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**MANAGERIAL COMPETENCE AS A  
DETERMINANT OF  
ORGANIZATIONAL PERFORMANCE**

**BY  
TONY COCKERILL**

**THESIS SUBMITTED TO THE UNIVERSITY OF LONDON  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.**

**LONDON BUSINESS SCHOOL  
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SEPTEMBER 1989**

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**Managerial Competence as a Determinant of  
Organizational Performance.**

by

**Tony Cockerill**

**A B S T R A C T**

Despite the important contribution made by managers to modern economies, little research has been undertaken into the behaviour of managers that is related to organizational performance. Upper level managers (i.e., executives) have been studied least. Consequently, this thesis has created and tested hypotheses on the relationship between managerial behaviour (i.e., competence) and organizational effectiveness at executive level. In addition, the thesis has also created and tested hypotheses on the relationship between managerial competence and individual variables. Directed by Campbell et al's (1970) model of managerial effectiveness, a review was made of the literature on organizational performance, managerial behaviour, environmental and individual variables. Based on this review, a revised model of managerial effectiveness was created from which a model of executive effectiveness in dynamic environments was derived. Eighteen hypotheses were drawn from the latter model for testing in this study. Behavioural and individual data were collected by means of observation, job analysis interview, biographical interview, Kirton's Adaption-Innovation Inventory and Ghiselli's Self-Description Inventory from a sample of 30 executives working for an international financial services organization. A short-term and long-term measure of the performance of the units managed by the 30 executives was gathered. A statistically significant, positive relationship was found between eleven "High Performance Managerial Competencies" (HPMC) and the long-term competence/performance of organizational units. Managerial competence was found to be related to three individual factors: Adaption-Innovation, Decision-making Style and Supervisory Ability. Furthermore, results appertaining to environmental variables as well as the development of the HPMC are reported and discussed. A validated model of managerial effectiveness is presented. Finally, the managerial and research implications of the research are discussed.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 THE PURPOSE OF THE RESEARCH

The recent report by Charles Handy et al (1987, p1) on "The Making of Managers" states that, "The most, striking similarity between the four countries (USA, West Germany, France and Japan) was the common belief by corporations in the importance of management, "Management makes a difference", was the consistent message, and it can be developed". Smith, Carson and Alexander (1984), Weiner and Mahoney (1981), House and Baetz (1979) as well as Gillen and Carrell (1985), have undertaken research which provides empirical support to the view that managers do have an important impact on the performance of their organizations.

Nevertheless, research conducted jointly by Hunt et al (1984) into "Management Resources" reported that there is, "A dearth of top flight managerial talent in all sectors of industry" and that, "This is the strongest complaint to emerge from the interviews with the 100 top managers in the survey" (p5).

Despite the important contribution made by managers to the success of their organizations and the perceived shortfall in managerial talent, little is known about the behaviour and individual characteristics of managers that influence organizational effectiveness. As Kotter (1982, p1-2) has

stated, "Despite the importance of modern managers to our present and future, we know relatively little about them - about who they are, what they do, and why some are more effective than others. And what we do know or think we know, rarely comes from the systematic study of real managers in any depth. This is particularly true for higher-level business managers - those charged with most of the responsibility for running an enterprise. Incredibly, there have been only two really in-depth studies of a group of top level business executives, one by Sune Carlson in the late 1940's and one by Henry Mintzberg in the 1960's. And Mintzberg recently noted that his pioneering book, "The Nature of Managerial Work", exposes perhaps one percent of the proverbial iceberg".

The lack of knowledge that Kotter has described creates a fundamental problem because it means that there is very little basis for selecting and developing managers in a way that is likely to enhance organizational performance. The realization of this problem is particularly sobering given the increasing quantity of resources which are being allocated to management selection and development.

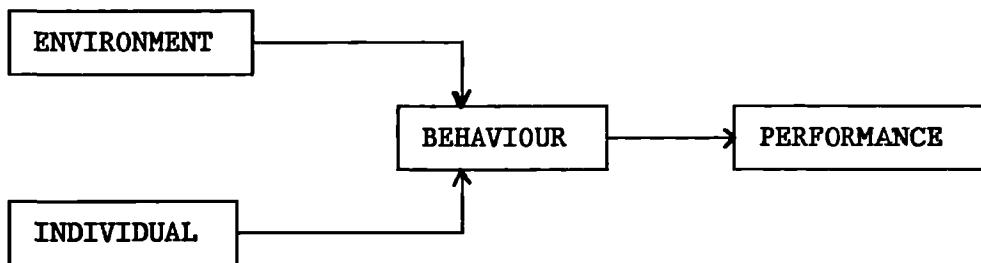
To help fill the gap which Kotter has identified, the primary purpose of this study has been the creation and testing of hypotheses about the relationship between managerial behaviour and organizational performance at executive level. A secondary purpose has been the

creating and testing of hypotheses about the influence of individual variables on managerial behaviour. To create these hypotheses it was necessary to make a review of the relevant literature. A review was made initially of general models of managerial effectiveness in order to identify the critical variables that needed to be studied in depth and to gain an early idea of the relationships that could be expected to exist between these variables. In doing this, it was assumed that managerial effectiveness results from the interaction of many different types of variables. As Campbell et al (1970, p4) have commented, "We seek to consider as many independent variables as potential determiners of the single dependent variable - managerial effectiveness. We assume that no single set of variables is sufficient for understanding managerial effectiveness". Three models were found to be useful and these are described below.

## 1.2 MODELS OF MANAGERIAL EFFECTIVENESS

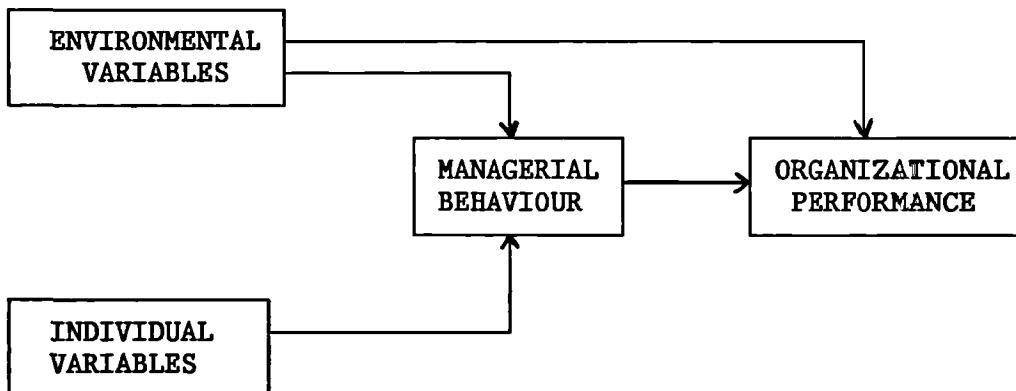
Lewin (1951) has postulated that behaviour and performance are a function of the interaction of environmental and individual variables. Figure 1.1 illustrates Lewin's model. Lewin's model suggests that different environmental circumstances require different behaviours for high levels of performance and that differences in the personal characteristics of individuals mean that they vary in their

**FIGURE 1.1: LEWIN'S MODEL OF HUMAN EFFECTIVENESS**



capacity to adapt their behaviour to meet different environmental demands. A development of Lewin's model has been provided by Vroom and Yetton (1973) which is presented in Figure 1.2.

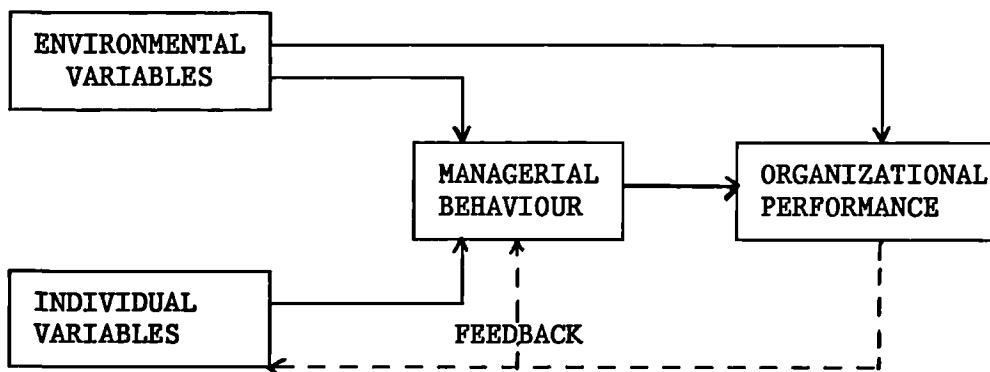
**FIGURE 1.2: VROOM AND YETTON'S (1973) MODEL OF MANAGERIAL EFFECTIVENESS**



Vroom and Yetton's model is focused more specifically on managerial behaviour than Lewin's. Like Lewin, Vroom and Yetton propose that managerial behaviour is a function of both environmental and individual variables. In contrast to Lewin, Vroom and Yetton suggest that organizational

performance stems from environmental variables as well as managerial behaviour. A third model of managerial effectiveness has been suggested by Campbell et al (1970) which is identical to Vroom and Yetton's except that a feedback loop is proposed from organizational performance to managerial behaviour and individual variables.

**FIGURE 1.3: CAMPBELL ET AL'S MODEL OF MANAGERIAL EFFECTIVENESS**



The model of Campbell et al (1970) was adopted as the model of managerial effectiveness to guide the literature review for two reasons. Firstly, it includes and extends the critical features of Lewin's and Vroom and Yetton's models. Second, it is sufficiently complex to identify key variables and specify the expected relationships between these variables while remaining simple and practical enough to give direction to the literature review.

### **1.3 THE STRUCTURE OF THE THESIS**

The next four chapters review the literature on the four key types of variable in Campbell et al's (1970) model to

identify variables that can be included in this study. Chapter two reviews organizational performance, chapter three managerial behaviour, chapter four environmental variables and chapter five individual variables. In Chapter six, the variables identified by the literature review are integrated by the creation of a revised model of managerial effectiveness. From the revised model, a model of executive effectiveness in dynamic environments is devised and hypotheses are drawn from this model for testing. Chapter seven explains the method chosen to test the hypotheses. Chapter eight presents the results of the data collection and analysis. Chapter nine discusses the results and chapter ten draws conclusions. A bibliography and the appendices are presented at the end of the thesis.

CHAPTER TWO  
ORGANIZATIONAL PERFORMANCE VARIABLES

**2.1 INTRODUCTION**

An extensive review has been made of the literature relating to organizational performance variables. It is evident from this review that organizational effectiveness is a theoretical as well as a practical issue because each of the major perspectives within organizational behaviour has its own approach to effectiveness. As Miles (1980, p360) comments, "Each of the major schools of management has its own view of the nature of organizations, its own definition of organizational effectiveness, and its own preferred set of assessment criteria".

Four models of organizational effectiveness have been identified. These are the Goal Model, the Systems Model, the Behaviour Model and, the Advancement Model. In this chapter, each model is critically reviewed and variables are identified for inclusion in this research.

**2.2 THE GOAL MODEL**

Four theories of organizational behaviour have contributed to the evolution of the Goal Model. The main features of each theory are described and a review is made of the implications which the theories have for the measurement of organizational performance.

### 2.2.1 Scientific Management theory

Early management theorists, especially those associated with the work of Taylor (1947), perceived performance in terms of the achievement of the goals of the organization. These writers assumed that scientific management (in essence, the creation of efficient methods of working by the use of work study, better equipment design and improved working conditions; the use of financial incentives to motivate passive workers; systematic personnel selection and training and; hierarchical organization) would result in high organizational performance. It was also assumed that an organization's goals would be shared by all its members. As Guion (1965) has pointed out, the Scientific Management school emphasized two types of performance variable. The first type was "production" variables - primarily productivity (the number of units produced or services delivered in a period of time), and efficiency (number of output units produced for a given measure of inputs). The second type was objective "personnel" variables - such as, pay levels, absenteeism, and labour turnover.

The existence of a variety of goal attainment variables led to efforts to combine these variables into fewer composite measures. Hence, Thorndike (1949, p121) proposed the "ultimate criterion" which he defined as, "The complete final goal of a particular type of selection or training". Thorndike (1949, p121) provided the following example to clarify his definition. "The ultimate goal in the selection

and training of insurance salesmen might be that each man sells the maximum amount of insurance which would not be allowed to elapse and that he continues actively as an insurance salesman for an extended period of years".

Although Thorndike's definition and example were focused on jobs, the approach has been transferred to organizations via the concept of profit maximization. As Miles, (1980, p362) states, "A common ultimate yardstick in the private sector has been profit maximization, a summary measure reflecting some combination of organizational operations (productivity and costs) and environmental (market) conditions". Many studies into organizational effectiveness have used accounting data to operationalize the concept of profit maximization (for example, Khandwalla, 1974; Weiner and Mahoney, 1981 and; Armandi and Mills, 1982). In her review, Smith (1976) suggests that three methods have been used to combine performance measures: the statistical method - based on the intercorrelation of the different variables measured; the economic method - which combines measures by relating them to a single common characteristic (for example, monetary value) and; the judgemental method whereby policy makers use experience or intuition to weight variables or whereby decisions are retrospectively analysed by researchers to determine the weightings that policy makers have actually used.

Nevertheless, the simplification provided by composite goal attainment variables has been regarded by several writers as a fundamental weakness. Dunnette's (1963, p252) criticism

of Thorndike's ultimate criterion illustrates the point, "Much selection and validation research has gone astray because of an over-zealous worshipping of *the* criterion with an accompanying will-o-the-wisp searching for a single best criterion. The result has been an over-simplification of the complexities involved in test validation and the prediction of employee success. Investigators have been reluctant to consider the many facets of success and the concomitant investigation of the prediction of many success measures and instead persist in an unfruitful effort to predict *the* criterion. Thus, I say! Junk *the* criterion!. Let us cease searching for single or composite measures of job success and proceed to undertake research which accepts the world of success dimensionally - as it really exists". Comparable criticisms have been made of profit maximization. For instance, Miles (1980, p367) comments, "If a manager squeezes everything out of the enterprise in the short run, what is the organization's prospect for long-term survival?. Where is the slack needed to cope with unforeseen events?. What would be the probability that its "battle fatigued" employees could or would keep going?. What eventual prices would the organization have to pay after it had exploited its suppliers?. What would be the cost of regaining the goodwill of its clients?".

The notion that organizational goals are multi-dimensional rather than uni-dimensional directs attention to the Human Relations movement which provided an alternative set

of goals to those of scientific management.

### **2.2.2 Human Relations theory**

The Human Relations movement owes much to the writings of Elton Mayo. Mayo (1933) argued that in the famous Hawthorn Studies, "The working group as a whole actually determined the output of individual workers by reference to a standard, predetermined but never clearly stated, that represented the group conception of a fair day's work. The standard was rarely, if ever, in accord with the standards of the efficiency engineers". As a result of these conclusions, the Human Relations theorists proposed that the satisfaction of the social needs of workers by teamwork and considerate supervision is the key to high output and productivity rather than scientific management. In consequence, there was a rapid growth in social satisfaction variables and measures. As Hunt (1972, p313) comments, "In the 1950's, the "goal" criteria of effectiveness were expanded to include indicators from the individual variable. Hence studies such as those of Katz et al (1950), Kahn and Morse (1951), Morse (1953) and others at the Institute of Social Research in Michigan, began to relate human criteria to achieving the objectives of the organization".

Thus, the Human Relations movement provided another dimension of organizational goals to those of scientific management. A third dimension was provided by Growth theory

which emerged from a critique of the Human Relations paradigm.

### 2.2.3 Growth theory

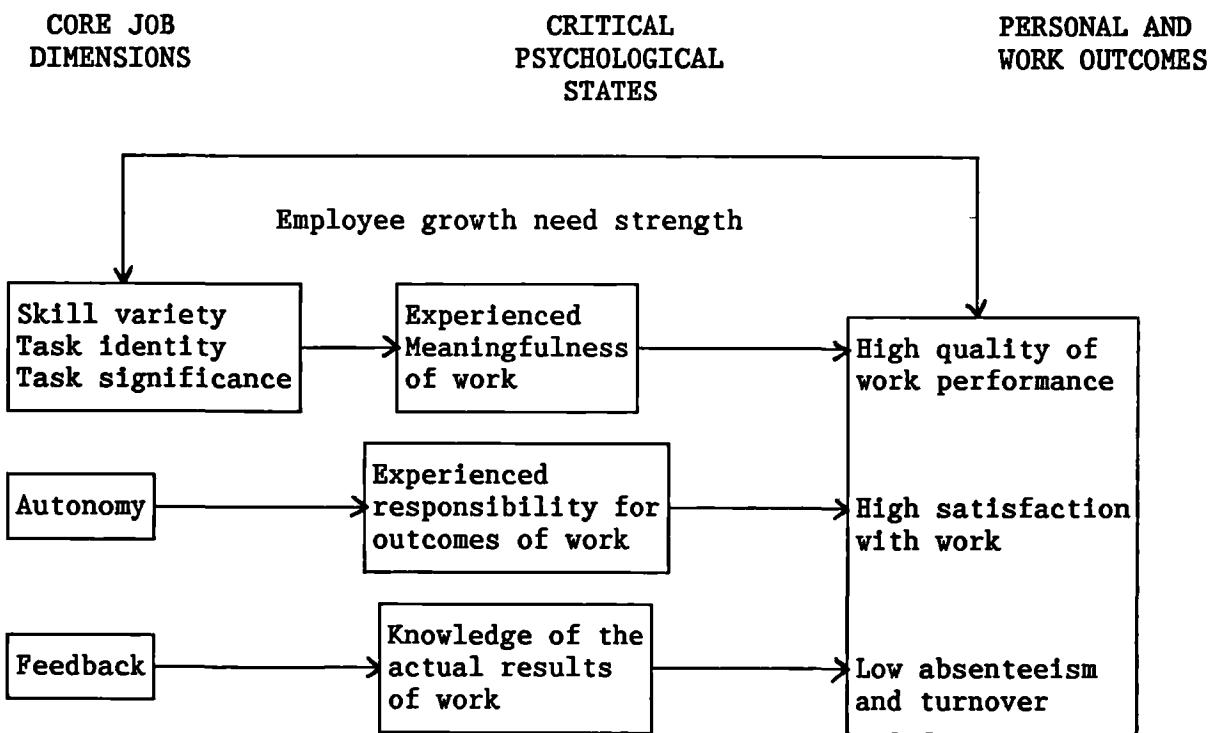
By the early 1960's, as Locke (1976) describes, the emphasis on social relationships as the source of worker satisfaction moved to an emphasis on the extent to which the design of the job provides individuals with the opportunity to grow mentally. Maslow (1954) proposed that the need for self-actualization (i.e., using one's talents to the fullest extent, developing and growing) is the highest order need. This helped to establish the idea that the satisfaction of the growth needs of individuals holds the key to worker productivity and satisfaction. Because development and growth involve learning and provide intrinsic, psychological satisfaction, Maslow's theory has a strong cognitive emphasis.

Although Maslow's theory has proven difficult to validate (see chapter 4), it has been very influential. Of particular relevance to this chapter is the avenue of research which has attempted to identify and measure job dimensions and related psychological variables. Turner and Lawrence (1965), Cooper (1973) as well as Hackman and Oldham (1976) have contributed to this approach. The work of Hackman and Oldham is probably the most sophisticated and their Job Characteristics Model is illustrated in Figure 2.1. The Job Characteristics Model postulates that three

job dimensions influence the experienced meaningfulness of work: skill variety (the extent to which the activities of the job call for a selection of skills and abilities); task identity (the degree to which the job requires completion of a whole and identifiable piece of work) and; task significance (the extent to which the job has a substantial impact on the lives or work of other people).

**FIGURE 2.1: HACKMAN AND OLDHAM'S (1976) JOB**

**CHARACTERISTICS MODEL**



The experienced responsibility for outcomes of work is associated with autonomy (the freedom and independence that the job holder has) while knowledge of the actual results of work is related to feedback (the extent to which the job holder obtains direct and clear information about performance effectiveness). The model proposes that the

three critical psychological states influence three personal and work outcomes (quality of work performance, satisfaction with work and absenteeism and turnover). Furthermore, the model hypothesizes that individuals with high growth need strength will experience the greatest change in their psychological states and in personal and work outcomes when the core dimensions of their jobs are varied. In Hackman and Oldham's model, therefore, experienced meaningfulness of work, experienced responsibility for outcomes of work and knowledge of the actual results of work can be regarded as intrinsic, intermediate psychological outputs which provide another dimension of organizational goals. Such goals typify the intrinsic performance variables that stem from Growth theory.

The three schools of thought reviewed so far share several common assumptions, two of which are relevant to this discussion. The first is that organizations are goal seeking social entities with an existence of their own. The second is that all "members" of the organization are committed to the achievement of its goals. These assumptions are relevant because a critique has been made of them by interactionist theorists which has resulted in the suggestion that many more than three dimensions of organizational goals exist. The interactionist paradigm is now considered in greater detail.

#### **2.2.4 Interactionist theory**

Important contributions have been made to interactionist theory by Berger and Luckmann (1966), Thompson (1967), Silverman (1970), Cummings (1977), Weick (1979) and Keeley (1980). Interactionists argue that organizations are not objective social entities with a life of their own. In contrast, these writers propose that all social phenomena, including organizations, are human creations and exist only insofar as they are recreated continuously by the social interaction of individuals. This approach, as Burrell and Morgan (1979, p28-31) have commented, "Sees the social world as an emergent social process which is created by the individuals concerned. Social reality, in so far as it is recognised to have any existence outside the consciousness of any single individual, is regarded as being little more than a network of assumptions and inter-subjectively shared meanings". According to this paradigm, therefore, organizations are not *a priori* social phenomena, they exist only when individuals agree social rules to create organized processes of interaction which provide the means for the achievement of self-interested goals.

Interactionists also suggest that shared goals should not be regarded as an innate feature of organizations. Individuals may agree shared goals and form "constituencies" when their particular interests overlap. Furthermore, individuals and constituencies may agree organizational goals if there is

sufficient overlap of interest. However, shared goals are not inevitable. Hence, Keeley (1980, p3) states,

"Organizations are seen to be non-teleological social structures consisting of the interrelated behaviours of self-interested participants or constituencies.

Interactionist models do not deny that a shared purpose may emerge among participants, but such a purpose is not assumed to be an essential aspect of organizations; it is an occasional feature requiring empirical confirmation. It is not assumed to be the goal of the organization as a personified entity; it remains a goal for the organization of natural persons". Interactionists have a broad view of the individuals and constituencies who are interacting organizationally. Usually included are any persons who affect one another through the organized system of rules. Hence suppliers, customers, government officials, employees, shareholders and financiers can all be seen as organizational participants. This implies that a great diversity of goals can be sought by individuals and constituencies through each organization.

The complexity of the interactionist approach is emphasized by Connolly, Conlon and Deutsch (1980) who argue that the perspectives of all individuals and constituencies are equally valid. This means that a priori criteria which could be used to judge the relative merits of different perspectives or interests are inappropriate. Consequently, organizations must be judged by the extent to which the goals of all individuals and constituencies are achieved.

Pickle and Friedlander (1967) have attempted to measure the effectiveness of small businesses by assessing the extent to which the goals of different constituencies (owners, employees, customers, suppliers, creditors, the community and the government) are being met (see Table 5.1). Even their approach, however, does not cover the full range of goals that interactionist theory would suggest are relevant. The problems associated with assessing the attainment of multiple goals have led interactionists to propose several methods of simplification to make the measurement of organizational effectiveness easier. The main methods are reviewed below.

Zammuto's (1982) Developmental Approach specifies a composite criterion at a higher level of abstraction than goals. Since goals and constituencies change, Zammuto argues that an organization will not be effective over time unless it is sufficiently adaptable to permit changing goals to be achieved. Consequently, he proposes that a "meta criterion" of effectiveness is the extent to which the organization increases its adaptability by removing obstacles that inhibit the satisfaction of constantly changing preferences. Hence, Zammuto's approach focuses attention on the nature of organizational processes. Keeley (1984, p7) has argued that a key problem with the Developmental Approach is that it assumes all participants will be able to satisfy their needs through the organization and it thereby, "Underestimates the probability of collision between the interests of organizational participants".

The same criticism can be made of Connolly et al's (1980) theory. Keeley (1984) suggests it is safer to assume that organizations have a limited capacity to satisfy the goals of all participants and that winners and losers are likely to occur. This being the case, Zammuto's meta-criterion is problematical because it will hide differences in the level of goal attainment and make an assessment of the merits of who has won and who has lost impossible. The existence of conflicts of interest means that values or principles must be used to attach more weight to some interests than others.

The Power Approach of Pfeffer and Salancik (1978) uses organizational survival as the criterion to weigh the competing goals of participants. They argue that most weight should be attached to the goals of those individuals who provide the organization with the most critical and scarce resources and who, as a result, have most power to influence events. Meeting the goals of these individuals and/or constituencies, therefore, is the measure of organizational effectiveness. Two major criticisms have been made of the Power Approach. First, the power holders may set purely self-seeking goals which do not satisfy important constituencies and which result, therefore, in the unintended death of the organization. This event would contradict the interests of all individuals and constituencies. Second, Keeley (1984, p10) has argued that, "The objectionable feature of the power approach is that individual persons are ultimately granted only instrumental worth. Consumers, employees and other participants take on

importance only in so far as they can contribute to or threaten system survival".

Keeley (1984) uses a Social Justice Approach to identify a method of assessing organizational effectiveness which, he argues, avoids the problems experienced by the Power Approach. In the Social Justice approach all individuals are seen as having the same "basic interests" which Taylor (1978, p49) has defined as, "First, whatever is necessary for preserving an individual's autonomy as a chooser of his own value system, and second, whatever is necessary for realizing those of a person's ends and goals that are of fundamental importance in his or her self-chosen value system". Furthermore, the Social Justice Approach proposes that each individual has the right to "equal consideration". This means that, "Each person's total set of basic interests is regarded as making the same initial claim to fulfilment as every other person's". (Taylor, 1978, p49) Keeley (1978, p12) suggests that this impartial norm can serve as one criterion of effectiveness, "An organization can be considered just or effective to the extent that the basic well-being of each participant is given equal consideration in policy making and consideration". Nevertheless, with limited resources the goals of all participants may not be met even when equal consideration is being applied. So, principles of justice are required to determine the allocation of resources and these principles must be applied impartially with equal

consideration. Several principles of justice have been proposed. At the societal level, Rawls (1971) has proposed the "difference" principle. At the organizational level, Keeley (1984) argues that the "minimization of regret" principle is appropriate. The latter principle is based on the view that, "All individuals share a basic interest which is that persons should not be subjected to serious harm by organizations" (Keeley, 1984, p18). From this principle, a second criterion of organizational effectiveness stems which is that, "Organizations improve - become better, more just or effective - as they minimize harmful effects on any participants (without inflicting harm on others)" (Keeley, 1984, p19). Organizations can try to achieve this goal in two ways. First, by using measures to try to prevent harms occurring. Second, by reducing the impact of harmful events when they do occur by measures such as compensation.

Hence, Keeley uses an external criterion to specify which goals should have priority and this criterion is universal in the sense that all participants will share the goals that are given most priority. A problem with Keeley's approach is that it provides a base-line criterion and gives little help in evaluating organizations according to the benefits that participants receive. This is because Keeley's approach is based on a universal principle of justice which, by definition, seeks to provide all participants with the same level of goal attainment. When scarce resources mean that some participants will benefit more than others a

principle which is not universalistic has to be used. When organizational participants have competing goals, one aspect of their interaction can be discussion and negotiation which resolves this conflict and determines the goals which should have priority. Other participants may implicitly accept these goals even though they were not directly involved in the discussion/negotiation process. The participants create and use their own criteria, internal to the organization, to resolve conflict. Such interaction enables the effectiveness of the organization to be assessed, by the extent to which goals that have been agreed implicitly or explicitly are satisfied. It is possible that participants do not resolve conflict so that agreed organizational goals do not exist. If organizational effectiveness is to be assessed by the level of achievement of agreed goals, then logic dictates that it is not possible to measure effectiveness if agreed goals do not exist. To be critical of this circumstance, it is necessary to use an alternative framework to that of the Goal Model - one which bases its evaluation of organizational effectiveness on the success of the processes used to achieve agreement on organizational goals.

Thus, by assuming that organizational participants have the capacity to and do agree criteria which are used by them to resolve goal conflict, it has been possible to propose that organizational effectiveness can be assessed by the level of achievement of agreed goals. This reduces the complexity

which interactionist theory has given to the Goal Model and makes this model a more practical approach to the measurement of organizational effectiveness. It has also been suggested that assessment of the process used by participants to achieve goal agreement is an alternate and complementary way of measuring organizational effectiveness. This introduces the Systems Model.

### 2.3 THE SYSTEMS MODEL

In this section, the evolution of the Systems Model is described and the methods used to measure organizational effectiveness by this approach are reviewed.

The research of Woodward (1965) identified inter-relationship's between the technical system, structure and performance of organizations. This emphasized the importance of the concept of contingency: that different production processes require different forms of structuring to achieve high performance. Work at the Tavistock Institute synthesized the ideas of the Scientific Management and Human Relations schools to produce a model of organizations as socio-technical systems - see Miller and Rice (1967). This model proposed that organizations have three main components (resource inputs, a processing system and outputs) and that an effective processing system is one which integrates the technical and the human aspects of work. The studies of Burns and Stalker (1961), Trist and Bamforth (1963), and Lawrence and Lorsch (1967) indicated

that the design of organizations needs to be matched to environmental conditions for high levels of performance to be achieved. This reinforced the contingency concept and brought about the notion of "open-systems" (i.e., organizations as systems existing within an environment that subjects them to external forces). Organization theory thus became linked with biological ideas about ecology.

According to open-systems theory, organizations need to adapt their character to changing environmental conditions in order to survive and prosper. Rather than having universal prescriptions that are considered to be valid in all circumstances (as had been proposed by the Scientific Management, Human Relations and Growth schools), "contingency" or "open-systems" theorists propose that the structure, technical system, people and environment of an organization need to be analysed and a good fit between these variables achieved.

The advent of the Systems Model led to the idea that it might be possible to measure organizational effectiveness by focusing on the characteristics of the processes being used to obtain resource inputs and convert them into outputs. If the characteristics of processes that lead to high levels of goal attainment could be identified, then it would be possible to use these as criteria to evaluate organizational performance. This approach would be particularly useful if there is more consistency in the characteristics of effective organizational processes than in outputs because one of the major problems of the Goal Model - the

multiplicity and variability of goals - could be sidestepped. Organizational process criteria of effectiveness have been specified by many writers including Georgopoulos and Tannenbaum (1957), Bennis (1962), Caplow (1964), Katz and Kahn (1966), Mott (1967), Yuchtman and Seashore (1967), Webb (1974), Hirsch (1975), and Reiman (1982). One of the problems with these efforts is that they have tended to tackle the issue from somewhat different perspectives with different methods in different sectors of the economy. Few have used the experimental method as the basis of their approach. Many have used deductive reasoning and have not tested their hypothesis inductively. Therefore, it is not surprising to find little consistency in the process criteria that have been specified. As Steers (1975, p547-9) has observed, "One of the most apparent conclusions emerging from a comparison of multivariate models is the lack of consensus as to what constitutes a useful and valid set of effectiveness measures. While each model sets forth its three or four defining characteristics for success, there is surprisingly little overlap across the various approaches .... adaptability-flexibility was mentioned most often, followed by productivity and satisfaction. Only adaptability-flexibility, however, was mentioned in more than half the models". To have a chance of success, studies of this kind need to create hypotheses about the relationship between organizational process measures and organizational goal attainments, and then test these hypotheses by the collection and analysis of data. One recent study has been more systematic than most and this

is reviewed in some depth due to the value of its findings to this research.

To help avoid the problems experienced by previous studies, Reiman (1982) set three design parameters for his research. Firstly, confine the analysis to a set of comparable organizations with similar purposes and constituencies. Second, develop organizational "competence" criteria that are theoretically meaningful as well as measureable for the focal organizations. Third, test the predictive validity of the organizational competence criteria against some long-term generally accepted criteria (eg organizational growth). Adopting an open systems perspective Reiman (1982, p325) assumed that, "The organization's competence in maintaining favourable energy flows within its environment will lead to long-term effectiveness. The failure to maintain such favourable energy flows (i.e., incompetence) is expected to lead to the ultimate demise of the organization". Furthermore, and drawing on the conclusions of authors such as Chandler (1962) and Thompson (1967), Reiman suggested that the role played by the top level decision-makers of an organization is a critical determinant of its relationship with its environment and, therefore, its long-term performance. On the basis of these parameters and propositions, Reiman made a longitudinal study of 20 manufacturing plants in the USA. Organizational competence was measured by asking the members of the top management team responsible for each plant to rate independently their plant relative to its competitors on eight competence

criteria using a scale of 0 to 100% with 100% defined as the optimum performance. The eight organizational competencies were: profit growth in the previous five years; sales growth in the previous five years; attraction and retention of high quality human resources; product quality; customer service; employee satisfaction and morale; potential for future growth and; competitive strength. These ratings were then averaged to give an overall rating of organizational competence similar to the one used by Lawrence and Lorsch (1967). The averaging was justified by the high internal consistency of not only the eight criteria with one another, but also, the ratings of each plant by the members of its top management team. Reiman (1982, p326) hypothesised that, "The long-term growth and survival of a manufacturing organization would depend on its current performance (relative to competition) on the eight criteria". Based on revenue growth over the nine years following the year in which organizational competency ratings were gathered, each of the twenty manufacturing plants was classified as growth, stable or declining. Reiman also gathered data on the growth of employment and plant closures over the same time period. His data analysis showed that, "Top executive consensus ratings of the organizational competence of their own plants were good predictors of long-term survival as well as growth in plant resources and employment" (Reiman, 1982, p332).

Thus, despite the early problems experienced by the Systems Model in using measures of organizational processes as

indices of effectiveness, Reiman's study has produced a methodology which is valuable and, "Particularly useful to future researchers faced with the common problem of finding "hard" effectiveness criteria" (Reiman, 1982, p332).

#### 2.4 THE BEHAVIOUR MODEL

The Behaviour Model has been used primarily by occupational psychologists as a means of assessing the performance of managers. Campbell et al (1970) present the case for using this approach. The first stage of the argument is to present a Goal Model definition of organizational effectiveness, "It makes good sense to define effective management in terms of organizational outcomes" (Campbell et al, 1970, p105). The next stage is to define effective managerial job behaviour through the Systems Model perspective, "We define effective managerial job behaviour as any set of managerial actions believed to be optimal for identifying, assimilating, and utilizing both internal and external resources toward sustaining, over the long term, the functioning of the organizational unit for which a manager has some degree of responsibility" (Campbell et al, 1970, p105). Hence, effectiveness is to be judged by the performance of a managers unit over time. The third stage is to argue that the problems of measuring goal attainments are insurmountable. Consequently, it is proposed that, "Any criterion (measure) of managerial effectiveness must depend on informed judgement to identify those managerial job behaviours constituting optimization of resources" (Campbell

et al, 1970, p106). This leads to the idea that, "The measure itself must encompass a series of observations of the manager's actual job behaviours by qualified observers who are able to judge how effectively he accomplishes all the things regarded as important for doing the job properly". In short, the problems of measuring the goal attainment of organizational units lead Campbell et al (1970) to conclude that managerial effectiveness must be assessed by individual-focused measures of managerial behaviour. The Behaviour Model presented by Campbell et al (1970) has been widely used by psychologists to validate predictors of managerial effectiveness - see Thornton, and Byham (1982).

Two fundamental criticisms can be made of the Behaviour Model. First, the model uses behaviour as both a predictor and a criterion. So, the same or similar behavioural dimensions are used both to assess individuals in order to predict their current or future performance and to measure their performance. The essential problem with this approach, and with research based on it, is that the behaviours which produce outputs have been misconstrued as outputs. In consequence, the research process is circular and can show nothing about the relationship between predictor variables (i.e., behaviour) and criterion variables (i.e., organizational performance). It is essential that performance is assessed by measures that are external to the behaviour of managers. Second, as Campbell et al (1970) state clearly, managers - unlike other

occupational groups - are responsible for the work of others. This means that it is essential for evaluations of the effectiveness of managers to be based on the performance of the unit of people that the manager is responsible for rather than the output of the manager as an individual. (It should be noted that the term "unit" has a flexible definition in this study; its precise meaning depends on the manager who is being evaluated. It might range from a small team headed by a supervisor, to a Strategic Business Unit or to an entire organization if the study is focused on Chief Executives). Unfortunately, the Behaviour Model focuses on the behaviour of managers as individuals rather than recognizing the unique character of managerial jobs and focusing on unit performance.

The importance of the two criticisms made above has been highlighted in a recent study by Schmitt et al (1984) into the validity of an assessment centre (AC) that was designed for school administrators. Whilst the AC's ratings of the administrators on various behavioural dimensions did correlate significantly with ratings of the school administrators work behaviour, the AC behaviour ratings did not correlate significantly with assessments made by students, teachers and support staff of the performance of the school as an organization. Similar findings were made by Heneman (1986) who identified validation studies that had used both supervisor ratings of behaviour and objective output (or "results") measures in order to explore the relationship between these two types of variable by means of

a meta-analysis. He found that, "The magnitude of the relationship between ratings and results is relatively weak, with a corrected mean of .27. This small correlation was obtained even after the data were corrected for sampling error and attenuation. Moreover, the lower limit of the 90% confidence interval around the corrected mean correlation was negative"(p818). One conclusion Heneman draws from his study is that, "It cannot simply be assumed that the findings from studies using results criteria are comparable to the findings from studies using rating criteria"(p818). Studies of this sort draw attention to the need to move away from behaviourally defined criterion measures to measures of the performance of the organization or unit.

## 2.5 THE ADVANCEMENT MODEL

The difficulties in obtaining measures of the effectiveness of organizations have led researchers who are interested in managerial effectiveness to use a second type of substitute variable to validate their findings: indeces of advancement (such as rate of promotion, salary growth corrected for age and length of service). Campbell et al (1970, p109) explain the case for using this type of variable, "It may be argued that (advancement) indices constitute a good summation of a manager's ability consistently to optimise organizational systems, to perform crucial managerial job activities and to do other "successful" things". Nevertheless, as Smith (1976, p756) points out, "Such indices may be contaminated by factors such as good luck, political expediency,

organization structure and labour market conditions". Klimoski and Strickland (1977, p355) have stressed the importance of realizing that advancement indices may not be good measures of performance. They state that these criteria, "May have less to do with managerial effectiveness than managerial adaption and survival". It is more than possible, therefore, that advancement indices help us to understand why managers get promoted rather than why organizations are effective. Thus, the importance of using direct measures of organizational performance rather than indirect advancement indices must be stressed because the later indices are likely to be poor surrogate measures of organizational effectiveness.

## 2.6 CONCLUSIONS

To identify organizational performance variables that can be used in this study, four models have been reviewed which present a different approach to organizational effectiveness. These are the Goal Model which focuses on organizational outputs, the Systems Model which is concerned with organizational processes, the Behaviour Model which concentrates on the behaviours used by managers and the Advancement Model which directs attention to the upward mobility of managers in the organization. Fundamental criticisms have been made of the Behaviour and Advancement models which imply that their value to this study is limited and that alternate approaches must be used. The Goal Model has been explored in depth and the level of attainment of

agreed organizational goals has been identified as a variable that is of use to this research. The review of the Systems Model has shown that different perspectives and methods have produced inconsistent results. Nevertheless, the longitudinal study of Reiman (1983) into the predictive validity of organizational competence measures, has shown that this variable can be used here. In this way, the Goal Model and the Systems Model can be employed to provide complementary, yet different, measures of organizational effectiveness.

## CHAPTER THREE

### BEHAVIOUR VARIABLES

#### 3.1 INTRODUCTION

This chapter reviews the literature to identify managerial behaviours which have been shown to be related significantly to organizational performance. The chapter begins with studies that have focussed on the "leadership" behaviours used by managers when working with subordinates. The review moves on to consider studies that have researched the full range of behaviours used by managers. Lastly, conclusions are drawn about the managerial behaviours which are relevant to this study.

#### 3.2 LEADERSHIP STUDIES

In the first studies of leadership, as Gibb (1969) has recounted, a wide range of individual differences such as height, weight, appearance, intelligence, and personality were analysed to discover variables which universally differentiate "leaders" from "followers". Although leaders were found to be slightly taller, bigger, heavier and somewhat more intelligent, extroverted, dominant, self-confident and well adjusted than followers, these differences, as Vroom (1976, p1529) has commented, "Tend to be small in magnitude with large amounts of overlap between the distributions of scores of leaders and followers". Also, the issue of causation raised problems: are leaders

inherently like this or do they become so by virtue of the positions they hold?. Furthermore, these studies found that there was much variance in the size and direction of the relationships across different situations. This raised doubts about the possibility of finding universally valid characteristics.

The difficulties experienced by the "trait" approach to leadership in differentiating leaders from followers coincided with a growing interest in the behaviour of leaders. Experimental studies by Lewin, Lippitt and White (1939) showed that different leadership behaviours (classified as Authoritarian, Democratic and Laissez-faire) resulted in different behavioural patterns on the part of group members. Also, the account by Roethlisberger and Dickson (1939) of the Hawthorne experiments stressed the importance of work groups and supervisor behaviour within industrial enterprises. Attention was thus focused on identifying the behaviours used by leaders when directing the activities of a group towards a shared goal and the relationship between these behaviours and organizational effectiveness. This new direction of research was followed by three important studies that were made concurrently - the Ohio State Studies, the Michigan Studies and the Harvard Studies. Each of these studies is reviewed below in some depth.

### 3.2.1 The Ohio State studies

These studies began in 1947 and defined leadership as, "Behaviour of an individual when he/she is directing the activities of a group toward a shared goal" (Halpin and Winer, 1952b, p6). Nine a priori dimensions of leadership behaviour were postulated: initiation, membership, representation, integration, organization, domination, communication, recognition, and production (Hemphill, 1950). Questionnaire items were created to operationalize these dimensions and the resulting Leader Behaviour Description Questionnaire (LBDQ) was administered to subordinates who were instructed to use the questionnaire to rate their leader. A factor analysis was made of the responses to the LBDQ by Halpin and Winer (1952a) which produced four main factors: consideration, structure, production emphasis and; sensitivity. At a later stage, the two latter factors were dropped leaving the orthogonal dimensions of consideration and initiating structure, which were described by Fleishman and Harris (1962, p43-44) as:

Consideration: "Includes behaviour indicating mutual trust, respect, and a certain warmth and rapport between the supervisor and his group. This does not mean that this dimension reflects a superficial "pat-on-the-back", "first-name-calling" kind of human relations behaviour. This dimension appears to emphasize a deeper concern for group members' needs and

includes such behaviour as allowing subordinates more participation in decision making and encouraging more two-way communication".

Initiating Structure: "Includes behaviour in which the supervisor organizes and defines group activities and his relation to the group. Thus, he defines the role he expects each member to assume, assigns tasks, plans ahead, establishes ways of getting things done and pushes for production. This dimension seems to emphasize overt attempts to achieve organizational goals".

In many ways, the two dimensions of leader behaviour identified by the Ohio State Studies integrate the two dominant schools of management thought which existed at the time. As Bass (1985, p5) has recently observed, "In the first part of this century, leadership was mainly a matter of how and when to give directions and orders to obedient subordinates. The strong directed the weak. Valuing equalitarianism, the opposing Human Relations movement emphasized participative and consultative group processes, and shared leadership. The dialectic merged into a synthesis. The behaviour of leaders was now to be seen as initiating structure and/or showing consideration for human relationships".

Following factor analysis, several revised versions of the LBDQ were produced together with the Leader Opinion

Questionnaire (LQQ) which leaders can use to assess how they believe they should behave towards subordinates. A large number of studies have been conducted by many researchers to explore the relationship between questionnaire measures of initiating structure and consideration and various performance measures. These studies were reviewed by Korman (1966, p354) who concluded that, "There is very little evidence that leadership behavioural and/or attitudinal variation, as defined by scores on the leadership behaviour and leadership opinion questionnaire, are predictive of later effectiveness and/or satisfaction criteria". Korman made four criticisms of the methodology that had been used in the studies he had reviewed: little or no use of moderating situational variables; the frequent use of the same individual to make predictor and criterion ratings; little evidence of causality due to the concurrent design of studies and; given the curvilinear relationship that had been found between structure, consideration and criterion measures, no exploration of the range of structure and consideration scores over which a relationship with performance could be expected.

A second set of criticisms relate to the psychometric properties of the LBDQ and LOP. Kerr and Schriesheim (1974, p565) comment, "It has been pointed out elsewhere (Bish and Schriesheim, 1974; Schriesheim and Bish 1974; Schriesheim and Kerr, 1974; Schriesheim and Schriesheim, 1974) that the scales inadequately control for agreement response tendencies, typically generate responses which may be

contaminated by what seem to be social desirability or leniency, include behaviour dimensions other than those of consideration and structure and provide response choice of unequal intervals". Furthermore, the well documented problems of using questionnaires to gain self and subordinate assessments of behaviour (for example, see Mount, 1984 and Mabe III and West, 1982) have raised questions about the extent to which the LBDQ and LOP are accurate measures of the actual behaviour of leaders. This issue led Gilmore, Beehi and Richter (1979, p167) to remark that, "The relationships of actual leader behaviour with perceived behaviours (i.e., LBDQ scores) and criterion variables (i.e., subordinate's performance) need to be investigated because much of the previous research has simply focussed on the relationships between the perceptions of leader behaviours by subordinates and the subordinates self-reported reactions to work".

Following Korman's review in 1966, researchers have made use of moderator variables, independent measures of performance, LBDQ ratings of individual subordinates rather than averaged subordinate ratings and experimental as well as longitudinal designs. As a result of these changes, Kerr and Schriesheim (1974, p564) could report that, "There has begun to emerge a research trail of studies showing often significant relationships between leader behaviours and subordinate morale, satisfaction (and to a lesser degree) performance variables". Stodgill (1974, p395) summarized his review of the latest research by saying, "Group productivity is

somewhat more highly related to structure than consideration". At this point in time, however, nothing was known about causation or the range of initiating structure and consideration scores that relate to criteria. In addition, nothing had been found out about the relationship between LBDQ or LOP scores and actual behaviour. Two more recent studies tackle some of these issues.

Gilmore et al (1979) used a realistic experimental design in which twelve individuals were recruited by advertisement and interview to work for one hour per day on four days at a rate of \$2.50 per hour on a task which permitted precise assessments of the quantity and quality of performance to be made. The participants were divided into four groups of three employees. Each group was supervised by a confederate who has been trained in the use of initiating structure and consideration behaviour. One group experienced low consideration, low structure over the four days, the second experienced high consideration and low structure, the third experienced low consideration and high structure and the fourth experienced high consideration and high structure. At the end of the four day period, the twelve participants each completed the LBDQ. The results of the experiment were as follows. First, the participants were unable to distinguish the different leader behaviours using the LBDQ, "Even though the leader behaved in markedly different ways, responses to the LBDQ were not markedly different" (p169). This finding is very important because it points to the need to use observed behaviour rather than questionnaire

assessments of behaviour when undertaking research into the behaviours that make leaders effective. Second, high initiating structure behaviour was significantly related to high quantity and quality of work. Third, on the issue of causation, it could be suggested that, "The present research supports the notion that certain leader behaviours do cause subordinate performance" (p171).

In 1984, Tjosvold also used an experimental design in which a confederate had been trained to use each of the four combinations of initiating structure and consideration behaviours. By applying each combination of behaviour to a different group of individuals undertaking the same task, Tjosvold found that, "Leaders who are both high in structure and high in consideration facilitate productivity and satisfaction among subordinates" (p426). Addressing the issue of causality he commented, "Results suggest that subordinates feel open, want to work with, feel attracted to, and are satisfied with leaders who communicate warmth to them. The impact of leader warmth and these positive attitudes on subordinate task performance depend on whether the leader was directive or non-directive. A warm leader who was directive and presumably clearly concerned about productivity had subordinates who themselves became work oriented and productive. A warm leader who was undirective and less interested in task completion had the least productive subordinates. When the leader was cold toward subordinates, the leader's approach and values seemed to have little impact on subordinate task performance" (p426).

