tr>
<td>Local Govt. Off.</td>
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</tr>
<tr>
<td>Technical</td>
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<td>4</td>
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Appendix 6.3.5 Description of Clusters (Sample Z)

3.5.1 CLUSTER A

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Average No. of changes/questionnaire = 3.9  
Standard Deviation = 2.4

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### 6.3.5.1.3 Age Distribution

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<td>2</td>
<td>5</td>
</tr>
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Average Age = 29.5
Standard Deviation = 5.9

### 6.3.5.1.4 Industry Distribution

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<td>15</td>
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<td>Chemicals</td>
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### 6.3.5.1.5 Function Distribution

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Appendix 6.3.5  Description of Clusters (Sample Z)

6.3.5.2  CLUSTER B

### 6.3.5.2.1

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Average No. of changes registered = 9.3
Standard Deviation = 2.8

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### Appendix 6.3.5 (continued)

#### 3.5.2.3

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Average Age = 30.2  
Standard Deviation = 5.9

#### 3.5.2.4

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<td>35</td>
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<tr>
<td>Local Government</td>
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<td>Chemicals</td>
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<td>Health</td>
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<td>Retail</td>
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#### 3.5.2.5

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### 5.3.5.3 Description of Clusters (Sample Z)

#### 6.3.5.3.1 CLUSTER C

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Average No. of changes registered = 16.0  
Standard Deviation = 4.0

#### 6.3.5.3.2

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#### 6.3.5.3.2 contd

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Average Age = 29.1  
Standard Deviation = 5.4
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### 5.3.5.3.5

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Appendix 6.3.5 Description of Clusters (Sample Z)

6.3.5.4 CLUSTER D

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Average No. of changes per questionnaire = 28  
Standard Deviation = 7.1

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### Appendix 6.3.5 (continued)

#### 5.3.5.4.3

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Average Age = 29.8  
Standard Deviation = 6

#### 6.3.5.4.4

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#### 6.3.5.4.5

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### Appendix 6.3.6

#### Significance Tests: Across Clusters

**5.3.6.1 Sample A**

**5.3.6.1.1 Age**

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\[ \chi^2 = 8.07: \text{ N/S; } p = 0.1 \]

**5.3.6.1.2 Industry**

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\[ \chi^2 = 13.95: \text{ N/S; } p = 0.1 \]

**5.3.6.1.3 Function**

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<td>4</td>
</tr>
<tr>
<td>Engineering</td>
<td>10</td>
<td>14</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Personnel</td>
<td>13</td>
<td>24</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>39</td>
<td>62</td>
<td>44</td>
<td>24</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 0.7: \text{ N/S; } p = 0.1 \]
Appendix 6.3.6 (continued)

6.3.6.2 **SAMPLE B**

6.3.6.2.1 **Age**

<table>
<thead>
<tr>
<th>Age</th>
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<th>C</th>
<th>D</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
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<td>25</td>
<td>9</td>
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<td>57</td>
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<tr>
<td>30 - 34</td>
<td>17</td>
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<td>9</td>
<td>9</td>
<td>57</td>
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<tr>
<td>35</td>
<td>3</td>
<td>9</td>
<td>1</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>39</td>
<td>62</td>
<td>25</td>
<td>25</td>
<td>159</td>
</tr>
</tbody>
</table>

\[ x^2 = 8.07; \ N/S; \ p = 0.1 \]

6.3.6.2.2 **Industry**

<table>
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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
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<td>Textile</td>
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<td>6</td>
<td>4</td>
<td>28</td>
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<tr>
<td>Engineering</td>
<td>10</td>
<td>18</td>
<td>9</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Local Gov</td>
<td>12</td>
<td>13</td>
<td>6</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Chemicals</td>
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<td>3</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
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<td>15</td>
<td>6</td>
<td>9</td>
<td>40</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td>64</td>
<td>30</td>
<td>24</td>
<td>160</td>
</tr>
</tbody>
</table>

\[ x^2 = 5.51; \ N/S; \ p = 0.1 \]

6.3.6.2.3 **Function**

<table>
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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
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<td>6</td>
<td>4</td>
<td>34</td>
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<tr>
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<td>12</td>
<td>6</td>
<td>3</td>
<td>30</td>
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<td>7</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>44</td>
<td>64</td>
<td>30</td>
<td>21</td>
<td>159</td>
</tr>
</tbody>
</table>

\[ x^2 = 1.30; \ N/S; \ p = 0.1 \]
Appendix 6.3.6 (continued)

6.3.6.3 SAMPLE X

6.3.6.3.1 Age

<table>
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<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>10</td>
<td>6</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>25 - 29</td>
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<td>11</td>
<td>74</td>
</tr>
<tr>
<td>30 - 34</td>
<td>12</td>
<td>17</td>
<td>9</td>
<td>14</td>
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<tr>
<td>35</td>
<td>7</td>
<td>5</td>
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</tr>
<tr>
<td>TOTAL</td>
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<td>64</td>
<td>29</td>
<td>36</td>
<td>178</td>
</tr>
</tbody>
</table>

\[ x^2 = 13.2: \ N/S; \ p = 0.1 \]

6.3.6.3.2 Industry

<table>
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<th>A</th>
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<th>C</th>
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<th>Total</th>
</tr>
</thead>
<tbody>
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<td>6</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Engineering</td>
<td>8</td>
<td>19</td>
<td>9</td>
<td>6</td>
<td>42</td>
</tr>
<tr>
<td>Local Government</td>
<td>11</td>
<td>13</td>
<td>4</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>Chemicals</td>
<td>5</td>
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<td>3</td>
<td>5</td>
<td>19</td>
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<td>13</td>
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<tr>
<td>TOTAL</td>
<td>49</td>
<td>64</td>
<td>30</td>
<td>36</td>
<td>178</td>
</tr>
</tbody>
</table>

\[ x^2 = 15.85: \ N/S; \ p = 0.1 \]

6.3.6.3.3 Function

<table>
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<th>Function</th>
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<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>9</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td>Engineering</td>
<td>10</td>
<td>13</td>
<td>6</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>Personnel</td>
<td>15</td>
<td>27</td>
<td>9</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>15</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>45</td>
</tr>
<tr>
<td>TOTAL</td>
<td>49</td>
<td>64</td>
<td>29</td>
<td>36</td>
<td>178</td>
</tr>
</tbody>
</table>

\[ x^2 = 5.85: \ N/S; \ p = 0.1 \]
Appendix 6.3.6 (continued)

6.3.6.4 SAMPLE 2

6.3.6.4.1 Age

<table>
<thead>
<tr>
<th>Age</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>25 - 29</td>
<td>12</td>
<td>19</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>35</td>
<td>13</td>
<td>19</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>32</td>
<td>43</td>
<td>33</td>
<td>15</td>
</tr>
</tbody>
</table>

\[ x^2 = 2.7: \ N/S; \ p = 0.1 \]

6.3.6.4.2 Industry

<table>
<thead>
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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile</td>
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<td>6</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Engineering</td>
<td>5</td>
<td>16</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Local Government</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>2</td>
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<tr>
<td>Miscellaneous</td>
<td>14</td>
<td>10</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td>33</td>
<td>15</td>
</tr>
</tbody>
</table>

\[ x^2 = 10.25: \ N/S; \ p = 0.1 \]

6.3.6.4.3 Function

<table>
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<tr>
<th>Function</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
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<td>11</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Engineering</td>
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<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Personnel</td>
<td>10</td>
<td>18</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>30</td>
<td>43</td>
<td>33</td>
<td>15</td>
</tr>
</tbody>
</table>

\[ x^2 = 4.85: \ N/S; \ p = 0.1 \]
Appendix 6.3.7  Significance Tests: Clusters from different samples

5.3.7.1  CLUSTER A

5.3.7.1.1 Number of Changes Registered

<table>
<thead>
<tr>
<th>No. of Changes</th>
<th>A</th>
<th>B</th>
<th>X</th>
<th>Z</th>
<th>( x^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>51</td>
<td>37</td>
<td>32</td>
<td>23</td>
<td>143</td>
</tr>
<tr>
<td>5 - 14</td>
<td>26</td>
<td>23</td>
<td>17</td>
<td>15</td>
<td>81</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>60</td>
<td>49</td>
<td>38</td>
<td>224</td>
</tr>
</tbody>
</table>

\( x^2 = 0.97: \) N/S; \( p = 0.1 \)