In summary, the move away from questionnaire measures of initiating structure and consideration has given support to the hypotheses of the Ohio State researchers. The use of these behaviours by a leader has now been shown to enhance productivity and worker satisfaction.

### 3.2.2 The Michigan studies

This work was begun in 1947 at the Institute for Social Research of the University of Michigan and was supported by the Office of Naval Research. Likert (1961, p5) has summarized the aims and methods of this research, "A series of related studies has been conducted to discover the organizational structure and the principles and methods of leadership and management which result in the best performance". These studies were conducted in a wide variety of industries - automobiles, chemicals, delivery service, electronics, electrical instruments, appliances and equipment, food, heavy machinery, insurance, paper petroleum, public utilities, railways and textiles. In general, each study, was designed to, "Measure and examine the kinds of leadership and related variables employed by the best units in an organization in contrast to those used by the poorest" (p5). The unit performance measures used were, "Productivity per man hour or some similar measure of the organization's success in achieving its productivity goals; job satisfaction and other satisfactions derived by members of the organization (often measured by the use of questionnaires); turnover, absence and similar measurements;

costs, scrap loss and; employee and managerial motivation" (p5-6). In each organization, the performance measures were used to identify high and poor performing units that were matched by type of work as well as the number and type of employees. Then, open-ended interviews were conducted with supervisors and employees to determine the behaviours used by the leaders. The data was then analysed to identify the behaviours which differentiated the leaders of the high performing units from those of the low performing units.

The results of these studies - see Katz, Maccoby and Morse (1950) and Likert (1961, 1967) indicated that more effective leaders: (1) understand the point of view of staff by listening and patiently giving group members ample opportunity to express their own thoughts without being constrained by the leader presenting his/her own views; (2) involve subordinates in issues and use consensus decision making; (3) develop staff by having high expectations of their performance, encouraging them to take on extra responsibilities, using training and coaching and turning mistakes or errors into learning opportunities; (4) take full responsibility for the performance of the unit and for seeing that it meets the demands and expectations placed on it by the rest of the organization and; (5) set subordinates high performance goals and standards.

In addition, the Michigan studies gave some valuable insights into causality. Likert (1961, p12) informs us that, "In one of the companies involved in this research

program, it was found that switching managers of high and low production divisions produced some interesting results. The high production managers were found to raise the productivity of the low production divisions faster than the former high production divisions slipped under the low production managers. The company, as a consequence, endeavoured to raise the general level of productivity by periodically shifting the managers. It was found that each of the managers, when shifted, tended to adhere to his habitual orientation toward his subordinates, irrespective of the productivity level of his division at the time. High producing managers maintained their employee-centred, general supervision. Low producing managers, even when placed in charge of high producing divisions, continued to use job-centred, close supervision. These results and data from field experiments indicate that supervisory attitudes and behaviour tend to be major causal influences".

In summary, the Michigan Studies into leadership behaviour identified five dimensions of behaviour which differentiated between the leaders of high and poor performing work units in a wide range of organizations and industries. A comparison of the results of the Ohio State and Michigan Studies is given in Appendix 1. The third of the major American leadership studies is considered now.

### 3.2.3 The Harvard studies

These experimental studies began in 1947 when a laboratory was established at Harvard University under the direction of Bales to study social interaction in small groups. Usually Harvard freshmen were recruited by letter sent to a random sample of undergraduates who were paid one dollar an hour to participate in the research. Small groups of undergraduates spent forty minutes discussing a human relations case facing an administrator in his organization. Observers systematically recorded the verbal and non-verbal behaviour of the participants. Bales (1950) and Bales and Slater (1955) describe four categories and twelve sub-categories of behaviour which emerged from the research and which were used to analyse the interaction - see Table 3.1.

TABLE 3.1: THE INTERACTION PROCESS ANALYSIS SYSTEM

Behaviour Category	Sub-Category
(A) Positive Reactions	(1) Shows solidarity (2) Shows release (3) Shows agreement
(B) Problem Solving Attempts	(4) Gives suggestion (5) Gives opinion (6) Gives information
(C) Questions	(7) Asks for information (8) Asks for opinion (9) Asks for suggestion
(D) Negative Rections	(10) Shows disagreement (11) Shows tension (12) Shows antagonism

From: Bales (1950).

Participants were also asked to complete a questionnaire which asked four questions: Who contributed the best ideas for solving the problem; who did most to guide the discussion and keep it moving effectively; how well did you personally like each of the other members and; which member of the group would you say stood out most definitely as leader in the discussion (including yourself)? By analysing the frequency of each sub-category of behaviour used by group members and the responses to the questionnaires, Bales (1966) and his colleagues developed the hypothesis that in the groups there were, "Two complementary leaders, one a task specialist, the other a socio-emotional specialist" (p441). In comparison with the socio-emotional leader, the task leader more frequently used problem solving attempts, showed more disagreement, had a higher interaction level and tended to be liked less. In explanation, Bales (1966, p444) comments, "The relatively low average of likeability preferences received by top participants might be due to the presence of some men in the total population of top men who overtalk, in the sense that they do not allow an appropriate amount of feedback of objectives, qualifications, questions and counter-suggestions to occur". Compared with the task leader, the socio-emotional leader more frequently asked questions and expressed positive reactions, had a lower interaction level and tended to be liked more.

In summary, two independent dimensions of leader behaviour emerged from the Harvard studies which closely resemble the

initiating structure and consideration dimensions that the Ohio State Leadership studies discovered. Appendix 1 compares the results of the two studies.

### 3.2.4 "Management Style" theories

Much overlap was perceived in the constructs identified by the three American studies of leadership that have been reviewed. These studies led to the development of several normative theories of management style. McGregor (1960) described two types of management: Theory X and Theory Y. Blake and Mouton (1964) developed the "Managerial Grid" which postulates five styles of management based on different combinations of Concern for People (consideration) and Concern for Production (initiating structure); these two dimensions were assumed to be independent of one another (as the Ohio State study had indicated). Likert (1961) postulated four systems of management (System 1: Exploitative Authoritative; System 2: Benevolent Authoritative; System 3: Consultative and; System 4: Participative Group) arranged along a single continuum. Each theory postulated an ideal style of management which would result in high levels of organizational performance under all circumstances and used a questionnaire as the primary means of diagnosing management style.

The problems experienced in validating the Ohio State Studies, however, led to concerns about the value of not only the Michigan and Harvard studies but also the theories

of management style. Furthermore, the notion of an ideal management style that is valid in all circumstances came under attack. Consequently, much attention was given to the effect of situational variables and to the improvement of validation study design. It is important to note, however, that the problems encountered by the research could centre largely on the use of questionnaires rather than directly observed behaviour. It may well be that the use of questionnaires means that poor quality data are being used which exhibit large amounts of artifactual variance. As Hunter et al (1982) have recently argued in a wider context, measurement problems might be the cause of the poor results of the validation studies so that much of the search for moderator variables has been a spurious exercise.

### 3.2.5 Situational Leadership Theories

#### 3.2.5.1 Fiedler's Leader Match Theory (1967)

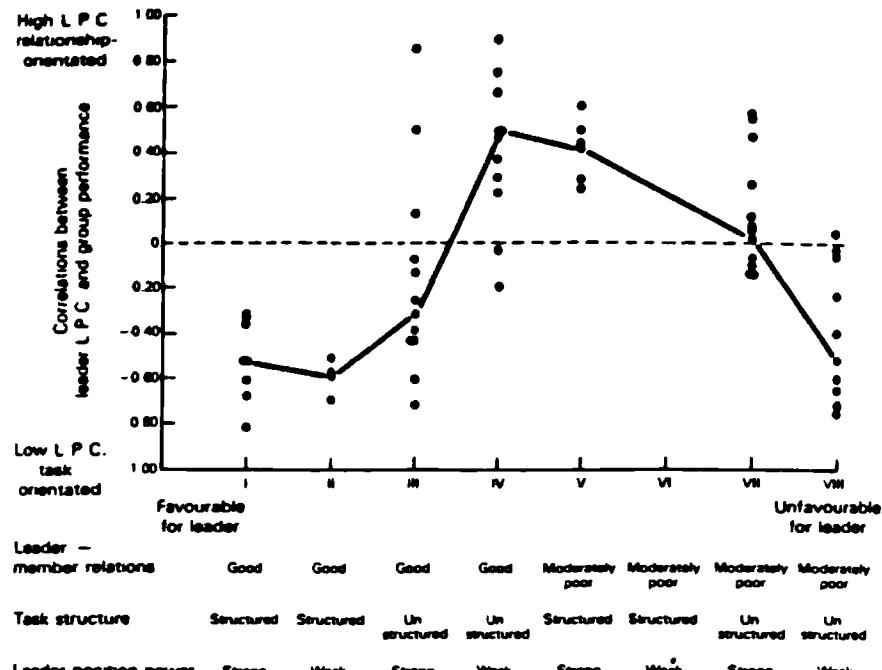
Leader Match (LM) is based on a continuum; one end represents a high relationship orientation and the other end a high task orientation. So, whereas the Ohio State studies had considered structure and consideration to be orthogonal, Fiedler (1967) sees them as opposite ends of a bipolar dimension. To measure their orientation along this continuum, individuals complete the "Least-preferred Co-worker" (LPC) questionnaire which provides a single score; low scores indicate a task orientation, high scores indicate a relationship orientation. Individuals then

complete questionnaires to analyse the leadership situation they are in on the basis of three variables: the quality of leader-member relations; the level of task structure and; the amount position power given to the leader. Fiedler (1967) claims that studies of the relationship between group performance, LPC and the three situational variables indicate that different leadership styles are relevant to different types of situation - see Figure 3.1.

Because Fiedler considers leader behaviour to be stable and not easily changed, he advocates that leaders whose style is ill-fitted to their situation should change the situation. In essence, therefore, Fiedler has moved away from leader behaviour as a product of both individual and environmental variables, to stable leadership traits.

The trait nature of Fiedler's theory has left it open to several criticisms. First, LM is denying the influence of the situation on performance because of its assertion that the leader should change the situation. Kabanoff (1981) has argued that rather than negating the power of the situation, the effective leader is one who, "best recognizes and implements the "potentialities" within different situations" (p762). A second criticism is that if behaviour is a function of individual and situational variables, then there can be no validity in Fiedler's assertion that the situation must be changed because the leader cannot change. In addition, the LPC questionnaire has been severely attacked because it is not clear what it is measuring. As Stinson

**FIGURE 3.1: CORRELATIONS BETWEEN LEADERS' LPC SCORES AND GROUP EFFECTIVENESS FOR EACH COMBINATION OF THE THREE SITUATIONAL VARIABLES**



From: Fiedler (1967).

(1977, p71) comments, "After 25 years the LPC remains a measure in search of meaning". Also, Kabanoff (1981) has argued that the design of LM validation studies does not permit the testing of Fiedler's theory and that improper criterion measures have been used. Finally, while courses designed to improve LM have resulted in higher course supervisor and peer ratings of participants, Kabanoff (1981, p759) points out that, "Alternative explanations include rater bias; a general confidence building or Hawthorne effect in trained leaders and a general sensitisation effect to the nature of leadership quite unrelated to the LM".

In summary, the difficulties experienced by LM mean that Vroom's (1976, p1536) verdict continues to be appropriate,

"To be sure the theory is crude in its present form and the practical implications are, at this point, matters of considerable uncertainty. Like most pioneering efforts it will undoubtedly be shown to be incorrect in detail if not in substance".

A second theory of situational leadership which draws on the Ohio State Leadership studies has been proposed by Hersey and Blanchard (1969). This is reviewed below.

### 3.2.5.2 Hersey and Blanchard's Situational Leadership Theory

#### (SLT) (1969)

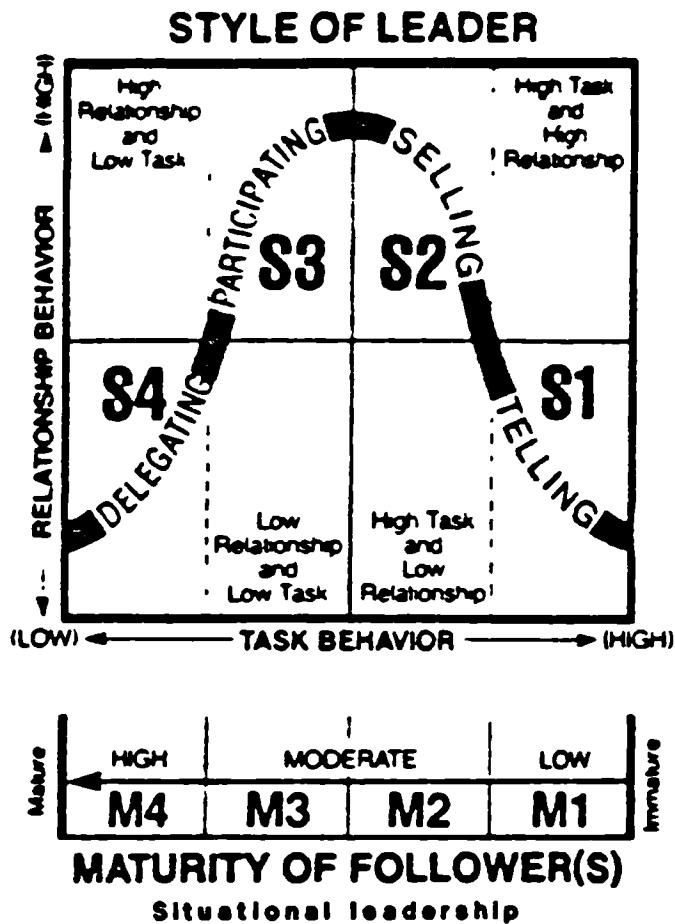
This theory employs three dimensions - relationship orientation (R0), task orientation (T0) and effectiveness. SLT also hypothesizes that there is no single ideal style of management. The appropriate style depends, according to SLT, on the level of maturity of the manager's subordinates. Maturity is defined as, "The level of achievement motivation, willingness and ability to take responsibility, and task-relevant education and experience of an individual or group" (Hersey and Blanchard, 1969, p134). SLT postulates that immature subordinates or groups are ineffective because they are not motivated to achieve task goals, are unwilling or unable to take responsibility and do not have task-relevant experience and/or education. In contrast, mature subordinates or groups are effective

because they are motivated, are able to take responsibility and do have task relevant experience and/or education. Four gradations of maturity are proposed from M1 (immature) to M4 (mature). SLT postulates that an immature individual or group requires a leader who uses high task and low relationship behaviour to be effective because task behaviour is needed to specify what needs to be done and how to do it. Giving socio-emotional support through relationship behaviour is not needed as it would only reinforce the immaturity of the subordinates. At the other end of the maturity scale, SLT hypothesizes that the manager should use low task and low relationship behaviour because a mature and effective individual or group will resent structuring by the manager and is not in need of socio-emotional support as this is provided by co-workers.

Figure 3.2 illustrates the main features of SLT. Hersey and Blanchard (1982) have developed the Leadership Effectiveness and Adaptability Description (LEAD) inventory to operationalize their theory.

Vecchio (1987) has made an empirical test of SLT. His findings suggest that, "SLT was most strongly supported in the low maturity condition ... (which) ... appears reasonable in that employees who are relatively lacking in task-relevant knowledge or commitment should require more structuring on the part of their supervisors. Displays of considerateness by superiors for low-maturity subordinates would be tantamount to sending improper signals to such subordinates. For subordinates of moderate maturity it is

**FIGURE 3.2: HERSEY AND BLANCHARD'S SITUATIONAL LEADERSHIP THEORY**



From: Hersey and Blanchard (1979).

not clear what style of supervision works best. The present data suggest that performance is greater for these same employees if moderating structuring is combined with high consideration. However, the same sample provides evidence that the quality of leader-member relationships may be significantly lower when this particular combination of styles is reported. For high maturity employees, the theory appears to be unable to predict" (p449-450). Vecchio (1987) also points out that effectiveness in SLT is defined in terms of the leader using behaviour that fits the maturity

of the subordinate or group rather than in terms of an external performance measure. In fact, Vecchio used the same individuals to gather predictor and criterion data in his study and did not use the effectiveness of the organizational unit as a criterion measure.

In summary, limited support for SLT has been provided by Vecchio (1987) and further studies using organizational performance measures need to be made before its validity can be properly assessed. A third theory of situational leadership has been provided by Reddin (1970) and this is now reviewed.

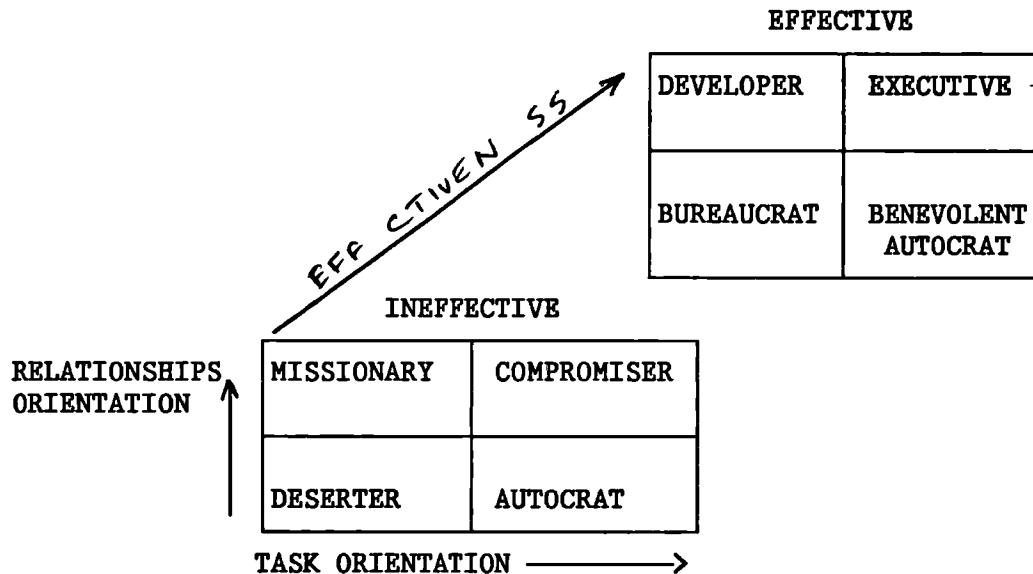
### 3.2.5.3 Reddin's 3-D Theory of Managerial Effectiveness (1970)

Reddin borrows Blake and Mouton's Managerial Grid - calling the horizontal axis "Task Orientation" (T0) and the vertical axis "Relationships Orientation" (R0). He then adds a third dimension - Effectiveness (E). This enables Reddin to identify eight managerial styles (see Figure 3.3) and to argue that no style is ideal: it all depends on the situation.

Reddin also uses a questionnaire - the Management Position Analysis Test (MPAT) to enable individuals to determine their preferred management style. Five situational variables (technology, subordinates, co-workers, supervisor and organization) are used to determine which style is most suited to a given situation. Reddin argues that individuals

should adapt their style to the appropriate situation and he thereby avoids the criticisms that have been made of Fiedler's trait-based theory.

FIGURE 3.3: REDDIN'S (1970) 3D THEORY OF MANAGERIAL EFFECTIVENESS



From: Reddin (1970).

A thorough psychometric analysis by De Ciantis (1987) of the MPAT has shown that it contains two orthogonal scales with reliabilities of at least 0.70 which he has called "Control" and "Structuring". De Ciantis (1987, p198-199) states that, "The control dimension describes the extent to which the manager holds power and control as opposed to distancing power ... (and) ... bears some correspondence to the consideration dimension of the Ohio leadership programme - high consideration corresponding to delegation of control to the workgroup, low consideration being associated with retention of control by the manager". The second scale describes the extent to which a manager, "Is likely to

co-ordinate activities using the organization's rules and procedures as a frame of reference within which to operate (or will), by placing less emphasis on such formal guidelines, make use of such methods as "flexible job trading" and informal teamwork. This scale is evocative of aspects of the early definition of task orientation" (p199). Hence, De Ciantis' analysis of Reddin's MPAT resurrects the two basic dimensions of initiating structure and consideration and once again points to the difficulties created by poor questionnaire design.

A fourth theory of situational leadership has been provided by Vroom and Yetton (1973) which draws more on the Michigan than the Ohio State leadership studies and tries to avoid the problems of the three situational leadership theories reviewed above.

### 3.2.5.4 The Vroom-Yetton Normative Model of Leadership and Decision-making (1973)

Vroom and Yetton (1973) argue that one of the main problems of other situational theories of leadership is that they are not based on a descriptive model of managerial effectiveness. Consequently, Vroom and Yetton propose the model which has been reviewed in chapter 1. Having presented their descriptive model, Vroom and Yetton propose a normative model which prescribes the most effective leadership process for solving different types of problem given various situational conditions. Five decision-making

processes are described in the normative model and these are shown in Table 3.2.

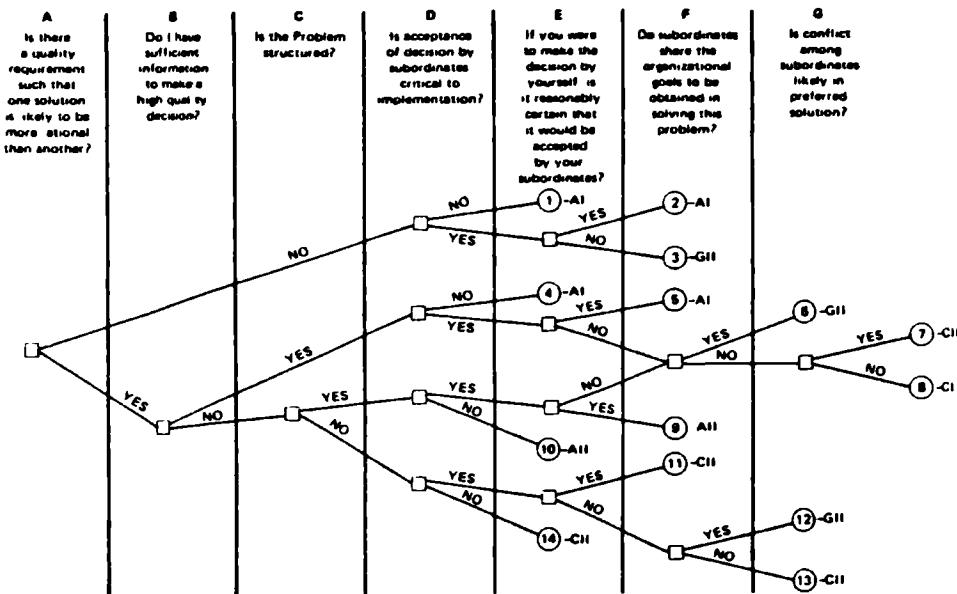
**TABLE 3.2: VROOM AND YETTON'S TAXONOMY OF DECISION PROCESSES**

- AI You solve the problem or make the decision yourself using the information available to you at the present time.
- AII You obtain any necessary information from subordinates, then decide on a solution to the problem yourself. You may or may not tell subordinates the purpose of your questions or give information about the problem or decision you are working on. The input provided by them is clearly in response to your request for specific information. They do not play a role in the definition of the problem or in generating or evaluating alternative solutions.
- CI You share the problem with the relevant subordinates individually, getting their ideas and suggestions without bringing them together as a group. Then you make the decision. This decision may or may not reflect your subordinate's influence.
- CII You share the problem with your subordinates in a group meeting. In this meeting you obtain their ideas and suggestions. Then, you make the decision, which may or may not reflect your subordinate's influence.
- GII You share the problem with your subordinates as a group. Together you generate and evaluate alternatives and attempt to reach agreement (consensus) on a solution. Your role is much like that of chairman, coordinating the discussion, keeping it focused on the problem, and making sure that the critical issues are discussed. You can provide the group with information or ideas that you have but you do not try to "press" them to adopt "your" solution and are willing to accept the implement any solution that has the support of the entire group.

Three situational variables are used to determine which decision process(es) should be used: the quality or rationality of the decision; the amount of time required to make the decision and; the extent to which the acceptance or commitment of subordinates is needed to execute the decision

effectively. Figure 3.4 presents the decision tree Vroom and Yetton use to determine the decision process(es) that should be used to solve different types of problem.

**FIGURE 3.4: THE VROOM-YETTON DECISION TREE**



From: Vroom and Yetton (1973).

Validation of the Vroom-Yetton Model by Vroom and Jago (1978) and Field (1982) indicates that the methods of decision-making it prescribes for different types of problem reasonably well reflect the methods actually used by managers and that decisions taken by a process that is recommended by the model are more successful in outcome than decisions taken by processes that the model prescribes as inappropriate. The Vroom-Yetton model is particularly interesting for two reasons. First, the model, by specifying rules which govern when subordinates should and should not be involved in decision-making, gives recognition

to the various activities which managers undertake that do not need contact with subordinates. These activities have been ignored by other leadership studies and theories which have focussed only on the behaviours used by managers when interacting with subordinates. Second, the model shows that some problems are solved most effectively by the involvement of subordinates and use of group decision-making processes. As Vroom and Jago (1978, p155) comment, "These results lend some support for the view of many behavioural scientists including Likert (1961), Blake and Mouton (1964) and Maier (1963), who emphasize the utility of participative management per se without paying explicit attention to situational moderator variables such as those in the Vroom-Yetton model". The value of the Vroom-Yetton model is that it uses situational variables to identify the type of subordinate involvement which will be most appropriate to different types of problem.

Thus, of all the situational leadership theories, it is Vroom and Yetton's which has been best supported by validation studies. Furthermore, this theory complements the work of Likert and his colleagues. In recent years, however, a critique has been made of the early American Leadership Studies and the style and situational theories which stem from them. This critique and the transformational leadership theory which has accompanied it are now reviewed.

### 3.2.6 Transformational leadership theories

In section 2.2.3 it was described how the growth school led to a critique of the ideas of the human relations and scientific management schools. A similar phenomenon has occurred more recently within the area of leadership theory through the work of Burns (1978), Bennis (1982) and Bass (1984) who contrast their approach - termed "transformational leadership" - with that of earlier scholars whose paradigm is called "transactional leadership".

It is argued by Burns (1978) that transactional leadership theories (i.e., all those studies of leadership behaviour reviewed so far in this chapter) are preoccupied with an exchange relationship between the leader and subordinates whereby subordinates receive valued monetary, security and social rewards from leaders in return for productive work. Burns (1978, p3) comments that transactional leaders, "Approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. Such transactions comprise the bulk of the relationships among leaders and followers, especially in groups, legislatures and parties". Bass (1984) argues that transformational leadership does contribute to organizational performance by producing incremental increases in effectiveness within the existing framework of doing things. However, if individuals are expected to contribute to organizational performance by making

fundamental changes to work patterns which result in dramatic increases in effectiveness, then, Burns (1978) and Bass (1984) argue, transactional leadership is not enough. Under these circumstances transformational leadership is required. Transformational leadership provides a work environment which enables individuals to satisfy their growth needs. Work becomes a reward in itself so that individuals are self-motivated and do not seek extrinsic rewards in exchange for effort. Bass (1984, p16) explains that, "Transformational leaders work themselves out of a job to the extent that they elevate their subordinates into becoming self-actualizers, self-regulators, and self-controllers. The transforming leaders provide the high standards of performance and accomplishment and the inspiration to reach such standards. To the degree their followers become self-actualizing the achievements become self-reinforcing".

To see if the theory of transformational leadership does relate to the behaviour of managers in complex organizations, Bass (1984) conducted a pilot study with 70 male senior industrial executives. The hypothesized behaviours of a transformational leader were described to these executives and they were asked to describe any person whom they had encountered in their own careers who fitted part or all of the description. Based on this open-ended interview survey and other studies, Bass (1984) produced a Leadership Questionnaire containing 73 items of behaviour to operationalize the concepts of transactional and

transformational leadership. This questionnaire was administered to a sample (n=176) of US Army colonels, officers from the army of other countries and civilians of comparable seniority. The respondents were asked to use the questionnaire to describe their immediate superior. The respondents were also asked to rate the overall effectiveness of their work unit, the effectiveness of the superior in meeting the needs of subordinates and the organization and, the respondent's level of satisfaction with their superior and his/her methods of leadership. A factor analysis of the completed questionnaires produced five factors which are described below.

**Factor I**

**Charismatic Leadership (66 percent)**

The leader inspires staff, provides a model for subordinates to follow, makes staff feel good to be around him/her, is a symbol of success and accomplishment, increases optimism for the future, makes staff respect him/her and trust his/her capacity to overcome any obstacles, has a sense of mission which is transmitted to and excites staff.

**Factor II**

**Contingent Reward (7 percent)**

The leader tells staff what to do to be rewarded for efforts, gives staff what they want in exchange for expressed support, lets staff negotiate with him/her about what they can get from what they accomplish, decides what staff want and shows them how to get it.

**Factor III**

**Individualized Consideration (6 percent)**

The leader gives personal attention to staff who seem neglected, finds out what staff want and tries to help them get it, shows appreciation when a job is done well, treats each subordinate individually, makes subordinates feel they can achieve goals without leader if necessary.

**Factor IV**

**Management-by-Exception (3 percent)**

Leader is satisfied with subordinates work as long as the old ways work, is content to let subordinates do their job in the same way, does not change things if everything is going all right.

**Factor V****Intellectual Stimulation (6 percent)**

Leader forces subordinates to rethink ideas they have never questioned before and enables them to think about old problems in new ways.

By examining the intercorrelations between the factors, Bass (1984) was able to bring factors I (Charisma), III (Individualized Consideration) and V (Intellectual Stimulation) together to represent transformational leadership. Factors II (Contingent reward) and IV (Management-by-exception) were linked to represent Transactional Leadership. The correlations between the effectiveness and satisfaction scores provided by subordinates and the factor scores are shown in Table 3.3.

The work of Bass (1984) highlights the importance of charisma and he points out how self-confidence is a critical cluster of behaviours that charismatic leaders use. Also of interest is the fact that individualized consideration (a variant of the dimension identified by earlier leadership - studies) falls into the transformational leadership category - thereby defusing some of the criticisms of earlier studies by the advocates of transformational leadership.

Furthermore, Bass' work introduces cognitive behaviours into the work of leadership theorists for the first time and indicates the importance of these behaviours. One shortfall of the studies made by Bass is that the range of items in his questionnaire probably do not cover the full range of leader behaviours related to organizational effectiveness because his approach was heavily influenced by the role of

**TABLE 3.3: CORRELATIONS BETWEEN FACTOR SCORES AND PERCEIVED  
SATISFACTION WITH LEADER AND THE LEADER'S EFFECTIVENESS**  
**(BASS 1984) (n=104)**

Factor	Satisfaction	Effectiveness
<b><u>Transformational:</u></b>		
I Charisma	.91	.85
III Individual Consideration	.76	.70
V Intellectual Stimulation	.55	.47
<b><u>Transactional:</u></b>		
II Contingent reward	.45	.41
IV Management-by-exception	.29	.23

charisma. A second criticism is that both behaviour and criteria were rated by the same individuals so that whilst effectiveness did relate to work unit performance, it would be preferable for these assessments to be made by an external group of individuals relying on objective data. Finally, direct observation of behaviour is preferable for the gathering of predictor data given the problems that questionnaires have caused to other leadership studies.

### **3.2.7 Summary of leadership studies**

This review of the literature shows that leadership studies have been plagued by the use of poor questionnaires and criterion measures, inadequate validation design and

insufficient conceptual model building. The use of direct behaviour observation, experimental and longitudinal designs, objective performance data and thorough psychometric analysis has helped to clear a way through the confusion. The Ohio State, Michigan and Harvard studies appear more useful now than they did twenty years ago. With the exception of Vroom and Yetton's (1973) theory, validation studies have thrown considerable doubt on the value of the management style and situational leadership theories that have been reviewed. The work of Bass (1984), based on that of Burns (1978), has also provided useful concepts.

The following behaviours emerge from leadership studies which research to date has shown to be related positively to the performance of organizational units:

- (i) Listening to the ideas, needs and feelings of staff (Ohio State, Michigan, Harvard, leadership studies; Bass, 1984).
- (ii) Involving subordinates and using group decision-making processes (Ohio State, Michigan leadership studies, Vroom and Yetton, 1973)
- (iii) Encouraging staff to take on extra responsibility by delegating, counselling and training. (Michigan leadership studies).

- (iv) Structuring the tasks and roles of self and group members; taking responsibility for group performance (Ohio State, Michigan, Harvard leadership studies).
- (v) Setting high performance goals and standards. (Michigan leadership studies).
- (vi) Expressing complete confidence in the correctness of own position and in own capabilities to be successful. (Bass, 1984).
- (vii) Providing staff with new ways to conceptualize a problem or issue (Bass, 1984).

One fundamental characteristic of most leadership research has been its preoccupation with the relationship between leaders and subordinates. Nevertheless, managers undertake an important range of tasks which do not require the direct involvement of subordinates - as Vroom and Yetton (1973) have pointed out. Studies which have explored the behaviour of managers whilst engaged in the full range of their responsibilities are now reviewed.

### 3.3 JOB ANALYSES OF MANAGERIAL BEHAVIOUR AND MANAGERIAL ASSESSMENT CENTRES

A large number of managerial job analyses have been published including those by Flanagan (1951), Hemphill (1959), Katsell, Barrett, Vann and Hogan (1968), Wofford

(1970) and Morse and Wagner (1978). These analyses have used mainly three methodologies: critical incident interviews (Flanagan, 1954), repertory grid interviews (Stewart and Stewart, 1981) and questionnaires (Hemphill, 1959). Several characteristics of job analyses limit considerably their relevance to this study.

First, the studies have not used objective measures of performance to identify the behaviours which distinguish between high and average performers. When the critical incident method has been used interviewees have been asked to make subjective assessments of the performance of managers but objective data external to the interviewee has not been sought to verify the subjective performance assessments. This means that the dimensions of behaviour which have been identified by job analyses are likely to give a good account of the full range of behaviour that is used by all job incumbents. However, it is unlikely that job analysis will highlight the behaviours that differentiate managers according to the criterion of enhancing organizational performance. As Schroder (1989a, p55-6) comments, "In a typical job analysis study, data are collected by interviews and questionnaires from a variety of sources (subordinates, supervisors, peers) about what a manager in a particular role does when he or she does his or her work well. From this data, a list of skills or dimensions needed to do the job well are identified and used for selection and development. This technique ensures that the skills are job relevant and used to perform the role.

As expected, it identifies many of the basic competencies such as planning ability, organizational ability, management control, organizational sensitivity and delegation. It may also identify certain other competencies like the high performing competencies. But it provides no evidence that any of the dimensions identified are significantly related to superior workgroup performance". Second, the job analyses mix the behaviour of managers (for example, seeking information) with the tasks or activities that managers apply behaviour to (eg matching personnel and jobs). Until the distinction between behaviours and activities is recognized and the two types of variable are analysed separately it will continue to be very difficult to make sense of the results of job analysis.

Despite the problems outlined above, job analysis might still produce behavioural dimensions that are valid and reliable. The most systematic use of behavioural dimensions has occurred within managerial assessment centres (MAC's). Consequently, an extensive review has been made of studies into the validity of MAC's to identify behaviours that have been shown to relate to organizational performance. The studies reviewed are listed in Appendix 2. The review of MAC validation studies has shown that with only a few exceptions three types of criterion measure have been used: behavioural based "performance" ratings; global ratings of the performance of the manager as an individual and; indeces of advancement. Since these criteria do not directly

measure the performance of the unit that is the responsibility of the manager, most of the validation studies that have been reviewed were incidental to this research.

One piece of research that has proved germane has been undertaken by Schroder (1989a). Schroder based his work on three studies (the Complexity Theory Studies, The Boyatzis Study, and the Florida Council for Education Management Study) which used measures of group or organizational performance to identify effective managerial behaviours. From an analysis of the results of these studies, Schroder identified eleven "High Performance Managerial Competencies", (HPMC), which he used within a development centre to assess managers and which he has validated in one organization using unit performance measures as the criterion. These four studies are now reviewed in detail as they are fundamental to the model adopted for this thesis.

### 3.4 THE COMPLEXITY THEORY STUDIES

#### 3.4.1 The aims of the studies

One of the main aims of these experimental studies, which were conducted at Princeton University, was to identify the cognitive behaviours used by individuals, when working in teams on complex tasks, which are consistently and significantly related to high levels of team performance.

A second aim of these studies was to identify the environmental variables which influence the cognitive behaviours of individuals working in teams on complex tasks. A third aim was to explore the interaction between environmental, behavioural and performance variables.

#### 3.4.2 The complex tasks

The complexity theory studies (see Schroder et al, 1967) used several simulations to test their hypotheses and cross-validate the results. In these simulations teams of students competed or collaborated with one another. For example, in the Inter-Nation Simulation (INS) seven teams, each responsible for a different nation, controlled the destiny of a seven-nation world. Each team consisted of three individuals who performed different roles (Central Decision Maker, Foreign and Defence Minister and International Organization Delegate). The teams had extensive decision-making powers covering the economy, international trade, domestic and foreign policies of their country. The teams worked together for one run of the simulation which lasted four hours per day on four days. The data was collected from seventeen runs of the INS with different students in each run.

#### 3.4.3 Performance variables

Each simulation had reliable measures of team performance. For example, the performance measures for each of the INS

countries included the amount of trading outside their own block of nations and their economic capability.

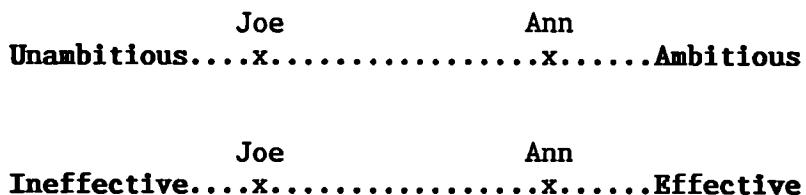
#### 3.4.4 Behaviour variables

The theoretical roots of the cognitive behaviour variables explored by the complexity theory studies can be traced to the Personal Construct Theory of Kelly (1955) as Streufert and Streufert (1978) have described. Complexity theory is concerned with how a person processes information rather than what the information is that is being processed. Streufert and Swezey (1986, p13) make this important distinction in the following way, "Complexity-based approaches are not interested in what the information processed might be. The content of an attitude, for example, would not be of major interest. How an attitude, whatever its content might be, is developed, how contradictory information may modify that attitude, and how the attitude is used in contributing to information input - behaviour - output chains is of interest". Two concepts are critical to the view that complexity theorists have developed about the way human beings process information. These concepts are differentiation and integration.

Streufert and Swezey (1986, p16-17) define differentiation as, "The process of dividing cognitive or conceptual space into two or more orthogonal bipolar dimensions". Like Kelly, therefore, complexity theorists postulate that each person creates bipolar constructs (for example, ambitious - unambitious or effective - ineffective) which structure the

cognitive space of the individual. One individual (say, Alan) will use particular constructs in parallel with one another so that they represent the same dimension of thought; for example, Alan may consider everyone who is unambitious to be ineffective and everyone who is ambitious to be effective:

FIGURE 3.5: ALAN'S COGNITIVE SPACE

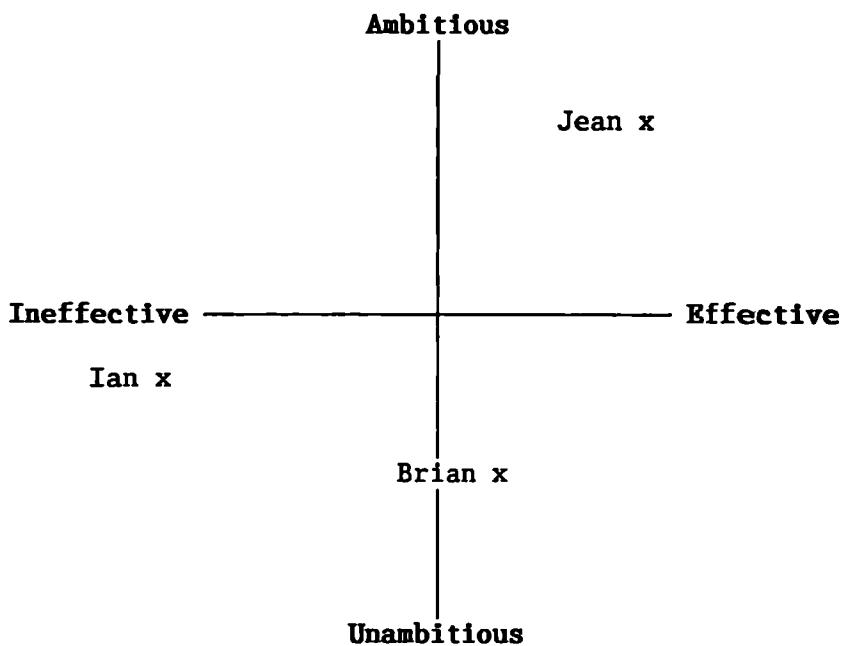


Another individual will use the same constructs independently so that they constitute different dimensions of thought. Michelle, for example, may consider some people to be ambitious and ineffective, others to be ambitious and effective and others to be at unrelated points on the two dimensions (see Figure 3.6).

In complexity theory the level of differentiation of individuals increases as more independent dimensions are used to divide up cognitive space. Furthermore, individuals are considered to vary in the level of differentiation that they use.

Given that an individual has used independent dimensions of thought to give meaning to the information that has been

**FIGURE 3.6: MICHELLE'S COGNITIVE SPACE**



gathered about a specific phenomenon (for example, another person), it is necessary for the individual to relate these dimensions to one another so that an understanding can be achieved and so that options for action can be created and compared. Complexity theorists call the latter process "integration". Individuals are also considered to vary in the way they relate dimensions to one another. At one extreme (low integration) individuals relate dimensions to one another by using rules that are, "In fixed relationship so that the whole process can be reduced to one rule" (Schroder et al 1967, p8). At the other extreme, (flexible integration) the rules are emergent - they are, "In an interdependent relationship; each can influence the other singly and in combination producing new connections and new rule structures" (Schroder et al, 1967, p8). The

researchers at Princeton used and produced a variety of methods (including paper and pencil tests like the Paragraph Completion Test, multidimensional scaling, repertory grid, and behaviour observation) to measure the cognitive processes of individuals (Schroder et al, 1967).

### 3.4.5 Environmental variables

Schroder et al (1967), also hypothesised that environmental complexity is the environmental variable which will have the most profound impact on human information processing because, "Overly simple environments, which fail to present sufficiently diverse and/or numerous dimensional units of information, fail to stimulate the processes of integration - that is, simple cognitive structures are sufficient for coping with such environments. Overly complex environments, which provide excessively diverse and/or numerous dimensional units of information, reduce the generation of integratively complex rules for processing information and also reduce the levels of differentiation and integration involved" (p31).

Three dimensions of environmental complexity were specified: uncertainty (measured by the information load, the information diversity and the rate of information change); noxity or cost (measured by the number, duration and severity of negative consequences of behaviour - eg threats, failures and frustrations) and; eucidy or reward (measured by the degree of interest in the task, the frequency or

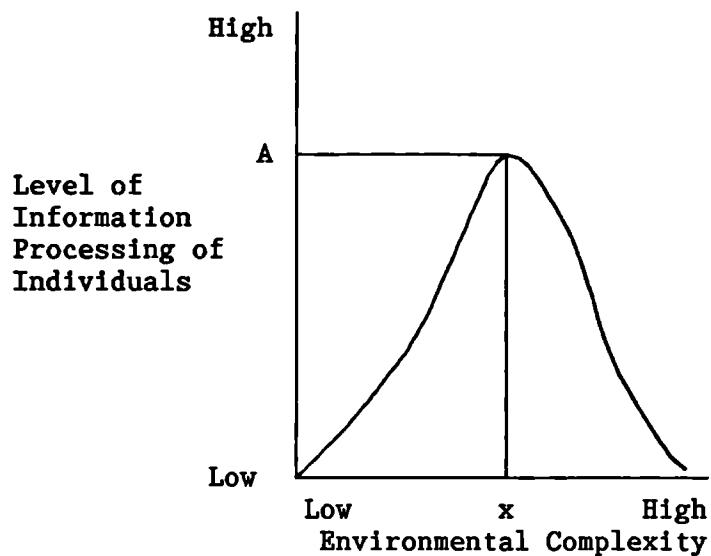
amount of rewards, the frequency of success and the positive utility of the task). By varying one variable (eg uncertainty) whilst holding the other variables constant and then replicating the study with different individuals and simulations, the complexity theorists were able to test their hypotheses and cross-validate their findings in a very systematic way.

### 3.4.6 Results

Five results are of relevance to this study:

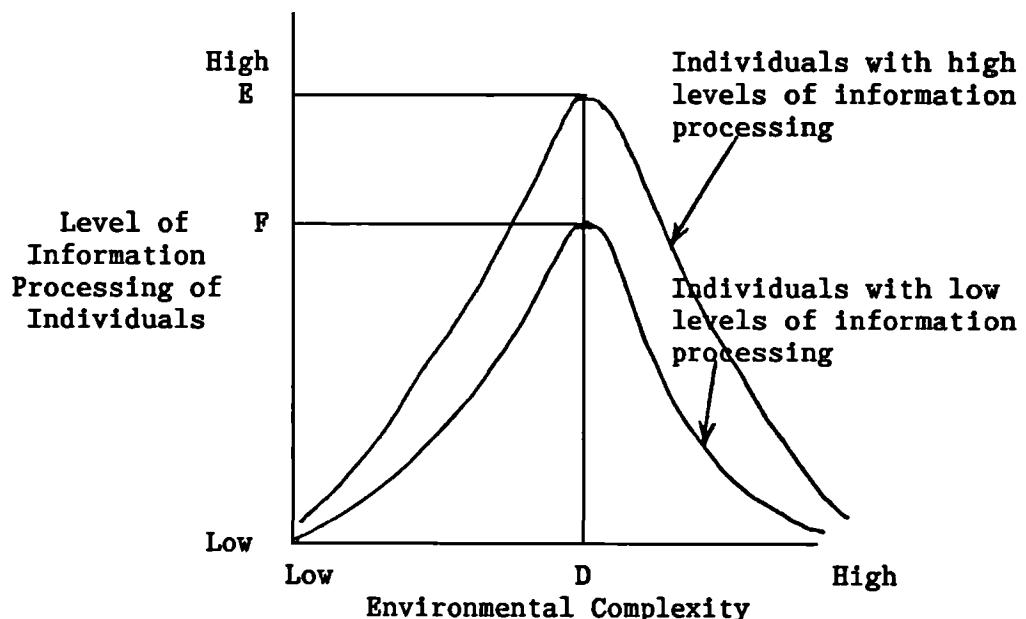
- i) A curvilinear relationship was found between the level of information processing of individuals and environmental complexity - See Figure 3.7. Hence, the information processing of "individuals in general" (individual differences disregarded) was found to reach a maximum level of complexity at an optimal level of environmental complexity (point x in Figure 3.7). Increasing or decreasing environmental complexity (points Z and Y) from the optimal point (x) decreases the level of information processing of individuals.
- ii) Individual differences in the level of information processing were found to exist; the amount of the difference varied depending on the level of environmental complexity (See Figure 3.8). Hence, maximal differences between the level of information processing of individuals was observed over the

**FIGURE 3.7: GENERAL RELATIONSHIP BETWEEN LEVEL OF INFORMATION PROCESSING OF INDIVIDUALS AND ENVIRONMENTAL COMPLEXITY**



From: Streufert and Swezey (1986)

**FIGURE 3.8: RELATIONSHIP BETWEEN ENVIRONMENTAL COMPLEXITY AND INDIVIDUALS WITH HIGH LEVELS OF INFORMATION PROCESSING AND INDIVIDUALS WITH LOW LEVELS OF INFORMATION PROCESSING**



From: Streufert and Swezey (1986)

mid-ranges of environmental complexity whilst at low or high levels of environmental complexity the difference between the level of information processing of individuals declined.