6.3.7.1.2 Proportion of Questionnaires registering change

<table>
<thead>
<tr>
<th>Variable No.</th>
<th>Variable</th>
<th>A</th>
<th>B</th>
<th>X</th>
<th>Z</th>
<th>( x^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
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<td>16</td>
<td>16</td>
<td>17</td>
<td>15</td>
<td>0.12</td>
</tr>
<tr>
<td>9</td>
<td>DUTPER</td>
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<td>18</td>
<td>17</td>
<td>20</td>
<td>0.15</td>
</tr>
<tr>
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<td>13</td>
<td>20</td>
<td>1.5</td>
</tr>
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<td>14</td>
<td>WL</td>
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</tr>
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<td>17</td>
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<td>17</td>
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<td>10</td>
<td>10</td>
<td>0 N/S</td>
</tr>
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<td>33</td>
<td>33</td>
<td>43</td>
<td>35</td>
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### 6.3.7.2 CLUSTER B

#### 6.3.7.2.1 Number of Changes Registered

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<th>B</th>
<th>X</th>
<th>Z</th>
<th>Total</th>
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</thead>
<tbody>
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<td>10 - 14</td>
<td>41</td>
<td>47</td>
<td>44</td>
<td>21</td>
<td>153</td>
</tr>
<tr>
<td>15 - 19</td>
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<td>12</td>
<td>7</td>
<td>4</td>
<td>31</td>
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</table>

\[ x^2 = 2.2: \text{N/S; } p = 0.1 \]

#### 6.3.7.2.2 Proportion of Questionnaires registering change

<table>
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<th>Variable</th>
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<td>70</td>
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<td>0.45</td>
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<td>1.9</td>
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<td>26</td>
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### 6.3.7.3 GLUSTER C

#### 6.3.7.3.1 Number of Changes Registered

<table>
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<th>X</th>
<th>Z</th>
<th>Total</th>
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</thead>
<tbody>
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<td>15</td>
<td>60</td>
</tr>
<tr>
<td>15 - 19</td>
<td>20</td>
<td>24</td>
<td>12</td>
<td>15</td>
<td>71</td>
</tr>
<tr>
<td>20 - 29</td>
<td>9</td>
<td>10</td>
<td>6</td>
<td>9</td>
<td>34</td>
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<tr>
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<td>39</td>
<td>165</td>
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</tbody>
</table>

\[ x^2 = 0.87; \text{ N/S; } p = 0.1 \]

#### 6.3.7.3.2 Proportion of Questionnaires registering change

<table>
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<th>Variable</th>
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<th>B</th>
<th>X</th>
<th>Z</th>
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<th>( \text{N/S} )</th>
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<td>0.85</td>
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</tr>
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<td>15</td>
<td>15</td>
<td>0.09</td>
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<td>80</td>
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\[x^2 = 2.55; \text{ N/S; } p = 0.1\]

#### 3.7.4.2 Proportion of Questionnaires registering change

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Appendix 6.3.8.1  Transitional Probability Matrix

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## Appendix 6.3.8.2

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Appendix 6.4.1 Mr 10

He was a member of the Certificate in Industrial Management course and for the three months prior to completing the questionnaire was employed as a production supervisor in a textile manufacturing company. The company employed about 300 people and he personally supervised about 20 manual workers. He reported directly to the production manager. During the period under consideration there had been a reorganisation of the company which involved reapportioning some functions, duties and reporting relationships. The reorganisation had affected him, by allocating him one or two new subordinates and a new direct superior. He had a wide range of duties with very little routine work. Most of his duties involved reacting to unpredictable events. There was much variety in his job within the short and medium term. He had been in his position for several years and had well established and stable relationships with all the managers and supervisors. The reorganisation had slightly affected this stable pattern. There had been no remuneration changes other than he had become eligible for a share in the management bonus. His involvement with the job was stable, as was his career and training opportunities (there was only one possible promotion within the company). These change circumstances appear in cluster B. The information from the interview confirmed the information from the questionnaire.
Appendix 6.4.2 Mr 13