- iii) In simulations where environmental complexity was held within the mid-range, teams consisting of more cognitively complex individuals (i.e., individuals with high levels of information processing) consistently and significantly out-performed teams made up of cognitively simple individuals (i.e., individuals with low levels of information processing).
- iv) In simulations where environmental complexity was held high or low, the difference in the performance of teams composed of cognitively complex individuals and teams composed of cognitively simple individuals was reduced. Furthermore, at low levels of environmental complexity, teams with cognitively simple individuals outperformed teams composed of cognitively complex individuals.
- v) Four information processing skills were used by individuals when environmental complexity was held in the mid-range that were all positively, consistently and significantly related to high levels of team performance. The variables were: *Information*

*Differentiation; Integration; Flexible Integration and; Interpersonal Differentiation.* These variables are described more fully in Appendix 1.

### 3.4.6 Summary

A detailed review of the complexity theory studies at Princeton University has been made which has identified four cognitive behaviour variables which are positively, significantly and consistently related to the performance of teams of senior high school students (controlled for IQ) in moderately complex environments under simulated conditions.

An important question is: will these findings transfer to managers in "real-life" situations? The work of Streufert et al (1988) has shown that the curvilinear relationships between individual and environmental complexity which are reported above do hold up when managers are placed in similar simulations to those used at Princeton. The work of Schroder (1989), provides evidence about the relationship between the cognitive behaviours of managers and organizational performance, this work is reviewed below. The second study used by Schroder to design the HPMC was Boyatzis, research into the competent manager. A review of this research now follows.

### **3.5 THE BOYATZIS STUDY**

#### **3.5.1 Background and key concepts**

The Boyatzis study is grounded in the Job Competency Assessment Method which was developed by David McClelland (1976) at Harvard University and then applied to the world of work by the American consultancy firm McBer and Company. Klemp (1982, p55), has defined a "competency" as, "any attribute of a person that underlies effective performance". Klemp (1978) and Boyatzis (1982) are careful to distinguish between a competency and a "threshold" or "basic" competency. Boyatzis (1982, p23) defines the latter as, "a person's generic knowledge, motive, trait, self-image, social role or skill which is essential to performing a job, but is not causally related to superior performance". Thus, a threshold competency is seen as an individual characteristic that people need in order to occupy a job - it is a prerequisite because without it the person would be unable to achieve even an average level of performance. A "competency" is an individual characteristic which differentiates high from average performers.

These distinctions are important because it means that the analysis of individuals undertaken by McBer and Company was referenced against and guided by performance variables - unlike most job analyses which only identify behaviours needed by all job holders (i.e., threshold competencies).

### 3.5.2 The aims of the Boyatzis study

Over a twelve year period from 1970, McBer and Company undertook a variety of managerial competency studies on a consultancy basis in a wide range of American organizations. McBer and Company used this data in a jointly funded project with the American Management Association. The main purpose of this project was to determine the characteristics of managers which are related to effective performance in a variety of jobs and organizations.

### 3.5.3 The sample

The analysis was based on data that had been gathered on 1009 managers; the composition of the sample is given in Table 3.4. The managers from the public sector that were studied by McBer and Company occupied 21 different types of management job in four organizations that were Federal Departments or Agencies within the United States Government. One organization was a branch of the military, one was involved in foreign relations, one was involved in international trade and, one was involved primarily in aspects of domestic trade. The managers from the private sector occupied 20 management jobs in eight organizations that were on the Fortune 500 list. Boyatzis (1982, p40-41) tells us, "One organization was in the industrial-products business; one was in the consumer goods business; one was in

**TABLE 3.4: THE BOYATZIS STUDY SAMPLE BY SECTOR  
AND MANAGERIAL LEVEL**

<b>Classification</b>	<b>Number of Managers</b>
<b><u>Sector:</u></b>	
Private	462
Public	547
<b>Total</b>	<b>1009</b>
<b><u>Managerial level:</u></b>	
Entry	377
Middle	485
Executive	147
<b>Total</b>	<b>1009</b>

From: Boyatzis (1982).

the high-technology industrial and consumer-products business; one was in the communications business; one was in a variety of industrial and consumer products businesses; and one was in the medical, health-care, and drug business".

### **3.5.4 Performance variables**

Three types of performance data were used in the Boyatzis study as criterion measures. The preferred criteria were

"hard" measures of work output. In several instances, however, such measures were unavailable so the researchers used supervisory and/or peer nominations based on subjective measures of work output and, in some instances, behavioural ratings by supervisors and/or peers. Boyatzis (1982, p44-45) comments, "If direct output measures are not available, then supervisory and/or peer judgements must be used. If these judgements are used, nominations are more effective than ratings..... to maximize confidence in the criterion data, several of these measures should be used whenever possible".

Klemp (1982) explains the process used to select the managers who were included in the study. First, a resource panel was established of people who had held the target job and were now supervising those in the job. The panel members' task was to pool their experiences and ideas to define the performance standards of the job (eg measures of sales, profits, efficiency and quality). These measures were then used to select poor, average and high performing managers for the study. If hard performance data was not available, panel members and job holders were asked to nominate privately outstanding, average and poor job incumbents bearing in mind the performance measures that were thought appropriate. When behaviour ratings were used only those behaviours thought to distinguish high from average performing managers were used as the basis for rating. If nominations or ratings were used, only those individuals who had been consistently described as high,

average or low performing by all assessors were included in the sample for each performance category.

A full breakdown of the measures used in the study is presented in Table 3.5.

**TABLE 3.5: PERFORMANCE MEASURES USED IN THE BOYATZIS STUDY**

Performance Measure	Number of People
Work-Output measure	370
Work-Output measure and Supervisor/Peer nomination	59
Supervisor/Peer nomination	377
Supervisor/Peer ratings	203
<b>Total</b>	<b>1009</b>

From: Boyatzis (1982).

Although some of the performance measures used in the Boyatzis study do not fully meet the requirements specified in chapter two, the measures, when considered in total, are sufficiently well designed and applied to make the study useful.

### 3.5.5 Methods used to collect competency data

Data on the behaviour of the managers were gathered by the administration of a Behavioural Event Interview (BEI). Boyatzis (1982, p50) states, "The BEI is a form of critical-incident interview in which the respondent is asked to describe three incidents in which he or she felt effective in the job..... The interviewer attempts to obtain as accurate an account of the incident as possible by asking probing, yet non-directive, questions and requesting specificity, clarification, and examples whenever possible. The interviewer writes a running documentation of the responses. The write-up is often accompanied by a typed transcript or audiotape of the interview". After a number of BEI's had been undertaken, a "compare and contrast thematic analysis" was used which identified nineteen characteristics that appeared to differentiate between the managers in the three criterion groups. It was then hypothesised that higher scores on these characteristics would be significantly related to higher job performance. A coding system was devised to provide a reliable method of characteristic identification and rating. The BEI's which had been conducted were then coded independently by two raters who did not know the criterion group of the interviewees. Having rated the total sample of managers on the 19 characteristics, tests of significance were made to determine whether any of the nineteen characteristics significantly differentiated the managers based on the performance criterion.

### 3.5.6 Results

The Boyatzis Study found 10 of the 19 characteristics to be skills that are related significantly to higher managerial performance and which therefore meet the definition of being a competency. The remaining characteristics, together with specialised job knowledge, were found to be threshold competencies.

Boyatzis' 10 competencies and 9 threshold competencies are given in Table 3.6; for a detailed description of the 10 competencies see Appendix 1.

**TABLE 3.6: THE COMPETENCIES AND THRESHOLD COMPETENCIES IDENTIFIED BY THE BOYATZIS STUDY**

Competency	Threshold Competency
Efficiency Orientation	Logical thought
Proactivity	Accurate self-assessment
Concern with impact	Positive regard
Diagnostic use of concepts	Developing others
Conceptualization	Spontaneity
Self-confidence	Use of unilateral power
Use of oral presentations	Self-control
Managing group process	Stamina and adaptability
Use of socialised power	Specialised knowledge
Perceptual objectivity	

From: Boyatzis (1982).

The Boyatzis study identified some differences between the public and private sector in the level of demonstration of the competencies. This is summarised in Table 3.7.

**TABLE 3.7: STRENGTH OF COMPETENCY DEMAND BY SECTOR -  
EXPRESSED AS LESS OR MORE DEMAND**

Competency	Sector	
	Public	Private
Efficiency Orientation	Less	More
Proactivity	Less	More
Concern with impact	Less	More
Diagnostic use of concepts	Less	More
Conceptualization	Less	More
Self-confidence	Equal	Equal
Use of oral presentations	Less	More
Managing group process	Less	More
Use of socialised power	Less	More
Perceptual objectivity	Equal	Equal

From: Boyatzis (1982).

Boyatzis (1982) argues these differences are attributable to varying levels of demand for the competencies within the two sectors. Nevertheless, in both sectors the 10 competencies did differentiate significantly between the performance groups.

Boyatzis also identified differences in the level of demonstration of the competencies by managerial job level. These results are presented in Table 3.8; an "x" means that the competency differentiates between high and average performing managers at the level being considered.

**TABLE 3.8: COMPETENCIES DIFFERENTIATING BETWEEN HIGH AND AVERAGE PERFORMING MANAGERS AT THREE MANAGERIAL LEVELS**

Competency	Managerial Level		
	Entry	Middle	Executive
Efficiency Orientation	X	X	X
Proactivity	X	X	X
Concern with impact		X	X
Diagnostic use of concepts	X	X	X
Conceptualization		X	X
Self-confidence		X	X
Use of oral presentations		X	X
Managing group process		X	X
Use of socialised power		X	
Perceptual objectivity	X		X

From: Boyatzis (1982)

### 3.5.7 Summary

The Boyatzis Study is seminal because it uses reasonably good performance measures and behavioural data drawn from a wide range of industrial sectors to identify competencies which relate to superior performance across many economic

sectors. The study is also valuable because of its findings about the influence on competency demand of sector and managerial level. The third study which contributed to the work of Schroder is now reviewed.

### 3.6 THE FLORIDA COUNCIL FOR EDUCATION MANAGEMENT (FCEM) STUDY

#### 3.6.1 The aim of the study

The FCEM study was commissioned as a means of improving the standard of education within the State of Florida by raising the quality of management in public elementary and secondary schools. The study was made by Huff, Lake and Schaalman (1983) on behalf of McBer and Company and was not included in Boyatzis' study. The FCEM study is of particular interest because great care was taken to gather multiple measures of performance so that a sample of high performing and a sample of average performing schools could be drawn in order to determine whether any behavioural differences existed between the principals of the two types of school.

#### 3.6.2 Performance variables

From the early 1970's, the educational attainment of every child in Florida schools in mathematics and communication has been measured using nationally normed tests. Since non-academic circumstances (such as the college education and occupation of parents, minorities represented at the school and the poverty level in the catchment area of the

school) will affect the attainment of pupils, Florida's Department of Education used regression analysis to compute a predicted attainment test score for each school which took into account the likely effect of such circumstances. Using the test results as a performance measure, Huff et al (1983) proceeded to identify as high performing those schools where the actual mean attainment test score (i.e., the mean of all pupils on all tests) was two standard deviations higher than the school's predicted mean score.

This method identified over 50 schools in 23 of Florida's 67 districts. The researchers then proceeded to interview the superintendents of the 23 Districts asking them to identify and rank the top 10% of their schools and the top 10% of their principals. The superintendents did not know the results of the regression analysis. By retaining in the high performing sample only those schools/principals which appeared in both rankings and only those schools where the principal had been in post long enough to have been able to influence the pupils' learning (at least three years), the original sample of over 50 schools was reduced to 17.

Having selected the sample of high performing schools, a sample of 14 average performing schools was chosen from schools whose students were performing at or just below the predicted test score and which had not appeared on either of the superintendents two lists.

### 3.6.3 Competency data collection and analysis

Competency data was gathered by means of a BEI with each principal. The interview transcripts were coded and scored by the method used in the Boyatzis Study. Neither interviewers nor coders had access to performance data. Having done this, significance tests were used to determine any characteristics which differentiated the high from the average performing principals. A sample verification was also performed at this stage whereby each researcher was asked to predict the performance category of the principals she/he had interviewed and, having read the transcripts prepared by the other interviewers, to predict the performance category of these principals. In only 3 of the 31 cases was there any discrepancy between the researcher's judgements and the performance category of the principals as determined by the criterion measures.

### 3.6.4 Results

Eight competencies were found to differentiate significantly the high from the average performing principals: *Sense of Control; Monitoring; Ability to Recognize Patterns; Perceptual Objectivity; Analytical Ability; Persuasiveness; Commitment to Quality and; Focused Involvement in Change.* For a detailed description of these competencies see Appendix 1.

### 3.7 SCHRODER'S STUDY INTO HIGH PERFORMANCE MANAGERIAL

#### COMPETENCIES

##### 3.7.1 The aims of the study

Schroder's primary interest has been the development of managers. He realized at the begining of his work with managers that an accurate awareness of strengths and limitations provides the foundation for development. He therefore made a review of the literature to identify managerial behaviour variables that have been shown to relate to work unit performance. Schroder identified the Boyatzis and FCEM studies to add to his research at Princeton. Having identified these studies, Schroder synthesized the results to create a set of valid and reliable competencies. The sections below explain the main stages of Schroder's work.

##### 3.7.2 Content analysis of behavioural variables

Schroder compared and contrasted the competencies identified by the Boyatzis, FCEM and Complexity Theory Studies in order to identify common unidimensional constructs (i.e., single constructs which do not overlap with one another). By using this process, Schroder specified eleven, unidimensional High Performance Managerial Competencies (HPMC), all of which had been shown to be valid in terms of performance measures:

*Information Search, Concept Formation, Conceptual*

*Flexibility, Interpersonal Search, Managing Interaction, Developmental Orientation, Impact, Self Confidence, Presentation, Proactive Orientation and Achievement*

**Orientation.** The relationship between the HPMC and the competencies identified by the other studies that have been reviewed are presented in Appendix 1.

### **3.7.3 Behavioural indicators and rating scales**

To achieve inter-rater reliabilities of at least 0.70 in research based on the observation of behaviour, each construct must be operationalized through behavioural indicators so that observed behaviour can be accurately classified as an example of the relevant construct.

Schroder's next step, therefore, was to devise behavioural indicators for each of the eleven HPMC's; these are presented in Appendix 3. Studies by Schroder (1989a) have shown that trained observers are able to measure each of the HPMC with an inter-rater reliability of 0.85. Once observed behaviour has been accurately classified it has to be numerically rated. To do this, Schroder developed a general model for competency rating scales (see Appendix 4). Then, he devised a rating scale for each competency (see Appendix 5).

### **3.7.4 Assessment exercises**

To be able to make competency ratings of managers, Schroder designed four exercises to accurately represent different

managerial situations. These exercises were an in tray, a one-to-one analytic exercise, a collaborative group exercise and a competitive group exercise. The exercises were designed to ensure that they demand the use of each of the eleven competencies by participants.

### 3.7.5 Validation of the HPMC's

Schroder's validation study used data gathered on 58 middle managers from a deregulated utility company. Choosing individuals from a single company helped to avoid the variance that can be caused in cross-organizational studies by different environmental circumstances and performance measurement standards. The managers had been selected to undertake the managerial assessment and development process by their Vice Presidents and the Director of Human Resources of the company based on their the potential to take more responsibility in the deregulated conditions. Performance data was gathered from two senior Vice Presidents in the company whose responsibilities ensured that they were well informed about the effectiveness of each unit in the organization. Sources of performance information regularly available to these executives included ratios of productivity, customer feedback, surveys of work unit climate and communications. The two senior VP's used a five point scale to rate the overall performance of the work units run by the 58 managers who had attended the assessment centre. The raters were specifically instructed to assess the performance of each manager's work unit not the

performance of the manager as an individual. The two VP's ratings were made independently of one another. The performance ratings of the two VP's correlated .75, thus showing a high level of reliability.

Schroder then correlated the average of the competency ratings across all four exercises for each manager with the average of the two performance ratings. The results of this analysis are given in Table 3.9.

TABLE 3.9: CORRELATION BETWEEN ASSESSMENT CENTRE RATINGS  
OF THE HPMC AND WORK UNIT PERFORMANCE MEASURES IN  
SCHRODER'S VALIDATION STUDY

Information Search	.43**
Concept Formation	.30*
Conceptual Flexibility	.40**
Interpersonal Search	.30*
Managing Interaction	.37**
Developmental Orientation	.40**
Impact	.35**
Self-Confidence	.12
Presentation	.24
Proactive Orientation	.45**
Achievement Orientation	.34**

\* p = 0.05  
\*\* p = 0.01

From: Schroder (1989a)

Table 3.9 shows that all of the HPMC, except *Self-Confidence* and *Presentation*, were correlated significantly with the criterion measure. With regard to *Self Confidence* and *Presentation*, Schroder (1989a, p97-99) comments, "Managers in the sample were given high scores on these two competencies. Such homogeneity of the variance could attenuate observed correlations with performance .... It would appear that either the behavioural indicators and the competency rating scales are invalid, or the competencies as defined are not significantly related to superior performance". Discussions with Schroder led to modifications being made to the competency rating scales for *Self Confidence* and *Presentation* prior to data analysis in this study. The modified scales are shown in Appendix 6. The modifications justify the inclusion in this study of self confidence and presentation alongside the nine other HPMC that were shown to be valid in Schroder's study.

### 3.8 SUMMARY OF THE REVIEW INTO BEHAVIOUR VARIABLES

The aim of this part of the literature review has been to identify behaviour variables which have been shown to be positively and significantly related to organizational performance. Schroder's study - which owes much to the FCEM study, the Boyatzis study and the Complexity Theory studies - was based on a wide range of behaviours. The leadership studies reviewed focussed on a narrower range of behaviours - those involved in the relationship between managers and

subordinates. Nevertheless, as Appendix 1 shows, there is much consistency in the behaviours identified across the different studies. When organizational performance is used as the criterion for identifying behaviour, much of the inconsistency and confusion in the literature disappears. The consistency shown by the data in Appendix 1 indicates that the High Performance Managerial Competencies can be used in this study on the grounds that they embody the behaviours which research to date has shown to be related positively and significantly to organizational performance. An added advantage of the HPMC is that they can be measured with a high level of reliability by individuals who have attended Schroder's assessor training course.

## CHAPTER FOUR

### ENVIRONMENTAL VARIABLES

#### 4.1 INTRODUCTION

The general model of managerial effectiveness postulates that situational variables influence the type of behaviour that managers need to use in order to make their organizations effective. A review has been made of research into the work context of managers so that the situational variables which influence critically the behaviour of managers can be identified. It has been useful conceptually to divide the work context of managers into three levels: the managerial job, the wider organization and the environment external to the organization. The manager's immediate context is provided by his/her job so it can be suggested that organizational and environmental variables influence the behaviour of managers through the design of their jobs. Consequently, the starting point for this review has been the design of managerial jobs.

Research by Burns (1957), Hanika (1963), Hinrichs (1976) and Horne and Lupton (1965), using the diary method has shown that managers' perceptions of the way they use their time vary considerably from how their time is actually used. This indicates that the most accurate accounts of the design of managerial jobs and the influence on them of wider contextual variables are to be found in "time allocation" studies that have used a method which records events as they

happen. Three methods share this characteristic - observation, work sampling and diary. Therefore, a review has been made of time allocation studies using these three methods to identify key job variables, to discover what these variables tell us about the design of managerial jobs and to identify how the design of these jobs and managerial behaviour is influenced by wider contextual variables.

In the first section, the key job variables that have been researched by time allocation studies are described and the picture that these studies provide of managerial jobs is presented. Second, the organizational and environmental variables which have been found by time allocation studies to influence significantly the design of managerial jobs are specified. Third, the impact of these contextual variables on the design of managerial jobs and on managerial behaviour is described. Finally, the implications of the results presented in this chapter to the study being undertaken are stated.

## 4.2 MANAGERIAL JOB VARIABLES

### 4.2.1 Introduction

Studies of managerial jobs using observation, diary and work sampling methods have explored seven key managerial job variables: the tasks managers work on; the behaviours managers use; the types of social situation managers encounter; the people managers spend their time with; the

physical location managerial of work; the pattern of work and; the workload of managers. The results of the research into these variables are described below.

#### 4.2.2 The "tasks" that managers work on

Mintzberg (1973, p21-22) distinguishes between the *content* and the *characteristics* of managerial work. He states, "A researcher studying the job of the manager may wish to know such things as where managers work, with whom they do so, how long they work, what media they use (telephone, for example). Answers to questions like these give the *characteristics* of managerial work. Or, the researcher may wish to know what managers do in their work - that is, what activities they carry out and why. Answers to these questions describe the *content* of managerial work". The activities that managers carry out can be disaggregated into more specific "tasks". For example, Gulick and Urwick (1937) inform us that one activity carried out by managers is "staffing" and they suggest that this consists of tasks such as training staff and maintaining favourable conditions of work. Thus, each activity can be regarded as a cluster of similar tasks; that is, a unique dimension of work content. Researchers have used principally two methods to classify tasks: induction and deduction.

Authors such as Fayol (1916), Gulick and Urwick (1937), Dale (1960), Drucker (1954) Barnard (1966) and MacKenzie (1969) have classified tasks by the use of inductive reasoning to

produce dimensions of work content which they have called the "functions of management". They suggest that these functions incorporate the tasks which managers need to carry out in order to keep their organization functioning. Examples of the functions of management are provided in Table 4.1.

**TABLE 4.1: EXAMPLES OF THE FUNCTIONS OF MANAGEMENT**

FAYOL (1916)	GULICK (1937)	MACKENZIE (1969)
Planning	Planning	Plan
Organizing	Organizing	Organize
Co-ordinating	Co-ordinating	Staff
Commanding	Directing	Direct
Controlling	Staffing Reporting Budgeting	Control

Deductive methods of analysis using questionnaires and factor analysis have been employed by Hemphill (1959), Prien (1963), Mahoney, Jerdee and Carroll (1965), Katsell, Barrett, Vann and Hogan (1968), Wofford (1970), and Tornow and Pinto (1976).

As stated in chapter three, a problem with many of the deductive analyses of managerial tasks is that they do not distinguish clearly between tasks and behaviour so the outcomes of this research have to be treated with some caution. Two examples of this approach are shown in Table 4.2.

Researchers who have used observation, diary and work sampling as their methodology have also explored the activities that managers undertake. In their study, Dubin and Spray (1964) examined how managers at three different

**TABLE 4.2: MANAGERIAL ACTIVITIES IDENTIFIED BY  
QUESTIONNAIRE STUDIES**

HEMPHILL (1959)	TORNOW AND PINTO (1976)
<ul style="list-style-type: none"> <li>*Providing a staff service in non-operational areas</li> <li>*Supervising work</li> <li>*Providing internal business control</li> <li>*Defining technical aspects of products and markets</li> <li>*Participating in human, community and social affairs</li> <li>*Initiating long-range planning</li> <li>*Exercising broad power and authority</li> <li>*Fostering business regulation</li> <li>*Demanding behaviour</li> <li>*Preserving assets</li> </ul>	<ul style="list-style-type: none"> <li>*Product, marketing, and financial strategy planning</li> <li>*Co-ordination of other units</li> <li>*Internal business control</li> <li>*Public and customer relations</li> <li>*Advanced consulting</li> <li>*Autonomy of action</li> <li>*Approval of financial commitments</li> <li>*Staff service</li> <li>*Supervision</li> <li>*Complexity and stress</li> <li>*Advanced financial responsibility</li> <li>*Broad personnel responsibility</li> </ul>

levels in five organizations divided their time across nine functional areas (finance\accounting, production, sales, personnel, public relations, customer relations, research and development and organization planning). They reported that, "One relationship does emerge: lower level executives are more likely than upper level executives in the same organization to concentrate their time on a single activity. It is also notable that the Manufacturing Senior Executive spent the highest proportion of his time handling two or more activities simultaneously. The junior

executives were not only functionally specialized in terms of department but also specialised according to the activities they performed inside the departments" (p101-102). These findings have been confirmed by Burns (1957), Mahoney et al (1965), and Hinrichs (1976). At executive level, Mintzberg (1973) identified ten "roles" which can be regarded as groups of activities; these are set out in Table 4.3.

Kotter (1982) has proposed more recently that two activities are critical to the work of general managers: agenda setting and network building. With regard to agenda setting, Kotter (1982, p60) comments, "The GM's always started their jobs with some knowledge of the businesses involved and some sense of what needed to be done with these businesses, but rarely did they have a very clear agenda in mind. Rarely did they have many goals, strategies and plans for their business and organizations. But during the first six months to a year, they usually focussed much of their activity on developing just an agenda; later they continued to update their agendas, but in a less time-consuming process".

Discussing network building Kotter (1982, p67) states, "In addition to agenda setting, the GM's all allocated significant time and effort early in their jobs to developing a network of cooperative relationships to and among those people they felt were actually needed to accomplish their emerging agendas. Even after the first six months, this activity still took up considerable time, but generally, it was most intense during the first months in

**TABLE 4.3: MINTZBERG'S TEN EXECUTIVE "ROLES"**

ROLE	DESCRIPTION
<b><u>Interpersonal</u></b>	
<b>Figurehead</b>	Symbolic head; obliged to perform a number of routine duties of a legal or social nature.
<b>Leader</b>	Responsible for the motivation and activation of subordinates; responsible for staffing, training, and associated duties.
<b>Liaison</b>	Maintains self-developed network of outside contacts and informers who provide favours and information.
<b><u>Informational</u></b>	
<b>Monitor</b>	Seeks and receives wide variety of special information (much of it current) to develop thorough understanding of organization and environment; emerges as nerve centre of internal and external information of the organization.
<b>Disseminator</b>	Transmits information received from outsiders or from other subordinates to members of the organization; some information factual, some involving interpretation and integration of diverse value positions of organizational influencers.
<b>Spokesman</b>	Transmits information to outsiders on organization's plans, policies, actions, results, etc.; serves as expert on organization's industry.
<b><u>Decisional</u></b>	
<b>Entrepreneur</b>	Searches organization and its environment for opportunities and initiates "improvement projects" to bring about change; supervises design of certain projects as well.
<b>Disturbance Handler</b>	Responsible for corrective action when organization faces important, unexpected disturbances.
<b>Resource Allocator</b>	Responsible for the allocation of organizational resources of all kinds - in effect the making or approval of all significant organizational decisions.
<b>Negotiator</b>	Responsible for representing the organization at major negotiations.

From: Mintzberg (1973).

the job. After that, attention tended to shift toward using the networks both to implement and to help update the agendas".

In order to set agendas, build networks and carry out other activities, managers must use behaviour. Research into the behaviours used by managers that has been undertaken by researchers using observation, diary study and activity sampling in field settings is reviewed in the next section.

#### 4.2.3 Managerial behaviour

Studies into the time utilization of managers have explored how much time managers spend using different types of behaviour. Information processing (gathering, understanding, and evaluating information) emerges as the type of behaviour consuming most time. Carlson (1951) found this took 55% of total time, Brewer and Tomlinson (1964) 42%, Horne and Lupton (1965) 63%, and Mintzberg (1973) 40%. No other type of behaviour was found to take more than 20% of managers time in these studies. Although studies of managerial work using observation, diary and activity sampling have provided only limited insights into the behaviours used by managers, they have given a much greater appreciation of the types of social situation that managers carry out their tasks within. The results in this area are presented below.

#### 4.2.4 The types of social situation that managers encounter

One of the strengths of the observation, diary and work sampling studies is that they provide an analysis of the social contacts of managers. Table 4.4 shows what these studies have discovered about the percentage of time spent by managers in different types of social situation. In every study, with one exception, managers spent most time in social situations based on verbal interaction; this was also found by Burns (1957). Furthermore, the small percentage of time spent telephoning means that verbal contact primarily involves face-to-face interaction with other people. Table 4.4 also shows that there is a slight tendency for the verbal and interactive nature of managerial work to increase with managerial level. Another important aspect of managerial work is the kind of people that managers spent their time with in the social situations they encounter. Time studies have extended knowledge in this area and the results are presented below.

#### 4.2.5 The people with whom managers spend their time

Table 4.5 shows the results obtained by researchers who have studied how managers distribute their time to different types of people. Stewart (1967), Lawler et al (1968), Dubin and Spray (1964), Kelly (1964), all report that the managers in their studies spent about 30 percent of their time alone. Table 4.5 shows the importance of the manager/subordinate relationship and it highlights the

**TABLE 4.4: PERCENTAGE OF TIME SPENT BY MANAGERS IN DIFFERENT SOCIAL SITUATIONS**

STUDY	VERBAL					WRITTEN			Overall Total (6+7+8)
	(1) Scheduled Meetings	(2) Unscheduled Meeting	(3) All Meetings (1+2)	(4) Telephone	(5) Tours/ Inspection	(6) Total Verbal (3+4+5)	(7) Desk Work	(8) Others	
<b>SENIOR MANAGERS</b>									
KOTTER (1982)	-	-	-	-	-	76	24	-	100
MINTZBERG (1973)	59	10	69	6	3	78	22	-	100
CHORAN (1969)	21	15	36	17	12	65	35	-	100
COPEMAN (1963)	28	23	51	4.5	5	60.5	39.5	-	100
LUIJK (1963)	62	9	71	15	-	86	14	-	100
CARLSON (1951)	-	-	87	-	-	87	10	3	100
<b>MIDDLE MANAGERS</b>									
LAWRENCE (1984)	30	18	48	7	17	72	11	17	100
LAWLER ET AL (1968)	-	-	73	14	-	87	11	2	100
STEWART (1967)	11	37	48	6	6	60	36	4	100
HORNE & LUPTON (1965)	10	44	54	9	11	74	26	-	100
BREWER & TOMLINSON (1964)	37	14	51	6	-	57	30	13	100
DUBIN & SPRAY (1964)	-	-	62	6	-	68	32	-	100
COPEMAN (1963)	14	30.5	44.5	6	2.5	53	47	-	100
<b>FIRST LINE MANAGERS</b>									
HINRICHES (1976)	32	26	58	4	-	62	38	-	100
KELLY (1964)	-	-	-	-	-	67	33	-	100
DUBIN & SPRAY (1964)	-	-	41	5	-	46	54	-	100

**TABLE 4.5: PERCENTAGE OF TIME SPENT BY MANAGERS WITH PEOPLE**

STUDY	INTERNAL			EXTERNAL	TOTAL
	Subordinates	Peers	Boss		
<b>SENIOR MANAGERS</b>					
MINTZBERG (1973)	48	5	7	60	100
CHORAN (1969)	56	-	-	37	100
COPEMAN (1963)	43.5	16	1.5	61	100
<b>MIDDLE MANAGERS</b>					
STEWART (1967)	41	32	12	92	100
DUBIN AND SPRAY (1964)	24	20	10	54	100
COPEMAN (1963)	30	20	14.5	64.5	100
<b>FIRST LINE MANAGERS</b>					
DUBIN AND SPRAY (1964)	49	27	15	91	100
KELLY (1964)	50	30	20	-	-
JASINSKI (1956)	46	44	10	100	100

growth in importance of external contacts beyond first line management/supervisor level. Dubin and Spray (1964, p105) state, "The data suggest, then, that top executives and those employed in client-centred industries will be engaged more frequently in contacts with people outside the organization than will their subordinates". In this regard, Stewart (1967, p66) comments, "Amongst the ten managers who spent 20 per cent or more of their time with people outside the company, other than with customers and suppliers, were those whose job was principally concerned with the company's external image..... It also included those general managers who took part in many activities outside their company, such as committees for their industry and meetings of local management bodies". In addition, Table 4.5 shows the importance of peer relationships at first and middle management levels. On this issue, Burns (1967, p59) comments, "There was very strong evidence from this study to suggest that subordinate managers derived a great deal of the information they needed for guiding their own actions from colleagues at or near their own level, and depended far less on decisions, instructions and information passed down from their immediate superior". The decline in peer and boss relationships and growth in external relationships at executive level is clearly evident from Table 4.5. This suggests that managers ascending to senior levels go through a phase when peer networks reduce in importance whilst the building and development of external networks becomes critical. Kotter (1982, p67) gives an idea of the importance and complexity of such networks, "The networks

developed by the GMs often included hundreds or thousands of individuals. The typical GM network was so large that it defied my efforts to draw one in any detail". Another important aspect of managerial work is its physical location. This variable has also been researched by time utilization studies as the next section describes.

#### 4.2.6 The physical location of work

Table 4.6 shows the results of studies which have analysed the time spent by managers in different locations. The results indicate that managers spend most time in their own office; however, this declines rapidly with level of managerial job because external demands pull executives away from their organization. This trend has been pointed out by Horne and Lupton (1965). Given that managers undertake a wide variety of tasks with many different kinds of people located in different places, it might be expected that there is little regularity in the work of managers so that they are hopping from one task, social situation and location to another. This phenomenon, known as work pattern, has also been explored by some studies and the findings are reported in the next section.

#### 4.2.7 Work pattern

Stewart (1967, p70) defines work pattern as, "The way in which the day is divided up between long and short activities, the duration of the different activities and the

**TABLE 4.6: PERCENTAGE OF TIME SPENT BY MANAGERS IN DIFFERENT LOCATIONS**

STUDY	INTERNAL					EXTERNAL	TOTAL
	Own Office	Subordinates Office	Peers' Office	Boss' Office	Conference/ Meeting Room		
<b>SENIOR MANAGERS</b>							
MINTZBERG (1973)	39	8	-	-	14	1	62
CARLSON (1957)	35	1	-	-	20	-	56
<b>MIDDLE MANAGERS</b>							
STEWART (1967)	51	-	-	-	-	32	83
HORNE AND LUPTON (1965)	52	-	-	-	-	33	85
						17	100
						15	100

number of interruptions". Stewart (1967) used three indices of "fragmentation" to analyse the work pattern of managerial jobs. The first was, "The number of periods spent alone that are long enough to provide time for the manager to concentrate on a problem" (p70). The second was "The number of fleeting contacts, that is, conversations of under five minutes, either by telephone or face to face" (p70). The third was, "The number of diary entries" (p70). Stewart found that managerial work was very fragmentated. On average during each day managers only had one period of half an hour to themselves that was broken just by fleeting contacts and one period of half an hour that was unbroken by any social contacts. For the rest of the day, managers were interacting with a variety of people in short episodes. Mintzberg (1973), Carlson (1981) and Kotter (1982), also found managerial work to be fragmented, brief and varied. In terms of the influence of managerial job level on work pattern McCall, Morrison and Hannan (1978, p8) comment that, "Executive decision-making patterns in particular appear to be more fragmented than those at lower management levels". The time utilization studies have shown also how heavy is the workload of managers. These results are presented and discussed in the next section.

#### 4.2.8 Workload

Observation and diary studies have shown that managers tend to work long hours. Carlson (1951) drew particular attention to the heavy workload of the chief executives in

his sample. He estimated that "normal" week days lasted 8 1/2 - 11 1/2 hours although work was also taken home and done at weekends. Carlson (1957, p75) suggested the long hours had many unpleasant effects, "It means that their opportunities to be with their families or to see their private friends are severely curtailed, and it entails travelling in night trains and evenings and weekends spent away from home. In some cases it also causes a certain intellectual isolation". Carlson's findings were confirmed by Mintzberg (1972) and by Kotter (1982) who found that the average GM worked a 60 hour week. McCall et al (1978) concluded that working hours are greater at higher levels of management.

#### 4.2.9 General findings

In addition to exploring the seven managerial job variables, researchers have drawn wider conclusions about the nature of managerial work by linking the variables together. The first conclusion is that managerial tasks are interconnected and iterative. Marples (1967, p287) has given an eloquent account of this, "The manager's job can usefully be pictured as a stranded rope made of fibres of different lengths - where length represents time - each fibre coming to the surface one or more times in observable "episodes" and representing a single issue. The higher the level of manager the longer the average length of the fibre, the more intertwined the issues become, and the greater the number of episodes per issue. A prime managerial skill may be the

capacity to keep a number of issues in play over a large number of episodes and long periods of time".

The second conclusion is that managerial jobs are a mixture of routine and innovation. Marple's (1968, p202) research again highlights this feature, "Managers are required on the one hand to inculcate a system of working on the part of those in their command and to establish and reinforce adherence to successful routine. On the other hand, they must have a system for reviewing the way ahead, for setting new courses and for changing the rules and practices so carefully installed". Kanter (1985) has confirmed Marples' findings.

Third, managerial jobs are regarded as complex - especially at executive level. As Kotter (1982, p9) explains, "Complexity is without question the overwhelming issue here. The data show a complexity which often makes managerial textbook concepts seem woefully inadequate. They also show a level of complexity which even the general managers themselves had difficulty consciously understanding".

Finally, it has been concluded that managers have little time for reflective thought despite the complexity, time spent on information processing and the interconnected, iterative nature of tasks. The fragmented interaction that managers have with other people leaves them little time to sit down on their own and think things through. Thus,

Carlson (1951, p74) comments, "Since the majority of the chief executives never had enough time undisturbed by visitors and telephone calls while at their offices, they had to bring a considerable amount of work home with them ... Some executives mentioned that they also had to do all dictation and writing which needed real concentration at home".

#### 4.2.10 A summary of the findings about managerial jobs

The observation, diary and work sampling methods provide the most accurate means of establishing how managers use their time. Researchers using these methods have analyzed seven managerial job variables and have drawn more general conclusions about managerial jobs. The results of the studies that have been made show: (a) Information processing consumes more managerial time than any other kind of behaviour; (b) Verbal communication is used far more than written communication; (c) Verbal communication involves mainly face to face interaction with other people rather than telephone contact; (d) Managers tend to spend far more time with subordinates than any other group of people and more time with peers than with bosses; (e) Managers spend most time in their own office and within their own organization; (f) Managerial work is fragmented, varied and brief; (g) Workload is high; (h) Managerial tasks are iterative and interconnected; (i) Managerial jobs are a

mixture of routine and innovation; (j) Managerial jobs are complex and; (k) Managers have little time for reflective thought.

The studies reviewed have explored how the managerial job variables are influenced by organizational and environmental variables. The wider contextual variables which have been shown to influence substantially the design of managerial jobs are now discussed.

#### 4.3 ORGANIZATIONAL AND ENVIRONMENTAL VARIABLES THAT INFLUENCE MANAGERIAL JOBS

##### 4.3.1 Introduction

Researchers using observation, work sampling and the diary method have been able to identify two variables at the organizational and environmental level which have a significant influence on the design of managerial jobs. These variables are the level of the job in the managerial hierarchy and the rate of change of the external environment. The effects that each of these variables has on the design of managerial jobs and on the managerial behaviours that are thought to enhance organizational effectiveness are presented now.

#### **4.3.2 Level of managerial job**

The nature of managerial jobs changes as their level in the organizational hierarchy increases. Replicated findings show that more senior jobs are:

- (a) More general in the sense that managers spend less time on a single function and deal with issues that require two or more functions to be handled simultaneously; such issues are more interconnected and require a longer process of reiteration to achieve resolution. (Burns, 1957; Dubin and Spray 1964; Mahoney et al, 1965; Marples, 1967 and; Hinrichs (1976).
- (b) More verbal in orientation. (See the studies presented in Table 4.4).
- (c) Involve more external contact and less contact with peers and bosses. Representation and image tasks therefore increase in importance. (See the studies presented in Table 4.5).
- (d) Involve substantial contact with subordinates. (See the studies presented in Table 4.5).
- (e) Involve managers spending less time in their own office and more time outside their own organization. (See the studies presented in Table 4.6).

- (f) Less fragmented. (McCall et al, 1978).
- (g) More demanding of executives' time and more disruptive to personal and family life. (McCall et al, 1978)
- (h) More complex. (Marples, 1967 and; Kotter, 1982)

From this description of the design of senior managerial jobs, inferences can be made about the behaviours that become increasingly demanded of managers as they move up the organizational hierarchy:

Cognitive Behaviour. It can be suggested that managers increasingly need cognitive skills which enable them to gather a large amount of diverse information about issues that are emergent and interconnected (*Information Search*). The interconnected nature of such tasks will require managers to recognize these connections (*Concept Formation*). The complexity of the networks of executives indicates that many individuals and constituencies with different perspectives and interests will be involved in issues so that it is important for executives to be open to these perspectives when coming to decisions (*Conceptual Flexibility*). Furthermore, the cross-functional nature of executive level issues implies that executives must be able to hold different functional perspectives in mind, weigh them up and integrate them prior to making decisions (*Conceptual Flexibility*).

Interpersonal Behaviour. The considerable time spent with subordinates indicates that the effectiveness of managers at all levels is dependent on the productivity of their subordinates. Consequently, the skills identified by the leadership studies in the USA are likely to be critically important. (*Interpersonal Search, Managing Interaction, Developmental Orientation, Proactive Orientation and Achievement Orientation*). Furthermore, the increasing importance of external contacts and of image and representational activities implies a growing need for *Impact, Presentation and Self Confidence*.

The growth in importance of cognitive and interpersonal skills with managerial level and the decline in importance of technical skills has been noted by Katz and Kahn (1978). One exception to this general pattern needs to be noted. This stems from the work of Thomason (1967) who has pointed out that in his study a few technical/functional managers did exist at senior levels alongside a greater number of general managers to oversee the work of those technical/functional areas that were critical to the success of the organization. Individuals in such jobs may rely more on technical skills than on the "general management" skills that have been described.

#### 4.3.3 Environmental rate of change

In his second diary study, which was based on eight manufacturing firms, Burns (1957) made an analysis of his

data according to the rate of change in the external environment. He found that, "Generally speaking, the faster the rate of change, the more time is spent by managers in talking with each other ... (so that) ... the forms of communication appropriate to relatively stable undertakings can follow the precise and prescribed patterns and paths appropriate to the passing of routine schedules, memoranda and other paper, but that as necessary information becomes less easily identified, less predictable in source and technical nature, individuals are forced to interact with more people even randomly, and to communicate immediately in conversation, so that information can be exchanged, so that its correct reception can be verified by cues proffered in ordinary social intercourse, so that the job of interpretation and further transmission can be done dialectically" (p56). Hence, Burns' study emphasizes the need for *Information Search*, *Interpersonal Search*, *Concept Formation* and *Conceptual Flexibility* as the rate of environmental change increases. Burns also commented that in more dynamic environments, "The organizational structure is modified from the command hierarchy, in which omniscience is ascribed to the head of the organization (from whom derive the definition of general and individual tasks, prescribed functions, kinds of information to be transmitted and paths of communications) and becomes a much more organic form of co-operative activity, with each executive role interacting almost autonomously with its organizational environment, and determining task, method, appropriate information

and paths of communication by direct exploration, contact and conflict". Burns' study suggests, therefore, that the demand for *Managing Interaction* increases as the environment becomes more dynamic. More recently, the accuracy of Burn's findings has been confirmed by the work of Kanter (1985) who found that for organizations to succeed in changing environments, their managers must exhibit, "The willingness to move beyond received wisdom, to combine ideas from unconnected sources" (p27) (i.e., *Concept Formation*) and ensure that, "Multiple perspectives will be taken into account in decisions" (p28) (i.e., *Conceptual Flexibility*) as well as create, "Mechanisms for exchange of information and new ideas across organizational boundaries" (p28) (i.e., *Information Search*). Besides these behaviours, Kanter argues that managers must, "Listen to a stream of communication from superiors, peers, subordinates, users or customers" (p217) (i.e., *Interpersonal Search*) and use, "Team building - including the creation of formal task forces or committees, frequent staff meetings," (p237) (i.e., *Managing Interaction*) as well as "Empower subordinates involve them and give them latitude" (p237) (i.e., *Developmental Orientation*). Furthermore, Kanter argues that managers must, "Persuade others and build alliances" (i.e., *Impact*) (p221) and do, "Punchy presentations with pictures and graphs and charts" (p220) (i.e., *Presentation*). Finally, she asserts that managers must work, "Across boundaries of work units, be the "prime mover's or "conductor" (p229) (i.e., *Proactive*

*Orientation) and, they must, "Measure themselves not by the standards of the past (how far they have come) but by visions of the future (how far they have yet to go) and set tough standards" (p27-8) (i.e., *Achievement Orientation*).*

In summary, the research of Burns (1957) and Kanter (1985) indicates that successful organizations experiencing rapid rates of environmental change tend to have more "organic" structures and that these circumstances influence the design of managerial jobs so that they demand highly the use of the HPMC by managers.

#### 4.4 CONCLUSIONS

A review has been made of studies into the nature of managerial work which has identified seven key job variables and which has shown that these variables are influenced significantly by managerial job level and by the rate of environmental change. It has been shown that at higher managerial job levels, the use of the HPMC by managers becomes more critical. This finding is supported by the research of Boyatzis (1982) who found that the demand for competency increases with job level - see Table 3.8. A second finding is that in more dynamic environments the demand for the HPMC increases. These findings are supported, in so far as the cognitive competencies are concerned, by the experimental studies made by Schroder et al (1967) at Princeton.

**These results mean that managerial job level and the rate of environmental change can be used in this study as the key environmental variables that influence managerial behaviour.**

## CHAPTER FIVE

### INDIVIDUAL VARIABLES

#### 5.1 INTRODUCTION

Three types of individual variable are thought to influence managerial behaviour. Firstly, there are the individual characteristics which underlie a person's *maximal performance* (see Cronbach, 1970) - that is, how well the person can perform a task at his/her best. In this regard, psychologists such as Binet (see Binet and Simon, 1905) first studied intelligence - the general mental capacity of the individual. This work resulted in tests measuring primarily verbal ability and to a lesser extent numerical and abstract ability. Following the widespread use of intelligence tests in the 1920's, it became evident that an individual's performance on different parts of such tests varies markedly. This led to the concept of different aptitudes which together constitute intelligence.

Statistical analyses by Spearman (1904, 1927), Kelley (1928) and Thurstone (1938, 1947) of the interrelations of the scores obtained by individuals on different tests supported the concept of multiple aptitudes. As Anastasi (1982, p14) has commented, "One of the chief practical outcomes of factor analysis was the development of *multiple aptitude batteries*. These batteries are designed to provide a measure of the individual's standing in each of a number of traits. In place of a total score or IQ, a separate score

is obtained for such traits as verbal comprehension, numerical aptitude, spatial visualization, arithmetic reasoning, and perceptual speed". Much confusion exists in the literature on the distinction between aptitudes and abilities as Dunnette (1976) makes clear. Throughout this work the word "ability" is used to encompass both general mental capacity (intelligence) and specific mental capacities (aptitudes). The second type of individual variable thought to be related to managerial behaviour are personality traits - which underlie a person's *typical* behaviour (see Cronbach, 1970). Campbell et al (1970, p7) have defined personality traits as, "The temperamental and preference predispositions of the individual". The third kind of individual characteristic relevant to this study are the "goals" of the individual which Hunt (1989, p1) informs us are, "The ends or objectives which are important to the individual". Goals are considered to underlie the motivation of the individual.

The model of managerial effectiveness presented in chapter one proposes that individual variables influence organizational performance via their effect on managerial behaviour. However, as Dunnette (1976) makes clear, most studies into managerial effectiveness have related individual variables directly to performance measures without considering the role of behaviour. With this proviso in mind, a review has been made of the literature to identify the abilities, personality traits and goals of managers that should be included in this study. In the

sections that follow, a review is made of research into each type of variable; then, conclusions are drawn about the implications of the review for this study.