He was a member of the Certificate in Industrial Management course and in the three months prior to completing the questionnaire was employed by the Fire Service as a Station Officer responsible for fire prevention. He had been in this position for 3 to 4 years. His duties were concerned with giving advice to companies and the general public on matters concerning fire prevention. A significant part of his job was desk bound administration. His duties were divided clearly between visits to clients, desk bound administration and supervision of 3 to 4 subordinates. He maintained a wide range of relationships both internal and external. The internal relationships were well established and stable. His functional superior was located at a site remote from his own. His whole work pattern appeared one of predictability and routine. There had been no change in remuneration in the time period under consideration. Opportunities were well defined and stable. These change circumstances appeared in cluster B. One discrepancy between the information gathered from the interview and the questionnaire concerned a change in one of his subordinates (not mentioned on the questionnaire).
He was a member of the Certificate in Industrial Management course and during the three months prior to completing the questionnaire was employed by a small textile company manufacturing high quality cloth for the fashion trade. The company employed about 200 people. During the period under consideration he had been promoted to production manager having previously held several jobs in production, supervision and engineering. His last position had been in engineering. His duties had not yet settled down into any kind of stable pattern but he thought they would be varied and the majority would be non-routine. He had a wide range of relationships with all managers and supervisors. His direct superior was the general manager. He also had a wide range of relationships with people external to the organisation and these were changing due to his recent promotion. He had been given a pay rise and several additional fringe benefits in connection with his recent promotion. He was heavily involved in his work and as there was a night shift as well as a day shift it was common to have to deal with problems at night. The job infringed heavily on his personal life. His career prospects had diminished as a result of the promotion. There was no other comparable job he could move to within the company and his age and experience made it unlikely he would get a comparable job outside the company. These change circumstances appeared in cluster D and were all connected with his recent promotion. The information from the interview confirmed the information from the questionnaire.
He was a member of the Certificate in Industrial Management course and during the three months prior to completing the questionnaire was employed as a chemist by a small chemical company employing between 75 and 100 people. He fulfilled a dual function in the company as a laboratory chemist and as a process control chemist. During the last several months there had been a major emphasis on the process control aspect of his job due to the installation of new equipment and hence he had spent much less time on laboratory work. His duties are very varied, and consisted of both routine and non-routine work. His relationships were varied but well established and stable. The only change in relationships was the amount of external contact he has at any one time. There have been no changes in involvement, opportunities or reward in the time period under consideration (this usually is the case). The change circumstances fall into cluster B. The information from the interview confirmed the data collected from the questionnaire.
Appendix 6.4.5 Mr. 100

He was a member of the Diploma in Management Studies course and during the three months prior to completing the questionnaire was employed as a works superintendent by a small chemical company. He was responsible for output and costs of a small factory. There were about 100 people employed in his factory. He was responsible for these people through 6 supervisors. The factory was one of three in the local area controlled by a general manager to whom the works superintendent reported. The three factories were part of a large international group of companies. In the period under consideration there had been a company reorganisation. As a result he relocated his office away from the site for which he was responsible to a nearby company management block. Mainly as a consequence of this move he was becoming far less involved in day to day production matters and more concerned with administration and he spent more time with other members of the management team. Up to this move he had a well established and stable set of relationships, although there was considerable variety in his day to day duties. This stable set of relationships was now beginning to change. The opportunities with the company were well established and readily identifiable. He seemed to spend less time at home since the reorganisation. There had also been a recent alteration to the company management bonus scheme. The change circumstances appear in cluster C. The information gathered from the interview confirmed the information gathered from the questionnaire, apart from one omission concerning relocation.
She was a member of the Diploma in Management Studies course and in the three months prior to completing the questionnaire was employed as the assistant registrar for examinations at a college of higher education. She reported directly to the college registrar and was directly responsible for two subordinates and a typist. Her duties were connected with the preparation and conduct of examinations as well as liaison with external bodies. The pattern of her duties were well structured over the course of a year, a cyclical pattern repeated year after year. She had a wide range of relationships with academic staff, other non academic support staff as well as officers of many outside examining and validating bodies. The success of her job was closely allied to the maintenance of goodwill in her many lateral relationships. Opportunities were readily identifiable and stable. The job did not tend to encroach on her personal life. In the time period under consideration she had received a cost of living rise. The significant feature of the job appeared to be the cyclical work pattern allied to the academic year. This particular set of change circumstances appeared in cluster B. The information gained from the questionnaire matched the information gained from the interview.
He was a member of the Diploma in Management Studies course and during the three months prior to completing the questionnaire he was employed by an international chemical and pharmaceutical company as a production manager of a factory employing several hundred people. During the period under consideration a reorganisation had been announced. As a consequence of this reorganisation he now has a new direct superior, a changed area of responsibility and a change in some of his subordinates. The reorganisation has only recently been announced and the real consequences for duties, relationships and work patterns have yet to be realised. Prior to the reorganisation announcement his duties were varied but well established and stable. He also had a wide range of well established relationships. There have been no changes in remuneration and no changes in his involvement with work. However he does see increased career opportunities due to the reorganisation. The most tangible result of the reorganisation so far has been a change in office accommodation. These change circumstances appear in cluster B. The information collected at the interview confirmed the information collected by the questionnaire.
Appendix 6.4.8     Mr 127