## 5.2 ABILITIES

Four major reviews have been made of research into the abilities of managers (Ghiselli, 1966; Korman, 1968; Ghiselli, 1976 and Schmitt et al, 1984). These reviews show that in the main traditional performance criteria (behaviour ratings, advancement measures and indeces of the individual output of managers) have been used to test the validity of abilities to managerial work. Few studies have used organizational unit performance as the criterion measure. Ghiselli (1966, 1973) found significant correlations in the range 0.20-0.30 between traditional criterion measures and the general mental ability, spatial ability and, perceptual accuracy of managers. Korman (1968) found that while verbal ability test scores correlated significantly with traditional criterion measures for supervisors, they did not do so for higher level managers. Korman (1968, p297-8) suggested, "These results .... do not mean that verbal and other abilities are not important in being a manager. Rather, what it does suggest is that the typical managerial applicant population is already highly pre-selected on abilities and is relatively homogenous on these variables. Thus, the differentiators will not be abilities in the traditional sense". Kraut (1969) came to the same conclusion as a result of his study in IBM.

In 1973, Grimsley and Jarrett reported a study using a matched-pair design that controlled for variables which might moderate the relationship between the abilities of managers and criterion measures. In this study, each member of a top manager group was paired with a member of a middle manager group. The matching was made on the basis of age, discipline of college major and amount of undergraduate education. A correlation analysis was made of the test ability scores of the 50 pairs of managers which had been obtained at the time of recruitment, with the level of their current job in the organizational hierarchy. Grimsley and Jarrett (1973, p44) inform us that, "The results of this study support the conclusion (Ghiselli, 1963) that differences in intellectual competence are related to the degree of success achieved at high levels of management, rather than Korman's conclusion (1968). The obtained differences between top and middle level managers on measures of reasoning, space visualization, perceptual speed and fluency as well as tests of verbal comprehension and number ability, indicate the need for more research before acceptance of Harrell's conclusion (1961) that, "Ability need be analysed no finer than verbal and numerical ability and a practical ability including, mechanical and spatial abilities for production managers". In their meta-analysis of validity studies published in the *Journal of Applied Psychology* and *Personnel Psychology* over the years 1964-1982, Schmitt et al (1984) reached similar conclusions to those of Ghiselli (1966, 1973) and Grimsley and Jarrett

(1973). For managerial samples, Schmitt et al (1984) found a significant relationship between tests of general mental ability and both performance ratings ( $r=0.22$ ,  $n=543$ ) and advancement indeces ( $r=0.22$ ,  $n=14190$ ).

Some evidence also exists on the relationship between the abilities of managers and organizational unit performance. Pickle and Friedlander (1967) studied the relationship between the abilities of 97 managers, who each had total responsibility for a small business (54 retail establishments, 26 service establishments, 8 wholesale establishments, 6 manufacturers and 3 mineral extraction firms) and ratings of the performance of each small business by seven constituencies - owners, customers, suppliers, employees, creditors, community and governments (local, state and federal). The criteria used by the seven constituencies are given in Table 5.1. The results of Pickle and Friedlander's study show that although the performance ratings of the seven constituencies were inter-related, the correlations were sufficiently low to demonstrate that each group was evaluating the small business from a different viewpoint. Verbal ability (measured by Test 1 of the Employee Aptitude Survey) correlated significantly with ratings by owners ( $r=0.30$ ), the community ( $r=0.20$ ), customers ( $r=0.30$ ), suppliers ( $r=0.27$ ) and creditors ( $r=0.20$ ). Critical thinking (measured by the Watson-Glaser Critical Thinking Appraisal) correlated significantly with ratings by customers ( $r=0.22$ ) and employees ( $r=0.24$ ).

**TABLE 5.1: CRITERIA USED BY SEVEN CONSTITUENCIES IN PICKLE  
AND FRIEDLANDER'S (1967) STUDY**

CONSTITUENCY	CRITERIA
OWNERS	Return on investment, return on hours of work, profit relative to other organizations, previous financial record and growth potential.
CUSTOMERS	Location, quality of goods and services, variety of offering, quality available, appearance of establishment, hours, days open, knowledge of product availability and of fashion, speed of service, prestige merchandise display, various customer services, satisfaction of complaints, parking, advertising, dependability, various employee factors, price, sales techniques, congestion and air conditioning.
EMPLOYEES	Satisfaction with work.
SUPPLIERS	Cost of filling orders for the small business, its record of meeting financial obligations to the supplier and its record of stability in the continuity of the relationship with the supplier.
CREDITORS	Speed of payment of debts.
COMMUNITIES	Support of organizations in the community, charities and schools and participation in political activities.
GOVERNMENTS	Quality of communications, the support of lobbying groups, quality of income tax returns, penalties paid on taxes or reprimands or censures by tax officials.

Thus, studies show that a relationship exists between the abilities of managers and traditional criterion measures (i.e., behaviour ratings, advancement indeces and individual-focussed output measures); typically, the correlation is in the range of 0.20-0.30. A similar level of association has been found in one study exploring the

relationship between the abilities of small business managers and business unit performance ratings by seven constituencies.

One response to the significant but low correlations which have been found has come from Schmidt and Hunter (1977, 1981). They argue that the observed correlations *underestimate* the size of the true relationship because they have not been corrected for artifactual errors.

Sources of error could include the unreliability of ability tests or performance measures and restriction of range in the sample due to the effects of selection.

A second response has come from McClelland (1973), who suggests that the correlations *overestimate* the true relationship between ability tests and criteria. His argument is that the correlations are artifacts of the joint association of ability test scores and criterion measures with social class status. In McClelland's view, higher status individuals tend to score higher on ability tests and get better performance appraisals from their bosses which can create the false impression of there being a causal relationship between test scores and criterion measures.

A third response has come from Neisser (1976). Neisser argues that the intellectual demands of schooling are a subset of the intellectual demands of the world of work.

Neisser (1976) suggests that ability tests measure academic intelligence and reflect the characteristics of academic tasks as they: (a) are formulated by other people; (b) often have little or no intrinsic interest; (c) have all the information that is needed available from the beginning; (d) are disembedded from an individual's ordinary experience. (Wagner and Sternberg, 1985, add that ability tests and academic tasks are usually well defined, have one correct answer and often have one method of solution). The characteristics of academic tasks and ability tests are at variance with the characteristics of "real-life" occupational tasks according to Neisser. Typically, real-life tasks are formulated by the individual, of intrinsic interest and meaning, emergent and, grounded in the individual's experience. Consequently, Neisser argues, ability tests and academic performance cannot be expected to relate strongly to occupational success. Wagner and Sternberg (1985) develop Neisser's thesis by proposing the existence of a second type of intelligence - "practical intelligence". Wagner and Sternberg draw on the work of Charlesworth (1976) to define practical intelligence as, "Behaviour under the control of cognitive processes and employed toward the solution of problems, which challenge the well-being, needs, plans, and survival of the individual" (p437). Hence, the work of Neisser and of Wagner and Sternberg makes a distinction between academic and practical tasks and proposes that a different form of intelligence is relevant to each domain. From this

perspective, the low relationship between tests of the academic intelligence of managers and criterion measures is explained by the low relevance of such tests to managerial work. Wagner and Sternberg (1984) have proposed that practical intelligence involves three cognitive processes:

(a) *Selective encoding* - separating, in an array of inputs, information that is relevant for one's purposes from information that is irrelevant for these purposes; (b) *Selective combination* - putting together the information selectively encoded in just the way that is relevant for one's purposes so as to form an integrated and coherent cognitive structure and; (c) *Selective Comparison* - properly relating the new information and cognitive structure to old information and cognitive structures so as to fully integrate the new information with the old. The cognitive processes described by Wagner and Sternberg resemble some of those which were identified and tested by Schroder et al (1967). The finding of Schroder et al (1967) that there was no relationship between academic intelligence tests and the four cognitive competencies explored in their work supports the theory of Neisser (1967) and the findings of Wagner and Sternberg (1984, 1985).

In summary, the low significant correlations found between the ability test scores of managers and a variety of performance criteria have led to one hypothesis, by Schmidt and Hunter (1977, 1981), which proposes that such correlations underestimate the true relationship and to two

hypotheses (one by McClelland, 1973, the other by Neisser, 1967 and, Wagner and Sternberg, 1985) which propose that the correlations are overestimates of the true relationship. The work of Wagner and Sternberg (1984, 1985) into practical intelligence is congruent with and supported by that of Schroder et al (1967) and Schroder, 1989(a). This work reinforces the expectation that a strong association exists between the cognitive HPMC and "real-life" organizational performance and leads to the expectation that there will be no relationship between measures of academic intelligence and the HPMC.

### 5.3 PERSONALITY TRAITS

Research into the personality traits of managers has shown that these relate weakly to traditional criterion measures (i.e., advancement indeces, behaviour ratings and individual output measures). Typical of these results are those reported by Schmitt et al (1984) from their meta-analytic study. They found personality traits correlated .10 ( $n=494$ ) with status changes, .18 ( $n=430$ ) with performance ratings and .14 ( $n=469$ ) with wages. Pickle and Friedlander (1967) used the four traits measured by the Gordon Personal Profile (ascendancy, responsibility, emotional stability and sociability) and the four traits measured by the Gordon Personal Inventory (cautiousness, original thinking, personal relations and vigour) to profile the personality of 97 small businessmen. The scores of the sample on the eight personality traits were correlated with performance ratings

of the organizations made by seven constituencies (see the previous section). Five significant correlations were found: ratings by the owners correlated with ascendancy (.29) and, original thinking (0.26); ratings by the government correlated with emotional stability (0.22); ratings by customers correlated with vigour (0.21) and; ratings by employees correlated with sociability (0.26). Pickle and Friedlander, (1967, p173) comment, "The degree and consistency of the relationships between the manager's personality characteristics and the societal fulfilment which the firm provides were far less than for the managers' ability".

An explanation for the weak association between personality traits and organizational performance can be derived from Kirton's (1976) Adaption-Innovation theory of cognitive style. Goldsmith (1989, p38) states that, "Cognitive styles are described as the manner in which individuals prefer to perform mental action; abilities may be distinguished from styles because the former refer to level of performance and the latter to how the action is performed".

Adaption-Innovation theory proposes a bipolar dimension of cognitive style on which the habitual adaptor and the habitual innovator are at extreme ends. The Adaption-Innovation dimension manifests itself in creativity, problem-solving and decision-making behaviour. Kirton and De Ciantis (1986, p141) state that, "Characteristically, adaptors when confronted with a problem turn to conventional procedures and consensus of the group

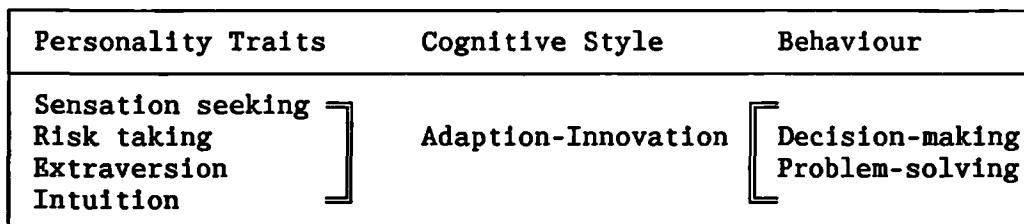
to which they belong, and derive their ideas towards the solution of the problem from those established procedures (Kirton, 1976). This behaviour is seen as refining existing methods or, in Drucker's (1969) terms, "Doing things better". Conversely, innovators faced with a similar problem will characteristically attempt to restructure the problem by approaching it from a new angle, thus breaking the customary starting point for its solution: an approach which might be described as "Doing things differently" (Drucker, 1969)". The behaviour descriptions of adaptors and innovators are presented in Table 5.2. Kirton (1976) has developed a 32 item questionnaire, the Kirton Adaption-Innovation Inventory (KAI), to measure the theory (see Appendix 7). A respondent scores each item on a 1-5 scale giving a theoretical range of total scores from 32 to 160 with a theoretical mean of 96. The observed range of the general population, based on samples in excess of 1000 subjects, is 45-146 with a mean of 95 (Kirton, 1976; Prato Previde, 1984; Goldsmith, 1985). The distribution of these samples approximates closely the normal curve. High scores on KAI indicate a preference for innovation, low scores indicate a preference for adaption. The internal reliability of KAI is 0.88 (Kirton, 1976). Goldsmith (1989) suggests that Adaption-Innovation theory describes a preference for certain patterns of behaviour which resemble traits in that they refer to consistencies in behaviour but are different from personality traits per se in that they are more specific in the behavioural domain to which they refer.

**TABLE 5.2: BEHAVIOUR DESCRIPTIONS OF ADAPTORS AND INNOVATORS (KIRTON, 1976)**

ADAPTOR	INNOVATOR
Characterized by precision, reliability, efficiency, methodicalness, prudence, discipline, conformity	Seen as undisciplined, thinking tangentially, approaching tasks from unsuspected angles.
Concerned with resolving problems rather than finding them.	Could be said to discover problems and discover avenues of solution.
Seeks solutions to problems in tried and understood ways.	Queries problems' concomitant assumptions; manipulates problems.
Reduces problems by improvement and greater efficency, with maximum of continuity and stability.	Is catalyst to settled groups, irreverent of their consensual views; seen as abrasive, creating dissonance.
Seen as sound, conforming, safe, dependable.	Seen as unsound, impractical; often shocks his opposite.
Liable to make goals of means.	In pursuit of goals treats accepted means with little regard.
Seems impervious to boredom, seems able to maintain high accuracy in long spells of detailed work.	Capable of detailed routine (system maintenance) work for only short bursts. Quick to delegate routine tasks.
Is an authority within given structures.	Tends to take control in unstructured situations.
Challenges rules rarely, cautiously, when assured of strong support.	Often challenges rules, has little respect for past custom.
Tends to have high self-doubt. Reacts to criticism by closer outward Conformity. Vulnerable to social pressure and authority; compliant.	Appears to have low self-doubt when generating ideas, not needing consensus to maintain certitude in face of opposition.
Is essential to the functioning of the institution all the time, but occasionally needs to be "dug out" of his systems.	In the institution is ideal in unscheduled crises, or better still to help to avoid them, if he can be controlled.
<i>When collaborating with innovators:</i> supplies stability, order and continuity to the partnership.	<i>When collaborating with adaptors:</i> supplies the task orientations, the break with the past and accepted theory.
Sensitive to people, maintains group cohesion and cooperation.	Insensitive to people, often threatens group cohesion and cooperation.
Provides a safe base for the innovator's riskier operations.	Provides the dynamics to bring about periodic radical change, without which institutions tend to ossify.

Goldsmith (1989, p46) has presented a model of the proposed relationships between personality traits, cognitive styles and behaviour which is shown in Figure 5.1.

**FIGURE 5.1: A MODEL OF THE RELATIONSHIPS BETWEEN PERSONALITY TRAITS, COGNITIVE STYLE AND BEHAVIOUR**



Modified from: Goldsmith (1989).

With regard to the model, Goldsmith (1989, p46) comments, "In this paradigm we may posit the KAI as a "summary measure" of the "trait-like" A-I continuum which occurs between the various broad personality traits and the highly specific observed behaviours that the traits are thought to determine. Adaption-Innovation is more specific than personality traits, but more general than any individual behavioural act. The KAI measures preferences for problem solutions which are themselves determined by interactions of many traits". Goldsmith's model, by proposing that cognitive styles, (such as KAI), mediate personality traits and behaviour, provides a theoretical rationale for several findings that have been difficult to explain previously.

First, the model predicts that individuals should be able to describe validly their Adaption-Innovation preferences because the A-I dimension is seen as being related closely

to the specific problem-solving and decision-making behaviours of individuals. Research by Kirton and McCarthy (1985) shows that individuals are able to do this. Second, the model proposes that strong correlations are expected between KAI and measures of the personality traits that are thought to underlie the A-I dimension. Extensive research shows that such correlations do exist. (Carne and Kirton, 1982; Gryskiewicz, 1982; Goldsmith, 1986a, Keller and Holland, 1978b; Kirton and De Ciantis, 1986; Goldsmith, 1984; Ettlie and O'Keefe, 1982; De Ciantis, 1987). Third, because cognitive style is perceived as a mediator between specific behaviour and general personality traits, little relationship is expected between the measure of such traits and specific behaviour. As Goldsmith comments, this prediction is also supported by research, "It has proved difficult to demonstrate reliable, valid, and consistent relationships between measured traits and specific behaviours" (p45). Fourth, the lack of relationship between personality traits and criterion measures can be explained. Kirton's theory assumes that in the general population cognitive style is not related to capacities (such as abilities or managerial competencies) and that, therefore, it is not related to level of performance. It has been demonstrated that KAI is not correlated significantly with either ability test scores (Kirton, 1978a; Gryskiewicz, 1982 and; Kirton and De Ciantis, 1986), or tests of the level of cognitive complexity (Gryskiewicz, 1982 and, Goldsmith, 1986b). Furthermore, Schroder (1989b) has shown KAI to be unrelated to ten of the eleven HPMC see Table 5.3.

**TABLE 5.3: CORRELATION OF KAI WITH HPMC SCORES**

HPMC	CORRELATION WITH KAI (n=104)
Information search	-0.01
Concept formation	0.22*
Conceptual flexibility	0.12
Interpersonal search	0.09
Developmental orientation	-0.03
Impact	0.10
Self-confidence	0.13
Presentation	0.10
Proactive orientation	0.05
Achievement orientation	0.18

\* p < 0.05

From: Schroder 1989b.

<sup>a</sup>  
If, in general population of managers, KAI is not related to ability, competency and performance and if certain personality traits are related to KAI, then such personality traits should not be related to ability, competency and performance. The same argument can be applied to other style dimensions and the related personality traits. Hence, Adaption-Innovation theory provides a plausible explanation for the data presented by researchers such as Schmitt et al (1984) which shows weak relationships between performance measures and personality inventory scores.

Adaption-Innovation theory also has implications for

research conducted with managerial samples that are not representative of the general population of managers.

Adaption-Innovation theory proposes that the cognitive style mode of individuals in a group is influenced by the type of change occurring in the group's environment. If the change is discontinuous and involves a departure from existing practices (such as a fundamental change to organizational structure) then the mode will reflect that innovation is favoured climatically. If the change is continuous and builds on the past (for example, making incremental improvements to an existing management information system) then adaption will be favoured climatically (Kirton and McCarthy, 1988). Consequently, it can be hypothesized that if a sample of managers is responsible for the formulation and implementation of discontinuous change the KAI mean of the sample will be skewed towards innovation. In this climate, competent managers who are innovative will have more opportunity to use their competencies and perform well so that a positive relationship between competence, performance and innovation is expected under these <sup>\* See Note 1, p 359</sup> conditions. In contrast, it can be hypothesized that if a sample of managers is responsible for the formulation and implementation of continuous change, then the KAI mean will be skewed toward adaption. In this climate, competent managers who are adaptive will have more chance to use their competencies and perform well so that a positive relationship is expected between competence, performance and adaption.

In summary, managers' personality traits have been shown to be related weakly to criterion measures. This finding can be explained by reference to Kirton's Adaption-Innovation theory which also has implications for research undertaken with samples that are not representative of the general population of managers.

## 5.4 GOALS

### 5.4.1 Introduction

Research into the goals of managers has to be placed into the wider context of work motivation theories. Motivation is concerned with, "The degree to which an individual chooses to engage in certain behaviours" (Hunt, 1986, p5). Two concepts are critical to an understanding of work motivation theories, these are "needs" and "goals". Locke and Henne (1976, p1) have defined a need as, "A requirement of the organism's survival and well-being" and argue that there are two categories of human need - physical and psychological. Physical needs are the requirements of a healthy body and include food, water and shelter. Psychological needs are the requirements of a healthy mind and include love, self-esteem and growth. Needs are regarded as innate and universal in that all human beings have them (Locke and Henne, 1986). Need deprivation leads to pain, unhappiness, depression, guilt, anxiety or self-doubt. Need fulfilment leads to pleasure, happiness

and contentment. However, need deprivation does not necessarily motivate behaviour because the individual must first identify the frustrated need and then learn how to satisfy it. Furthermore, individuals may choose to satisfy a need in different ways so that the same need can result in a wide variety of behaviour. Thus, it is difficult, if not impossible, to predict the behaviour of an individual from his or her needs. As Locke and Henne (1956, p2) comment, "Need theories by themselves are inadequate to explain human action. They may explain why a person has to act (if he wants to live) and why he often wants to act, but they do not account for the particular action chosen. Specifically, need theories do not account for individual differences". The inability of need theories to predict the behaviour of individuals has led to the creation of theories of motivation based on the concept of goals. As Hunt (1986, p5) comments, "To avoid the complications of need theories it has become fashionable to talk about goals, values or even work orientations - i.e., to acknowledge that people have tendencies to return to similar ends or goals that seem to be (sufficiently) important to them to suggest an underlying theme, pattern or goal behind their behaviour". Goals are considered to be learned and to be influenced by situational demands (Hunt 1986). Goals are more specific than needs and closer to behaviour so it should be possible to predict behaviour from goals.

Needs and goals are useful concepts to this review because they help to comprehend the main theories of managerial

motivation and to explain the results of studies examining the validity of these theories. The main managerial motivation theories are reviewed now and their use to this study is discussed.

#### 5.4.3 Maslow's Theory of Human Motivation

Maslow's (1943) theory of individual motivation has been discussed extensively in the literature (for example, Vroom, 1970; Handy, 1985; Hunt, 1986 and; Robertson and Smith, 1985). The theory proposes a hierarchy of five human needs - physiological, safety, love, esteem and, self-actualization. The categories are regarded as prepotent so that a higher category only emerges after lower needs have been satisfied. For example, safety needs emerge only when physiological needs have been satisfied.

The main aspects of Maslow's theory have been explored by several researchers. Hall and Nougaim (1968) examined the hierarchy of prepotency hypothesis; their results were not supportive. Hunt (1986, p5) comments, "Nor does my research, or that of others, support the concept of a hierarchy of needs". Wahba and Bridwell (1979) reviewed studies designed to test the validity of Maslow's notion that there are five categories of need. No study reviewed had identified five categories; usually three were found; lower level (physiological and safety); higher level (social and esteem) and, self actualization. For an example, of a three category theory see Aldefer (1962, 1972).

Hence, Maslow's theory is very well known but it has not received support from those studies designed to test its main propositions. This does not invalidate the concept of need, but it does suggest that more specific concepts (i.e., goals) are required to predict accurately human behaviour.

#### 5.4.4 Hertzberg's Two-Factor Theory

Locke (1976) considers Hertzberg's (1966) Motivation-Hygiene Theory to be based on the concept of need. Hertzberg proposes two types of "factor": motivators and hygiene factors. Five motivators are suggested. These are achievement, recognition, work itself, responsibility and advancement. Five hygiene factor's are specified. They are company policy and administration, supervision, salary, interpersonal relations and working conditions. According to Hertzberg, motivators relate to the kind of work an individual does; if the work provides an individual with these factors then his/her growth needs will be fulfilled and satisfaction and effort will result. Hygiene factors relate to the work context or environment in which an individual's job is located. If the context provides an individual with these factors then the basic needs of the individual will be fulfilled and this will prevent dissatisfaction (but not create satisfaction or effort). Thus, two categories of need - growth and basic - underlie Hertzberg's theory. Locke and Henne (1986) point out that Hertzberg's theory has not been tested and, "Is no longer

taken seriously" (p6). Nevertheless, in Herzberg's theory, the hygiene factors can be regarded as individual goals which bridge the gap between needs and behaviour and which therefore resemble the goals proposed by the theorists reviewed below.

#### 5.4.5 McClelland's Theories

McClelland (1961) has proposed the need for achievement (nAch) which he defines as, "The need to do something better than it has been done before". McClelland's concept of need is different from that of Maslow because it is considered to be an individual difference and because it refers to particular ends or goals that are important to the individual. Also, McClelland (1973) has argued that the "needs" he has researched are related to specific domains of human activity rather than being related to all human activity. For these reasons, McClelland's theory can be regarded as being as based on the concept of goals rather than needs.

McClelland (1961, 1977) has argued that nAch relates to entrepreneurial success. Research by Wainer and Rubin (1969) and Durand and Shea (1977) has supported this hypothesis. In 1975, McClelland argued also that the "Leadership Motive Profile" (high need for power, low need for affiliation and high activity inhibition) is associated with career advancement in large organizations. Research by McClelland and Boyatzis (1982) has supported this

hypothesis. In the main, McClelland and his associates have used the Thematic Apperception Test (Murray, 1943) to measure the goal strength of individuals. Although the work undertaken by McClelland and his colleagues has been based on TAT assessments with high inter-rater reliabilities (see McClelland, 1961), some difficulties have been found in the use of the TAT - such as low inter-rater reliability and the length of time needed to score TAT's - by other researchers (see Entwistle 1972, and Fineman, 1977). This had led McClelland (1961) and others (e.g., Hermans, 1970; Stahl, 1983) to develop and use alternate, reliable measures of nAch and nPow. The study by Stahl (1983) has followed this approach. He hypothesized that high managerial motivation consists of high nAch and high nPow and that low managerial motivation consists of low nAch and low nPow. To test this hypothesis Stahl administered the Job Choice Exercise (JCE) to seven samples of individuals from a mixture of occupations. The results were that, "There was a higher proportion of subjects with high managerial motivation among the managers than among the non-managers; there was a higher proportion of managers with high managerial motivation among the promoted managers than among the non-promoted managers; and managers with high managerial motivation had higher managerial performance than others. The opposite held true for low managerial motivation except for managerial performance which was untestable due to insufficient data". (Performance measures were based on in-company appraisal ratings of the managers made on a 5 point scale).

In summary, studies based on McClelland's theories have shown a positive relationship between traditional criterion measures and nAch, nPow, low nAff and high Activity Inhibition. However, no studies have explored the relationship between these goals and organizational unit performance.

#### 5.4.5 Miner's Role Motivation Theory

Miner's (1965) theory of Role Motivation is applicable to a very specific domain - managerial jobs in businesses organized according to the scalar principle. Miner (1978, p740-1) comments that the domain, "Clearly has much in common with the concept of bureaucracy as an ideal organization type as specified in the Weberian definition. Implicit in this domain statement is the assumption that the organization is sufficiently large, formalized and rationalized to function in the bureaucratic manner". Miner posits that managerial jobs in bureaucratic business organizations have six role prescriptions and that a motivational pattern (i.e., goal) is associated with each role prescription. First, "Managers are expected to behave in ways which do not provoke negative reactions from their superiors; ideally they will elicit positive responses. It follows that managers should have a generally positive attitude towards those holding positions of authority over them" (p741). Second, "Managers must strive to win for themselves and their subordinates and accept such challenges as other managers may offer. In order to meet this

role requirement a person should be favourably disposed towards engaging in competition"(p741). Third, the manager is expected to, "Take charge, to make decisions, to take disciplinary actions (hence managers must) behave in an active and assertive manner"(p741). Fourth, "The manager must exercise power over subordinates and direct their behaviour"(p742) and must therefore be favourably disposed to imposing his wishes on others. Fifth, "The managerial job requires a person to stand out from his group and assume a position of high visibility. It is the person who enjoys being the centre of attention, who is most likely to meet the demands of the job in this area"(p742). Finally, "There are administrative requirements such as constructing budget estimates, serving on committees, talking on the telephone, filling out forms and so on. To meet these prescriptions a manager must at least be willing to face this type of routine and ideally gain some satisfaction from it"(p742).

From this prescription, Miner hypothesizes that individuals who seek strongly the six goals will best meet the related role prescriptions. Miner (1965) devised the Miner Sentence Completion Scale (MSCS) to operationalize his theory. The MCSC has seven scales - Positive Attitude toward Authority, Desire to Compete (Games), Desire to Compete (Situations), Assertive Motivation, Desire to Exercise Power, Desire to Stand Out, Desire to Perform Routine Administrative Functions - and provides a total MCSC score. Miner's (1978) studies show that the MCSC is a very reliable instrument and more

recently a forced choice version of the MCSC has been introduced (Miner, 1977).

In 1978, Miner summarized the results of research using the MCSC. In all of the 21 validation studies that have been undertaken, the MSCS total score has correlated positively with criterion measures at the .05 level of significance or higher; criteria were advancement indeces, potential ratings or ratings of the individual performance of the managers. Positive Attitude to Authority and the Desire to Exercise Power were correlated at the .05 level or above in half of the studies; Assertive Motivation in six studies and the Desires to Stand Out and to Perform Routine Administrative Functions in seven.

Miner (1977) has explored also the relationship between the MSCS Scores and five conceptually similar scales measured by the Self Description Inventory (SDI) of Ghiselli (1971). Significant correlations were found between the MSCS Total score and the Decisiveness, Supervisory Ability and Self Assurance scales of the SDI. In a more recent study, Berman and Miner (1985) used a design that matched top level executives with middle managers. It was found that, "The top executives are characterised overall by a stronger motivation to manage. They are also more positively disposed to authority figures, more competitive in an occupational sense, more desirous of power and more motivated to perform routine administrative functions. There is a continuing lack of evidence, however, that top

managers in corporate bureaucracies are distinguished by greater competitiveness in the more occupationally distant sphere of sports and games or by a greater degree of assertiveness".

Thus, Miner's theory has been based on reliable measurement and has provided interesting data on the goals of managers working in bureaucratic business organizations. One of the strengths of Miner's theory is that it specifies clearly the domain to which it applies. Miner (1965) makes it clear that the theory is not be expected to apply in other domains. It is interesting to consider the effects that more rapidly changing environments and more organic organizational structures will have on the applicability of Miner's theory. It could be that a decline in bureaucratic forms of organization will be accompanied by changing role expectations and changes in the associated motivational patterns. In 1982, Miner and Smith presented MCSC data from several samples of undergraduate business students gathered over the period 1960-1980. These data showed that there was a substantial decline in the MCSC total score from 1960-1973 and then a stabilization from 1972-1980. The authors comment, "Although the decline is not continuing, stabilization has occurred at a very low level and has remained at that point for 7 or 8 years"(p302). Miner and Smith suggest that, "These changes are related to the changing patterns of attitudes, values and motives that occurred in college population during the 1970's and that were associated with student activism"(p302). Miner and

Smith conclude that older and higher scoring managers from a previous generation are being replaced by, "A continuing flow of men and women who lack both the desire to manage and the motivational drive to meet managerial role requirements in a manner that can be evaluated as successful, competent and outstanding"(p304).

Another explanation for Miner and Smith's data is that societal and organizational changes since the 1970's have influenced a general shift to more organic organizational structures, small businesses and self-employment to which the motivational patterns measured by the MCSC are ill-suited. Hence, the decline in MCSC scores of business undergraduates should be a source of optimism rather than pessimism. It could be, therefore, that one of the strengths of Miner's approach - its specification of the relevant domain - is its weakness; the domain may be disappearing or becoming less important than it was in the past.

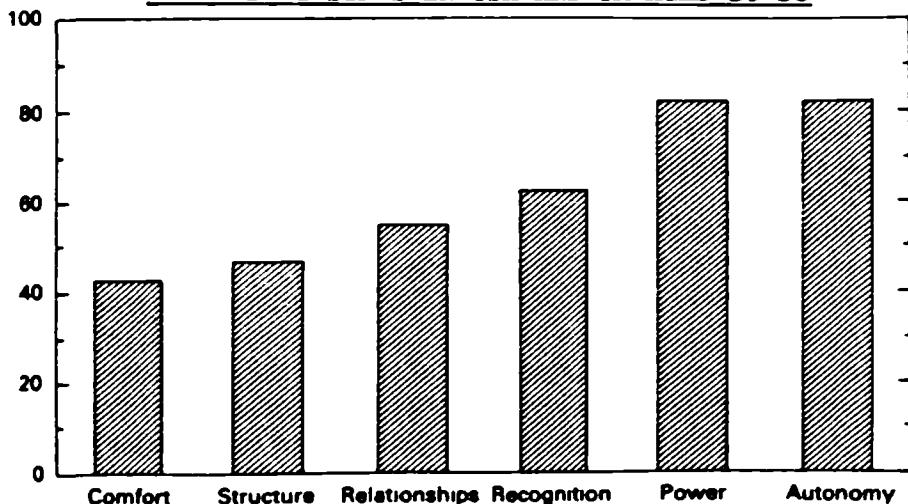
#### 5.4.6 Hunt's Goal Theory of Work Motivation

Hunt (1986) suggests that individuals have eight recurring goal categories - comfort, structure, relationships, recognition and status, power, autonomy, creativity and, growth. Data collected by Hunt (1986) on the background, age, position, culture and work goals of some 10,600 individuals over a fifteen year period shows that, "Although the broad category of a goal may remain relatively stable

there are subtle shifts of emphasis within that goal. Certainly, the goals are not static. They shift over time in individuals and more generally between individuals within a culture" (p8). Hunt's data identifies three variables which may influence the rankings or the shape of an individual's goal profile: age; job position and culture. Of relevance to this study is the goal profile of the very high achiever. Hunt (1986, p47) comments, "Comfort, structure and relationships are either unimportant or are already satisfied as goals. In contrast, recognition, power, autonomy, creativity and growth dominate this profile .... People with this sort of profile are generally not attracted to large bureaucracies, possibly because they are too restricted by them ... (This profile)... is often associated with the entrepreneurial behaviour of independent, unstructured, risk-taking high achievers" (p47). Also of relevance is the goal profile of senior managers, executives and rising stars in the UK and USA aged between 30 and 50 (see Figure 5.2).

FIGURE 5.2: GOAL PROFILE OF SENIOR MANAGERS, EXECUTIVES

AND RISING STARS IN USA AND UK AGED 30-50



From: Hunt (1986).

In summary, Hunt's research has provided evidence on the goal profiles of managers. Further research must be undertaken to determine whether the goals of managers relate to organizational unit performance.

## 5.5 INTEGRATING RESEARCH INTO THE ABILITIES, PERSONALITY TRAITS AND GOALS OF MANAGERS: GHISELLI'S EXPLORATIONS INTO MANAGERIAL TALENT

### 5.5.1 Introduction

In 1971, Ghiselli published, "The culmination of some twenty years of research in which I have examined the traits and abilities which play a part in managerial success" (Ghiselli, 1971, vii). Ghiselli's research spans the three types of individual variable that have been reviewed in this chapter - abilities, personality traits and goals - and provides a questionnaire (the Self-Description Inventory) to measure relevant variables. The work of Ghiselli is critical to this study and, therefore, it is reviewed in depth.

### 5.5.2 The individual characteristics studied by Ghiselli

Ghiselli set himself the task of devising a paper and pencil test that measures the individual variables which: (a) differentiate between managers, line supervisors and line

workers; (b) differentiate between more and less successful managers, and (c) show a stronger differentiation between more and less successful managers than between more and less successful supervisors or line workers. Ghiselli used four rules to make an initial selection of thirteen traits. These rules were: (a) the traits should be broad rather than highly specific because, "We shall be better able to draw generalisations that have some scope" (p31); (b) traits shown by previous research to be promising to a study of managerial success should be included; (c) traits frequently stressed by persons in business and industry should be included, and (d) the traits should form a broad range of human characteristics.

Ghiselli classified the thirteen characteristics he had identified into abilities, personality traits and motivations (i.e., goals):

<b>ABILITIES:</b>	Supervisory ability Intelligence Initiative
<b>PERSONALITY TRAITS:</b>	Self assurance Decisiveness Masculinity-Femininity Working-class affinity Maturity
<b>MOTIVATIONS:</b>	Need for occupational achievement Need for self-actualisation Need for power over others Need for high financial reward Need for job security

### 5.5.3 The Self-Description Inventory (SDI)

To measure the thirteen characteristics, Ghiselli produced sixty four items which consist of a pair of personally descriptive adjectives. The adjectives were chosen so that both members of each pair are similar in terms of the social desirability of the human qualities they symbolise. These items constitute the Self-Description Inventory (SDI) - see Appendix 8. Individuals complete the SDI by selecting the adjective in the pair which most describes them (items 1-32) and then the adjective in the pair which least describes them (items 33-64).

To get the SDI to measure the thirteen characteristics that he considered to be related to managerial success, Ghiselli used a separate pair of criterion groups for each characteristic: one group being strong in the characteristic and the other weak (as determined by an independent measure of the characteristic). For each characteristic, individuals in the strong and weak groups completed the SDI and Ghiselli identified the items which differentiated between the groups. By weighting the relevant items according to its capacity to differentiate between the two groups, Ghiselli was able to produce a scoring key for each characteristic. (see Ghiselli, 1973, p142-144).

### 5.5.3 Validation of the Self-Description Inventory

To test the validity of the SDI, Ghiselli administered it to three samples of individuals. The first sample consisted of 306 managers from 90 businesses and industrial organizations in the transportation, finance, insurance, manufacturing, utilities and communications industries. Ghiselli (1971, p26) explains that, "On the basis of his past performance as a manager, each of the 306 men was evaluated by another manager superior to him who knew him and his work record. In most instances, these superior officers were the managers' immediate supervisors. The judgements of these superior officers were recorded in two categories so that the men were described as being among the more successful and less successful managers". This procedure placed 57% of the managers in the more successful category and 43% in the less successful category. The second sample consisted of 111 line supervisors and the third of 238 line workers; the individuals in these samples were also from a wide range of organizations and industries and their performance was assessed using the procedure described above.

The scoring keys were used to profile the individuals in the three samples on the thirteen characteristics measured by the SDI. Then, the relationship in each sample between the thirteen characteristics and the performance measure was calculated using the Pearson correlation. The results of this analysis are presented in Table 5.4 which shows that ten characteristics fulfilled the four criteria that

Ghiselli had set to select variables which are related to managerial success. The characteristics consist of three abilities (supervisory ability, intelligence and initiative) three personality traits (self-assurance, decisiveness and low working-class affinity) and four goals (occupational achievement, self-actualization, low financial reward and low job security).

#### 5.5.4 Summary

Ghiselli's study is important because he devised an easily administered, inexpensive, mass-usage paper and pencil test which measures ten individual characteristics that are related to boss ratings of managerial success. The validity of the SDI in terms of advancement indeces has been confirmed by Schippmann and Prien (1986). Nevertheless, no study has been made of the relationship between the ten SDI scales and organizational unit performance.

#### 5.6 CONCLUSIONS

In this chapter three types of individual variable that are thought to relate to managerial success have been reviewed. The review has shown that little research has been undertaken into the relationship of abilities, personality traits and goals with measures of either managerial behaviour or organizational unit performance. Most research has explored the association of traditional criterion measures with individual variables. Nevertheless,

**TABLE 5.4: THE CORRELATION BETWEEN THE SDI SCALES  
AND CRITERION MEASURES IN GHISELLI'S STUDY**

Characteristic	Correlation Between Characteristic and Criterion		
	Manager Sample	Supervisor Sample	Line Worker Sample
Supervisory ability	.46	.34	.10
Intelligence	.27	.06	.03
Initiative	.15	-.07	.02
Self assurance	.19	.18	-.03
Decisiveness	.22	.15	.05
Masculinity-Femininity	-.05	-.07	-.09
Maturity	-.03	.13	.02
Working-class affinity	-.17	-.07	-.03
Occupational achievement	.34	.08	.01
Self-actualisation	.26	-.03	.05
Power over others	.03	.12	-.16
High financial reward	-.18	-.05	-.10
Job security	-.30	-.05	-.11

From: Ghiselli, (1971).

Ghiselli's synthesis of research into the individual characteristics of managers indicates that this study should include three abilities (supervisory ability, intelligence and initiative), three personality traits (self assurance, decisiveness and working-class affinity) and four goals

(occupational achievement, self-actualization, high financial reward and job security). Although power was not related to managerial success in Ghiselli's work, it was in that of McClelland and Boyatzis (1982), Stahl (1983) and Miner (1977). The work of these researchers indicates, therefore, that power over others should be included in this study. Furthermore, the work of Kirton suggests that the climate of organizations and the cognitive style of individuals can influence the relationship between managerial competence and organizational performance which means that Adaption-Innovation style should also be included in this study.

CHAPTER SIX  
A MODEL OF EXECUTIVE EFFECTIVENESS  
IN DYNAMIC ENVIRONMENTS AND HYPOTHESES

6.1 INTRODUCTION

The primary thesis of this research is that a relationship exists between certain behaviours used by senior executives and organizational performance. A secondary thesis is that individual variables influence executive behaviour. The preceding literature review has been guided by Campbell et al's (1970) model of managerial effectiveness and has identified variables appropriate to this study's primary and secondary theses. In this chapter, the relevant variables are stated and defined and the expected relationships between these variables are specified. This leads to the creation of a revised model of managerial effectiveness from which a model of executive effectiveness in dynamic environments is developed. Hypotheses are drawn from the latter model for testing in this study. Finally, conclusions are drawn.

6.2 VARIABLES IDENTIFIED BY THE PRECEDING LITERATURE REVIEW

Four categories of variable have been reviewed in chapters two to five: organizational performance; managerial behaviour; environmental and; individual. In this section, the variables identified in each category as being of relevance to this study are stated and defined.

Two types of organizational performance variable were shown to be pertinent to this research in chapter two. The first stems from the Goal Model of organizational effectiveness and consists of organizational goals that have been agreed by organizational participants. The level of achievement of these goals constitutes the first measure of organizational performance. The second is derived from the Systems Model of organizational effectiveness and particularly from the work of Reiman (1983). It is organizational competence which is defined as, "An organization's capacity to maintain favourable energy flows within its environment" (Reiman, 1983, p325). The level of this capacity is the second measure of organizational effectiveness.

In chapter three, eleven dimensions of managerial behaviour - Schroder's (1989) High Performance Managerial Competencies - were shown to be relevant to this study. The eleven HPMC are *Information Search, Concept Formation, Conceptual Flexibility, Interpersonal Search, Managing Interaction, Developmental Orientation, Impact, Self Confidence, Presentation, Proactive Orientation and Achievement Orientation*. The definitions of the eleven HPMC are presented in Appendix 3.

In chapter four, two environmental variables were identified as being relevant to this study. The first is the rate of environmental change which is defined as, "The speed with which changes occur in the economic, political, social and technological environment of an organization". The second

is managerial job level which is defined as the location in the organizational hierarchy of a managerial job.

In chapter five, three types of individual variable - abilities, personality traits and goals were reviewed. It was shown that three abilities have a bearing on this research. The first is supervisory ability which is defined as, "The capacity to direct the work of others, and to integrate their activities so that the goal of the work group can be attained". (Ghiselli, 1971, p39). The second is intelligence which is defined as, "The cognitive capacity of the mind including the capacity to deal with ideas, abstractions and concepts, the ability to learn, and, the capacity to analyse and synthesize information" (Ghiselli, 1971, p44-5). The third is initiative which is defined as, "The ability to act independently, to initiate actions without stimulation and support from others and the capacity to see courses of action and implementations that are not readily apparent to others" (Ghiselli, 1971 p49). Chapter five, showed that three personality traits should be used in this study. The first is self assurance which is defined as, "The extent to which the individual perceives him/herself to be effective in dealing with the problems that confront him/her" (Ghiselli, 1971, p57). The second is decisiveness which is defined as, "The extent to which the individual prefers to be a ready, quick and self confident decision-maker" (Ghiselli, 1971, p61). The last personality trait is working class affinity and is defined as, "The

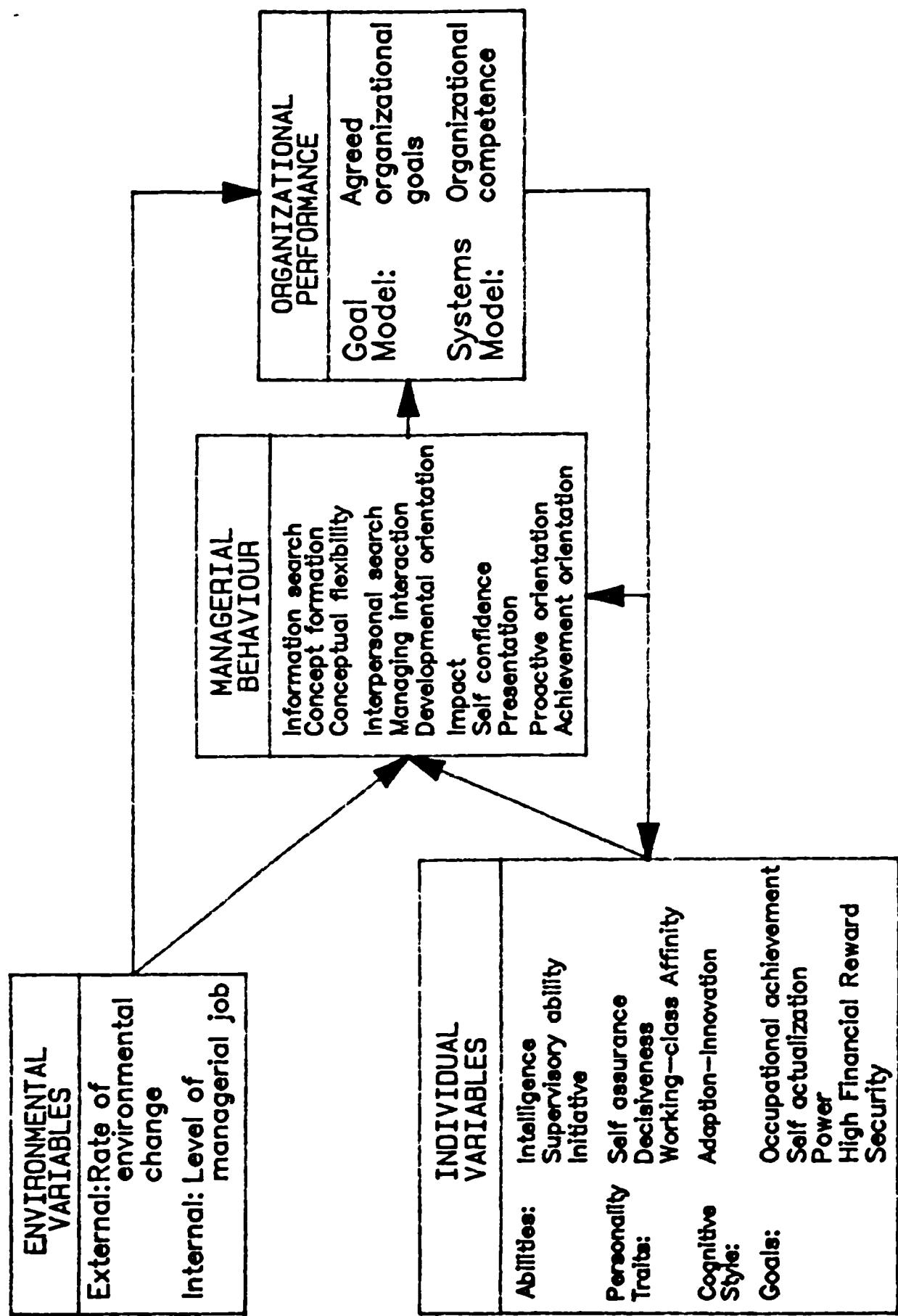
extent to which the individual prefers to be with, work with and share common problems with those of the working class" (Ghiselli, 1971, p71). From the review of personality traits, one cognitive style dimension was identified as being relevant to this research. This dimension is adaption-innovation which is defined as, "a cognitive style manifesting in creativity, problem-solving and decision-making" (Kirton and De Ciantis, 1986, p141).

Chapter five showed that five goals should be used in this study. The first is occupational achievement which is defined as, "The extent to which the individual seeks to gain appointment to high-level positions in business and industry" (see Ghiselli, 1971, p79-80). The second is self-actualization which is defined as, "The extent to which the individual seeks to use his/her talents to the fullest extent" (see Ghiselli, 1975, p82). The third is power; this is defined as, "The extent to which the individual seeks to exercise power over others" (see Ghiselli, 1971, p85). The fourth goal is high financial reward and is defined as, "The extent to which the individual seeks monetary gain from work" (see Ghiselli, 1971, p89). The last goal is job security which is defined as, "The extent to which the individual seeks protection from adverse forces by means of tenure" (see Ghiselli, 1971, p90-91). Now the variables to be included in this study have been specified and defined, the proposed relations between these variables are stated in the next section.

### 6.3 THE REVISED MODEL OF MANAGERIAL EFFECTIVENESS

The revised model of managerial effectiveness, which is illustrated in Figure 6.1, postulates that a positive relationship exists between the eleven HPMC and the two measures of organizational performance (the level of attainment of agreed organizational goals and organizational competence). The model also postulates that the relationship between the eleven HPMC and organizational performance is influenced by the rate of environmental change and managerial job level. It is proposed that an increasing demand will be placed on managers to use the eleven HPMC as the rate of change in the external environment increases. Also, it is proposed that the higher a managerial job is located in the organizational hierarchy, the greater the level of demand will be on job incumbents to use the HPMC. It is expected that the relationship between the eleven HPMC and organizational performance will grow stronger as the level of demand for the use of the HPMC increases. The strongest relationship between the eleven HPMC and organizational performance is expected, therefore, when both the managerial job level and the rate of environmental change are high. The weakest relationship between the eleven HPMC and organizational performance is expected when both the managerial job level and the rate of environmental change are low. A moderate relationship is expected between the eleven HPMC and organizational performance when the managerial job level is high and the rate of environmental change is low. A moderate

FIGURE 8.1: REVISED MODEL OF MANAGERIAL EFFECTIVENESS



relationship is expected also when the managerial job level is low and the rate of environmental change is high. Figure 6.2 presents the expected relationships between environmental, behavioural and organizational performance variables.

**FIGURE 6.2: EXPECTED RELATIONSHIPS BETWEEN ENVIRONMENTAL,  
BEHAVIOURAL, AND ORGANIZATIONAL PERFORMANCE VARIABLES**

		Environmental Rate of Change	
		Low	High
		MODERATE RELATIONSHIP BETWEEN HPMC AND ORGANIZATIONAL PERFORMANCE	STRONG RELATIONSHIP BETWEEN HPMC AND ORGANIZATIONAL PERFORMANCE
Managerial Level	High	WEAK RELATIONSHIP BETWEEN HPMC AND ORGANIZATIONAL PERFORMANCE	MODERATE RELATIONSHIP BETWEEN HPMC AND ORGANIZATIONAL PERFORMANCE
	Low		

It is postulated that a positive relationship exists between seven HPMC and seven individual variables - see Table 6.1. Individuals who exhibit strongly any of the seven individual characteristics included in Table 6.1 are thought to be oriented towards the effective use the related HPMC. These relationships are derived from a content analysis of the definitions of the eleven HPMC and twelve individual variables shown to be relevant to this study in chapter five. Sufficient overlap was observed between the definitions of the seven HPMC and seven individual characteristics included in Table 6.1 to justify the hypothesized relationships.

**TABLE 6.1: HYPOTHEZIZED POSITIVE RELATIONSHIPS BETWEEN  
SEVEN HPMC AND SEVEN INDIVIDUAL VARIABLES**

HPMC	INDIVIDUAL VARIABLES HYPOTHEZIZED AS POSITIVELY RELATED TO THE HPMC
INFORMATION SEARCH	Self-actualization
CONCEPT FORMATION	Self-actualization
CONCEPTUAL FLEXIBILITY	Self-actualization
IMPACT	Power
SELF CONFIDENCE	Decisiveness, self assurance
PROACTIVE ORIENTATION	Supervisory ability, initiative
ACHIEVEMENT ORIENTATION	Supervisory ability, occupational achievement

It is proposed that a negative relationship exists between five HPMC and two individual variables (see Table 6.2). These relationships are derived from an analysis of the intercorrelations between the variables included in the Self-Description Inventory (Ghiselli 1971, p130). In Ghiselli's study, high financial reward was correlated negatively with initiative ( $r=-0.51$ ) and occupational achievement ( $r=-.41$ ). It is expected, therefore, that high financial reward will correlate negatively and significantly with the HPMC that are thought to be related to initiative (*Proactive Orientation*) and occupational achievement (*Achievement Orientation*). Also, Ghiselli's research showed that security is correlated negatively with supervisory ability (-.52), occupational achievement (-.54) and self-actualization (-.62). It is expected, therefore, that the goal of security will be correlated negatively with the HPMC that are thought to be associated with supervisory ability (*Proactive Orientation, Achievement Orientation*) occupational achievement (*Achievement Orientation*) and

self-actualization (*Information Search, Concept Formation, Conceptual Flexibility*).

**TABLE 6.2: HYPOTHEZIZED NEGATIVE RELATIONSHIPS BETWEEN  
SIX HPMC AND TWO INDIVIDUAL VARIABLES**

HPMC	INDIVIDUAL VARIABLES HYPOTHESIZED AS NEGATIVELY RELATED TO THE HPMC
INFORMATION SEARCH	Security
CONCEPT FORMATION	Security
CONCEPTUAL FLEXIBILITY	Security
PROACTIVE ORIENTATION	Security, high financial reward
ACHIEVEMENT ORIENTATION	Security, high financial reward

In Ghiselli's study, working-class affinity was not correlated above the .35 level with any other individual variable and the content analysis does not relate it to any HPMC. Consequently, it has not been possible to formulate a hypothesis regarding the relationship between working-class affinity and the eleven HPMC.

No relationship is postulated between intelligence and the eleven HPMC. This is based on the work of Neisser (1976), Sternberg (1985) and Wagner and Sternberg (1985) in which a distinction is made between the "practical intelligence" required to do emergent, managerial tasks and the "academic intelligence" required to do pre-determined, close-ended academic tasks.

No relationship is expected between Adaption-Innovation and the eleven HPMC in a general population of managers (Kirton, 1976; Schroder, 1989b). However, a relationship is expected

between organizational performance, the eleven HPMC and innovation if the sample of managers being studied are responsible primarily for the management of discontinuous change. Furthermore, a relationship is expected between organizational performance, the eleven HPMC and adaption if the sample of managers being studied are responsible primarily for the management of continuous change.

In addition, the revised model proposes that organizational and environmental variables (such as the formal and informal structure) are independent variables which influence organizational performance directly. Finally, the model has a feedback loop which enables learning to occur.

#### 6.4 A MODEL OF EXECUTIVE EFFECTIVENESS IN DYNAMIC ENVIRONMENTS -

This study is focussed on executive level managerial jobs. Consequently, one environmental variable - managerial job level - is held constant. Furthermore, many authors such as Burns (1963), Toffler (1980), Kanter (1983) and Schroder (1989a) have suggested that the rate of environmental change has accelerated in recent times and predict that this trend will continue. If the analysis of these writers is correct then this research will be of greatest utility if it focuses on managers who are experiencing dynamic environments. If a sample of managers is selected for study who are experiencing a similarly fast rate of environmental change

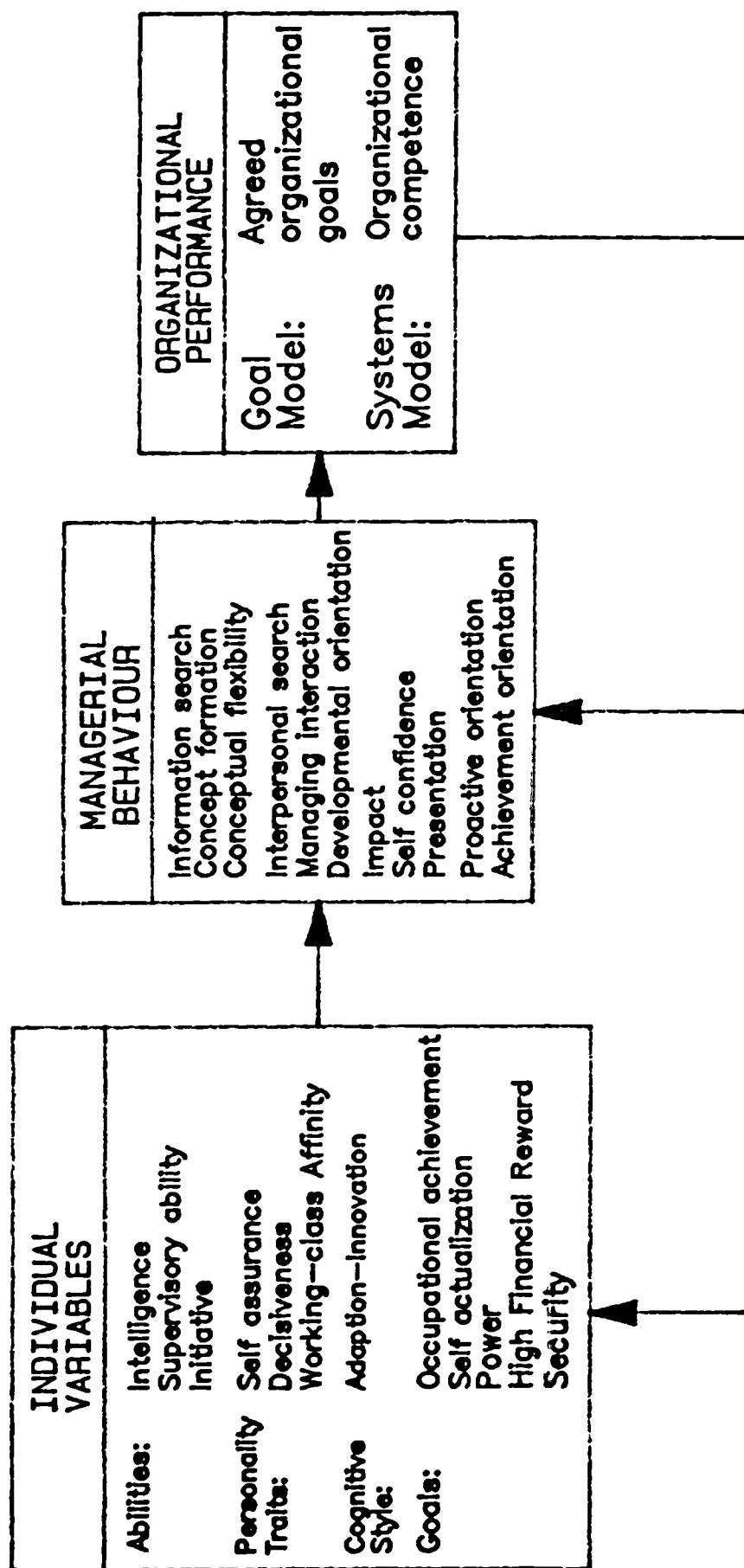
then the second environmental variable can be regarded as a constant. In addition, if all the important external and internal environmental variables experienced by the executives in the sample being studied are similar, then the revised model can be simplified further. By holding environmental variables constant in the manner described, the model of executive effectiveness in dynamic environments which is shown in Figure 6.3 is created. In this model, organizational performance is a function of the eleven HPMC which are influenced by the abilities, personality traits, cognitive style and goals of executives. A feedback loop exists from organizational performance to managerial behaviour and individual variables.

## 6.5 HYPOTHESES

The model in Figure 6.3 proposes that if the rate of environmental change is held constant at a moderate to high level and if the other environmental variables which affect organizational performance are also held constant, then the following relationships can be hypothesized:

- HYPOTHESIS 1:** A statistically significant, positive relationship exists between the level of attainment of agreed organizational goals and eleven HPMC:
- (a) *Information Search;*
  - (b) *Concept Formation;*

# CHALLENGES OF EXECUTIVE EFFECTIVENESS IN DYNAMIC ENVIRONMENTS



- (c) *Conceptual Flexibility;*
- (d) *Interpersonal Search;*
- (e) *Managing Interaction;*
- (f) *Developmental Orientation;*
- (g) *Impact;*
- (h) *Self Confidence;*
- (i) *Presentation;*
- (j) *Proactive Orientation and;*
- (k) *Achievement Orientation.*

**HYPOTHESIS 2:** A statistically significant, positive relationship exists between organizational competence and eleven HPMC:

- (a) *Information Search;*
- (b) *Concept Formation;*
- (c) *Conceptual Flexibility;*
- (d) *Interpersonal Search;*
- (e) *Managing Interaction;*
- (f) *Developmental Orientation;*
- (g) *Impact;*
- (h) *Self Confidence;*
- (i) *Presentation;*
- (j) *Proactive Orientation and;*
- (k) *Achievement Orientation.*

**HYPOTHESIS 3:** A statistically significant, positive relationship exists between *Information Search* and self-actualization;

- HYPOTHESIS 4:** A statistically significant, positive relationship exists between *Concept Formation* and self-actualization.
- HYPOTHESIS 5:** A statistically significant, positive relationship exists between *Conceptual Flexibility* and self-actualization.
- HYPOTHESIS 6:** A statistically significant, positive relationship exists between *Impact* and power.
- HYPOTHESIS 7:** A statistically significant, positive relationship exists between *Self Confidence* and;  
(a) decisiveness and;  
(b) self assurance.
- HYPOTHESIS 8:** A statistically significant, positive relationship exists between *Proactive Orientation* and:  
(a) supervisory ability;  
(b) initiative;
- HYPOTHESIS 9:** A statistically significant, positive relationship exists between *Achievement Orientation* and:  
(a) supervisory ability  
(b) occupational achievement;
- HYPOTHESIS 10:** A statistically significant,

- negative relationship exists  
between *Information Search* and  
job security.
- HYPOTHESIS 11:** A statistically significant,  
negative relationship exists  
between *Concept Formation* and  
job security.
- HYPOTHESIS 12:** A statistically significant,  
negative relationship exists  
between *Conceptual Flexibility*  
and job security.
- HYPOTHESIS 13:** A statistically significant,  
negative relationship exists  
between *Proactive Orientation*  
and:  
(a) job security and;  
(b) high financial reward.
- HYPOTHESIS 14:** A statistically significant,  
negative relationship exists  
between *Achievement*  
*Orientation* and:  
(a) Job security and;  
(b) high financial reward.
- HYPOTHESIS 15:** No statistically significant  
relationships exist between  
*Information Search* and  
intelligence;
- HYPOTHESIS 16:** No statistically significant  
relationship exists between

*Concept Formation* and  
intelligence.

**HYPOTHESIS 17:** No statistically significant relationship exists between *Conceptual Flexibility* and intelligence.

**HYPOTHESIS 18:** (a) If the sample of managers being studied is responsible for the management of discontinuous change, then a statistically significant, positive relationship exists between the eleven HPMC and innovation.

(b) If the sample of managers being studied is responsible for the management of continuous change, then a statistically significant, positive relationship exists between the eleven HPMC and adaption.

## **6.6 CONCLUSIONS**

In this chapter, the performance, behavioural, environmental and individual variables relevant to this study have been specified and defined. A model of executive effectiveness in dynamic environments has been developed from which eighteen hypotheses have been drawn for testing in this study. The next chapter describes the method chosen to collect data so that the hypotheses can be tested.

## CHAPTER SEVEN

### METHOD

#### 7.1 INTRODUCTION

This chapter explains the method chosen to test the hypotheses drawn from the model of executive effectiveness in dynamic environments. The decisions taken on the research setting and the site of the research are stated and explained. Then, the methods chosen to collect behavioural and individual data are described and discussed. Next, the selection of the sample is explained. Afterwards, the methods used to code the behavioural and individual data in preparation for quantitative and qualitative analysis are presented. Penultimately, the collection of performance data is described. Finally, conclusions are drawn.

#### 7.2 THE RESEARCH SETTING

A field setting was chosen for this research because the heavy workload, large responsibilities and social status of top level executives made it extremely unlikely that any would participate in an experimental study. Also, it was decided to conduct the study in a single organization to permit some uniformity for the rate of environmental change and other key environmental variables that influence organizational performance. This decision had the added advantage of standardizing the method of organizational

performance assessment - a cross-organizational study would have led to inconsistencies in criterion measurement (Schroder, 1989a).

### 7.3 THE SITE OF THE RESEARCH

#### 7.3.1 The focal organization

An international financial service group (IFSG) provided the site for this research. The IFSG had total assets of more than £72bn and profit before tax of over £800m (23% of which was from international operations, subsidiaries and associated companies) when it was chosen as the focal organization. It employed over 80,000 people in the UK and over 95,000 worldwide. The IFSG provided a population of more than 5,000 managers of whom 64 were top level executives responsible for the overall management of the organization. The IFSG was chosen as the focal organization because it provided access to a population of top level executives who were experiencing an increasingly dynamic environment. Also, as neither Schroder nor Boyatzis have studied a financial services organization, the choice of the IFSG means that this research can add to knowledge on the generalizability of the HPMC.

#### 7.3.2 The problem of access

Kotter (1982) has stressed the difficulty of gaining access to top level executives. He states, "Gaining access and

co-operation can be very difficult and time consuming; it is infinitely easier to get a group of students or lower level employees to spend fifteen to sixty minutes filling out a questionnaire than it is to do the typical field study" (p151). Fortunately, the IFSG staff were willing to give the researcher access to all of its managers and to provide an outstandingly high level of co-operation and support.

### 7.3.3 The rate of environmental change experienced by focal organisation

A literature review of expert sources outside the IFSG showed that fundamental changes had occurred and were continuing to occur to its external environment. Bain (1986) has suggested that five driving forces for change exist in the environment of financial services organizations: international competition, securitization, deregulation, technology and supervisory arrangements. Also, Bain (1986,p20-1) has pointed out that these forces have substantial implications for organizations like the IFSG, "The specialized organizations of yesterday tended to be product-orientated - building societies, banks, life assurance companies, unit trusts, pension funds. Each offered a limited range of specialist products. The financial conglomerates of tomorrow will be customer-orientated, aiming to provide their customers a comprehensive and varied set of financial services. This poses major strategic questions and organizational challenges..... the strategic choice concerns the markets

to be served, a choice which is inevitably constrained by the institution's own expertise and resources. There are also questions of the products to be offered to the chosen customers. Pricing policy has become a key issue ..... competitive pricing has eliminated any remaining elements of monopoly profit - profitability in future will depend therefore on being a low cost supplier and the spotlight turns to the cost base. New products, new payment systems, new distribution and delivery and enhanced management information systems make immense demands on the technology, telecommunications, computing technology and the software to go with it. A major challenge, for the individual institution perhaps the most important challenge, is how to ensure that capital (on technology) is wisely spent and that the organizational structure enables business to take full advantage of this immense resource commitment".

A review of archival data inside the IFSG revealed a high level of awareness of these environmental trends and their organizational implications. For example, the Chairman's statement in the Annual Report and Accounts for the year when this study began included the following passage, "Shareholders will notice that this year our report is designed to highlight the changing environment in which we operate..... The world's financial markets are changing rapidly. Competition (this year) remained strong and will intensify (next year). Deregulation is a potent catalyst for change. Traditional barriers in the financial services sector are being dismantled, and this will have an impact

upon the personal and corporate sectors of our business. Technology is speeding the process of change through faster communications and is also enabling us to contain costs and improve efficiency". An internal document produced by the focal organization's executives highlighted four factors for change (increasing and more segmented customer needs and expectations, competition, pressure on costs, and new technology). The document introduced fundamental changes to the formal structure aimed at making the organization more differentiated and tailored to market segments, more flexible and rapid in its response to customers, more efficient and, flatter with more responsibility pushed down to units in contact with customers.

In summary, the review of internal and external archival sources showed that the rate of change in the IFSG's environment was perceived to have increased in recent years and to be accelerating. The executives of the IFSG were making major changes to the strategy, structure, technology and staffing of the organization to ensure that it was well adapted to the new environmental conditions. In fact, it is fair to say that the IFSG was at a major turning point in its history since revolutionary, discontinuous changes were being made to the key organizational variables due to both the advent of a number of environmental forces driving change and the desire of executives to make the organization outstandingly successful in the long-term. These circumstances mean that the work of the executives in the focal organization was being influenced substantially

and by the increased rate of environmental change.

#### 7.3.4 Implications of the site chosen for the research on the hypotheses being tested

As the focal organization permitted a sample of top level executives to be studied who were experiencing at least a moderate level of environmental change, it is expected that a strong relationship will exists between organizational performance and the eleven HPMC. Furthermore, a relationship is expected between organizational performance, the eleven HPMC and innovation because the executives in the focal organization were responsible for the management of discontinuous change.

#### 7.4 METHODS USED TO COLLECT BEHAVIOURAL DATA

It was decided to use observation as the primary means of collecting data on the competence of executives. There were several reasons for this decision. Firstly, the literature review of leadership studies demonstrated the disadvantages in the use of questionnaires to gathers information on managerial competence compared with the clarity and meaningfulness of data gathered by direct observation of behaviour. Observation, as Bouchard (1976, p385) has pointed out, "Focuses the researcher's attention on the behaviour of individuals rather than simply on their verbal interview or test-taking behaviour. This is no small gain

in the light of the consistent finding that test-taking behaviour in the form of attitude and satisfaction measures is consistently unrelated to the behaviour of real interest to most investigators (Brayfield and Crockett, 1955, Wicker, 1969). It is difficult to understand why researchers have held so tenaciously to paper and pencil methods rather than turning to a systematic examination of the structure of the behaviour of interest (cf., Brandt, 1972; Wernimont and Campbell, 1968)". Second, observation tends to force the researcher, "To work at the whole man, the whole organization and the whole environment (social and physical) in an integrated way" (Bouchard, 1976, p385). Lastly, observation can lead to an unanticipated experience which permits the development of a new theory or the extension of an existing one. Nevertheless, as Mintzberg (1970) has pointed out, observation is a resource intensive method so that a much smaller sample of people has to be studied with a given amount of resources than is the case with less rich but more economical methods like interviews and questionnaires.

Bouchard (1976) has identified three methods of participant observation that can be used in field settings. These are complete participation, participant as observer and observer as participant - see Table 7.1. The third method - observer as participant - was chosen for this study. Methods one and two would have required the researcher to be a top level executive. This was not considered feasible due to the complex nature of executive jobs and the extensive training

**TABLE 7.1: METHODS OF PARTICIPANT OBSERVATION**

METHOD	PROS	CONS
<b>Incomplete Participation observer</b> repetitiously becomes a member of the group being studied and conceals his/ her role as a researcher.	<ul style="list-style-type: none"> <li>• Least obtrusive method so that research role interferes least with "natural" behaviour</li> <li>• Permits deepest penetration into the social structure being investigated</li> </ul>	<ul style="list-style-type: none"> <li>• Raises ethical questions</li> <li>• Can be disastrous if deception is discovered</li> <li>• Much training is needed for deception to be successful</li> <li>• Puts a psychological strain on the observer</li> <li>• Recording of observations difficult putting much reliance on memory</li> <li>• Isolates observer from groups he/she is not a member of</li> <li>• Observer gets drawn into the group and can actively influence events</li> </ul>
<b>Participant as Observer</b> researcher is somewhat aware about the purpose of study, but ensures that his/her activities as participant are given many importance.	<ul style="list-style-type: none"> <li>• Overcomes the ethical stress and other problems caused by Method 1</li> <li>• Enables researcher to remain more neutral and can help to prevent isolation from other groups</li> </ul>	<ul style="list-style-type: none"> <li>• Recording can still be difficult.</li> <li>• Activity of researcher as participant can influence events</li> <li>• Researcher may still need much training to participate effectively</li> </ul>
<b>Observer as participant</b> researcher is publicly known and possibly likely sponsored. The research role predominates observer plays little active participation in events.	<ul style="list-style-type: none"> <li>• Researcher can remain neutral and can have access to different groups</li> <li>• No ethical etc problems</li> <li>• No training needed to enable observer to participate as a member</li> <li>• Researcher has minimal active influence in the group</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher's presence may influence events even though a passive role is being adopted</li> <li>• Researcher may not gain subjective information which explains the perceptions of group members</li> </ul>

and experience they demand. Method three was the main option available, therefore, and has been used successfully by previous researchers in this area (Rackham and Carlisle, 1978).

Weick's (1969) method of reducing the interference caused by an observer was used in this study. In his review of research into the effects of the presence of an observer on the behaviour of subjects, Weick (1969) states, "The typical finding is that interference is not extensive, and when it occurs, its effects are usually localized in the period when the observation begins"(p372). He suggests that one way to reduce interference is for the observer to indicate, "His purpose to subjects in advance and then (try) to remain inconspicuous while recording their actions"(p374). This method was used as far as possible. However, one limitation on openly stating the purpose of the study was that the sponsoring executive in the focal organization did not want his colleagues in the sample to know that assessments were being made of their competence. Consequently, this aspect of the research was not revealed to the executives in the sample. It was decided to interview the executives after the observation period to discover how they saw their jobs in order to avoid the second problem highlighted in Table 7.1 (the loss of the subjective perceptions of the executives being observed). This method has been used with good effect by Lawrence (1984). The format of the job interview is given in Appendix 9.

The next stage in the design of the methodology was to choose the method of recording the behaviour being observed. It was decided to use a large pad of plain sheets of paper to record events as they happened because experimentation at the pilot stage showed that this was the most effective way of keeping a comprehensive and accurate behavioural record. Attempts made at coding behaviour immediately it was observed proved too cumbersome and resulted in the loss of too much data.

## 7.5 COLLECTION OF DATA ON INDIVIDUAL VARIABLES

### 7.5.1 Collection of data on the abilities, personality traits,

#### cognitive style and goals of the sample

To test hypotheses 3-18 it was decided to collect data by administering Ghiselli's Self-Description Inventory and Kirton's Adaption-Innovation Inventory to the sample of 30 executives because these questionnaires are tried, tested, reliable and quick ways of measuring the individual variables included in these hypotheses.

### 7.5.2 Collection of biographical information

It was decided to use an interview to gather biographical information from the executives in the sample. The objective data collected was: birth order, parental occupation, education, employment history, training, and developmental experiences, age and gender. Subjective data

was also collected on the respondents' attitudes towards their family of birth, occupational choice and employment history by means of the biographical interview. The format of this interview is given in Appendix 10.

## 7.6 THE SAMPLE

### 7.6.1 Sample size

It was decided to observe 30 executives for two days making a total of 60 days observation. Several factors informed this decision. First, enough time had to be spent with each executive for a representative sample of behaviour to be observed. Rackham and Carlisle (1978) found that two days or 40% of a normal working week provided adequate data on the competencies being studied. A three day pilot observation study was made on one executive which supported Rackham and Carlisle's findings because the subject did not use new competency-relevant behaviours after the middle of the second day. Second, a sample of 30 executives is sufficiently large for hypotheses to be tested. Third, 60 days of observation was the maximum that could be undertaken and analyzed by the researcher.

### 7.6.2 Sample selection

A sample of 30 executives was drawn from the 64 who constituted the population. Because the study was seeking to explore the relationship between independent variables

and organizational performance, it was important to ensure that the sample contained managers whose units spanned the full range of performance. Regular, detailed reviews are made within the IFSG of the performance of the units for which the executives are responsible. On the basis of this information, the sponsoring executive (who had been excluded from the sampling frame so he could help with the management of the research) divided the executives into three groups according to the level of performance of the organizational units for which they were responsible. (Group 1 = below average; Group 2 = average; Group 3 = above average). A random sample of 10 executives was then drawn from each group. The researcher was blind to the performance level and grouping of the executives who made up the resultant sample of 30.

#### 7.7 THE SEQUENCE OF COLLECTION OF BEHAVIOURAL AND INDIVIDUAL DATA FROM THE SAMPLE

Once the sample had been selected, the sponsoring executive wrote a letter to each of the 30 executives to introduce them to the study and the researcher. The researcher then met each executive for 20-30 minutes to explain the broad purpose of the study and to secure their cooperation. The executives were not informed that behavioural assessments were being made of them by the researcher. At these introductory meetings, times were booked into the executives' diaries to permit the gathering of data. Data were gathered in the following sequence from all executives:

(a) two days observation; (b) the job analysis interview within two weeks of observations; (c) at the end of this interview, executives were given the KAI with an envelope addressed to the researcher and were asked to complete and return these by the time of the next interview; (d) the biographical interview within two weeks of the first interview; (e) at the end of this interview executives were given the SDI and a second envelope and asked to complete and return these to the researcher within two weeks. All questionnaires were number coded to protect the anonymity of the respondents. Executives were guaranteed that no information would be reported in this thesis or to the focal organization on an individual basis.

## 7.8 CODING OF THE BEHAVIOURAL AND INDIVIDUAL DATA

### 7.8.1 Behavioural data

At the start of this study, the researcher attended a six day assessor training course run by Schroder and had achieved an inter-rater reliability with expert ratings of at least 0.85 in all eleven of the HPMC. Using the assessment methods devised by Schroder, the behavioural data that had been collected by observing the IFSG's 30 executives were coded. About 9,000 pages of behavioural notes had been collected in total. For each executive, a pad of eleven A4 sheets of paper (one sheet for each of the eleven HPMC) was used to classify the behaviour that had been recorded during the observation period. Every

page of the observation notes was read carefully and each time a behaviour relevant to one of the HPMC was found it was rerecorded on the relevant sheet of the classification pad. Schroders' behavioural definitions, indicators and contributions of the HPMC (see Appendix 3) were constantly at hand to help ensure that the classification process was accurate. At the end of this process the classification pad for each executive had a large number of behaviours recorded on each of the eleven pages.

For each executive, the researcher then used Schroders' Competency Rating Scales (see Appendix 5) to rate on a 1-5 scale each piece of behaviour that had been rerecorded on the classification pad for each competency. Finally, these scores were analyzed to provide an overall rating on a 1-5 scale for each executive on each competency. For example, the classification pad for executive (A) had 120 pieces of behaviour on page 1 that had been classified as *Information Search* and each of these was now rated 1-5 using the *Information Search* rating scale; when this had been done, the 120 ratings were examined and an overall rating for the executive on *Information Search* was given using the 1-5 scale. Executive (A) had 49 pieces of behaviour on page 2 of the classification pad that had been classified as *Concept Formation* and each of these was now rated 1-5 using the *Concept Formation* rating scale; when this had been done, the 49 ratings were examined collectively and an overall rating for the executive on *Concept Formation* was given using the 1-5 scale. This

continued through to page 11 of the pad where 39 pieces of behaviour had been classified as *Achievement Orientation* and were now rated 1-5 using the *Achievement Orientation* rating scale. Once this had been completed the 39 ratings were examined collectively and an overall rating for the executive on *Achievement Orientation* was given using the 1-5 scale.

When the researcher had finished the classification and rating process a second researcher, also trained to be a highly reliable assessor of the HPMC by Schroder, used the process described above to rerate every piece of behaviour for every competency for every executive and make overall ratings of each executive on the eleven competencies. The second rater did not know the ratings of the first researcher. The inter-rater reliability of overall ratings was at least 0.90 - see Table 8.7.

When the two raters had given a different overall rating for a competency, they discussed their ratings and arrived at a consensus overall rating so that analyses other than the reliability check could be made.

#### 7.8.2 Individual data

The response sheets to the questionnaires were scored according to the instructions in the respective manuals. The biographical interview data was analyzed to identify

similarities and differences in the personal history of the executives.

## 7.9 PERFORMANCE DATA

### 7.9.1 Introduction

The literature review of organizational performance variables showed that both the Goal Model and the Systems Model could be useful to this study. The Goal Model pointed to the value of the level of attainment of agreed organizational goals while the work by Reiman within the framework of the Systems Model showed the value of organizational competence measures. With these variables in mind, discussions were held in the research design phase with the sponsoring executive in the ISFG. Two measures were chosen for use in this study as a result of these discussions. One measure already existed. It was the level of achievement by executives of objectives established for the IFSG's Performance Related Reward (PRR) scheme. The second was created for this study. It was a rated ranking of the organizational competence of the units reporting to the executives in the sample. Both measures are described in detail below.

### 7.9.2 The Performance Related Reward measure

Under the PRR scheme each executive has to agree five or six objectives with his boss for achievement in the forthcoming

year. This process has four stages: selecting objectives, determining measures, setting targets and determining the level of reward. Each stage is described below.

#### 7.9.2.1 Selecting objectives

The scheme states that the PRR objectives should be closely related to the annual business plan, be related to those factors which the manager can influence or control and, wherever possible, include at least one objective of a financial nature.

#### 7.9.2.2 Determining measures

In the scheme, three types of target were identified for use as indices of the level of achievement of agreed objectives:

- (a) Measurable - those targets which have a clear numeric performance result, eg. profit or sales of certain products;
- (b) Testable - those targets where performance can be tested, particularly by reference to surveys, eg. customer satisfaction;
- (c) Assessable - those targets where performance cannot be measured, but where performance criteria can be clearly stated, eg project work.

#### 7.9.2.3 Setting targets

Under the scheme, each objective has to have three levels of target specified. The "threshold" level is the lowest level of target and its achievement results in the payment of a

minimum bonus to the executive. In broad terms, this target means a financial result about 10% below the "on-target" level. The "on-target" level is described as a stretching but realistic target. If all financial targets were met at this level the organization would achieve the "on-target" level set in its corporate plan. The "ceiling" level is the highest level of achievement and is described as a very stretching target; it could mean a financial result around 25% higher than the "on-target" level.

#### 7.9.2.4 Determining the level of reward

At the end of the PRR year, the executives agree the level of target achieved (below threshold, threshold, on-target or ceiling) for each objective with their boss. The level of achievement of all objectives results in a percentage of overall achievement (POA) for each executive. If an executive achieved all objectives On-Target, the POA would be 20%. If an executive achieves objectives above or below the On-Target level, the POA will vary from 0% to 40%.

#### 7.9.2.5 Collection of PRR data

The PRR scheme provides an index (the POA) of each executive's level of achievement of five or six agreed objectives which are measurable and achievable within a one year period. Once the behavioural and individual data had been collected and coded, the PRR data was collected for each executive.

### 7.9.3 The Organizational Competence measure

The second measure of organizational performance which was used in this study is based on Reiman's organizational competence (OC) measure. Once the behavioural and individual data had been collected and coded, the organizational competence data was collected for each executive. The organizational unit managed by the each executive in the sample was identified. A rated ranking of the performance of each executive was made based on the perceived organizational competence of the unit. Factors taken into account when making the organizational competence assessment were those specified by Reiman: profit growth, sales growth, attraction and retention of high quality human resources, product quality, customer service, employee satisfaction and morale, potential for future growth and competitive strength. The rated ranking was made independently by three senior executives who had been excluded from the sampling frame so that they could make the rated rankings impartially. One executive was responsible for the management of the PRR scheme and was closely in touch with organizational performance data. The second executive had joint responsibility with line managers for executive succession and management development and regularly gathered formal and informal performance data as a basis for undertaking these responsibilities. The third executive was the boss of the other two. The rated ranking technique used was the one reported by Miner (1988). This technique was chosen because it overcomes many of the

problems experienced by ratings and rankings when used in isolation from each other (see Miner, 1988, pages 291-292 and 303-304).

In order to minimize measurement error, a standardized process was used with each of the three evaluating executives to obtain the rated rankings. Reading from a script the researcher explained the process as follows:

*I am going to ask you for your evaluations of the performance of 30 executives based on the competence of the organizational unit managed by these executives. As far as possible you should relate the competence of these units to that of other units in your organization and to comparable units in competitor organizations. Your evaluations will go to me only. The data will be in my hands and only summary statements, not information on individuals or units, will be reported.*

*Initially, I will ask you to rank the 30 executives on the basis of the competence of the organizational units they manage and then to rate the 30 executives. Thus, there will be both a ranking and a rating. It is important to remember that the basis of the ranking is organizational competence, not the personal characteristics or behaviour of the executives. Hence, your assessment should be based on the profit growth, sales growth, attraction and retention of quality human resources, product quality, customer service, employee satisfaction and morale, potential for future growth and, competitive strength of each executive's unit during the entire period it has been managed by that executive.*

At this point the executive was presented with 30 6"x4" cards - one for each executive in the sample. On each card was written the organizational unit that the executive was managing and the name of the executive. The researcher then used the script to take the executive making the evaluation through the following process:

*Here is the organizational unit run by each of the executives in the sample. Using the eight criteria just described, tell me which executive's unit has the highest level of organizational competence.. (Once the name was given and recorded, the process continued). Now, using the same basis of assessment, tell me which executive's unit has the lowest level of organizational competence. Of those remaining and using the same basis of assessment, which executive's unit has the highest level of organizational competence and which executive's unit has the lowest level of organizational competence?*

The alternation process was repeated until all of the 30 executives in the sample had been ranked according to the organizational competence of the units they were managing and the results had been recorded. The following rating scale was then given to the evaluating executive (the numbers in brackets at the different points of the scale were those used in the data analysis and were not shown to the evaluating executives).

Rating Scale

- An outstanding performance (7)
- A very good performance (6)
- A good performance (5)
- Performance at somewhat above a satisfactory level (4)
- Performance entirely satisfactory but no more than that (3)
- Performance somewhat below a satisfactory level (2)
- A poor performance (1)

Having given the evaluating executive an opportunity to read the rating scale and ask questions the procedure continued from the script as follows:

*Now we have a ranking of the performance of each executive based on the organizational competence of the unit managed by him. But we still need to make a rating of that performance. Lets take ..... whose unit you have ranked at the top. Has the performance of this executive, based solely on the organizational competence of the unit he is managing, been outstanding?*

If the evaluating executive rejected this label then the researcher moved down the scale until a suitable label was found. Then the evaluating executive was directed to the lowest ranked person:

*Lets take ..... whose unit you have ranked at the bottom. Has the performance of this executive, based solely on the organizational competence of the unit he is managing, been poor?*

Again, if "poor" was considered inappropriate, the researcher moved up one level at a time until an appropriate designation was found. Then, the evaluating executive was directed to the second ranked individual:

*.....(executive managing first ranked unit) has been rated ..... is ..... (executive managing second ranked unit) rated at the same level (if not) what lower level should apply? Again, base your judgement solely on the organizational competence of the unit he is managing.*

Ratings were thus made in the same alternating way until all 30 executives had been rated. The three evaluating executives undertook the rated ranking process independently of one another and were requested not to discuss the process or its outcome. The executives agreed to this condition and so far as can be judged, complied with it. The inter-rater reliability of the three evaluating executives was high and is presented in section 8.3.

## 7.10 CONCLUSIONS

A field setting was used to collect behavioural data from a sample of 30 top level executives working for an

international financial services group that was experiencing rapid environmental change. Each executive was observed for two days to collect behavioural data. An interview with each executive following observation supplemented this data. The procedures devised by Schroder (1989a) were used to analyse the behavioural observation data and to rate each executive on the eleven HPMC using a five point scale.

Ghiselli's Self-Description Inventory and Kirton's Adaption-Innovation Inventory and a biographical interview were used to gather data on individual variables. The focal organization's Performance Related Reward scheme and a rated ranking based on organizational competence of the unit run by each executive in the sample provided organizational unit performance data. The next chapter describes the results gained from the analysis of this data.

## CHAPTER EIGHT

### RESULTS

#### 8.1 INTRODUCTION

In this chapter the results of the data collection and analysis are presented. The results are in the following sequence: firstly, organizational unit performance variables; second, behaviour variables; third, individual variables; fourth, results relating to the development of the HPMC and; finally, concluding comments are made. The quantitative analyses which are described in this chapter were made with the SPSS/PC+ Version 2.0 software programme; the user manuals for this programme (see Norusis, 1988a, 1988b) describe in detail the statistical techniques used.

#### 8.2 ORGANIZATIONAL UNIT PERFORMANCE VARIABLES

##### 8.2.1 Introduction

Data was gathered on two types of organizational unit performance variable. The first, the POA, is a measure of the level of achievement of agreed organizational goals and is based on the focal organization's Performance Related Reward scheme. The second is a rated ranking based on the organizational competence of the unit managed by each of the executives in the sample. In this section, the data gathered on the two performance variables are presented.

### 8.2.2 The POA measure

Table 8.1 presents the statistics of the POA measure.

**TABLE 8.1: SUMMARY STATISTICS OF THE POA MEASURE**

Mean	Standard Deviation	Minimum	Maximum	Number of Observations
20.8	1.79	17.3	25	30

Table 8.1 shows that the observed mean of the POA (20.8) is close to the theoretical mean (20), that the range of POA is 7.7 and that 68% of the executives scored between 19 and 22.6. These results indicate that the POA approximates a normal distribution and does not suffer from leniency or a restricted range of rating.

### 8.2.3 The Organizational Competence measure

Three evaluating executives made rated rankings of the performance of the sample based on the organizational competence of the unit they were managing. Summary statistics for the three rated rankings (OC1, OC2 and OC3) are presented in Table 8.2. This table shows that OC1 and OC2 have a mean which is slightly higher than the theoretical mean (4) and that the executives who made these ratings used the full range of the seven point scale. OC3 shows some tendency towards leniency as the mean was 5.37

**TABLE 8.2: SUMMARY STATISTICS OF THE ORGANIZATIONAL  
COMPETENCY RATED RANKNESS**

Rated Ranking	Mean	Standard Deviation	Minimum	Maximum	Number of Observations
OC1	4.85	1.58	1	7	30
OC2	4.57	1.71	1	7	30
OC3	5.37	1.27	3	7	30

and the range of the rating scale used was restricted slightly as the minimum score awarded was three.

An important consideration is the reliability or consistency of the three rated rankings. To assess reliability, the intercorrelations of the rated rankings were computed, the results of this analysis are given in Table 8.3.

**TABLE 8.3: THE RELIABILITY OF THE OC RATED RANKINGS BASED ON  
THE INTERCORRELATIONS OF OC1, OC2 AND OC3**

	OC1	OC2	OC3
OC1	1.00		
OC2	.79***	1.00	
OC3	.84***	.63***	1.00

\*\*\* p< .001

Table 8.3 shows that a high level of correlation (above 0.70) exists between OC1/OC2 and OC1/OC3 whilst the correlation OC1/OC3 falls below the 0.70 level but not below

0.60. It was decided that the high correlations between the three organizational competence rated rankings justifies their summation to form an organizational competence total score (OCTOT). The correlations between OCTOT and the three composite rated rankings are given in Table 8.4.

TABLE 8.4: THE CORRELATION BETWEEN OCTOT AND OC1, OC2 AND OC3

	OC1	OC2	OC3
OCTOT	.96***	.90***	.88***

\*\*\* p< 0.001

Table 8.4 shows the very high correlations between OC1, OC2, OC3, and OCTOT gives confidence in the use of OCTOT as the second measure of organizational performance in this study.

Table 8.5 gives the summary statistics for OCTOT.

TABLE 8.5: SUMMARY STATISTICS OF OCTOT

Mean	Standard Deviation	Minimum	Maximum	Number of Observations
14.78	4.18	6	21	30

Table 8.5 shows that the observed mean (14.28) and range (15) of OCTOT are sufficiently close to the theoretical mean (13.5) and range (18) for this measure to be used confidently as the second measure of organizational performance.

#### 8.2.4 The Relationship between POA and OCTOT

The Pearson correlation of POA and OCTOT was computed. The coefficient is 0.12 ( $p=.26$ ) which is below the level necessary to reject the null hypothesis. These results show that no relationship exists between the POA measure of the extent to which the sample achieved the agreed organizational goals included in the IFSG's PRR scheme and the evaluating executives' assessment of the organizational competence of the unit managed by each executive in the sample.

The results relating to the most important independent variable in this study - behaviour - are now presented.

### 8.3 BEHAVIOUR VARTABLES

#### 8.3.1 Introduction

In this section, the summary statistics of the HPMC ratings are described first. This is followed by the reliability of the HPMC ratings, the relationships between these ratings as determined by correlational and factor analysis, the relations between the HPMC factors and managerial activities and, lastly, the validity of the HPMC in terms of the two measures of organizational unit performance.

### 8.3.2 Summary statistics of the behaviour variables

Table 8.6 presents the summary statistics for the eleven HPMC ratings made of the 30 executives in this study. Table 8.6 shows that the observed mean of every HPMC is above the theoretical mean (3) but no competency has a mean of four or above. The full range of the rating scale was used for seven competencies; the remaining HPMC have a range of four because the minimum rating was two. These data show that the HPMC definitions, behavioural indicators and rating scales can be applied by researchers to top level executive samples without the results suffering from excessive skew or restriction of range.

**TABLE 8.6: SUMMARY STATISTICS OF THE HPMC (n = 30)**

HPMC	Mean	Standard Deviation	Minimum	Maximum
Concept Formation	3.92	0.87	2	5
Proactive Orientation	3.87	0.97	2	5
Achievement Orientation	3.80	0.96	1	5
Interpersonal Search	3.72	1.19	1	5
Self Confidence	3.65	1.04	2	5
Managing Interaction	3.57	1.50	1	5
Information Search	3.55	0.95	2	5
Impact	3.53	1.31	1	5
Conceptual Flexibility	3.40	1.10	1	5
Presentation	3.33	1.18	1	5
Developmental Orientation	3.03	1.22	1	5

Table 8.6 demonstrates that, for the sample as a whole, the three most highly rated competencies were *Concept Formation, Proactive Orientation and Achievement Orientation*. As a group, therefore, the executives are most able to: (a) build frameworks and form concepts, hypotheses or ideas on the basis of information; (b) create change, make plans and take responsibility for all aspects of a situation and; (c) set challenging work standards, measure progress against standards and take action to improve efficiency and quality.

Table 8.6 shows that for the sample as a whole, the three least highly rated competencies were *Conceptual Flexibility, Presentation and Developmental Orientation*. As a group, therefore, the executives are least able to: (a) identify and analyse the relative pros and cons of feasible alternatives, multiple options or different perspectives; (b) present ideas clearly with ease and interest using technical, symbolic, non-verbal and visual aids to get the message across and; (c) create a positive climate in which individuals gain self-awareness and are provided with coaching, training, developmental resources and job responsibility to improve their performance. Before proceeding to more complex analyses of the competency data, it is important to know how reliable the competency ratings are because unreliable data would be unacceptable.

### 8.3.3 The reliability of the HPMC ratings

Two researchers used the Competency Rating Scales to rate independently each executive in the sample on all competencies. For each competency, therefore, 30 paired ratings exist - one pair for each executive. By correlating the 30 pairs of ratings for each competency an index of the inter-rater reliability of each competency can be obtained. The results of this analysis are presented in Table 8.7.

**TABLE 8.7: THE RELIABILITY OF THE HPMC RATINGS**

HPMC	Correlation of 30 pairs of Ratings for each HPMC
Information Search	.93
Concept Formation	.98
Conceptual Flexibility	.95
Inter Personal Search	.97
Managing Interaction	.97
Developmental Orientation	.94
Impact	.96
Self Confidence	.94
Presentation	.93
Proactive Orientation	.97
Achievement Orientation	.95

As Table 8.7 demonstrates, an extremely high level of inter-rater reliability was achieved which permits more complex analyses of the competency data to be made.

#### 8.3.4 The relationships between the HPMC ratings

It is important to know how similar or different the HPMC ratings are. Are the ratings so similar that they represent a single dimension of behaviour, are they so different that each is completely unrelated to any other or are they between these two extremes?

The first stage in exploring this question was the computation of the correlation matrix for the 11 HPMC's, (see Table 8.8). This table shows that each of the 11 HPMC's has a strong correlation with at least one other competency which suggests they share common factors. Therefore, factor analysis was undertaken to identify how many dimensions could be computed to represent the statistical relationships between the competencies.

A principle components analysis of the correlation matrix produced the initial statistics presented in Table 8.9 which shows that three factors, explaining 76.8% of the variance, had eigenvalues of one or more. A fourth factor with an eigenvalue of 0.63 might also be justified if good reasons for this can be cited as it explains a further 5.7% of the variance.