He was a member of the Diploma in Personnel Management course and in the three months prior to completing the questionnaire joined a large metropolitan local authority as a trainee personnel officer. Prior to joining the local authority he had a temporary post as a shop assistant, and prior to that had been in full time education. His job was a trainee post reporting to the training manager. For a period of eighteen months it was proposed he would be attached to several personnel departments within the authority undertaking specific projects for those departments. After the eighteen months as a trainee he would be offered a permanent position within one of the personnel departments. All the changes indicated are connected with taking up a new appointment in a new organisation. His change circumstances appear in cluster D and are typical of someone changing both function and organisation. The information from the interview confirmed the information collected from the questionnaire.
She was a member of the Diploma in Personnel Management course and during the three months prior to completing the questionnaire was employed as a personnel officer by a small engineering company employing 300-400 employees on one site. The company was part of a larger group of companies. She reported to the production manager who in turn reported to the works manager. She was responsible for two staff. Her duties were much broader than the term personnel officer might suggest. The duties were routine and not very significant. She had very little discretion over her duties. Her relationships were very broad, she had contact with most members of staff. The production manager initiated all her work, and his relationship was very directive. The only significant changes in relationships in the period under consideration was the replacement of one of her subordinates and she had slightly more contact with an outside supplier of safety equipment. Her work pattern was characterised by stability and predictability and dominated by her immediate superior. The opportunities inside the organisation were seen as non existent and her work encroached very little on her private life. During the period under consideration she had received a cost of living increase and had joined both the Institute of Personnel Management and a Trade Union. Her change circumstances appear in cluster A. There was no significant discrepancy between the information gathered at the interview and the information gathered from the questionnaire.
He was a member of the Diploma in Training Management course and during the three months prior to completing the questionnaire was employed as a field officer for a large nationwide charity. He had been employed in his job for one year and with the organisation for two years. He was responsible for the activities of his organisation in East Lancashire and West Yorkshire. His direct superior was located in London and he had no direct full time subordinates.

However he was responsible for a substantial number of part time workers and a number of voluntary workers. His duties were very diverse and constantly changing. He had a great deal of discretion in determining his priorities and in structuring his time. He had a wide range of relationships with people inside and outside his organisation. His job emphasised lateral relationships and much of his impact had to be through his personal influence. He had a cost of living increase during the period in question and became involved in a pilot job evaluation scheme. There appeared to be many opportunities within the organisation. The job appeared to have considerable impact on his personal life. These change circumstances appeared in cluster C. Apart from one minor error made in completing the questionnaire the information from the interview and questionnaire matched closely.
Appendix 6.4.11 Ms 165

She was a member of the Diploma in Training Management course and in the three months prior to completing the questionnaire was employed as a training officer by a large diversified financial organisation. She reported directly to the Training Manager and was responsible for no subordinates. Her duties were project based. The projects were major tasks and lasted anything up to twelve months. She would usually only be involved in one project at a time and involved in two as a maximum. There was no cyclical routine work involved in her job. Her working relationships were stable over the length of the project. She had no relationships external to the organisation. All her relationships were connected with her current project. In the time period under consideration she was writing a final report on a major project she was completing. Her job environment was stable and did not have much variety. She spent much time on the telephone checking information and asking for reports on the progress of a pilot scheme. The change circumstances appear in cluster A. The information from the questionnaire corresponded with the information from the interview.
She was a member of the Diploma in Training Management course and in the three months prior to the completion of the questionnaire she was employed as a Recruitment and Training Executive by a retail organisation with headquarters based in the north of England. She had been employed in this position for eighteen months. The company was part of a larger group of companies. She reported to the managing director and was responsible for four staff, three clerical, and one training officer. She was nominally based at headquarters but spent most of her time at the various shops. During the time period in question the company had a major problem in labour turnover and she had a heavy work load in recruitment. To a lesser extent she was involved in discipline problems and liaison with the distributive industry training board. Since starting her job she had little chance of becoming involved in the training activity.

She had a wide range of relationships within the organisation both in the shops and at headquarters and these were changing rapidly. She had no relations external to the organisation. There had been no change in her remuneration during the time period under consideration. Her job impinged very much on her private life. Because plans for a large expansion in the number of shops had recently been announced, opportunities for advancement appeared promising. The change circumstances appeared in cluster C. The information from the questionnaire and the interview matched closely.
He was a member of the Diploma in Training Management course. In the three months prior to completing the questionnaire he was employed as a Production Training Officer in the Prison Service. His immediate supervisor was in the process of relocating to London. He was responsible for no subordinates. His main duties consisted of advising on the training of prison inmates. He worked on a regional basis and his job involved extensive travelling in the north of England. A recent reorganisation had given him a much larger area to deal with and meant his direct superior would now reside in London rather than the north of England. His duties tended to be reactive, answering calls for advice and help on particular training matters. There was little routine in his duties. He had a broad range of lateral relationships which were in the process of changing. He had recently had a cost of living rise and there had also been a change in the negotiating procedure within his trade union. The reorganisation had the most significant effect on his work patterns during the period under consideration. Not only did he change office but was spending much more time at work. This particular set of change circumstances appeared in cluster C. There was just one discrepancy between the information from the interview and the information from the questionnaire, this was the omission of "significant increase in work load" from the changes indicated on the questionnaire.
She was a member of the Diploma in Training Management course and in the three months prior to completing the questionnaire was employed by a Training Board as a Training Adviser. She had been with the Board for ten years. Her job involved visiting approximately twelve companies, giving advice on training matters and on some occasions organising or running training courses. There was also a significant administrative role in operating the levy scheme and writing reports on companies. By the very nature of the job her duties varied significantly from day to day and from week to week. However over the longer period the pattern of duties were stable even though random in the shorter term. She maintained a wide range of relationships with clients outside her own organisation and had a stable set of relationships within her own organisation (labour turnover was very low in the Board). She had received a cost of living rise in the period under consideration. The opportunities and involvements were stable and predictable.

Although the job provided much variety and change from day to day, the environment and overall work patterns were stable. This particular set of change circumstances appeared in cluster C at the boundary with cluster B. One difference between the information gained from the questionnaire and the interview was the questionnaire omitted change in the "percentage of time spent on each of your duties".
She was a member of the Diploma in Management Services course and for the three months prior to the completion of the questionnaire she joined a sports wear and equipment manufacturing company as a work study engineer. She had been employed as a work study engineer at a local engineering company. Her present company employed about 1,000 people and was located on three sites within 10 miles of each other. She reported directly to the work study manager and was responsible for no subordinates. Her duties consisted of giving a full work study service to operational departments. The duties were very similar to those of her previous job. The main differences between the two jobs were concerned with the product and the relationships. In her present job she had a wide range of relationships within the departments she serviced and these relationships ranged from shop floor to senior management. All the significant changes are connected with the job move. The change circumstances appear in cluster C. This is one of the cases which occurs at the boundary of cluster C and D. Despite a change of organisation (which would imply a large amount of change) there was not the usual amount of change associated with these circumstances. This is perhaps because of the similarity of the present job with the previous job. The information from the questionnaire showed some slight but insignificant discrepancies from the information gained from the interview.
Appendix 6.4.16 Mr 250

He was a member of the Diploma in Management Services course. In the three months prior to completing the questionnaire he joined a brewing company as a management services officer after several months of unemployment. He reported to the management services manager and was responsible for no subordinates. His main duties were connected with time study exercises carried out at the request of operational departments. Most of his tasks were project based. There was no on going routine work. He maintained a wide range of lateral relationships with staff from all other functions. He also dealt with all levels of staff from senior management to shop floor. He was paid an annual salary plus overtime and participation in an annual bonus scheme. His opportunities for training and future position moves increased on taking up this appointment. His involvement in worked changed enormously. He also joined a trade union. The main changes during the period under consideration were connected with becoming employed again after a period of enforced unemployment. This particular set of change circumstances appeared in cluster D and are typical of a change in function and organisation. The information gained from the interview confirmed the information gained from the questionnaire.
Appendix 7.1

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<th>Jobs with predominantly managerial characteristics</th>
<th>Jobs with minimal managerial characteristics</th>
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<tr>
<td>No variety in work pattern</td>
<td>2</td>
<td>9</td>
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<tr>
<td>Variety in work pattern</td>
<td>10</td>
<td>6</td>
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