TABLE 8.8: CORRELATION MATRIX FOR THE ELEVEN HPMC (n = 30)

	IS	CF	CX	PS	MI	DO	IM	SC	PR	P0	A0
Information Search (IS)	1.00										
Concept Formation (CF)		.72** 1.00									
Conceptual Flexibility (CX)			.56** .74** 1.00								
Interpersonal Search (PS)				.36* .34* .49** 1.00							
Managing Interaction (MI)					.55** .63** .63** .62	1.00					
Developmental Orientation (DO)						.65** .64** .50** .22	.33* 1.00				
Impact (IM)							.61** .40*	1.00			
Self Confidence (SC)								.13 .25 .22 .10 .10 .20 .50** 1.00			
Presentation (PR)									.25 .35* .26 .19 .41* .21 .71** .74** 1.00		
Proactive Orientation (P0)										.70** .74** .53** .15 .38* .53** .47** .44** .43** 1.00	
Achievement Orientation (A0)											.39* .64** .44** .13 .25 .48** .39* .27 .15 .71** 1.00

\* p<.05  
\*\* p<.01

**TABLE 8.9: THE PRINCIPAL COMPONENTS ANALYSIS OF THE  
HPMC CORRELATION MATRIX**

Factor	Eigenvalue	Percentage of variance explained	Cumulative Percentage of variance explained
1	5.46	49.6	49.6
2	1.61	14.6	64.3
3	1.38	12.5	76.8
4	0.63	5.7	82.5
5	0.50	4.6	87.1
6	0.45	4.1	91.2
7	0.39	3.5	94.7
8	0.21	1.9	96.6
9	0.15	1.4	98.0
10	0.13	1.2	99.2
11	0.09	0.8	100.0

Schroder (1989a) identified four factors:

<b>"COGNITIVE FACTOR":</b>	<i>Information Search</i> <i>Concept Formation</i> <i>Conceptual Flexibility</i>
<b>"MOTIVATING FACTOR":</b>	<i>Interpersonal Search</i> <i>Managing Interaction</i> <i>Developmental Orientation</i>
<b>"DIRECTIONAL FACTOR":</b>	<i>Impact</i> <i>Self Confidence</i> <i>Presentation</i>
<b>"ACHIEVING FACTOR":</b>	<i>Proactive Orientation</i> <i>Achievement Orientation</i>

The choice of the four factor model was justified by the results obtained by Schroder.

Varimax rotation of the four factor model produced the results in Table 8.10; factor loadings below 0.55 have not been presented in this table - see Appendix 11 for the other results.

Table 8.10 shows that Factor 1 is mainly cognitive in that *Information Search and Concept Formation* have high factor loadings. The results also suggest that *Developmental Orientation* has a cognitive basis. Executives with strong cognitive skills are most likely to provide subordinates with opportunities that enable them to learn, develop and grow. Proactive orientation has a loading of .57 on Factor 1 and .62 on Factor 4; therefore, this competency also appears to be partially cognitive in nature.

**TABLE 8.10: VARIMAX ROTATION OF THE FOUR FACTOR HPMC MODEL**

HPMC	FACTOR			
	1	2	3	4
Information Search	.86			
Developmental Orientation	.82			
Concept Formation	.61			
Interpersonal Search		.87		
Managing Interaction		.83		
Conceptual Flexibility		.63		
Presentation			.93	
Self Confidence			.89	
Impact			.64	
Achievement Orientation				.92
Proactive Orientation	.57			.62

Factor 1 shows that there is a tendency for the following behaviours to be related: (a) gathering many different kinds and sources of information to build a rich informational environment in preparation for decision making; (b) building frameworks or forming concepts, hypotheses or ideas on the basis of information; (c) anticipating problems and

successes and; (d) fostering the cognitive growth of staff by increasing their self-awareness and by providing coaching, training, developmental resources and stretching job responsibilities.

Factor 2 brings together *Interpersonal Search*, *Managing Interaction* and *Conceptual Flexibility*. The behaviour encompassed by this factor is: (a) using questions, summaries and paraphrasing to understand the ideas, concepts and feelings of another; (b) getting people with different ideas, concepts and feelings to interact and discuss their different perspectives and; (c) evaluating the pros and cons of multiple options by relating them to different criteria, points of view and interests. This factor is different from Schroder's in that *Conceptual Flexibility* is included and *Developmental Orientation* is excluded. The factor is renamed "Interpersonal Complexity".

Factor 3 is identical to Schroder's "Directional" factor. This factor brings together: *Impact*, *Self Confidence* and *Presentation*. The behaviour encompassed by this factor is: (a) the expression of a "stand" or "position" on issues, making and justifying decisions and expressing confidence in the success of the actions resulting from the decision; (b) using persuasive arguments, symbols, and alliance formation to gain support for ideas, goals and decisions and; (c) presenting ideas clearly with ease and interest, using technical, symbolic, non-verbal and visual aids or graphics to get the message across.

Factor 4 is identical to Schroder's "Achieving" factor. This factor brings together: *Proactive Orientation and Achievement Orientation*. The behaviour encompassed by this factor is: (a) taking responsibility for managing change and implementing plans and; (b) setting challenging standards and goals, measuring progress against standards and improving efficiency and quality.

### 8.3.5 Qualitative results showing the relationship between the HPMC factors and the work of the executives

During the observation and job analysis interview phases of the study it became evident that the issues which make up an executive's agenda tend to pass through four stages.

Different competency factors are particularly, but not exclusively, relevant to each stage. These qualitative data are reported below.

#### 8.3.5.1 Stage 1: Issue Identification and Analysis

In this stage, the most cognitively competent executives gathered a wide range of "hard" and "soft" information from a variety of sources (such as walking around offices, chance meetings with colleagues in corridors, informal and formal meetings, written reports, telephone calls, memoranda, newspapers, books and publications). The executives pieced this information together to form an understanding of what was happening and to identify issues which constituted threats to and/or opportunities for the organization.

Furthermore, having identified issues, the executives went beyond the symptoms (eg slow response to customers) to create hypotheses about underlying structural causes (eg inadequate technology) and identified several options to tackle these issues. Executives also recognized the human resources implications of the issues they had identified and analysed. They saw, for example, that a rapidly changing environment which requires flatter structures means that staff must be developed to take on more responsibility.

The agendas of the most cognitively competent executives differed from those of the least competent in that they contained issues which: (a) mutually supported one another in the sense that action on one issue would help the resolution of another issue; (b) related to the structural characteristics of the organization (its formal or informal structure, its career paths, its management information systems, its processes for formulating strategy) rather than "surface" phenomena (eg what a specific policy ought to be, how a particular individual's career ought to proceed); (c) were longer in timescale such that implementation would take 5-10 years and the assessment of effectiveness 10-20 years; (d) spanned wider than the executive's own area of responsibility: they affected several units or the entire organization and; (e) included the development of staff.

### 8.3.5.2 Stage 2: Group Evaluation of Options

The next stage tended to involve a meeting (most usually with direct subordinates but often involving peers and subordinates from other units and sometimes external consultants) at which the options for tackling an issue were evaluated. The competencies in the Interpersonal Complexity factor (*Interpersonal Search, Managing Interaction and Conceptual Flexibility*) were used extensively at these meetings. The executives who were most effective in the use of these competencies found out the ideas of the other people at the meeting, evaluated the pros and cons of the different options by getting the group members to discuss the options and enabled the group to reach a consensus decision on the preferred option. Following such meetings a paper was finalized for submission to the relevant policy committee.

The executives who were most effective in the use of the competencies in the second factor also used them extensively when they were representing the IFSG in other organizations (for example, in their capacity as chairman of the board of another organization). Because other representatives were also backed by powerful organizations and were not prepared to be coerced, a premium was placed on finding out the viewpoints of those representatives, taking them into account when evaluating options and ensuring decisions were acceptable to them rather than imposed. During the job analysis interviews, several respondents stressed that the

most effective way of being a representative was to stand above the sectional IFSG interest, find out the shared interests of all representatives, give shared interests priority and discuss conflicting interests openly and impartially. If the debate generated new ideas, a consensus could usually be achieved. The acrimony which ensued from the pursuit of sectional interests and from unilateral decision-making placed a great demand on the effective use of *Interpersonal Search, Managing Interaction and Conceptual Flexibility*.

#### 8.3.5.3 Stage 3: Policy Making

The policy paper, which had been finalized following the group evaluation of options, was presented to one or several of the IFSG's policy committees. These committees were formal and their members included the chairman and directors of the corporation, the deputy chairmen and the most senior executives. Usually, the sponsoring executive spoke to his paper explaining the issue that was being addressed, the options that were available, the pros and cons of each option, the preferred option and the reasons for this choice. For major decisions visual aids etc were used. The presenter was asked hard hitting questions and clear, concise and persuasive arguments were expected. Hence, the decision stage heavily demanded the three directional competencies of *Impact, Self Confidence, and Presentation*. This stage was seen as a critical test of the executives. On the one hand, much esteem was derived

from the ability to perform well at committees; on the other hand, low performance was regarded as a significant limitation and stories of executives who had "frozen" at committee were part of the folklore.

The directional competencies were also demanded highly when the executives were representing the organization to the media in radio, television, newspaper and journal interviews and when giving speeches, presentations etc for industry, national and international institutions. Another source of demand for the directional competencies were internal events such as the Chief Executive's tour, roadshows, speeches to staff attending courses at the IFSG's training centre and a myriad of similar events at which the executive was the representative of "general management". Much attention was paid to formal and informal feedback on the performance of executives when representing the IFSG internally and externally. The reasons for this were again made clear in the job interviews and during observation phase. A "good performance" appeared to impress a large number of people in a short period of time and to boost the confidence of the audience in both the organization and themselves. At one presentation attended by the researcher the dramatic impact on the enthusiasm of the staff was clear to see. One member of the audience told the researcher, "That was fantastic, it's great to have people like that running the corporation, I can see how we got where we are today now". "Poor presentations" appeared to have the opposite effects. A member of the audience who had attended such a presentation

said to the researcher, "What a prat ! I hope he doesn't do that when he's in front of customers or else we'll be in trouble".

#### 8.3.5.4 Stage 4: Implementation and Review

Once policy decisions had been made on issues, these decisions had to be implemented and reviewed. Usually those people who would be responsible primarily for implementation had been involved in the debate at stage two. Now they were allocated the relevant responsibilities and provided with targets not only for the process of implementation but also for the measurement of outcomes. The executives who were most effective in the use of the Achieving HPMC set both types of target, regularly reviewed progress and took any corrective action that was necessary. They had an intense drive to get policies achieved which pulled others along with them.

#### 8.3.5.5 Summary of qualitative data on Agenda Stages

The four agenda stages and the most relevant HPMC factors and competencies are provided in Table 8.11. It must be emphasized that the sequence in Table 8.11 should not be treated mechanistically. There are several reasons for this. First, the observation study showed that at any moment in time an executive would be dealing with a large number of issues at different stages of completion. Second, executives sometimes became responsible for issues at stage

3 or 4 and handed others over once stages 1 or 2 had been completed. Third, executives dealt with many tasks which could be completed quickly without going through stages 1-4.

**TABLE 8.11: AGENDA STAGES AND THE MOST RELEVANT COMPETENCIES**

STAGE OF TASK COMPLETION	MOST RELEVANT FACTORS AND COMPETENCIES	
	FACTOR	COMPETENCIES
1. ISSUE IDENTIFICATION AND ANALYSIS	COGNITIVE	Information Search Concept Formation Developmental Orientation
2. GROUP EVALUATION OF OPTIONS	INTERPERSONAL COMPLEXITY	Interpersonal Search Managing Interaction Conceptual Flexibility
3. POLICY MAKING	DIRECTIONAL	Self confidence Impact Presentation
4. IMPLEMENTATION AND REVIEW	ACHIEVING	Proactive Orientation Achievement Orientation

Fourth, all stages of task completion required all the competencies. Table 8.11 shows the most important competencies to each stage and it should not be assumed that the other competencies are irrelevant. Thus, Table 8.11 should be regarded as an analytical scheme that helps to comprehend the complexity of executive tasks and behaviour rather than pure representation of these tasks and behaviour.

The observation and job analysis interview data have shown that the executives in the sample did use the HPMC, that similar inter-relationships were found between the

competencies in this study and in Schroder's and that each factor seems particularly (but not exclusively) relevant to one of the stages which the issues on an executive's agenda were found to pass through. This indicates that the hypothesized relationships between managerial behaviour and organizational performance should exist. These relationships are of central importance to this study, and are considered next.

### **8.3.6 The validity of the HPMC**

#### **8.3.6.1 Introduction**

In section 8.2 it was shown that the two measures of organizational unit performance (POA and OCTOT) are independent. This section, considers separately the relationship of the HPMC to POA and OCTOT.

#### **8.3.6.2 Relationship of the HPMC to POA**

The correlations between the HPMC and POA were computed. The results of this analysis are given in Table 8.12. Table 8.12 shows that none of the HPMC was correlated significantly at the .05 level with POA. No relationship was found, therefore, between the behaviours included in the HPMC and the POA measure of the level of achievement of agreed organizational objectives.

**TABLE 8.12: THE CORRELATION BETWEEN THE HPMC AND POA (n = 30)**

COMPETENCY	CORRELATION WITH POA
Information Search	.24
Concept Formation	.01
Developmental Orientation	.10
Interpersonal Search	.04
Managing Interaction	.03
Conceptual Flexibility	-.03
Presentation	.29
Self Confidence	.20
Impact	.28
Proactive Orientation	.24
Achievement Orientation	-.01

### **8.3.6.3 Relationship of the HPMC to OCTOT**

The Pearson correlation of OCTOT with the eleven HPMC is presented in Table 8.13; this shows that all of the HPMC were correlated significantly with OCTOT at or below the 5% level. One HPMC was correlated with OCTOT in the range 0.30 - 0.39 (*Interpersonal Search*). Two of the HPMC were correlated with OCTOT in the range 0.40 - 0.49 (*Development Orientation, and Achievement Orientation*). Two HPMC were correlated with OCTOT in the range 0.50 - 0.59 (*Information Search and Conceptual Flexibility*). Five HPMC were correlated with OCTOT in the range 0.60 - 0.69 (*Concept Formation, Managing Interaction, Self Confidence, Presentation, and Proactive Orientation*). One HPMC was correlated with OCTOT in the range 0.70 - 0.79 (*Impact*).

**TABLE 8.13: THE CORRELATION OF OCTOT WITH THE HPMC**

COMPETENCY	CORRELATION WITH OCTOT
Information Search	.52**
Concept Formation	.61**
Developmental Orientation	.45**
Interpersonal Search	.33*
Managing Interaction	.60**
Conceptual Flexibility	.53**
Presentation	.67**
Self Confidence	.65**
Impact	.72**
Proactive Orientation	.68**
Achievement Orientation	.43**

\* p< .05

\*\* p< .01

The correlation matrix and factor analysis of the HPMC show interrelationships between these eleven variables. To explore the effect of these interrelationships on the relationship between the HPMC and OCTOT, the four factors which had been extracted were treated as independent variables in a stepwise multiple regression with OCTOT as the dependent variable. The results are given in Table 8.14 which shows that all four factors are included in the multiple regression model. The model has a multiple R of .86 and explains 70% of the variance of OCTOT. Factor 3 (Directional) explains 38% of the variance, Factor 1 (Cognitive) 12%, Factor 2 (Interpersonal Complexity) 12% and Factor 4 (Achieving) 8%.

**TABLE 8.14: STEPWISE MULTIPLE REGRESSION WITH OCTOT AS THE  
DEPENDENT VARIABLE AND THE FOUR EXTRACTED COMPETENCY  
FACTORS AS THE INDEPENDENT VARIABLES**

VARIABLES IN THE MODEL	B	SEB	T	SIGNIFICANCE OF T	MULTIPLE R	CHANGE IN R	ADJUSTED $R^2$
CONSTANT	14.78	.42	35.1	.0000			
FACTOR 3	2.65	.43	6.2	.0000	.63		.38
FACTOR 1	1.53	.43	3.6	.0015	.73	.10	.50
FACTOR 2	1.48	.43	3.4	.0020	.81	.08	.62
FACTOR 4	1.17	.43	2.7	.0112	.86	.05	.70

#### **8.4 INDIVIDUAL VARIABLES**

##### **8.4.1 Introduction**

Two questionnaires were used to gather data on individual variables to test hypotheses 3-18. The questionnaires were Kirton's Adaption-Innovation Inventory (KAI) and Ghiselli's Self-Description Inventory (SDI).

The statistics for each questionnaire are presented first. This is followed by an analysis of the relationship between the relevant variables measured by the questionnaires and the four competency factors. Finally, the results are summarised.

## 8.4.2 Summary statistics of the individual variables

### 8.4.2.1 Kirton's Adaption-Innovation Inventory

Table 8.15 presents the summary statistics of the KAI total score for this sample and data from other relevant samples.

TABLE 8.15: SUMMARY STATISTICS OF KAI

SAMPLE	MEAN	SD	N	RANGE	
				MINIMUM	MAXIMUM
IFSG executives	109.6	17.4	30	80	143
<u>RELEVANT LITERATURE</u>				<u>REFERENCE</u>	
General population male mean	98.1	16.8	290	Kirton(1976)	UK
Managers in general	97.1	16.9	88	Kirton(1980)	UK
<b>BANKERS:</b>					
Strategic planners and financial analysts	111.0	15.0	34	Gryskiewicz et al (1987)	USA
Bank branch managers	91.0	13.1	128	Gryskiewicz et al (1987)	USA
Bank branch managers	91.2	17.3	51	Holland(1984)	UK

The KAI mean of the executives in the sample was 109.6 which is significantly higher than the mean for managers in general ( $t = 3.26$ ;  $p < .001$ ) and for branch managers ( $t = 4.61$ ;  $p < .001$ ). This result shows that the sample has a clear preference for innovation. The executives have a similar score to that of strategic planners in banking and financial analysts who tend to be engaged in jobs that

involve more radical change than managers in general (Gryskiewicz, 1987).

#### 8.4.2.3 Ghiselli's Self-Description Inventory

Eleven individual characteristics measured by Ghiselli's SDI have been shown to be relevant to this research. Table 8.16 presents the summary statistics for these variables from various samples including the executives in this study.

Table 8.16 shows that the IFSG executive sample is comparable to Ghiselli's USA executive sample on the five scales that are reported by him (supervisory ability, intelligence, initiative, self assurance and occupational achievement). Also, the ISFG is comparable to Ghiselli's USA managers sample on all scales except decisiveness and power. The IFSG sample's mean for decisiveness ( $t=2.00$ ;  $p=.05$ ) and for power ( $t=2.75$ ;  $p<.05$ ) are significantly lower than those of Ghiselli's sample. Compared to Australian bankers, the IFSG executive sample has a significantly higher mean on all scales except working-class affinity and job security.

Having presented and discussed the summary statistics for the KAI and SDI, attention is now focussed on the relationships between the characteristics measured by these questionnaires and the eleven HPMC.

**TABLE 8.16 SUMMARY STATISTICS FOR GHISELLI'S SELF-DESCRIPTION INVENTORY**

SDI SCALE	SAMPLE									
	ISFG Executives (n=30)		GHISELLI, <sup>1</sup> S <sup>2</sup> Managers USA (n=110)		AUSTRALIAN <sup>3</sup> Managers USA (n=306)		AUSTRALIAN <sup>4</sup> Bankers (n=47)		HONG KONG <sup>5</sup> Managers (n=49)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Supervisory ability	30.9	5.7	33.1	5.8	30.5	6.3	27.3	6.2	24.9	6.0
Intelligence	43.1	5.5	43.1	6.7	41.6	7.6	41.2	6.7	39.0	6.2
Initiative	34.6	7.3	33.2	5.8	32.9	6.4	30.5	7.6	28.0	8.1
Self Assurance	29.2	4.4	28.6	4.5	28.2	5.9	26.9	5.1	25.3	4.6
Decisiveness	20.3	5.0			22.2	4.9	18.8	5.1	17.7	5.3
Working Class Affinity	13.9	3.4			14.5	3.3	14.6	3.7	14.9	3.4
Occupational Achievement	43.5	6.7	44.8	13.5	41.8	8.6	40.0	9.2	35.4	8.6
Self Actualization	11.2	2.3			10.5	2.5	10.1	2.9	9.6	2.7
Power	9.7	2.1			10.8	2.2	11.0	2.1	10.8	2.0
High Financial Reward	4.5	1.8			4.1	1.9	4.9	2.1	5.3	2.2
Job Security	10.2	4.1			10.3	3.6	10.8	4.0	11.2	4.3

**References:** 1. Ghiselli (1971). 2. Ghiselli (1971) 3. Spillane (1984) 4. Spillane (1984).  
 5. Evans and Sculli (1981).

### 8.4.3 Relationship between individual and behavioural variables

Table 8.17 presents the correlations between the individual variables and the eleven HPMC. These results show that seven of the twelve individual variables are correlated at or below the .05 level of significance with one or more of the HPMC:

<u>INDIVIDUAL VARIABLES ASSOCIATED WITH HPMC:</u>	<u>INDIVIDUAL VARIABLES NOT ASSOCIATED WITH HPMC:</u>
KAI	
Supervisory ability	Intelligence
Decisiveness	Initiative
Occupational achievement	Self assurance
Self-actualization	Working-class Affinity
(Low) Financial reward	Power
(Low) Job Security	

The data in Table 8.17 show that KAI is associated with seven competencies: *Information Search, Concept Formation, Developmental Orientation, Impact, Self Confidence, Proactive Orientation and Achievement Orientation*. Supervisory ability is related to *Information Search, Developmental Orientation and Achievement Orientation*. Decisiveness is associated with *Self Confidence*. Occupational achievement relates to *Concept Formation, Self confidence and Achievement Orientation*. Self-actualization correlates significantly with *Information Search, Concept Formation, Developmental Orientation, Interpersonal Search, Self confidence and Presentation*. High financial reward is negatively related to *Self Confidence* and job security is negatively associated with *Developmental Orientation, Self*

**TABLE 8.17: CORRELATIONS BETWEEN THE INDIVIDUAL VARIABLES AND THE ELEVEN HPMC**

INDIVIDUAL VARIABLE	H P M C									
	COGNITIVE			INTERPERSONAL COMPLEXITY			DIRECTIONAL			
	IS	CF	DO	PS	MI	CX	IM	SC	PR	ACHIEVING P0
KAI	.31*	.40*	.39*	.05	.12	.15	.41*	.44**	.29	.41*
Supervisory ability	.32*	.13	.37*	-.19	-.06	-.00	.15	.13	.18	.25
Intelligence	.05	.13	.04	.07	.04	.04	.32	.19	.14	.00
Initiative	.11	.18	.20	-.09	.11	-.10	.11	.24	.14	.16
Self assurance	.07	-.02	-.04	-.08	.00	-.27	.17	.25	.18	.03
Decisiveness	-.43	-.05	-.04	.11	.03	-.15	.05	.46**	.25	.02
Working class affinity	.05	.21	.13	.24	.31	.09	.29	.04	.07	.09
Occupational achievement	-.03	.36*	.24	.09	.02	.12	.23	.44**	.13	.24
Self-actualization	.46**	.30*	.41*	.34*	.26	.18	.33	.32*	.31*	.26
Power	-.07	.00	-.01	.04	.13	-.18	.21	.15	.26	.10
High financial reward	.07	.11	-.01	.05	.14	.04	-.01	.38*	-.16	.04
Job security	-.20	-.29	-.36*	-.11	-.10	-.05	-.25	-.31*	-.19	-.18

\*p < .05  
\*\*p < .01

**Key:**

IS = Information Search      IM = Impact  
 CF = Concept Formation      SC = Self Confidence  
 DO = Developmental Orientation      PR = Presentation  
 PS = Interpersonal Search      P0 = Proactive Orientation  
 MI = Managing Interaction      AO = Achievement Orientation  
 CX = Conceptual Flexibility

*Confidence, Proactive Orientation and Achievement*

*Orientation.*

The possibility of relationships existing between the seven individual variables associated with the HPMC led to a correlation analysis being made of these variables. Table 8.18 presents the correlation matrix of the individual variables and shows that each of the individual variables is correlated highly with at least one other variable. This indicates the individual variables share common factors. A factor analysis was made to identify how many dimensions could be computed to represent the statistical relationship between the individual variables.

A principal components analysis of the correlation matrix produced the initial statistics shown in Table 8.19.

**TABLE 8.19: THE PRINCIPAL COMPONENTS ANALYSIS OF THE INDIVIDUAL VARIABLES' CORRELATION MATRIX**

FACTOR	EIGENVALUE	PERCENTAGE OF VARIANCE EXPLAINED	CUMULATIVE PERCENTAGE OF VARIANCE EXPLAINED
1	3.45	49.3	49.3
2	1.09	15.6	64.9
3	0.85	12.1	77.0
4	0.69	9.9	86.9
5	0.45	6.6	93.5
6	0.27	3.9	97.4
7	0.18	2.6	100.0

These data show that two factors explaining 64.9% of the variance had eigenvalues of one or more and that a third

**TABLE 8.18: CORRELATION MATRIX OF THE INDIVIDUAL VARIABLES (n=30)**

	1 KAI	2 Sup Ab	3 Dec	4 Ach	5 S Act	6 Fin R	7 Sec
1. KAI	1.00						
2. Supervisory ability	.41*	1.00					
3. Decisiveness	.35*	.12	1.00				
4. Achievement	.64**	.00	.45**	1.00			
5. Self actualization	.49**	.39*	.40*	.34*	1.00		
6. High Financial Reward	-.33*	-.29	-.39*	-.39*	-.25	1.00	
7. Security	-.77**	-.37*	-.48**	-.58**	-.53**	.03	1.00

\*p<.05  
\*\*p<.01

factor with an eigenvalue of 0.85 increases the variance explained to 77%. Analysis of the two and three factor models using varimax rotation demonstrated that the three factor model (see Table 8.20) provides the clearest solution (factor loadings below 0.55 have not been presented in Table 8.20 - see Appendix 12 for the other results).

TABLE 8.20: VARIMAX ROTATION OF THE THREE FACTOR INDIVIDUAL VARIABLE MODEL

INDIVIDUAL VARIABLE	1	2	3
Job Security	-.85		
KAI	.84		
Occupational Achievement	.78		
Self Actualization	.57		
High Financial Reward		-.90	
Decisiveness		.63	
Supervisory ability			.93

Factor 1 brings together job security, KAI, occupational achievement and self-actualization. Little research has been undertaken into the goals related to KAI so factor 1 provides important evidence of these relationships and is called "Adaption-Innovation". Factor 2 links low financial reward and decisiveness and is called "Decision-making Style". Supervisory ability loads heavily on Factor 3 which is therefore called "Supervisory Ability". To clarify the relationships between the HPMC and the individual variables, the correlation of the three individual variable factor

scores and the eleven HPMC was computed. Correlations which are significant at or below the .05 level are shown in Table 8.21 (see Appendix 13 for the other results).

**TABLE 8.21: SIGNIFICANT CORRELATIONS OF INDIVIDUAL FACTOR**

**SCORES WITH HPMC RATINGS OF 30 EXECUTIVES**

HPMC	INDIVIDUAL FACTORS		
	Factor 1 Adaption- Innovation	Factor 2 Decision-making Style	Factor 3 Supervisory Ability
Information Search	.32*		
Concept Formation	.46**		
Developmental Orientation	.39*		36*
Interpersonal Search			
Managing Interaction			
Conceptual Flexibility			
Impact	.37*		
Self Confidence	.38*	.40*	
Presentation			
Proactive Orientation	.37*		
Achievement Orientation	.37*		

\* p<.05

\*\* p<.04

Table 8.21 shows that the Adaption-Innovation factor correlates positively and significantly with seven HPMC - *Information Search, Concept Formation, Developmental Orientation, Impact, Self Confidence, Proactive Orientation and Achievement Orientation.* The Decision-making Style factor correlates significantly with *Self Confidence* and the Supervisory Ability factor is associated with *Developmental Orientation.*

As Table 8.21 shows, no individual factor explains more than 20 per cent of the variance of any HPMC. It could be that individual variables other than those measured in this study might relate more strongly to the HPMC. Nevertheless, the results of this study support the view that in the main the HPMC are learned.

The biographical interview that was held with the sample provided much data about the developmental conditions which provide individuals with opportunities to learn the HPMC. These results are presented in the following section.

## 8.5 DEVELOPING THE HIGH PERFORMANCE MANAGERIAL COMPETENCIES

### 8.5.1 Introduction

The biographical interview data showed that the average age of the sample was 52, that the average tenure of the 30 executives in the IFSG was 35 years and that 26 of the respondents were married. All the respondents were male.

The biographical interview data was analyzed to highlight the situational conditions which help individuals to develop the HPMC. It was evident that one variable was fundamental because most of the developmental experiences of the executives in the sample were contingent on this variable.

The variable is the type of career path of the executives.

Two types of career path were identified from the data. The career path of the majority of the sample can be called "general management" because it is characterized by

individuals experiencing regular job rotation across different functional areas and markets in preparation for general management jobs that require the integration of different specialisms. The career path of five of the executives can be called "specialist" as these individuals had spent the majority of their career within a single functional area (eg financial control, advances control, treasury and personnel). Although each executive in this group was now managing a unit, it was in his area of specialization.

The analysis of the developmental experiences of the executives was facilitated also by the subdivision of the generalist group. Once the performance data had been gathered, it was evident that the sample contained six high-fliers who had received higher than average OCTOT ratings and who were at least two years younger than any of the other executives. The executives who made the rated rankings confirmed that these six individuals are indeed regarded as the focal organization's high-fliers. Thus, the total sample was divided into three groups - High-fliers (n=6), Generalists (n=21) and, Specialists (n=5). Table 8.22 presents for each group the eleven HPMC means and the means of the individual characteristics shown to be associated with the HPMC. Also, differences between the means of the three groups that are significant at the .05 level are indicated in Table 8.22.

**TABLE 8.22: THE MEAN HPMC RATINGS AND INDIVIDUAL VARIABLE SCORES OF THE HIGH-FLIER, GENERALIST AND SPECIALIST SUB GROUPS**

Table 8.22 shows that the Generalist group's mean is significantly higher than the Specialist group's mean for six HPMC: *Interpersonal Search, Managing Interaction, Conceptual Flexibility, Impact, Self Confidence and Presentation*. There are no significant differences between the individual variable means of the two groups; this indicates that the HPMC differences between the groups could result from differences in developmental experiences rather than individual differences.

Table 8.22 also shows that the High-flier group mean is significantly higher than the Specialist group mean for eight HPMC: *Information Search, Concept Formation, Managing Interaction, Conceptual Flexibility, Impact, Self Confidence, Presentation and Proactive Orientation*. In addition, the High-flier's mean for *Information Search, Concept Formation, Impact and Proactive Orientation* is significantly higher than the Generalist group's mean for these HPMC. Furthermore, the High-fliers have higher means than both the Specialist and the Generalist groups for KAI, occupational achievement and self-actualization and a lower mean for security. These results indicate that the rapid development of the HPMC by the High-fliers could be due to both situational and individual differences.

Further analysis of the biographical interview data showed that the developmental experiences of the sample can be split into two stages: pre-work and work. The executives in the sample had many pre-work experiences in common.

However, three pre-work experiences were identified which differentiated the High-fliers from the Generalists and the Specialists. The analysis showed also that the High-fliers and Generalists had had equivalent developmental experiences at work but that these were different in several ways from those of the Specialists. The following sections present the common pre-work experiences of the sample, the unique pre-work experiences of the High-fliers, the common work experiences of the High-fliers and Generalists and, the unique work experiences of the Specialists. In these sections, verbatim quotations have been selected from the biographical interview data to represent trends or recurring patterns that apply to the sample as a whole rather than to individual respondents.

#### 8.5.2 Common Pre-work experiences

Nearly all respondents were from working class or lower middle class families. The father was the main income earner. Most (n=24) mothers did not work; those mothers who did work included a head teacher, a junior civil servant, a domestic servant and two retail shop assistants. The occupation of the respondents' father is shown in Table 8.23.

**TABLE 8.23: OCCUPATION OF THE EXECUTIVES' FATHER**

Occupational Category	N
Self-employed and higher-grade salaried professionals	0
Employers and proprietors	0
Administrators and managers	5
Lower-grade salaried professionals and technicians	9
Inspectors, supervisors and foremen	1
Clerical workers	3
Sales personnel and shop assistants	3
Skilled manual workers (inc Self-employed artisans)	6
Semi-skilled manual workers	3
Unskilled manual workers	0
<b>TOTAL</b>	<b>30</b>

Table 8.23 shows that the largest percentage of fathers were lower-grade salaried professionals or technicians (including, a teacher, an electrician and an insurance underwriter), and that several fathers were either administrators/managers (including two civil servants and a factory manager) or skilled manual workers (including a cabinet maker, a gamekeeper and a miner). Most respondents (n=19) stated that their family's income was just sufficient. Representative comments made by two executives were:

*"We were not deprived but not well to do. We had no wealth and lived on my father's income. We lived in council flats with a back-yard and outside toilet. We had no washing machine and no TV - we had to go to more affluent neighbours to use theirs."*

*"My mother didn't work - it was socially unacceptable. My father had a secure job - cashier and advertising manager for a local newspaper - but we were not well off or flushed with money. We didn't have a TV".*

The rest of the respondents stated that their family had some surplus income - but not much. Invariably, the parents used their surplus income to pay for the education of their children. Typical comments were:

*"My father was a skilled miner - a craftsman. He was relatively well paid; my mother was a domestic servant. I had a brother and sister close to my age. In Wales . education was seen as a way of getting out of the mines so my father paid for all of us to go to grammar school at great expense. It was a sacrifice financially for my parents. We were not flushed with money but not in rags and ruins".*

*"My father worked in the Bank of England as I have said. He paid for my two brothers and me to go to boarding school so he was very hard up for cash".*

The lack of material wealth as well as the hard effort and sacrifices made by parents for their children fostered a strong work ethic and sense of self-reliance in the respondents at an early age:

*"My parents put great value on the work ethic - it was a question of survival. My parents brought us up to be self-sufficient. I did all the household chores and mucked in".*

*"My father was killed in active service when I was six so my mother had to get a job. I realized there was only one person who was going to look after me - myself. With my mother working I was left to fend for myself. I got the tea ready, kept the place clean, decorated rooms. I was the quasi-man of the house".*

The respondents emphasized that they had learned basic ethical values from their family:

*"My family instilled in me the value of honesty. I'm almost too honest. I can't tell white lies and I don't like wasting time in deceptions. I like to be straight-forward".*

*"I accepted the values of my parents and was influenced most by my father. He was a simple chap who was clear thinking, had high principles and a clear sense of right and wrong. He impressed on me the importance of meticulous attention to truth and financial honesty".*

In some instances these values were associated with religious beliefs in others they were not.

The attitude and support of the parents influenced the approach of the respondents towards school:

*"Because my father was so hard up for cash educating us I felt under great pressure to get the school certificate".*

*"If I didn't do my homework I was in big trouble. My parents' attitude was that we are working our butts off for you to give you opportunities, don't let us down".*

The investment of the parents of this sample paid off. Twenty two respondents attended grammar school, two technical college, one secondary modern and five minor public schools. All but two respondents passed at least six

subjects at School Certificate or GCE "O" levels. Several achieved distinctions. Four gained a place at university.

Although most of the respondents were academically successful early in their life, the majority did not go on to higher education. Most (n=16) had no choice. They could not afford to go to university so they had to earn a living and put money into their family:

*"I got 7 "O" levels at school and could have kept going but I didn't stay for "A" levels because we needed the money".*

*"My mum needed the £1.10s a week I gave her and the sooner I fed it into the family system the better - there was no thought of me going further educationally".*

Six executives who could have gone further educationally decided not to because they preferred the world of work:

*"I never had any doubts that I could achieve academically. I just wanted to get outside the school environment".*

*"All bar two of my school chums went to Oxbridge or a good university. I didn't set my sights on university. My father wanted me to go and I didn't want to because I wanted to get a job. I had a genuine desire to earn some money, to start a career and make something of it.*

Three executives did not know what to do and drifted into work, one decided that if he could not get into Oxbridge he did not want to go to university (he did not apply because he thought he would not get in). Four executives did go to university yet the attraction of the world of work rather

than the academic world was a powerful influence even on these executives:

*"I was asked to stay on and do a PhD but I didn't want to stay in academic life. I wanted to go to the big wide world - the real-world".*

There was little or no formal careers advice given to the respondents. Any advice they received came from their parents, family or friends of the family. Even so, they did choose to work for a financial institution. The respondents were asked what their primary reason was for joining a financial institution. The results are presented in Table 8.24 which shows that good career prospects as well as security of tenure and pension were cited by over two thirds of the sample as their primary reason for joining a financial institution.

**TABLE 8.24: THE PRIMARY REASON WHY THE RESPONDENTS**

**BEGAN WORKING FOR A FINANCIAL INSTITUTION**

REASON	FREQUENCY
Good career prospects	13
Security of tenure and pension	9
Friend working in finance	4
Thought work would be interesting	2
Salary relatively good	2
<b>TOTAL</b>	<b>30</b>

### 8.5.3 Distinguishing pre-work experiences of the High-fliers

Three pre-work experiences were identified that distinguish the High-fliers from the other groups. First, all of the High-fliers were first born sons. Only two of the five Specialists and ten of nineteen Generalists shared this circumstance.

Second, the High-fliers made a point of stating that they believed their fathers had either under-achieved or achieved little and that they had decided early not to repeat this experience:

*"My father never yielded his full potential - the stature of our family was greater three generations ago than in my father's time. I wanted to put the family back where they had been".*

*"My father worked terribly hard and got nowhere - that made me terribly industrious and believe that work will bring results. I was determined to get something out of life. My ambition in my 30's was £2000 per year and to be a bank manager. I set my goals very early.*

Lastly, all the High-Fliers had ambitious mothers.

*"My father was unambitious, popular locally and stayed in a little pond all his life. My mother was a head teacher and very ambitious".*

*"My mother worked and travelled around the country; she was very ambitious while my father was placid".*

#### 8.5.4 Work experiences of the High-Fliers and Generalists that differentiate them from the Specialists

The analysis of the biographical interview data showed that a process for developing general managers was well established in the focal organization. This process was experienced by both the High-flier and the Generalist respondents and was different from that of the specialists. The main features of the general manager development process are now described.

##### 8.5.4.1 The general manager development process

The general manager development process can be divided into eight stages. Figure 8.25 presents these stages.

- (a) Induction Having left school, the generalists usually began work in a small bank branch and did the most basic tasks. As one respondent described:

FIGURE 8.25: THE STAGES OF THE GENERAL  
MANAGER DEVELOPMENT PROCESS

STAGE	DESCRIPTION
8	General Management
7	Head of a Business Area
6	Head of a Unit
5	Marketeer
4	PA to Executive
3	Head Office
2	A large branch
1	Induction

*"I started as a junior. It was routine. I'd change blotting paper, check the manager's fire and stoke the boiler. I'd bring up the tills and do the local clearing. I would hand-pull the Burroughs machine and do all the debits and credits. I'd write by hand the details of all cheques in the ledger. I'd go to the Post Office to get all the high value packages. Later I graduated to cashiering".*

This taught the respondents to:

*"Work at speed and be efficient. There was no surplus of staff and jobs had to be done. We had to plan our day and meet schedules. If we didn't do this or if the tills wouldn't balance we had to stay behind until they did - which wasn't popular with the staff.*

The induction stage emphasized the importance of good teamwork:

*"The branch gave me a sense of how necessary it is to cooperate and work as a team. We never finished later than 4.30 or 5.00 as we all worked well together. We helped people out if they were stuck and all mucked in together".*

Junior staff who did well moved through a hierarchy of jobs in their branch. They began as a junior and proceeded through book-keeping, cashiering and safe custody of customers' assets to being the manager's clerk. In this way they learned the basic technical skills of banking. Also, the respondents built up friendships with their colleagues which extended outside work:

*"The branch manager influenced me to join the company sports club. I spent much time there".*

Hence, the High-fliers and Generalists became a part of focal organization's network of social relationships which extended beyond work and which tended to foster a sense of community among employees. Employment by the focal organization started to become a way of life rather than a job. The respondents also began studying for their professional qualifications at this time. To do so was a sign of commitment as study had to be done outside normal work hours:

*"Immediately I started work at 16 I began studying for the Institute's exams".*

Managers and inspectors kept an eye open for staff who had coped well with their early experience of work in the organization. Nearly all the High-fliers and Generalists were talent-spotted by managers or inspectors and sent to the next stage in the development process - a large urban branch.

- (b) A large branch. Large branches were a training ground for staff. Staff learned how to lend money, relate to customers and supervise staff:

*"I made my way through and was put in charge of the accountancy unit which employed 35 of the 70 staff in the branch. So at a fairly young age (22), I had to learn man-management skills - especially as there were older people than me in the unit. I learned the basic technical skills - law, credit appraisal and systems. I learned the importance of meeting the needs of customers and that an instantaneous response was needed to customers".*

The potential general managers also had the opportunity of learning how to handle autocratic bosses:

*"Two of the managers were awful. For example, the assistant manager would open the door of his office and bellow down the banking hall in front of all the customers and staff, "Boy come here". I learned how to handle such individuals I ignored him and he learned that if he didn't call me Mr , I'd ignore him".*

The respondents made changes to their branch which improved its operation:

*"The branch's accounting function got in a mess and I was put in charge to sort it out. I did".*

Many executives met their future wife at work around this time and established their family by marriage. This reinforced the sense of identity of the executive and his wife with the focal organization.

Line managers, inspectors and personnel managers made a habit of finding out who was doing well in the large branches. Good performers were interviewed for a job at Head Office - the next stage in the development process:

*"Having made a mark I was given the ultimate accolade of being transferred to Head Office in London".*

- (c) Head Office. When the respondents first worked at Head Office, it had responsibility for sanctioning all the major business deals which had been worked out by

managers at local level who were in direct contact with customers. As a result of the deliberations at head office, deals were agreed, renegotiated or stopped. Furthermore, head office took wide responsibility for functions such as premises, personnel and inspection. The UK was split geographically into four regions. The head office staff was divided into four separate units. Each of these units was responsible for performing all the head office functions for one of the regions and for contributing to the general management of the organization. This meant that much power was concentrated at head office.

The head office experience had a seminal influence on the development of the respondents. First, the respondents learned how to sanction major business deals which provided them with a high level of technical expertise:

*"Head office gave me lending training. I interfaced with the branches and decision-makers on lending issues. I learned how to analyse big deals".*

Second, the respondents learned how to run a business so that all the functional areas are integrated:

*"We didn't just learn how to sanction loans. We had to pull everything together - publicity, branch rationalization, premises, personnel, donations etc".*

Third, the head office experience taught the respondents the inner-workings of their organization, and how it related to its environment:

*"I learned what was going on in the economy and different business sectors; also, I found out how the organization ticked, and how we were affected by the wider world".*

Fourth, the experience helped to develop several competencies:

*"You had to be a team player, not a loner. We all helped each other out because we knew that if we didn't perform we would be out of head office. The hard work and co-operation meant that there was a tremendous esprit de corps. You couldn't get on at the expense of a colleague - by sticking knives into others' backs".*

*"I was communicating with branches all the time. My bosses impressed on me the need to communicate well and to ensure that we debated issues openly and freely".*

*"It gave me a belief in my own abilities. Once I knew I was as good as anyone else in that hothouse where the elite were working I became very self confident and felt like an executive".*

*"The standards were very high. You had to be able to meet them and beat them". If you didn't you were sent back to the provinces without hesitation".*

Fifth, the head office experience gave the respondents the opportunity to form a peer network. The members of this network constituted the best of the talent that had been spotted locally and had succeeded at head office.

*"I worked and became friends with all the people of my age who have progressed far in the organization".*

The high standards, complexity of work and tough stance taken towards inability to cope meant the respondents, who had all survived and done well at head office, were a highly selected group. As reward for success at head office they were made personal assistant (PA) to a senior executive.

- (d) PA to a Top Executive. Usually, PA jobs were located at head office. Typically, the respondents were delegated much responsibility once they had gained the trust of their boss:

*"My boss gave me a lot of discretion. I did everything for him. For two years he didn't have to write a letter. I did cocktail parties with customers, complicated deals and so on".*

Many bosses were very developmental towards their PA in other ways:

*"I was under the wing of an Assistant General Manager. He was my mentor and father confessor. Later I was working for the Chief Executive. He had a tremendous influence on me; he gave me great discretion. Every year we still send long letters to each other at Christmas".*

Sometimes PA's learned from the bad example set by their boss:

*"He taught me just about everything I needed to know on the positive side and the negative side - how not to operate. He provided encouragement through his own driving ambition and had very high standards of ethics which rubbed off on me. But he was also a totally insensitive bastard without compassion who couldn't work with his colleagues".*

PA's tended to be seconded to projects responsible for the management of changes that had a major impact on key organizational variables and which were beyond the previous experience of the organization:

*"The next big milestone in my career was a review of the organizational structure; we wanted to decentralize so I spent months in the small team doing the work on this. I did all the write-ups".*

Lastly, being a PA put the respondents in contact with senior executives who were moving up the organization and who could use patronage to pull younger staff with talent along with them:

*"Being a PA meant you got known by the people who were going to run the organization in the next few years. If you did well, you knew they would keep you in mind when jobs turned up and would pull you through the hierarchy".*

As a PA, respondents were given much opportunity to develop *Impact*:

*"I found out how to get what I wanted from managers who were much more senior to me without making myself unpopular and when I had no power to speak of. I learned how to use persuasive arguments and gain influence by associating myself with power-holders."*

In summary, PA's were given much discretion by their bosses who kept a steady, but distant, hand on the tiller. This meant the respondents had got the feel of what it is like to run a multi-functional organization in their twenties. This gave them practice at using the competencies, both technical and managerial, that

they had already developed and in particular, it gave them the chance to develop *Impact*. Additionally, the respondents consolidated their peer network and established relations with sponsors and mentors.

- (e) Marketeer. After their time at head office, the respondents were promoted into jobs that required them to sell services to customers. This provided them with an alternative perspective. At head office they had vetted the work of marketers, now they saw the world through the eyes of a marketeer. Their new job was a critical test. Could they establish relations with customers that benefited the interests of both parties?. The respondents were usually able to do this:

*"The business went from strength to strength. I was accused of running a consultancy service - I was helping customers and you weren't supposed to do that in those days. You could respond but not help!".*

Some respondents became responsible for managing staff again:

*"I had my first experience of leading staff since I had joined head office. I had to relearn and hone my skills".*

For some, marketing involved extensive foreign travel:

*"We started up \_\_\_\_\_ section. It was the perfect marketing job as we had no market share. I did the USA as the manufacturers were there and they were the key.*

*It was very stressful and involved enormous amounts of travelling. I was away 120 days of the year. But the*

*business grew like topsy and we ended up employing 20 staff."*

Whether at home, abroad or a mixture of the two, this stage gave the respondents an external network of business contacts, customers and friends.

*"The benefit was that I got very involved with top level people in a big industry that's really a village. If you spit everyone knows it. I also got close to the big US investment houses in Wall Street. I worked with our own staff abroad I too".*

(f) Head of a Unit. The next stage for the respondents was being the manager of a unit. Having been a successful marketeer some were now expected to lead a marketing unit. Once again building the business was a sign of success:

*"I undertook this job for five and a half years - the longest time I've done a single job. When I took over it made £5 million profit a year, when I left it made £15 million. I established it as one of the premier units of its kind in the world. I had to add on specialist advisory units from scratch. During this time I was up-graded twice".*

Other executives were put in charge of a lending control unit:

*"I was pulled out to be the senior lending manager at head office. I would lend up to £50 million without reference. The senior executives had lending limits of £1 million and would ask me if I'd sanction £50 million. I got all the tricky calls - others got the routine enquiries".*

At this stage respondents were learning how to apply their technical and managerial competencies by using them in a wide variety of activities and social settings. The respondents had to manage and develop managerial and non-managerial staff which placed heavy demands on the three HPMC in Schroder's "Motivating" factor (*Interpersonal Search, Managing Interaction and Developmental Orientation*):

*"I decided that I wanted to know what my two managers were doing only on an exceptional basis. I did the dirty dozen - the twelve trickiest business accounts - and kept an eye on the others through the copy correspondence and when my staff came to me to talk through a tricky issue. I built up their confidence, talked over accounts with them and spent time with them".*

*"I said that every quarter we'll have a seasonal function - divide the managers and staff into four teams and each team organizes an event for the whole staff for their quarter. This built team spirit and meant we had a wonderful time - it kept the show going".*

Also, the respondents had to identify opportunities and threats as well as develop a strategy for their unit which demanded the use of the Cognitive HPMC:

*"I was put in charge of ..... office. In three years I increased the profits from £28k to £4m. I found out what was happening - who was well respected locally and who wasn't, what the expanding, profitable areas of business were - and then targeted the best business of our weakest competitor. As a result our business went through the roof".*

The respondents had to represent their unit externally (eg with important customers, or at local events) and

internally (eg presenting strategies, policies, business plans and budgets to more senior managers and obtaining their approval). This demanded the Directional competencies.

*"The market was very competitive, when we presented our proposals to customers we knew that competitors were lining up to do theirs. If the presentation wasn't slick and if our package didn't do what they wanted we were out on our ear. That sort of pressure makes you the best if there's anything about you."*

Furthermore, the respondents didn't wait around for things to happen they were the prime-movers and used external standards to judge their effectiveness.

*"I was put in a traditional credit control job. I knew how I wanted to do it, which wasn't the same as most people. I wanted to be a resource for local managers as well as making sound lending decisions. When I left branch managers told me they felt they got more help than ever before and the provisions for bad debt had gone down!. I proved that it could be done differently - and better. This drove me on.*

The highest performing respondents were often pulled out of their job at this stage to undertake a risky, uncertain assignment that was of critical importance to the IFSG and that needed to be tackled with all speed. These assignments tended to demand all the HPMC and were intense learning opportunities:

*"When we bought ..... I was pulled out to join a small project team under the direction of the future Chief Executive. I ran two projects - one on marketing synergy, the other on pricing and costing policy. I worked out what our policy should be. My solution was highly controversial and caused a lot of antagonism but I got it agreed even though the macro-politics got very nasty. Then I implemented my proposals. That project gave me a lot of credibility and was a very steep learning curve. We worked from 5am to 12pm. I loved the working environment; it was wonderful, we achieved so much in that short period".*

Lastly, the respondents were sent to external business school courses around this time.

- (g) Head of a Business Area At this stage, the respondents were made responsible for a substantial business territory, a critical head office role or a subsidiary company. They began to experience the loneliness that accompanies ultimate responsibility.

*"I was made MD of one of our subsidiaries. I found out how lonely it is sitting in the hot spot. The previous MD had left in a mysterious circumstances and I had to put the staff, who had been devoted to him, back on their feet as well as sorting out a financial muddle. I was the only one there who had it in them to get the company working again. I was on my own".*

The jobs of the respondents at this stage were multi-functional and required the integration of many different perspectives.

*"I was put in charge of the Group's strategy unit. We had to pull together what was going on outside - the world economy, industrial developments, demographics competitors, opportunities, technology etc - with what was going on inside - our strengths and weaknesses - to produce a strategic plan. I had four teams with separate roles to manage so that their ideas all fed into our plan".*

The directional competencies became very important as decision-making became more difficult, critical and high profile:

*"I had to sort out our property portfolio when the market was in crisis. I found I am quite happy to face very difficult situations, where nobody can be a winner, and speak on my own for the (IFSG) with confidence and without running for cover. I never ducked an issue - that's true now and it will be for the rest of my life. I got close to issues and took responsibility for sorting them out. Sorting out the property portfolio was a tough job - customers were fighting for their business and me for ours. I always tried to be realistic, tough and fair. I would speak their language, look for the other dimension, see the historical perspective - where we are, how did we get here, where do we want to go?. I took a tough stance and stuck to it; if you were indecisive it was a sure sign of not knowing what you were doing and you were virtually dead in the water".*

At this level, respondents got much more involved in the policy making machinery of the IFSG and other organizations.

*"I was made executive responsible for the offshore subsidiaries and affiliates, administration and financial control. This gave me enormous experience of a variety of boardrooms and how subsidiaries relate to the parent".*

Finally, respondents received the reward of being sent to one of the most prestigious American executive business school programmes.

- (h) General Management The final stage in the respondents' career was to become a deputy general manager and then general manager or be appointed directly to a GM role and thus responsible for one of the IFSG's eight divisions as well as for the Group as a whole. The demands of these jobs and those of the previous stage have been described in section 8.3.5.

The general manager development process is summarized in Table 8.26. The process embodies a clearly structured progression of work activities. Eleven dimensions of activity can be identified: basic technical tasks; team member tasks; intermediate technical tasks; customer relations; managing people; advanced technical tasks; negotiating; representing (internal and external); strategy formulation; managing change projects and; board room tasks. The relevance of each type of activity to the seven stages in the executive development process is presented in Table 8.27; in this Table, "x" means that the work activity dimension is relevant to the particular stage.

Table 8.27 shows that the complexity of work undertaken by the respondents increased as they progressed through the general manager development process because the work at each successive stage involved more, different dimensions of activity. The eleven HPMC are relevant to each dimension of activity with the exception of basic, intermediate and advanced technical tasks. This implies that a critical capability for the effective executive is being able to apply the HPMC to a wide range of different dimensions of work activity. A major feature of the general manager development process is that it provided executives with the opportunity to learn how to apply their competencies to an increasingly wide range of managerial activities. Every time a respondent had to cope with a new dimension of activity it was both an opportunity for development and a

**TABLE 8.26: A SUMMARY OF THE GENERAL MANAGER DEVELOPMENT PROCESS**

DESCRIPTION	DEVELOPMENTAL CHARACTERISTICS
HEAD OF BUSINESS AREA	<u>Emphasis on:</u> Taking ultimate responsibility; managing and developing staff; multi-functional integration; team work; negotiating; being a member of the boardroom; business school education; introducing change, representation.
HEAD OF A UNIT	<u>Emphasis on:</u> Building the business through customer relations; managing and developing managerial and non-managerial staff; spotting opportunities and threats and creating a strategy for unit; external and internal representation of unit/IFSG; introducing change; work on critical projects; business school education; negotiating.
MARKETEER	<u>Emphasis on:</u> Getting the marketing perspective as well as the head office/loans sanctioning perspectives; building the business through effective customer relations; managing staff; international travel and experience; building an external network of customers; negotiating.
PA TO AN EXECUTIVE	<u>Emphasis on:</u> Technical excellence; customer relations; managing a functionally integrated business; high standards; teamwork; managing change through project teams; developing a sponsor/mentor network and consolidating the peer network; influencing more senior managers.
HEAD OFFICE	<u>Emphasis on:</u> Advanced technical expertise-especially in dealing with large, complex deals; managing a functionally integrated business; learning the inner workings of the IFSG; relating external events to the internal circumstances of the IFSG; team work; communication; self confidence; high standards; developing a peer network.
LARGE BRANCH	<u>Emphasis on:</u> Intermediate technical skills; managing people; customer service; assertiveness towards more senior staff; improving the running of the branch (identifying problems, finding solutions and implementing).
INDUCTION	<u>Emphasis on:</u> Working quickly, accurately and efficiently; scheduling work; teamwork; very basic technical skills; social networks; values of honesty and truthfulness and commitment to a long-term career with the organization; becoming professionally qualified.

**TABLE 8.27: RELEVANT WORK ACTIVITY DIMENSIONS AT EACH STAGE OF THE GENERALIST DEVELOPMENT PROCESS**

WORK ACTIVITY DIMENSION	STAGE						
	1 Induction	2 Large Branch	3 Head Office	4 PA to Executives	5 Marketeer	6 Head of a unit	7 Head of business area
Board Room			X			X	X
Managing Change					X	X	X
Strategy Formulation					X	X	X
Representating					X	X	X
Negotiating					X	X	X
Managing People					X	X	X
Advanced Technical work			X	X	X	X	X
Customer Relations	X				X	X	X
Intermediate technical tasks			X	X	X	X	X
Team Member	X				X	X	X
Basic technical tasks			X	X	X	X	X

test of the respondent's capacity to apply his competencies to a new area of activity. Thus, the ability to demonstrate the effective use of the HPMC in one type of activity is not enough to be an effective executive; an individual has to be able to use the HPMC on a complex range of different types of activity to be effective as a general manager.

Unlike the Generalists and High-fliers, the Specialists' development process was less complex in that it required the in-depth development of mainly technical competencies to relatively few dimensions of activity. The main feature of the Specialists' development process are described in the next section.

#### 8.5.5 The Specialist development process

The first striking feature of the development process of the Specialists is that there is little common pattern before the age of 35-40. Two of the sample joined the IFSG from school. One of these was not talent-spotted and stayed in branches until the age of 38, when he went to head office in a specialized treasury role. The other was talent-spotted, went to head office and then specialized in personnel work rather than the "mainstream" of lending control and/or inspection. Two attended university and joined the IFSG in their twenties. One of these missed the head office experience and specialized in financial control. The other was talent-spotted, went to head office and followed the

mainstream until he found that he did not like and had no flair for being a marketeer; at this point he reverted back to his specialism of lending control at which he demonstrated outstanding competence. Thus, by the age of forty, all the Specialists were working in their area of technical expertise and honing these skills by their application to more complex technical problems and issues. In their fourties, this group became responsible for managing staff because they led teams in their area and had to develop technical experts like themselves or look after generalist who passed through their area on their way to the top. The Specialists were responsible particularly for the interface between their own area and the income-earning units run by the general managers and for introducing change within their own sphere of operations. However, this change does not appear to be as intensive and critical as the change projects managed by the Generalists and High-fliers. The Specialists were promoted more rapidly than most managers because their skills were much in demand and relatively scarce:

*"The growth of my area meant that I got promoted twice so I was in a higher grade than I would have been otherwise".*

*"I worked very hard. My motivation was that I knew I could do the work, I was the only person who could do it and I would be rewarded. Here I am now at executive level so it did pay off".*

However, the Specialists reached a ceiling to promotion at a lower point in the hierarchy than the Generalists and High-fliers. Their narrow experience was seen as a limit on their capacity to be effective in general management jobs. The Specialists also tended not to get involved in representational tasks. Such tasks often involved the Generalists and High-fliers giving up much time in the evenings and at weekends to the organization that could have been spent with their family. The Specialists did not give this time up and preferred to devote much energy to building a life outside work:

*"I try to make sure the weekends are free - I rarely take work home. I also try not to have too full a calendar. I turn down invitations and say I just can't face this."*

*"I get things finished at work so I can live my own life outside. I don't believe in combining my social and business life. I don't do work in the evenings and refuse to go to events like Glynebourne on behalf of the organization. I stick to 9-5.30 as much as I can".*

Thus, whereas representational activities placed a heavy demand on the Generalists and High-Fliers, who had to build their lifestyle and marriages around these activities, the Specialists did not face such demands. They traded off lower occupational achievement for greater control over their private and family lives. The fact that the Specialists did not build the social networks and bonds that the Generalists and High-fliers established in their early career may help to explain why they remained, and were content to remain, on the periphery of the IFSG's social world.

Furthermore, whilst the Specialists made an input into strategy making, negotiations and boardroom activity they did not have prime responsibility for or involvement in these activities.

In summary, the Specialists primarily used technical, professional competencies which were supplemented with the HPMC due to the activities of managing people and technical change projects. The managerial demands placed on the Specialists through their careers were much less complex than those experienced by the Generalists and High-fliers which meant that they had less opportunity and reason to develop the HPMC.

#### 8.6 CONCLUSIONS

In this chapter the results of the data collection and analysis have been presented. Firstly, the results relating to organizational unit performance measures were set out. Second, the behavioural results were presented and this was followed by the outcomes of the analysis of the individual variables. Finally, data relevant to the development of the HPMC were presented. The next chapter discusses the results.

## CHAPTER NINE

### DISCUSSION AND CONCLUSIONS

#### 9.1 INTRODUCTION

This chapter discusses the results in the following order: firstly, organizational unit performance; second, managerial behaviour; third, environmental variables; fourth, individual variables and; fifth, the development of the HPMC. Sixth, a discussion occurs on the finding that the general managers of the IFSG are predominantly innovators while the managerial population of their industry is predominated by adaptors. Next, a validated model of managerial effectiveness is presented and explained. Then, the managerial and research implications of this study are discussed. Finally, conclusions are drawn.

#### 9.2 ORGANIZATIONAL UNIT PERFORMANCE

In the previous chapter it was reported that a significant correlation was not found between the two measures of organizational unit performance (POA and OCTOT) used in this study. This result is particularly interesting because the three executives who made the OCTOT rated rankings were very familiar with the IFSG's Performance Related Reward (PRR) scheme and the POA score of the sample. The evaluating executives who made the rated rankings were clearly differentiating between the level of achievement of agreed

organizational unit objectives (POA) and the organizational competence of the unit managed by each of the executives in the sample.

One explanation for the results is measurement error. On the one hand, the lack of experience in target setting, variation in the difficulty of supposedly equal levels of target and inconsistent treatment of the influence of external events (such as changes in interest rates) on targets could have caused the POA measure to misrepresent the real level of attainment of agreed organizational unit objectives. On the other hand, factors such as incomplete information could mean that the OCTOT measure is inaccurate. However, it is unlikely that measurement error accounts fully for the results obtained. Firstly, the executives responsible for the administration of the PRR scheme were aware of its potential shortfalls and took considerable care to ensure that the system was consistent and fair. Second, the work of Reiman (1983) suggests that organizational competence ratings do relate positively and significantly to long-term organizational unit performance.

A second explanation for the results concerns the type of performance measured by POA and OCTOT. POA is based on five or six agreed organizational objectives that can be achieved in a single year. The PRR scheme assumes that the attainment of these objectives will enhance organizational unit performance, although, it might well be that some such objectives do not. OCTOT is based on the level of

attainment over several years of eight organizational competence factors (see section 7.9.3) which may be difficult to enhance in a single year and which have been shown by Reiman (1983) to relate to long-term organizational unit performance. Consequently, POA and OCTOT are measuring somewhat different phenomena and this is bound to reduce the size of the relationship between the two variables.

Nevertheless, over a number of years, a relationship should exist between the level of achievement of some of the objectives included in the PRR scheme (such as return on capital employed), and organizational unit competence. The critical phrase is "over a number of years". As Miles (1980) has pointed out, executives who strive to maximize performance in the short-term (who would be rated highly over this period on POA) can impair organizational performance in the long-term because resources that ought to have been used to invest in the future are realized in the present. An effective balance needs to be struck between short-term and long-term performance. In this study, the POA measure covers only one year because the PRR scheme was in its first year of operation. Consequently, the POA measure cannot detect any instances of short-term profit maximization by executives which will reduce the performance of their unit in the long-term so that a reduction in POA occurs. Such an event is likely to have been picked up by OCTOT, however, because of its long-term focus. Under such circumstances, a divergence would occur between the two measures of organizational unit performance which would

reduce any relationship that exists between them. In summary, artifactual error may have affected somewhat the correlation between POA and OCTOT. Nevertheless, the focus of POA on short-term objectives and the availability of this measure only for one year as well as the long-term focus of OCTOT provide good reasons for accepting the hypothesis that there is no relationship in this study between POA and OCTOT. These results support Dunnette's (1963) view that organizational performance is multidimensional and that a single measure of performance is unsatisfactory because it will lead to oversimplification. More research is needed into the relationship between short-term measures such as POA and long-term measures like OCTOT. It would be particularly interesting to find out if a positive, significant relationship exists between organizational unit competence and the average level of achievement of PRR scheme objectives over a five year period.

### **9.3 BEHAVIOURAL VARIABLES**

#### **9.3.1 Statistical relationships between the HPMC**

Factor analysis of the HPMC (see Tables 8.9 and 8.10) produced a solution which is very similar to that of Schroder (1989a) as Table 9.1 demonstrates. There are two important differences between the results of Schroder's factor analysis and those found here. Firstly, in this research *Developmental Orientation* is brought together with *Information Search* and *Concept Formation*.

**TABLE 9.1: COMPARISON OF FOUR FACTOR 8 HPMC SOLUTIONS  
IN SCHRODER'S AND THIS STUDY**

SCHRODER		THIS STUDY	
FACTOR	HPMC	FACTOR	HPMC
COGNITIVE	Information Search Concept Formation Conceptual Flexibility	COGNITIVE	Information Search Concept Formation Developmental Orientation
MOTIVATING	Interpersonal Search Managing Interaction Developmental Orientation	INTERPERSONAL COMPLEXITY	Interpersonal Search Managing Interaction Conceptual Flexibility
DIRECTIONAL	Impact Self Confidence Presentation	DIRECTIONAL	Impact Self Confidence Presentation
ACHIEVING	Proactive Orientation Achievement Orientation	ACHIEVING	Proactive Orientation Achievement Orientation

whereas in Schroder's study *Developmental Orientation* forms part of the Motivating factor. In other words, this study found that executives who are highly competent cognitively are most likely to provide staff with the opportunity to learn, develop and grow; cognitive competence appears to orient the manager towards helping others to experience cognitive growth. Second, in this study *Conceptual Flexibility* is brought together with *Interpersonal Search* and *Managing Interaction* rather than with the Cognitive competencies - as Schroder found. The executives in this study spent much of their time interacting with others who had conflicting viewpoints and interests to their own. Under these circumstances, the results show that individuals who are most able to understand the viewpoints of others (*Interpersonal Search*) and to get individuals to discuss their conflicting perspectives (*Managing Interaction*) are those who are most able to hold alternate viewpoints in their mind and to evaluate a range of options using a variety of criteria which include the effects of each option on the interests of the different parties involved (*Conceptual Flexibility*).

The analysis reported in Table 8.10 also shows that this study found *Proactive Orientation* to be related to the Cognitive factor as well as the Achieving factor. This result shows that managers who are strong cognitively have a greater sense of being in control of events and of taking

action to change their environment. This finding supports the work of Schroder et al (1967, p17) who discovered that, "With increasing conceptual level, alternate perspectives and inter-relationships can be generated from the same dimensional values of information. This represents an increase in the concept of "self" as an agent, a going beyond any single or externally given interpretation, and an increase in the conception of internal causation".

The consistency of the two factor analyses - which used samples from different nations, organizations and levels of management as well as different methods of data collection - supports strongly the proposition that four factorial dimensions of managerial behaviour can be derived from statistical analysis of the HPMC. This finding is important because research into managerial behaviour has tended to concentrate on the two factorial dimensions of Initiating Structure and Consideration which, as Appendix 1 shows, cover only partially the full range of behaviour encompassed by the HPMC. Of particular interest are Schroder's Cognitive competencies (*Information Search, Concept Formation and Conceptual Flexibility*) as the cognitive aspect of managerial behaviour has received scant attention by researchers to date.

### 9.3.2 Agenda stages and the HPMC

This study has shown that the executives in the sample used an agenda setting process which can be divided into four

stages which supports and elaborates the work of Marples (1967, 1968) and Kotter (1982). In addition, the research demonstrates that each of the HPMC factors is particularly, but not exclusively, relevant to one of the agenda stages (see Table 8.11). This finding is important because it highlights the behaviours which create the agenda setting process. Furthermore, section 8.3.5.1 described how the characteristics of the sample's agendas varied according to their cognitive competence. This suggests that the analysis of executive agendas may provide a method of assessing the cognitive competence of executives.

This study has also provided evidence of the cross-validity of the eleven HPMC. These results are discussed in the next section.

### 9.3.3 The validity of the HPMC

As Tables 8.12 and 8.13 show, none of the HPMC correlated significantly with POA while all of the HPMC were correlated positively and significantly with OCTOT. Hence, hypotheses 1(a)-(k) are rejected and hypotheses 2(a)-(k) are accepted.

These results show that the HPMC relate to organizational competence and, therefore, long-term organizational unit performance rather than the level of achievement of agreed,

<sup>\*See Note 2, p 389</sup> short-term organizational unit objectives in a single year.

These findings mean that the study undertaken is unable to shed much light on the managerial behaviours which are

associated with the level of achievement in a single year of the objectives included in the POA measure. Nevertheless, the study can help to explain how managerial behaviour relates to organizational competence. The reasons for the relationships that have been observed are discussed below.

#### **9.3.3.1 The Cognitive HPMC**

In section 8.3.5.1, it was explained that the executives who are strong in the cognitive HPMC (*Information Search, Concept Formation and Developmental Orientation*) had agendas consisting of issues that addressed the structural characteristics of the focal organization. These executives had abstracted from specific events to identify and test hypotheses about underlying causes. Furthermore, once these executives had completed their analysis, they tended to take action to tackle the issues on their agenda.

This meant that the attention of the executives who were competent cognitively was directed towards issues that were deep-rooted, required the investment of the IFSG's resources and, had a long payback period. The agendas of these executives suggested that they were neither directing most of their attention towards short-term issues nor sacrificing performance in the long-term in order to maximize performance in the short-term. It is not surprising, therefore, that the cognitive HPMC do relate to OCTOT and do not relate to POA. Furthermore, because such executives

went beyond the analysis of the issues on their agendas to take action to deal with these issues, the positive and significant association of *Proactive Orientation* with OCTOT and its lack of association with POA is explicable.

#### **9.3.3.2 The Interpersonal Complexity HPMC**

The use of the HPMC in the Interpersonal Complexity factor (*Interpersonal Search, Managing Interaction and Conceptual Flexibility*) helps to create long-term relationships, goodwill and joint decisions between individuals and constituencies with differing viewpoints and interests. Therefore, the Interpersonal Complexity factor also has a long-term focus and payback, and can be expected to relate to OCTOT rather than POA.

The behaviour encompassed by the Interpersonal Complexity factor can be contrasted with a unilateral approach which is based on a single interest and few options. Under simple conditions, when divergent interests and viewpoints do not exist, a unilateral approach can be effective in both the short and long-terms (see Yetton and Crouch, 1983). However, as complexity increases and the demand for the behaviour encompassed by the Interpersonal Complexity factor grows, a unilateral approach may achieve gains in the short-term for one individual or constituency, but only at the expense of long-term relationships and goodwill. Hence unilateral behaviour can be expected to relate to POA but not OCTOT.

### 9.3.3.3 The Directional HPMC

Table 8.13 shows that the three HPMC in the Directional factor (*Impact, Self Confidence and Presentation*) were most predictive of OCTOT and Table 8.12 shows that two of those competencies (*Presentation and Impact*) are close to being correlated significantly with POA at the .05 level. In section 8.3.5.3 it was explained how many of the situations which demanded heavily the use of the directional competencies involved a large number of people both inside and outside the focal organization and how these competencies appeared to influence both positively and negatively, the motivation and confidence of others. The results show that the influence which the directional competencies have on others affects the long-term performance of organizational units and may also have a short-term pay off. Effective use of the directional competencies may boost the commitment, confidence and motivation of others immediately so that short-term performance is influenced. The consistent use of these competence appears to build a climate of commitment, confidence and motivation which affects substantially the performance of organizational units over a period of time. These results support the findings of Burns (1978) and Bass (1985) who emphasize the importance of charismatic, inspirational leadership.

#### 9.3.3.4 The Achieving HPMC

Tables 8.12 and 8.13 show that *Achievement Orientation* relates to OCTOT but not POA. Analysis of the observational data shows that the executives who were rated most highly in *Achievement Orientation* created strategies and set targets for the improvement of performance in the longer term (such as the creation of a company-wide Quality of Service Programme). Again, such actions are likely to affect performance most in the long-term and require investment of the resources in the short-term so that the positive relationship with OCTOT is to be expected.

#### 9.3.4 Multivariate analysis

It has been argued that the HPMC were used by the executives in the sample to tackle issues whose resolution will produce a return in the long-term and which therefore require a balance to be struck between short and long-term considerations. Executive work was found to be characterized by issues with a long rather than a short time horizon. It is to be expected, therefore, that executives who are highly effective in the use of the HPMC will be able to have a substantial effect on the organizational competence of their units unlike executives who are unable to use the HPMC effectively. The multiple regression analysis (see Table 8.14) supported this expectation.

Table 8.14 shows that all four HPMC factors are included in the regression model which reinforces the importance of going beyond the two factorial dimensions that have tended to dominate research into managerial behaviour. These findings show that managerial behaviour is an extremely important determinant of organizational unit competence under certain environmental conditions. Two environmental variables were thought to influence the demand for the eleven HPMC. The salience of those variables and one other is discussed below.

#### 9.4 THE EFFECT OF ENVIRONMENTAL VARIABLES ON THE LEVEL OF DEMAND FOR THE HPMC

As the previous section has pointed out, executive work was found to be characterized by issues and tasks with a long time horizon. Also, it was found that the HPMC are particularly relevant to such tasks. In this section, the environmental variables which give executive work its character and which influence the demand for the HPMC are discussed.

##### 9.4.1 Managerial job level

The finding that executive level work is characterised by tasks with a long time horizon is supported by the Stratified Systems Theory of Elliott Jaques. Jaques (1976) argues that the time-span of the longest task undertaken by an individual extends as a function of the level of his/her

job in the organizational hierarchy. At the lowest levels, tasks can be completed in a day or less. At the highest "strategic" levels, tasks take twenty years or more to complete. The results of this study and of Jaques' research reinforce, therefore, the findings of the time utilization studies which indicated that the demand for the HPMC increases with managerial job level. Managerial job level should therefore be retained as an environmental variable in the model of managerial effectiveness.

#### 9.4.2 Rate of environmental change

The work of Burns (1957) and Kanter (1985) indicates that the demand for the HPMC will increase as a function of the rate of environmental change. In this study, an increase in the rate of environmental change had made it necessary for the executives to make radical changes to key organizational variables such as the formal structure and technology.

These changes have a long time horizon and required the extensive use of the HPMC - as has been described in section 9.3. These results support, therefore, the inclusion of the rate of environmental change in the model of managerial effectiveness.

#### 9.4.3 Environmental complexity

The observational and job analysis interview data indicated that one other environmental variable can influence the level of demand for the HPMC: environmental complexity.

Most of the issues facing the executives in the sample involved several individuals and constituencies each of whom had a different viewpoint and set of interests. This circumstance meant the demand for the HPMC in the Interpersonal Complexity factor was high. It can be suggested, therefore, that the demand for *Interpersonal Search, Managing Interaction and Conceptual Flexibility* increases as a function of the number of different viewpoints and interests involved in managerial tasks. Based on these findings, environmental complexity should also be included in the model of managerial effectiveness.

## 9.5 INDIVIDUAL VARIABLES

### 9.5.1 Relationships between the individual variables and the HPMC

Table 8.17 shows the correlations between the twelve individual variables and the eleven HPMC included in the revised model of managerial effectiveness. This study found eleven of the twenty one hypothesized relationships between the HPMC and the individual variables to be supported by the results - see Table 9.2.

The hypothesized relationship of self-actualization with *Information Search* and *Concept Formation* was supported but its relationship with *Conceptual Flexibility* was not. As Table 8.10 shows, this study

**TABLE 9.2: SUPPORT GIVEN TO HYPOTHESES ON THE RELATIONSHIP  
BETWEEN BEHAVIOURAL AND INDIVIDUAL VARIABLES**

HYPOTHESIS	LEVEL OF SUPPORT
<b>A statistically significant, positive relationship exists between:</b>	
3. <i>Information Search</i> and self-actualization.	SUPPORTED
4. <i>Concept Formation</i> and self-actualization.	SUPPORTED
5. <i>Conceptual Flexibility</i> and self-actualization.	NOT SUPPORTED
6. <i>Impact</i> and power.	NOT SUPPORTED
7. <i>Self confidence</i> and: (a) decisiveness; (b) self assurance.	SUPPORTED NOT SUPPORTED
8. <i>Proactive Orientation</i> and: (a) supervisory ability; (b) initiative.	NOT SUPPORTED NOT SUPPORTED
9. <i>Achievement Orientation</i> and: (a) supervisory ability; (b) occupational achievement.	SUPPORTED SUPPORTED
<b>A statistically significant negative relationship exists between:</b>	
10. <i>Information Search</i> and job security.	NOT SUPPORTED
11. <i>Concept Formation</i> and job security.	NOT SUPPORTED
12. <i>Conceptual Flexibility</i> and job security.	NOT SUPPORTED
13. <i>Proactive Orientation</i> and: (a) job security; (b) high financial reward.	SUPPORTED NOT SUPPORTED
14. <i>Achievement Orientation</i> and: (a) job security; (b) high financial reward.	SUPPORTED NOT SUPPORTED
<b>No statistically significant relationship exists between:</b>	
15. <i>Information Search</i> and intelligence	SUPPORTED
16. <i>Concept Formation</i> and intelligence	SUPPORTED
17. <i>Conceptual Flexibility</i> and intelligence	SUPPORTED
18a. If the sample of managers being studied is responsible for the management of discontinuous change, then a statistically significant, positive relationship will exist between the eleven HPMC and innovation.	SUPPORTED FOR SEVEN HPMC

found that *Conceptual Flexibility* forms part of the Interpersonal Complexity factor and is not brought together with *Information Search* and *Concept Formation* as it was in Schroder's (1989a) study. In this study, *Developmental Orientation* was found to form part of the Cognitive factor and this HPMC correlates significantly ( $r=.41$ ) with self-actualization. It can therefore be proposed that the goal of self-actualization is related to the Cognitive factor identified by this study and should therefore be retained in the model of managerial effectiveness.

The goal of power was not related to any of the HPMC which confirms Ghiselli's (1971) finding that striving for power over others is not related to managerial success. As Ghiselli's findings are at variance with those of McClelland and Boyatzis (1982), Stahl (1983) and Miner (1977,1978), further research needs to be undertaken into the construct and criterion validity of the measures of power used by these researchers. Power can be excluded from the model of managerial effectiveness on the basis of these results.

As expected, decisiveness was significantly correlated with *Self Confidence*. However, self assurance was not correlated with any HPMC so it can, unlike decisiveness, be excluded from the revised model of managerial effectiveness. Supervisory ability was not correlated significantly with *Proactive Orientation* as had been

predicted but, as hypothesized, it did correlate significantly with *Achievement Orientation*. Supervisory ability was also found to be related to *Developmental Orientation* and *Information Search* which suggests it should be retained in the model of managerial effectiveness.

The hypothesis that the goal of occupational achievement is related to *Achievement Orientation* was supported so that grounds exist for keeping this individual variable in the model of managerial effectiveness.

The goal of job security was not correlated significantly with *Information Search*, *Concept Formation* or *Conceptual Flexibility* so that hypotheses 10-12 are rejected. However, hypotheses 13(a) and 14(a) are accepted because job security did correlate negatively and significantly with *Proactive Orientation* and *Achievement Orientation*.

High financial reward did not correlate significantly with *Proactive Orientation* or *Achievement Orientation* so that hypotheses 13(b) and 14(b) are rejected. Nevertheless, as high financial reward did correlate negatively and significantly with *Self Confidence* it can be kept in the model of managerial effectiveness.

As expected, intelligence did not correlate significantly with any of the HPMC so hypotheses 15-17 are accepted. This result supports the work of Schroder et al (1967), Neisser (1976) and Wagner and Sternberg (1984, 1985) and suggests that the notion of individuals having "practical" as well as "academic" intelligence has merit. This theory is given further support by the strong relationship that has been found between the Cognitive HPMC, which resemble the "practical intelligence" behaviours described by Sternberg and Wagner, and OCTOT. Hence, these results reinforce the notion that the capacity of intelligence to discriminate between effective and ineffective top level executives is limited.

Seven HPMC were found to be correlated significantly with KAI which provides partial support for hypothesis 18(a). This research did not test hypothesis 18(b).

Although working-class affinity was identified by Ghiselli as being negatively related to traditional criterion measures, it was not possible to formulate a hypothesis about the relationship between this variable and the eleven HPMC. Table 8.17 shows that working-class affinity was not correlated significantly with any of the HPMC and can be dropped, therefore, from the model of managerial effectiveness.

### 9.5.2 Factor analysis of the individual variables

To clarify the nature of the relationship between the individual variables and the eleven HPMC a factor analysis was undertaken of the seven individual variables found to be related significantly to the HPMC - see Tables 8.19 and 8.20. The three factor model was chosen.

#### 9.5.2.1 Individual factor 1: Adaption-Innovation

Factor 1 was called Adaption-Innovation and brings together KAI, with the goals of job security, occupational achievement and self-actualization. Innovators seek low job security, high occupational achievement and high self-actualization. Adaptors seek high job security, low occupational achievement and low self-actualization.

The SDI security scale measures the extent to which the individual seeks protection from adverse forces by means of tenure. Kirton (1976, p623) states that adaptors "tend to have self-doubt, react to criticism by closer outward conformity; are venerable to social pressure and authority and are compliant". It might therefore be expected that adaptors have a high need for security - as is indicated by the correlation of -.77 between KAI and need for security. This finding is supported by data gathered from a sample of 95 graduate applicants to the ISFG who completed the KAI and

SDI questionnaires during the selection process. In this sample a correlation of -.53 ( $p < .001$ ) was found between KAI and need for security.

The SDI occupational achievement scale measures the extent to which the individual seeks to gain appointment to high level positions in business and industry. The strong correlation of .64 between KAI and occupational achievement is confirmed by the graduate sample where a correlation of .38 ( $p < .001$ ) was found between these two individual variables. The achievement of high level jobs in business means that executives experience rapid upward social mobility so that they move quickly from one group of colleagues and friends to another. It is possible, therefore, that such a process favours innovators who tend to be irreverent to group pressures for conformity, cohesion and cooperation, who are unlikely to be constrained by these pressures, and who will be predisposed to rapid upward social mobility if the opportunity exists. Adaptors, who are vulnerable to social pressure, are likely to be inhibited by such pressure and have a lower preference for rapid upward social mobility.

The SDI self-actualization scale measures the extent to which the individual seeks to use his/her talents to the fullest extent. This result is again supported by data from the graduate sample which showed a correlation of .30 ( $p < .01$ ) between KAI and self-actualization. Ghiselli (1973,

p84) states that, "A view advanced some years ago, and still firmly supported today in certain circles, holds that managers are completely establishment oriented. This notion has been embodied in the phrase "organization man". Essentially it is claimed that managers are compliers, and must do things the "company way" if they are to hold on to their very positions, much less if they are to advance in their firms. Nevertheless, contemporary philosophers of organizational matters argue just the opposite. They stress the importance of creativity at the managerial level, insisting that business and industrial organizations must foster self-actualization among their executives and administrators, and the originality and individuality that goes with it". From Ghiselli's comments it is clear that "organizational men" , who will score low on the SDI measure of self-actualization, are likely to be adaptive in preference while "individualists" who will score high on this SDI scale, are likely to be innovators. Consequently, the positive relationship between KAI and self-actualization is to be expected.

#### 9.5.2.2 Individual factors 2 (Decision-making Style)

#### and 3 (Supervisory Ability)

The second individual variable factor was called Decision-making Style and brings together decisiveness with the goal of high financial reward. Individuals who prefer

to be ready, quick and self-confident decision makers do not tend to seek high financial reward. Individuals who prefer to be careful, cautious and slower in decision-making do tend to seek high financial reward. This finding is confirmed by the graduate sample in which the two variables were correlated  $-.24$  ( $p > .01$ ) and by Ghiselli's (1971) USA manager sample in which the correlation was  $-.29$  ( $p > .01$ ). Nevertheless, the negative relationship between decisiveness and high financial reward is difficult to explain and further work into the nature of this association is required.

The third factor loads heavily on Supervisory Ability and was therefore given this title.

### 9.5.3 Relationships between the individual factors and the eleven HPMC

#### 9.5.3.1 Adaption-Innovation factor

As Table 8.21 demonstrates, the Adaption-Innovation factor correlates positively and significantly with the three HPMC in the Cognitive factor, two of the three HPMC in the Directional factor and, the two HPMC in the Achieving factor. The Adaption-Innovation factor does not correlate significantly with the three HPMC in the Interpersonal Complexity factor and *Presentation*.

One explanation for these results could be unwitting

assessor bias. The innovative expression of the HPMC could have been more salient generally to assessors than the adaptive expression and, therefore, rated more highly. Even though the assessors were aware that the HPMC can be expressed both innovatively and adaptively and that, in general, no relationship exists between KAI and the HPMC, an unconscious bias could still have occurred. If this explanation is valid, it is to be expected that a generalized assessor bias would have affected the rating of all the HPMC. It would seem unlikely that a general bias would operate so unevenly as to affect only seven HPMC and leave four unaffected - none of which could account for more than 5% of the variance. Therefore, another explanation must be sought.

A more plausible explanation is organizational climate. Kirton and McCarthy (1988) have argued that one dimension of organizational climate is the type of change that individuals experience in their jobs. At one end of this dimension, change is continuous; at the other end, it is discontinuous. Continuous change is preferred by adaptors while discontinuous change is preferred by innovators. It has been shown that the executives being studied were responsible for the management of much discontinuous change - a situation, therefore, which suits innovators rather than adaptors. Consequently, it can be proposed that innovators were rated more highly than adaptors on seven HPMC because the innovators were provided with more opportunity to use

these HPMC by the discontinuous nature of the changes being made than were adaptors. The three Interpersonal Complexity HPMC, which were not associated with Adaption-Innovation, are concerned with finding out and understanding the alternate viewpoints of others (*Interpersonal Search*), getting individuals with different perspectives to debate their points of view (*Managing Interaction*) and, evaluating multiple options by objectively relating them to alternate criteria, viewpoints and interests (*Conceptual Flexibility*). To be effective in the use of these competencies managers must not be biased by or give primacy to any single point of view or preference. These competencies require managers to accept and work with differences, diversity and complexity. Managers who are biased by their own or others preferences will not be effective in the use of these three competencies. It can therefore be proposed that the opportunity given to individuals to use the three Interpersonal Complexity HPMC is unaffected by their Adaption-Innovation preferences and the related organizational climate dimension. In summary, it is proposed that one dimension of organizational climate - the type of change being managed by the sample - favoured innovators who were given more opportunity, therefore, to use seven HPMC than were adaptors. This resulted in a positive, significant correlation between the Adaption-Innovation factor and these seven HPMC. The three HPMC in the Interpersonal Complexity factor, it has been argued, are unaffected by the type of change being managed

so neither innovators nor adaptors were given more opportunity to use these three HPMC. Hence, no relationship was found between these three HPMC and the Adaption-Innovation factor.

#### **9.5.3.2 Decision-making Style factor**

The Decision-making Style factor was correlated positively and significantly with *Self Confidence*. Organizational climate can also be proposed as the explanation for this result. It is suggested that the sample were encouraged by customers, shareholders and other organizational participants to be ready, quick and self-confident decision-makers and to have a low concern for financial reward (i.e. to do work for its own sake rather than for material gain). Under these circumstances, individuals who prefer this climate (and score highly on the Decision-making Style factor) will be given more opportunity to use the behaviours encompassed by the HPMC of *Self Confidence* and will tend, therefore, to be more effective in the use of this competence than individuals with low Decision-making Style factor scores.

If this analysis is valid, it means that Adaption-Innovation, Decision-making Style and the related organizational climate dimensions are important variables because they can affect the level of opportunity that individuals have to use several HPMC. If the climate

favours particular preferences, then, individuals with those preferences will be more able to use the related HPMC and will therefore be more effective than equally competent individuals with different preferences. This could help to explain why individuals who are very effective in some organizations or organizational units are less effective in others and indicates the importance of ensuring that the preferences of managers are suited to the prevailing organizational climate.

#### 9.5.3.3 Supervisory Ability factor

The third individual factor is Supervisory Ability. Table 8.21 shows that this factor correlates significantly with Developmental Orientation which suggests that managers who have a high ability to direct, organize and integrate the work of staff do so in a way that helps those individuals to develop. This result gives support to the findings of Likert (1961, 1967) and his colleagues.

### 9.6 DEVELOPMENT OF THE HPMC

The results demonstrated that the focal organization had a structured process for the development of general managers which enabled the individuals who had participated in this process to develop the HPMC to a significantly higher level than the specialists - who had not participated. The most important features of the general manager development process are now discussed.

### **9.6.1 The general manager development process**

#### **9.6.1.1 Early identification of talent and rigorous screening process**

Managers in the focal organization made a point of identifying individuals who had performed well in their early years of employment. These individuals were selected for placement in large branches which acted as training grounds for staff with potential. The talent-spotting process continued when individuals who were performing best in large branches were picked for head office jobs. This process was based on the IFSG managers' judgements of the potential of individuals. Once individuals had been promoted to the next development stage those who did not perform were identified rapidly and returned to jobs that matched their capabilities. In effect, therefore, a rigorous screening process was in operation.

#### **9.6.1.2 Early development of technical competence**

The young staff with potential were expected to achieve advanced technical competence by their mid-twenties. Technical capability formed the foundation on which general management skills were built.

#### **9.6.1.3 Early experience of integrating different functions**

At head office the staff with the highest potential were

delegated substantial responsibility by their general management bosses so that they had very early experience of managing an organization so that different functional areas are integrated and mutually reinforcing.

#### 9.6.1.4 Job placements that gave an opportunity to learn how to apply the HPMC to different managerial activities

Table 8.27 shows that the Generalists and High-fliers were promoted to jobs which were increasingly complex in the sense that each new job involved responsibility for an additional and different set of managerial activities.

#### 9.6.1.5 Job placements in different parts of the organization and different countries

Not only did the activities of executives become more complex as they were promoted, but also the executives were given jobs in relatively unfamiliar parts of the organization. Hence, they were moved to different divisions or to subsidiary companies. This process usually involved working abroad for a period of at least three years.

#### 9.6.1.6 Secondments to major change projects

At least once or twice in their career, the Generalists and High-fliers were seconded to a critical project managing major change that was beyond the experience of the IFSG and which needed urgent attention. Such projects often involved

international travel and very long hours of work.

#### **9.6.1.7 A steep learning curve**

The jobs and assignments that were undertaken by the Generalists and High-fliers meant they were on a steep learning curve most of the time. They were appointed to jobs that developed them rather than to jobs they had proved they could do.

#### **9.6.1.8 New jobs/assignments are tests as well as opportunities**

One of the perennial problems of fast-track schemes is the escalator principle: young people who are thought to have potential being put on the fast track, cossetted and promoted to the top of the organization regardless of competence. The focal organization protected itself against the escalator principle by giving its Generalists and High-fliers challenging and taxing tasks and then evaluating their performance rigorously. If individuals did not perform to expected levels, their potential was revised downwards - and vice versa.

#### **9.6.1.9 External business school education**

Individuals with potential attended the executive programmes of the business schools with the highest reputation. Usually, executives would attend one programme lasting 3-6

months; sometimes they would attend two programmes.

#### **9.6.1.10 Mentors**

Most respondents had mentors who were senior executives and who took responsibility for coaching staff and providing them with emotional support. Often the mentors acted also as sponsors in that they appointed their proteges to taxing and challenging jobs. These jobs gave the proteges the opportunity to demonstrate their worth and develop their knowledge and competence.

#### **9.6.1.11 Summary**

In summary, the Generalists in the sample had higher levels of the HPMC than did the Specialists although there were no significant differences between the two groups in terms of individual variables. This implies that the Generalists learned the HPMC. The main features of the focal organization's general manager development process are of considerable interest, therefore, because the results suggest strongly that it has enabled individuals to develop the HPMC and that it has made, therefore, an important contribution to the long-term performance of the IFSG.

#### **9.6.2 Pre-work experiences that may enhance the HPMC**

As Table 8.22 shows, the High-fliers were more competent than the Generalists in four areas: *Information Search,*

*Concept Formation, Impact and Proactive Orientation.*

Furthermore, the High-fliers had higher Adaption-Innovative factor scores than the Generalists. This suggest that the HPMC differences between the Generalists and High-fliers are in part due to individual differences: the high level of demand for innovation in the organization could have given the High-fliers more opportunity to use the HPMC than the Generalists so they were rated higher. However, the biographical interview data suggests that the pre-work experiences of the High-fliers might also underlie their superior competence. Three features of the High-fliers pre-work experience were identified which might influence the development of the HPMC. Firstly, being the first born son; second, having an under-achieving father and; finally, having an ambitious mother. It is not clear from this study how these experiences might influence the development of the HPMC so further research is needed to explore this issue.

#### 9.7 THE PREDOMINANCE OF INNOVATORS AT THE TOP OF AN ORGANIZATION IN AN INDUSTRY PREDOMINATED BY ADAPTORS

Research by Holland (1984) and Grysiewicz et al (1987) shows that financial service organizations are predominated by adaptors. As Holland (1984, p266) states, "It is suggested that branch banking, because it emphasizes set procedures and short-term goals is essentially an adaptive occupation. It is therefore expected that the established branch managers will behave adaptively, i.e., they will be safe, sound, methodical, prudent, rule-conforming, and wary

of unproven radical solutions". Holland's results in the UK supported this hypothesis as did Gryskiewicz et al's in the USA. On the basis of Hayward and Everett's (1983) study, Holland also proposed that if trainee applicants to banking are less adaptive than the established branch manager population then over time wastage among the trainees will result in their mean equating that of branch managers. This process would occur due to the presence of bias in favour of adaptors when promotion takes place. Holland's results supported this hypothesis. Holland (1984, p269) notes Gryskiweicz et al's finding that, "Not all senior positions in a bank are filled by adaptors. For example, his Strategic Planners (perhaps equal to General Managers in UK banks) obtained a mean KAI score of 113. This was significantly higher than his branch managers and substantially higher than young bank trainees". Holland therefore asks, "How do the innovators in an adaptive organization survive"? The results of this study can supply some answers to this question.

This study shows that the focal organization used a general manager development process which deliberately picked individuals to manage unfamiliar, risky and unstructured assignments. This process of selection has, therefore, an in-built innovator bias. Furthermore, the Generalists and High-fliers were developed by job placements across geographical, functional and organizational boundaries. Foxall's (1986) research has shown that managers who have changed their functional specialism and who interface with

other departments and organizations will be more innovative than managers who have pursued the same specialism throughout their career and are concerned with the maintenance of internal stability and continuity.

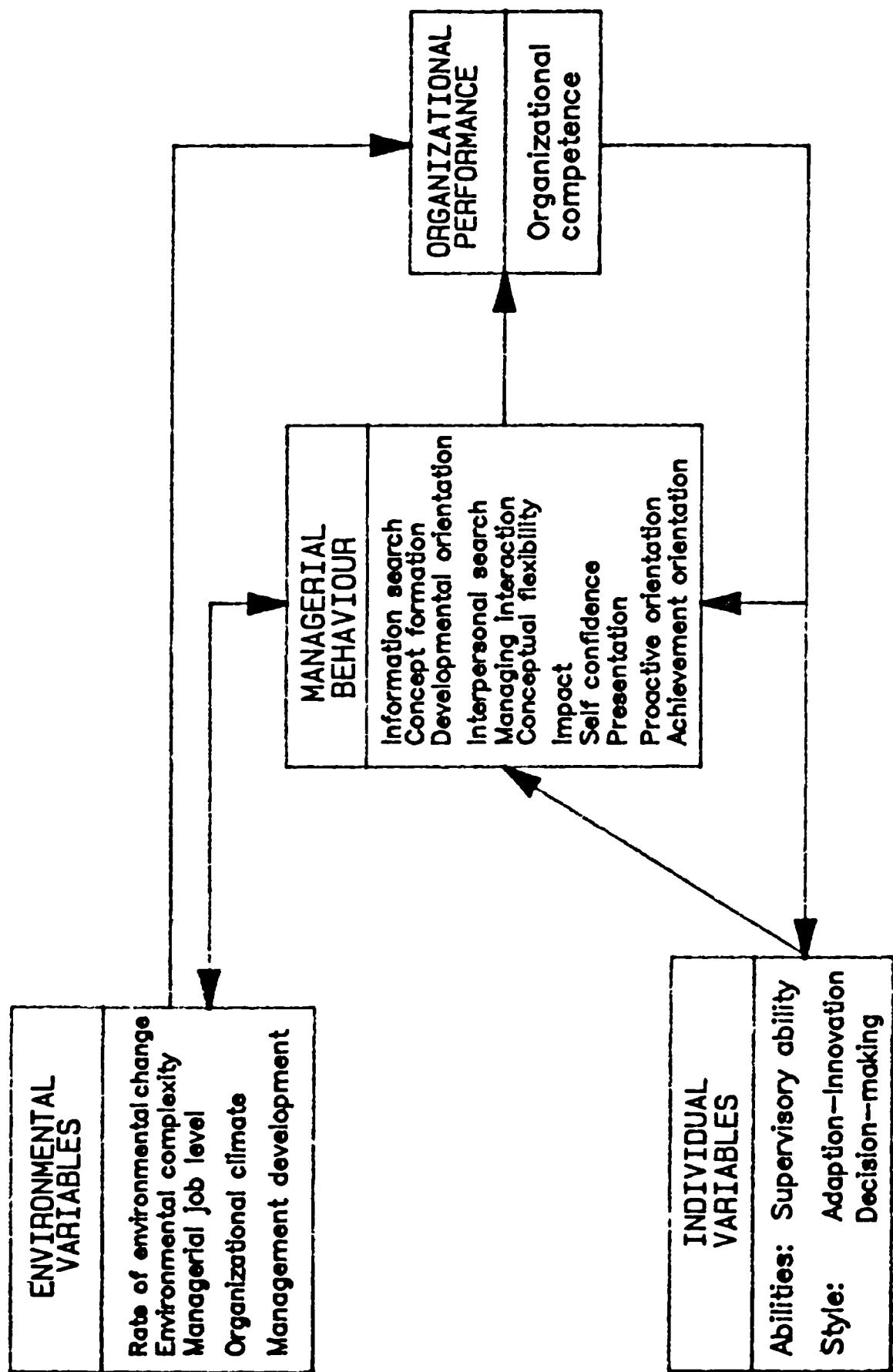
Consequently, it is highly probable that the IFSG's general manager development process favours innovators. In addition, the successful Generalists and High-fliers experienced rapid upward social mobility, a very steep learning curve and risky, insecure assignments which put their reputations on the line. As the goal profile associated with innovation is high occupational achievement, high self-actualization and low security, it is evident that innovators were again favoured by the general manager development process. In summary, the focal organization was run by innovators who were managing an organization in an industry predominated by adaptors. It is proposed that this phenomenon occurred because the IFSG recognized the differences between general management and branch banking and had institutionalized a process of executive talent-spotting and development which favoured innovators and gave them the opportunity to develop the HPMC. This phenomenon highlights the importance of identifying the cognitive style demands of different areas of work in an organization and of establishing selection and development programmes which are appropriate to these demands. It should also be noted that not all of the IFSG sample were innovators - some were adaptors. What is important, therefore, is the balance of adaption and innovation in a managerial population. In the case of the IFSG executive

population the balance was tilted towards innovation; however, individuals existed in this population who supplied an adaptive approach to counterbalance innovation. Adaption was still required, but less so than in branch banking.

### **9.8 A VALIDATED MODEL OF MANAGERIAL EFFECTIVENESS**

The results of this study permit the validated model of managerial effectiveness presented in Figure 9.1 to be created. The validated model includes: (a) one organizational unit performance variable - organizational competence; (b) eleven dimensions of managerial behaviour - the High Performance Managerial Competencies; (c) five environmental variables - the environmental rate of change, environmental complexity, managerial job level, organizational climate and the management development process and; (d) three individual factors Adaption-Innovation, Decision-making Style and Supervisory Ability.

The validated model postulates that the level of demand for the use of HPMC increases as a function of three environmental variables. The first is the environmental rate of change; the faster the rate of change, the higher will be the level of demand for the HPMC. The second is environmental complexity; the greater the number of different (i.e., independent) perspectives typically involved in issues, the higher will be the level of demand for the HPMC. The third is managerial level; the higher the



level of management the greater will be the demand for the HPMC. The model proposes that the higher the level of demand is for the HPMC, the stronger will be the relationship between the eleven HPMC, organizational competence and the long-term performance of organizational units.

In addition, the validated model proposes that at any level of demand for the HPMC, the opportunity given to managers to use the HPMC will vary according to the prevailing organizational climate. Two dimensions of organizational climate are identified. The first is the type of change which predominates. At one extreme, change is discontinuous; at the other, it is continuous. The second is the type of decision-making which predominates. At one extreme, decision-making can be quick and self-confident; at the other extreme, it can be slow and cautious.

Furthermore, the model proposes that the competence of managers will vary with the quality of the management development process of the organization. Organizations that have processes which include the features described in section 9.6 are considered to be more effective at developing managers than organizations without such processes. Consequently, organizations with such processes are expected to perform more highly in the long-term than organizations without such processes.

Also, the Adaption-Innovation and Decision-making Style preferences of managers will determine how well suited they are to the prevailing organizational climate. If a manager's preferences are suited to the prevailing organizational climate then he/she will have more opportunity to use the HPMC related to those preferences. If the individual is ill-suited to the prevailing organizational climate then he/she will have less opportunity to use the HPMC related to those preferences. It is proposed that competent managers whose preferences are well-suited to the prevailing organizational climate will perform better and be more satisfied with their jobs than equally competent managers whose preferences are ill-suited to the prevailing organizational climate.

Additionally, the model proposes that an individual's effectiveness in *Developmental Orientation* is influenced by his/her Supervisory Ability. The model proposes that organizational unit performance will also be influenced directly by environmental variables such as political events and demographic change. Furthermore, the model includes a feedback loop from organizational unit performance to managerial behaviour and individual characteristics.

Finally, the model proposes that the behaviour of managers can change environmental variables.

## 9.9 MANAGERIAL IMPLICATIONS OF THIS STUDY

This study has important managerial implications which are discussed below.

### 9.9.1 The annual performance review and management

#### development processes

As Meyer (1989) has commented recently, most annual performance review processes combine a review of the last year's performance with behavioural feedback. Performance review occurs to justify administrative decisions such as whether or not a salary increase is awarded and how big the increase should be. Behavioural feedback occurs to motivate and develop the manager. This study suggests strongly that a separation should be made between a review of the previous year's performance and behavioural feedback aimed at improving the long-term effectiveness of the manager. The study also implies that reward systems should not be just short-term in focus. On the one hand, the organizational unit performance results showed that the success of executives in achieving short-term, organizational unit objectives in a single year is not related to organizational unit competence and long-term organizational unit performance. On the other hand, the behavioural results showed that while the HPMC relate to organizational unit competence, they do not relate to the level of achievement of short-term organizational unit objectives in a single year. Consequently, it would be a mistake to base behavioural feedback aimed at improving the competence and long-term performance of the units that managers are responsible for on the behaviours which led to high achievement of short-term objectives in a single year.

Such an approach could lead to long-term organizational performance being sacrificed for short-term gain. Thus, a distinction and separation needs to be made between the short-term performance review and long-term management development. A further implication of this study is that reward systems should not be based exclusively on short-term performance as this could also jeopardise organizational competence and performance in the long-term. Some rewards must be reserved for those managers who are able to produce consistently good organizational unit performance over several years.

#### 9.9.2 The role of management development

This study has shown that management development practices can have an significant influence on the development of the HPMC and, therefore, on organizational unit competence and performance in the long-term. This means that management development should be regarded as a strategic asset which can provide a durable competitive advantage to organizations.

#### 9.9.3 Selecting and developing managers on the basis of environmental demand

This research suggests that three environmental variables influence the demand for the HPMC. This implies, firstly, that the HPMC are not relevant to all situations - their relevance depends on the level of managerial job, the rate

of environmental change and environmental complexity. The second implication is that managers should use these environmental variables to determine the competencies required by their managers. These variables can be of great help, therefore, to human resource planning as well as managerial selection and development.

#### 9.9.4 Selecting and developing managers on the basis of organizational climate

This study indicates that organizational climate can influence the opportunities given to managers to use their competencies. Managers whose preferences are suited to the prevailing organizational climate will have more chance to use the HPMC that are related to these preferences than managers who are ill-suited. Thus, equally competent managers can vary in their effectiveness and level of job satisfaction because they have different preferences. This implies that managers also need to assess the climate of their organizational units as part of the human resource planning process. By doing this they will be better able to select and develop managers who are matched to the prevailing organizational climate and who are more likely, therefore, to be effective and satisfied.

#### 9.9.5 Different development processes for different types of manager

This research has built on the findings of Holland (1984)

and Grysiewicz et al (1987) to show that the general managers of the IFSG are innovative in cognitive style preference while bank branch managers are adaptive. Furthermore, it has been argued that the focal organization's general manager development process favours innovators rather than adaptors. It can be inferred, therefore, that the strategies and processes needed to develop general managers in financial service organizations are different from those needed to develop bank branch managers. Management development must be differentiated so that different strategies and processes are created for different managerial populations. A single, undifferentiated approach is unlikely to be fully effective in meeting the development needs of any managerial population. It is possible that these inferences apply also to management development in other industrial sectors, although further research is needed to test this hypothesis.

#### 9.9.6 The assessment of managerial competence

The biographical interviews showed that effective general managers have learned how to apply the HPMC to a wide range different activities. This implies that the effectiveness of managerial assessment centres and other assessment procedures depends in part on the extent to which they include exercises that reflect the full range of different activities that general managers undertake. An important aspect of the assessments that are made should be the extent to which participants are able to use the HPMC

effectively across a wide variety of different activities. A useful developmental strategy for participants who are effective in the use of the HPMC when undertaking some activities but not others will be an extension of the range of activities on which they can use the HPMC effectively.

#### **9.10 RESEARCH IMPLICATIONS OF THIS STUDY**

One outcome of this research has been the creation of a validated model of managerial effectiveness. Several avenues of research stem from this model. Firstly, more work needs to be undertaken to explore the relationship between the different aspects of organizational unit performance. It is important to know, for example, whether the positive and significant relationship that has been hypothesized between the average POA results over a five year period and OCTOT is a reality. Second, this study has kept environmental variables constant at a level which produces a high level of demand for the HPMC. It has been hypothesized that the level of demand for the HPMC, and the strength of their relationship with organizational unit performance will decline with a reduction in the level of managerial job, the rate of environmental change and environmental complexity. Research needs to be undertaken to test these propositions. Third, the model suggests that equally competent managers will vary in effectiveness and job satisfaction if their Adaption-Innovation and Decision-making Style preferences are matched differentially with the cognitive climate prevailing in their

organization(s). This thesis should also be tested. Lastly, the model proposes that the long-term effectiveness of organizations will vary according to the characteristics of their general manager development process. This proposition also needs to be tested by more extensive research.

The biographical interview data indicated that the pre-work experiences of individuals may influence their competence. The relationship between such experiences and the HPMC needs to be explored in more depth. If pre-work experiences do influence the development of the HPMC, it is important to find out why this occurs. Finally, this research has shown the value of using the observational method and four factorial dimensions of managerial behaviour. More research should be based on this approach and less on the use of questionnaires that measure a restricted range of managerial competency factors.

#### 9.11 CONCLUSIONS

This research has been undertaken primarily to create and test hypotheses on the relationship between managerial behaviour and organizational performance at executive level. A secondary aim has been the creation and testing of hypotheses on the relationship between individual variables and managerial behaviour. To achieve these aims, the influence of environmental variables on organizational performance, managerial behaviour and individual variables

had to be explored. A strong relationship was found between eleven High Performance Managerial Competencies and organizational unit competence and, therefore, long-term organizational unit performance. It has been argued that five environmental variables (the rate of environmental change, environmental complexity, managerial job level, organizational climate and management development) influence the relationship between the eleven HPMC and organizational performance. The results demonstrate that managerial competence is influenced by three individual factors (Adaption-Innovation, Decision-making Style and Supervisory Ability). In addition, the study has shown how the HPMC can be developed and how management development strategies and processes need to be differentiated so they are tailored to different managerial populations. Furthermore, a validated model of managerial effectiveness has been presented and the managerial and research implications of the study have been discussed.

The respondents in Handy et al's (1987) study believed that management makes a difference. This study supports that belief and provides a basis for selecting and developing managers who work for financial services organizations in a way which enhances organizational performance. This research has cross-validated the work of Schroder, Boyatzis and other studies into managerial competence and, therefore, it should be relevant and applicable to a wide range of economic sectors.

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## **APPENDIX 1**

**COMPETENCIES FOUND TO SIGNIFICANTLY DIFFERENTIATE  
BETWEEN MANAGERS OF AVERAGE AND SUPERIOR PERFORMING  
ORGANIZATIONS OR GROUPS**

Ohio State Leadership Studies	Michigan Leadership Studies	Harvard Leadership Studies	Transformational Leadership Studies	Coopervision Theory Studies	The P.C.H.M. Study	The Royalist Studies	High Performance Managerial Competencies
<b>INFORMATION DIFFERENTIATION</b> The number of unique dimensions of information used in making a judgement; multidimensional thinking.	<b>INFORMATION MONITORING</b> Informally observes and interacts with staff and students with the purpose of diagnosing conditions; gathers information from sources inside and outside the school to determine what may be contributing to a problem.	<b>PRODUCTIVE USE OF CONCRETES</b> One part of the competency is defined as using concepts to direct information search or to use for information testing, checking	<b>INFORMATION SEARCH</b> The breadth and depth of information search across relevant categories in problem solving; monitoring testing, checking				
<b>INTELLECTUAL STIMULATION</b> Leader forces subordinates to rethink ideas they had never questioned before and enables them to think about old problems in new ways.	<b>PATTERN RECOGNITION</b> A process of relating a stimulus configuration of two or more dimensions to view different dimensions of information in terms of their potential implications for the organisation.	<b>CONCEPTUALIZATION</b> Recognises patterns in an array of information, develops concepts or ideas which describe a pattern or sequence of events.	<b>CONCEPT FORMATION</b> Can link different kinds of information separated spatially and over time to form concepts, hypotheses & ideas; a creative, logical process of forming ideas based on a range of information.				
<b>Leader asks for Information.</b>  Leader makes problem solving attempts by giving suggestions, ideas and opinions formed by linking information.		<b>ANALYTICAL ABILITY</b> Identifies the advantages and disadvantages of different options; compares a situation or behaviour with another situation or behaviour.	<b>PERCEPTUAL OBJECTIVITY</b> A disposition to view an event from multiple perspectives simultaneously; considers the pros and cons (relationships) between different options or strategies to arrive at decisions.				
	<b>FLexible Integration</b> Considers relationships between alternative options and integrations.	<b>PERCEPTUAL OBJECTIVITY</b> States another person's or group's perspective; acknowledges the legitimacy of others' perspectives (e.g., teachers, students, subordinates, supervisors, customers, regulators).	<b>INTERPERSONAL SEARCH</b> Views an event from multiple conceptions or perspectives simultaneously; considers the pros and cons (relationships) between different options or strategies to arrive at decisions.				
		<b>INDIVIDUALIZED CONSIDERATION</b> A part of this dimension includes behavior used to find out what staff want.	<b>INTERPERSONAL DIFFERENTIATION</b> Understands the dimensions and integrations used by others in making judgements.				
		<b>GENERALIZATION</b> A part of this dimension includes behaviour used to gain an understanding of the needs of subordinates.	<b>MANAGING GROUP PROCESS</b> Stimulates others to work together to collaborate and to get one group to work with another; builds identity, pride and trust.				
		<b>CONSOLIDATION</b> A part of this dimension includes allowing subordinates participation in decision making.	<b>MANAGING INTERACTION</b> Stimulates others to interact in one-on-one and group situations and to feel like valued members of a team; creates a climate in which others feel involved, that they are participating and contributing; builds a desire to work together and builds co operation within.				



**APPENDIX 2**

**VALIDITY STUDIES OF MANAGERIAL ASSESSMENT**

**CENTRES REVIEWED**

**APPENDIX 2: VALIDITY STUDIES OF MANAGERIAL ASSESSMENT**

**CENTRES REVIEWED**

Albrecht et al (1964).	Laurent (1968)
Alexander, Buck and McCarthy (1985)	McConnell and Parker (1972)
Anstey (1966, 1971)	Mitchel (1975)
Bentz (1968, 1980)	Moses (1972)
Borman (1982)	Moses and Boehm (1975)
Bray (1964, 1968, 1982)	Moses and Wall (1975)
Bray and Campbell (1968)	Parker (1980)
Bray, Cambell and Grant (1974)	Ritchie and Moses (1983)
Bray and Grant (1966)	Ritter and Roden (1982)
Campbell and Bray (1967)	Schmitt et al (1982)
Carleton (1970)	Schroder (1989a)
Finley (1970)	Taft (1959)
Gardner and Williams (1973)	Thomson (1969)
Grossner (1974)	Thornton III and Byham (1982)
Hinrichs (1969, 1978)	Vernon (1950)
Huck and Bray (1976)	Wakabayashi et al (1988)
Jaffee et al (1970)	Wilson (1948)
Kolb (1968)	Wollowick and McNamara (1969)
Kraut and Scott (1972)	Worbois (1975)

## **APPENDIX 3**

### **BEHAVIOURAL INDICATORS AND CONTRIBUTIONS OF THE HIGH PERFORMANCE MANAGERIAL COMPETENCIES**

**BEHAVIOURAL INDICATORS AND CONTRIBUTIONS  
OF THE HIGH PERFORMANCE MANAGERIAL COMPETENCIES**

**INFORMATION SEARCH**

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>INFORMATION SEARCH</u></b></p> <p>athers many different kinds of information and uses many different sources to build a rich informational environment, including data bases, in preparation for decision making in the organization. Uses formal and informal observation, interaction and systematic environmental monitoring relevant to the internal and external environment.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Breath of search: The number different kinds of information gathered about any issue.</li> <li>• Depth of search: The adequacy of information gathered in each content area for decision making.</li> <li>• Concept utilization; the use of a variety of concepts to direct search in different areas.</li> <li>• Information gathering strategies: The use of formal or informal strategies to gather information--e.g., visiting worksites, informal meetings with customers, management by walking around.</li> <li>• Delegation of information search: Allocating responsibility for information gathering so as to develop motivation and commitment.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Gathers information over a narrow range of areas only.</li> <li>• Fails to perceive relevant events or changes in the environment.</li> <li>• Uses pre-existing concepts as a substitute for information search in a changing situation.</li> <li>• Forms concepts on the basis of inadequate information, when time permits.</li> </ul>	<p><b><u>PEOPLE WHO POSSESS THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Build a rich informational environment to support the organization's ability to capitalize on opportunities and to prepare for the unexpected.</li> <li>• Keep workgroups and organizations focused on gathering information about the internal and external environment including comparisons, methods, technology, the competition, customers, demand, development, motivation, innovation.</li> </ul>

## APPENDIX 3

CONCEPT FORMATION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b>CONCEPT FORMATION</b></p> <p>Involves building frameworks or forming concepts, hypotheses or ideas on the basis of information. Ordering sequences of information so as to give meaning, linking different kinds of information across areas and over time to form concepts.</p>	<p><b>POSITIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Concept formation: Verbalizations or behaviours which indicate that different kinds of information were selected and used to form an idea or hypothesis to attribute meaning to an event.</li> <li>• Behaviour change: Changes search pattern, implementation procedures, diagnosis, or iteration as a consequence of a new or different idea.</li> <li>• Cause/effect relations: Becomes aware of new cause/effect relations as a consequence of reconceptualizing the situation.</li> <li>• Delegation/stimulation of concept formation: Allocating responsibility to develop and report concepts in an area.</li> </ul> <p><b>NEGATIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Continues to use pre-existing concepts after new information is presented or searched which would support new concepts.</li> <li>• Gives insufficient weight to information which supports changing conceptions about "the way things are done".</li> <li>• Short circuits the "idea forming" phase in managerial functions.</li> </ul>	<p><b>MEMBERS POSSESSING THIS COMPETENCY:</b></p> <ul style="list-style-type: none"> <li>• Integrate new and old ideas to determine what the workgroup or organization is doing well and what needs to be changed -- for example, with respect to production methods, work-design, marketing, productivity.</li> <li>• Develop ideas about what is needed to improve what the organization is doing well and the kind of change needed when more radical change is indicated.</li> <li>• Clarify strategic issues and develop plans for the future when many diverse kinds of information are available.</li> <li>• Identify optional concepts, strategies or ideas as a basis for stimulating conceptual flexibility in the organization (See below).</li> </ul>

CONCEPTUAL FLEXIBILITY

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<b>CONCEPTUAL FLEXIBILITY</b>  Identifies feasible alternatives or multiple options or perspectives in planning and decision making. Holds different options in focus simultaneously relating them via their pros and cons, in order to optimise the positive consequences of each valued alternative. Decisions or plans emerge out of the integration of different or conflicting options.	<p><b>POSITIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Identifies and relates multiple options: Identifies at least two feasible concepts or options about a problem or a task, relates these via a consideration or comparison of their consequences and arrives at a decision which can be either option, some consideration of both, or new superordinate concept.</li> <li>• Relates multiple perspectives: In social and group interaction, identifies the perspectives of members, describes each person's "side" on an issue and relates the consequences of each relevant perspective in arriving at a group decision.</li> <li>• Delegates conceptual flexibility: Allocates responsibility for identifying and relating alternatives in arriving at a decision or a plan.</li> </ul> <p><b>NEGATIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Adopts and supports a single option or perspective. Failure to recognize feasible alternatives in planning, decision making and reporting.</li> <li>• Uses persuasion or confrontation to discard a relevant option (as opposed to a consideration of both options).</li> <li>• Fails to withhold the expression of own favoured conception in order to identify alternative concepts.</li> <li>• Fails to review delegated tasks in terms of the options recommended, the pros and cons of each and the decision.</li> </ul>	<p><b>MEMBERS POSSESSING THIS COMPETENCY</b></p> <ul style="list-style-type: none"> <li>• Ensure that all <u>relevant</u> information, concepts and perspectives influence the plans and decisions made in the workgroup or organization. In the absence of the expression of this competency, power determines which information and ideas are used and decisions can become less effective.</li> <li>• Optimise the positive contributions of members' ideas and minimize the impact of ideas which would have a negative or neutral effect on the work-group.</li> <li>• Build a foundation for the development of superordinate goals ("we", the corporate perspective), balanced perspectives across members and functions, and trust.</li> <li>• Reduce policy, planning and operational biases based on the use of a narrow range of options or perspectives. They demonstrate less judgmental bias in all areas.</li> <li>• Generate and analyse optional plans to prepare them to meet the unexpected.</li> </ul>

## APPENDIX 3

INTERPERSONAL SEARCH

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b>INTERPERSONAL SEARCH</b></p> <p>discusses, understands and verbalizes the concepts, ideas and feelings of another. Is not only sensitive to the ideas and attitudes of others, but behaves in order to test the validity of the perspectives one holds about another. Understands the concepts which generate the decisions and solutions of others.</p>	<p><b>POSITIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>. Gathering interpersonal information: Using silence, non-directive probing and repetition to understand the feelings, attitudes and perspectives of others.</li> <li>. Encouraging other's expressions: Withholding the expression and/or promotion of one's own conceptions in, order to stimulate others presentations and expressions, and to listen.</li> <li>. Validating one's views: Uses summary clarification and paraphrasing to test the accuracy of one's understanding of another's perspective.</li> </ul> <p><b>NEGATIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>. Interrupts or discourages the attempts by others to present their own views.</li> <li>. Evaluates the self presentations of others in terms of one's own perspectives in the information gathering phase.</li> <li>. Reacts to other's presentations in terms of one's own perspectives in the information gathering phase.</li> <li>. Own feelings or concepts are hidden in efforts to deceive.</li> <li>. Is negative to self-presentations or self-exposure of others.</li> </ul>	<p><b>MEMBERS POSSESSING THIS COMPETENCY:</b></p> <ul style="list-style-type: none"> <li>. Keep themselves in touch with others' ideas and feelings. They are less remote.</li> <li>. Build an informationally rich environment in which information about the ideas and feelings of people is added to general information gathered under information search.</li> <li>. Keep workgroups and organizations focused on the ideas and perspectives of their members and of functional and cross-functional group of members.</li> <li>. Build trust between members and work-groups who listen to and understand each other.</li> <li>. Develop the basis for mutual agreements for negotiation and influence through a sound knowledge of the interests and desires of others.</li> </ul>

MANAGING INTERACTION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b>MANAGING INTERACTION</b></p> <p>Stimulates others to interact in one-on-one and group situations and to act and feel like they are valued members of a team. Creates a special climate in which members feel involved, that they are participating and contributing to the group's goals. Builds a desire to take responsibility, work together and build co-operation within and between teams.</p>	<p><b>POSITIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Building superordinate goals: Communicates superordinate goals which bring members to identify with the importance of the group, its purpose; to involve and commit members to participate in the pursuit of these goals.</li> <li>• Stimulating interaction: Encouraging people with different or conflicting perspectives to communicate about the issues, both within and between groups and to reach mutual understanding and decisions.</li> <li>• Identifying member contributions: Encourages interaction and decisions about the most valuable, unique contributions members can make to the team - contributions which rest on the member's most important strengths. Allocates such responsibilities and provides team support.</li> </ul> <p><b>NEGATIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Centralizing team interaction through a core of one or two pivotal members. Team members contribute inputs on request.</li> <li>• One member, e.g., the leader or an aspiring leader, acts to direct and control the behaviours of other members.</li> <li>• Overstating or overextending the importance and value of one's own contributions.</li> <li>• Withholding information or ideas which place other group members at a disadvantage and detracts from their contributions.</li> </ul>	<p><b>MEMBERS POSSESSING THIS COMPETENCY:</b></p> <ul style="list-style-type: none"> <li>• Can build workgroups whose members focus on the superordinate organizational goals rather than turf protection, who take responsibility for and have pride in the contributions they make to those goals and participate with others to ensure that these members responsibilities fit together to improve overall workgroup effectiveness.</li> <li>• Can build networks of cooperating workgroups within and across functions and levels so as to improve the quality and "speed" of communications in the organization.</li> <li>• Provide the foundation for allocating responsibility downward so that members at the lowest levels have the information and support to make important decisions.</li> </ul>

DEVELOPMENTAL ORIENTATION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>DEVELOPMENTAL ORIENTATION</u></b></p> <p>Develops an understanding of the skills/competencies needed for effective workgroup performance in a variety of managerial tasks. Creates a positive climate in which members increase the accuracy of their awareness of their own strengths and limitations as managers and provides coaching, training and development resources to improve leadership performance.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Positive expectation of potential: views others as having high potential and as being the source of valued ideas.</li> <li>• Identifies competency demands: Identifies the competencies and styles needed by workgroup teams to accomplish specific managerial tasks in the organization.</li> <li>• Builds self awareness: seeks test, performance information and feedback to identify managerial strengths and limitations in self and others.</li> <li>• Develops competence: Uses developmental strategies, coaching and other training and developmental resources to expand the strengths of members and improve their contributions.</li> <li>• Developmental orientation: Views performance problems as opportunities for development.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Does not stimulate discussion of performance problems in others. Distrusts the identification of leader competence and development.</li> <li>• Views own managerial performance as indicative of strengths in all competency areas (rates self high and undifferentiated on all competencies).</li> <li>• Views performance problems exclusively from the knowledge/task perspective.</li> </ul>	<p><b><u>MEMBERS POSSESSING THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Provides a developmental climate in which members take responsibility for identifying methods to improve their own and others' workgroup performance.</li> <li>• Change the organizational culture from the salience of external control (giving orders and directing subordinates) which is associated with negative climates and low quality services and products to a culture characterized by internal control and individual responsibility.</li> <li>• Build workgroups which are balanced in the sense that they contain members with the appropriate distribution of competencies and styles required to perform the task effectively. This replaces the operation of turf, power and favouritism in team composition with a focus on complementary competencies and styles which are associated with superior performance.</li> <li>• Develop members who can take more responsibility, be more autonomous and flexible so that layers of management can be deleted.</li> </ul>

## APPENDIX 3

IMPACT

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>IMPACT</u></b></p> <p>Builds support for ideas, organizational values and goals. Uses a variety of means including: persuasive arguments, setting examples, modeling the desired behaviours or ideas, linking ideas to values in the organization and inventing symbols which act as bonds.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Uses information persuasively: Gains influence and support for ideas by using information and concepts persuasively; others pay close attention.</li> <li>• Builds alliances: Builds support for ideas by linking these ideas to the interests, desires and goals of others; linking to a superordinate interest.</li> <li>• Builds common bonds: Creates a bond between members and support for ideas by linking ideas to the values and image of the organization.</li> <li>• Uses symbols: Uses direct authority based on one's responsibility and other symbols of power to influence others.</li> <li>• Models desired ideas: Recognizes others for behaviour which is consistent with the desired ideas.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Presentation of ideas which are perceived as being inadequately backed by information and experience.</li> <li>• Perception of the source as one who is not aligned with the values, symbolism, power or goals of the organization.</li> <li>• Other members are unable to understand or trust the link between the sources' ideas and the value of their own.</li> </ul>	<p><b><u>MEMBERS POSSESSING THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Build cohesion within and between workgroups by influencing members to "buy in" to the values, goals and proposed innovations of the organization.</li> <li>• Create symbols and labels which link the interests and ideas of diverse members via a common goal to which they contribute, so that they "pull together" and feel "loyalty".</li> <li>• Form alliances of members and groups within and outside the organization to accomplish goals, build reputation and react to crises.</li> <li>• Back their words with behaviour and model the value of "setting examples", and recognizing others by paying attention to the things they want to happen - eg they display behaviour which is consistent with the values and ethical standards of the organization and recognize such behaviour in others.</li> </ul>

SELF-CONFIDENCE

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>SELF-CONFIDENCE</u></b></p> <p>Expresses confidence and clarity in dealing with issues. Provides clarity for all. May recognize alternatives and uncertainty, but states own position and deals directly with other positions so as to spell out the justifications of each. Unhesitatingly makes a decision when it is required and commits self and others accordingly. Expresses confidence and success in the actions to be taken.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Confidence of success: Expresses confidence in the likelihood of success in the direction and mission of the organization.</li> <li>• Presents own position: States own "stand" or position on issues, even as the situation is changing - that is, the clarity of "own position" at any time is perceived by others, even though this position may change over time.</li> <li>• Faces the issues: Defines the issues; confronts all issues and others' positions openly, states own view of each with justification.</li> <li>• Makes decisions: Makes a decision when it is required, states it clearly, justifies it and believes in its success.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Group members are uncertain or uninformed about one's position on issues.</li> <li>• Expresses ambivalence, conflict or doubt in making a required decision, often elaborating with conditional language, or fails to make a decision when required.</li> <li>• Changes position without justification.</li> </ul>	<p><b><u>MEMBERS POSSESSING THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Provide direction in the workgroup or organization by bringing issues to the surface, confronting them and generating justifications. This complements some of the processes involved in conceptual flexibility.</li> <li>• Ensure that the organization makes decisions confidently when they are required. This reduces ambivalence and the negative effects of too much uncertainty.</li> <li>• Are able to present the organization's decisions, goals and products unhesitatingly so that it is perceived as "knowing what it is doing" or as "being on top of things".</li> <li>• Create clarity of goals, roles and expectations in the organization.</li> <li>• Arouses esteem in self and others.</li> </ul>

PRESENTATION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>PRESENTATION</u></b></p> <p>Presents ideas clearly so that the other person or the audience understands, with ease and interest, what one purports to communicate. The "bottom line" is that the message "gets through" regardless of style or grammatical considerations. Uses technical, symbolic, non-verbal and visual aids or graphics effectively to get the message across.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Presentations are clear: Communicates to others in one-on-one or group situations so that the materials or ideas to be presented are clearly understood.</li> <li>• Sequence enhances the message: Presentation has sequence, form and a logic which leads into the main points, creating interest and understanding.</li> <li>• Uses non-verbal aids: Uses eye contact, gestures, voice modulation and pauses to build attention and empathize emphasize the major points.</li> <li>• Uses visual aids: Uses hand-outs, charts and other visual aids which control the timing and assist others in understanding the presentation.</li> <li>• Uses inquiry: Uses questions to check the progress or effectiveness of own communication.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Voice is too soft or speech is projected away from the recipients (eg downward), creating barriers to listening.</li> <li>• Presentation is accompanied by distractions such as "fiddling", or mannerisms such as placing the hands on the face.</li> <li>• The sequence is out of order or incomplete, creating confusion, difficulty and discomfort.</li> <li>• Speech is flat, monotone, lacking eye contact and gestures, which decreases interest, and fails to emphasize major points.</li> </ul>	<p><b><u>MEMBERS POSSESSING THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Improve the quality, speed and accuracy of communication: upward and downward in the organization, within and between work-groups, to the press, and externally to the public, governmental agencies and to customers.</li> </ul>

PROACTIVE ORIENTATION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b><u>PROACTIVE ORIENTATION</u></b></p> <p>An "internal control" orientation in which the person behaves on the assumption that he/she can be the cause and can "make things happen", such as create change and achieve plans. Takes responsibility for all aspects of the situation - even beyond ordinary boundaries - and for the success and failure of the group.</p>	<p><b><u>POSITIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Implements plans and ideas: Structures the task for the team, implements ideas and actions.</li> <li>• Takes responsibility: Takes charge, verbalizes personal and group responsibility for tasks, takes responsibility for the progress of the group -not just own job - and for the group's failures.</li> <li>• Anticipates problems: Considers the consequences of plans, anticipates successes and problems.</li> </ul> <p><b><u>NEGATIVE INDICATORS</u></b></p> <ul style="list-style-type: none"> <li>• Reacts (positively or negatively) to the actions, ideas or plans of others or to environmental events.</li> <li>• Views "cause" or problems more as a consequence of factors external to self, for example, the external environment or others (may blame others).</li> <li>• Perceives own role within the boundaries of own job and looks to the impact of rules, procedures and directives for control beyond those boundaries.</li> </ul>	<p><b><u>MEMBERS POSSESSING THIS COMPETENCY:</u></b></p> <ul style="list-style-type: none"> <li>• Provide the workgroup and the organization with a sense of direction and a task focus.</li> <li>• Provide a structure or platform for the group to take action: Where are we? Where do we want to be?</li> <li>• Provide an action orientation so that the organization is ready to meet a number of problems, acts before problems surface instead of spending most of its time putting out fires and reacting to an overload of events.</li> <li>• Focus on implementation of ideas and the problems of implementation.</li> </ul>

ACHIEVEMENT ORIENTATION

COMPETENCY	BEHAVIOURAL INDICATORS	CONTRIBUTIONS
<p><b>ACHIEVEMENT ORIENTATION</b></p> <p>Possesses high internal work standards and sets moderately risky goals which represent a challenge to achieve. Wants to do things better, to improve. Shows a commitment to efficiency and quality. Devises opportunities to receive feedback about progress measured against the standards.</p>	<p><b>POSITIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Sets challenging standards: Plans to do tasks better, to improve, to do it better than it was done before, better than others do it or better in terms of some standard of excellence.</li> <li>• Measures progress against standards: Develops plans to measure progress by monitoring performance to keep self informed.</li> <li>• Informs others of progress: Informs others about progress in meeting or not meeting standards, expresses frustration with barriers.</li> <li>• Focuses on efficiency: Considers plans to improve the efficiency in the use of resources.</li> </ul> <p><b>NEGATIVE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Fails to set standards for task accomplishment.</li> <li>• Does not devise methods or opportunities to monitor performance or track progress or the work of self or others.</li> <li>• Lack of concern for efficiency.</li> </ul>	<p><b>MEMBERS POSSESSING THIS COMPETENCY:</b></p> <ul style="list-style-type: none"> <li>• Keep the entrepreneurial spirit, challenge and moderate risk taking alive in the organization.</li> <li>• Provide the future orientation by focusing on anticipated positive and negative outcomes of plans, by providing measurements of progress of work and using knowledge of progress to enhance commitment to improvement, eg in quality enhancement.</li> <li>• Improve the efficiency of the workgroup or organization by careful planning for all events which, in addition to the plan (eg, an agenda or a project), covers the organization of resources and time and other implementation strategies, such as phasing and scheduling, to increase the efficiency of operations</li> </ul>

**APPENDIX 4**

**SCALE POINT VALUES ON THE COMPETENCY**

**RATING SCALE (CRS)**

## SCALE POINT VALUES ON THE COMPETENCY RATING SCALE (CRS)

SCALES VALUES	CRS
1 In addition, behavior represents negative instances or effects of the competency.	1 L I M I T A T I O N
2 Fails to demonstrate the minimum basic behaviour which defines the competency.	2
3 Demonstrates the basic competency behaviours in response to specific events and inputs demanded in the specific situation.	3 A D E Q U A C Y
4 In addition, uses higher order competency behaviour to involve other people and units in the organization.	4 S T R E N G H T
5 In addition, plans or implements strategies to perpetuate the contributions of the competency.	5

**APPENDIX 5**

**HPMC COMPETENCY RATING SCALES**

ting	Behaviour
	<u>INFORMATION SEARCH</u>
5	In addition, sets up or envisions strategies, processes or systems to gather information via delegation, surveys, management practices, systems.
4	In addition, gathers or requests information in areas outside or broader than the immediate domain of items, presentations or specific problems; e.g., about major organizational issues.
3	Demonstrates good grasp of given information; requests information in response to specific items, presentations, issues or problems.
2	Demonstrates good grasp of given information; does not gather or request sufficient information in handling specific items, presentations or problems.
1	Inadequate grasp of given information and/or does not request information about items, presentations or important aspects of a given problem.
	<u>CONCEPT FORMATION</u>
5	In addition, forms a rich base of overall organizational concepts and/or sets up strategies or processes to stimulate the formation of concepts about the organization.
4	In addition, relates concepts formed via specific linkages to arrive at a minimum base of insights about the overall organization; e.g., diagnostic hypotheses.
3	Links major sets of connected items by forming concepts; perceives linkages between different items, different presentations, responses to inquiries or observations.
2	Concepts not formed by linking most major sets of connected items, presentations or observations.
1	Does not link connected items or observations to form concepts, or continues to use "imported" or existing concepts.
	<u>CONCEPTUAL FLEXIBILITY</u>
5	In addition, envisions (or sets up strategies to envision) the implications of alternative options on the overall organization; gets group to evaluate different options.
4	In addition, relates alternative concepts or perspectives by planning to gather or gathering information about the pros and cons of each.
3	Demonstrates viewing problems or situations from two perspectives; generates alternative conceptions or options about major issues and holds simultaneously.
2	Views problems or issues from different perspectives serially; that is, at different times. Not considered simultaneously.
1	Adopts and/or supports the adoption of a single perspective or concept.

**APPENDIX 5**

ting	Behaviour
<b><u>INTERPERSONAL SEARCH</u></b>	
5	In addition, sets up or envisions strategies, processes or systems to gather information about the attitudes and ideas of others via delegation, surveys.
4	In addition, uses techniques such as paraphrasing and summary classification to validate the accuracy of one's understanding of others' views.
3	Demonstrates the use of probes and open ended questions to give an understanding of the concepts, attitudes and feelings of others.
2	Listens to others; shares interest but does not probe the ideas and attitudes of others.
1	Discourages possibilities of receiving information about other's concepts and ideas via interruptions, evaluations, overconcern for own position.
<b><u>MANAGING INTERACTION</u></b>	
5	In addition, builds cohesive teams of members with different or conflicting interest; e.g., cross-functional teams.
4	In addition, stimulates the involvement of members of the interaction between members by using behaviours which encourage others to contribute.
3	Supports the involvement of others and recognizes the contributions of others.
2	Shows positive interest in the interaction of others, does not behave in ways which shut down interaction.
1	Behaves in ways which reduce the contributions or interaction of others.
<b><u>DEVELOPMENTAL ORIENTATION</u></b>	
5	In addition, proposes developmental strategies for members needed to achieve organizational goals.
4	In addition, gives responsibilities which represent opportunities for coaching and development.
3	Implements, delegates or supports developmental or training programs in response to major situational demand.
2	Verbalizes the general need or value for training and development.
1	No concern for development of people shown. Fails to support others' developmental efforts.

Rating	Behaviour
	<u>IMPACT</u>
5	In addition, builds common bonds or alliances between self and members to be persuaded to create a momentum for one's own ideas.
4	In addition, links own position to the interests and goals of members being persuaded. Creates a favorable attitude toward one's position or stand.
3	Uses information and concepts persuasively; engages in influence attempts by showing the advantages of a particular position.
2	Does not present advantages of own ideas for others and/or focuses on arguing against the ideas of others.
1	Focuses on attacking or being negative toward the ideas of others.
	<u>SELF-CONFIDENCE</u>
5	In addition, clarifies decisions of self or others (in the unit) in ways which create confidence in their success in the organization.
4	In addition, keeps members informed of own position on issues which emerge. Develops positions on relevant issues (even if it is not to make a decision).
3	Makes decisions in response to major inputs and problems in situations which demand a decision.
2	Makes decisions and justifies in respect to relevant situations, but decisions are somewhat ambivalent or conditional.*
1	Decisions demanded by the situation are not made or avoided, and/or decisions are characterized by hesitation and ambivalence.
	<u>PRESENTATION</u>
5	In addition, visual aids and/or inquiry are used to assist understanding or to check understanding.
4	In addition, non-verbal aids such as gestures, voice modulation and pauses are used effectively.
3	Presentations are clear and logical, and major points are emphasized. Eye contact is used.
2	Presentations are clear but lack enhancement, which create barriers to understanding.
1	Presentations are not clear, for example, not logical or complete, and are accompanied by distractions and barriers.

\*This does not mean that a conditional decision or a decision to remain in conflict cannot receive a high rating. Ratings are low when decisions (whatever they are) are characterized by hesitation, avoidance and ambivalence.

Rating	Behaviour
<b><u>PROACTIVE ORIENTATION</u></b>	
1	In addition, implements plans which are relevant to a number of inputs and would impact on the total unit.
4	In addition, takes stock of or structures the overall situation and takes responsibility for doing something about problems or future problems which are broader than the scope of one's own perspective.
3	Implements actions calculated to overcome or begin to work on problems introduced by major items, presentations or requests.
2	Actions rarely implemented in response to specific situations having demand for such action, and/or acts in terms of rules and procedures.
1	May react to the positions or inputs of others, but does not initiate action to overcome problems. Avoids taking responsibility when needed.
<b><u>ACHIEVEMENT ORIENTATION</u></b>	
5	In addition, develops strategies or ideas for identifying and overcoming barriers to improvement and for improving efficiency, productivity, quality or customer/user satisfaction.
4	In addition, sets targets or standards against which organizational improvement can be measured; e.g., past performance, competitors. Implies a standard against which success can be measured.
3	States ways to improve performance (efficiency, quality) in response to major inputs, presentations or situations which "draw" the need to do better.
2	Verbalizes general statements about the need to improve.
1	No concern for performance improvement or for the efficient use of resources.

**APPENDIX 6**

**AMENDED COMPETENCY RATING SCALES**

Rating	Behaviour
<b><u>SELF-CONFIDENCE</u></b>	
5	In addition, sets up or envisions strategies, processes or systems to create confidence in the success of the organization.
4	In addition, clarifies decisions of self or others (in the unit) in ways which create confidence in their success in the organization.
3	Makes decisions in response to major inputs and problems in situations which demand a decision. Keeps members informed of own position on issues which emerge. Develops positions on relevant issues (even if it is not to make a decision).
2	Makes decisions and justifies in respect to relevant situations, but decisions are somewhat ambivalent or conditional.*
1	Decisions demanded by the situation are not made or avoided, and/or decisions are characterized by hesitation and ambivalence.
<b><u>PRESENTATION</u></b>	
5	In addition, sets up or envisions strategies, processes or systems to improve the effectiveness of presentation in the organization.
4	In addition, visual aids, non-verbal aids such as gestures, voice modulation pauses and/or inquiry are used effectively.
3	Presentations are clear and logical, and major points are emphasized. Eye contact is used.
2	Presentations are clear but lack enhancement, which create barriers to understanding.
1	Presentations are not clear, for example, not logical or complete, and are accompanied by distractions and barriers.

\*This does not mean that a conditional decision or a decision to remain in conflict cannot receive a high rating. Ratings are low when decisions (whatever they are) are characterized by hesitation, avoidance and ambivalence.

**APPENDIX 7**

**THE KIRTON ADAPTION-INNOVATION INVENTORY**

### Respondent Details

Date \_\_\_\_\_  
 Name \_\_\_\_\_  
 Age \_\_\_\_\_ Sex \_\_\_\_\_  
 Occupation/Title \_\_\_\_\_  
 Department \_\_\_\_\_  
 Educational Status \_\_\_\_\_  
 Other \_\_\_\_\_  
 \_\_\_\_\_

# KAI RESPONSE SHEET

### IMPORTANT

- Complete 'Respondent Details'
- Answer all questions
- Use ball point pen and press hard

### Guidance Notes

We all find it necessary to present a particular image of ourselves consistently over a long period. In some cases this proves easy as we are like this; sometimes it is very difficult as we are not like this at all.

For instance, some of us are early risers. It is easy for such people to present the image of good timekeepers at work. So if you are an early riser and were asked how easy or hard it is for you to present an image at work of a good timekeeper you would put a clear cross on the scale below on or near 'Very Easy'.

Very Hard	Hard	Easy	Very Easy
-----------	------	------	-----------

X

If you are the extreme other sort, you would find being on time every morning for a long period difficult, and you may well put a cross on the scale at the 'Very Hard' end.

Please Indicate the degree of difficulty (or ease) that would be required for you to maintain the image, consistently for a long time, that is asked of you by each item below.

How easy or difficult do you find it to present yourself, consistently, over a long period as:

- 1) A PERSON WHO IS PATIENT.
- 2) A PERSON WHO CONFORMS.
- 3) A PERSON WHO WHEN STUCK WILL ALWAYS THINK OF SOMETHING.
- 4) A PERSON WHO ENJOYS THE DETAILED WORK.
- 5) A PERSON WHO WOULD SOONER CREATE SOMETHING THAN IMPROVE IT.
- 6) A PERSON WHO IS PRUDENT WHEN DEALING WITH AUTHORITY OR GENERAL OPINION.
- 7) A PERSON WHO NEVER ACTS WITHOUT PROPER AUTHORITY.
- 8) A PERSON WHO NEVER SEEKS TO BEND (MUCH LESS BREAK) THE RULES.
- 9) A PERSON WHO LIKES BOSSSES AND WORK PATTERNS WHICH ARE CONSISTENT.
- 10) A PERSON WHO HOLDS BACK IDEAS UNTIL THEY ARE OBVIOUSLY NEEDED.
- 11) A PERSON WHO HAS FRESH PERSPECTIVES ON OLD PROBLEMS.
- 12) A PERSON WHO LIKES TO VARY SET ROUTINES AT A MOMENT'S NOTICE.
- 13) A PERSON WHO PREFERS CHANGES TO OCCUR GRADUALLY.
- 14) A PERSON WHO IS THOROUGH.
- 15) A PERSON WHO IS A STEADY PLODDER.
- 16) A PERSON WHO COPIES WITH SEVERAL NEW IDEAS AND PROBLEMS AT THE SAME TIME.
- 17) A PERSON WHO IS CONSISTENT.
- 18) A PERSON WHO IS ABLE TO STAND OUT IN DISAGREEMENT ALONE AGAINST A GROUP OF EQUALS AND SENIORS
- 19) A PERSON WHO IS STIMULATING.
- 20) A PERSON WHO READILY AGREES WITH THE TEAM AT WORK.
- 21) A PERSON WHO HAS ORIGINAL IDEAS.
- 22) A PERSON WHO MASTERS ALL DETAILS PAINSTAKINGLY.
- 23) A PERSON WHO PROLIFERATES IDEAS.
- 24) A PERSON WHO PREFERS TO WORK ON ONE PROBLEM AT A TIME.
- 25) A PERSON WHO IS METHODICAL AND SYSTEMATIC.
- 26) A PERSON WHO OFTEN RISKS DOING THINGS DIFFERENTLY.
- 27) A PERSON WHO WORKS WITHOUT DEVIATION IN A PRESCRIBED WAY.
- 28) A PERSON WHO LIKES TO IMPOSE STRICT ORDER ON MATTERS WITHIN OWN CONTROL.
- 29) A PERSON WHO LIKES THE PROTECTION OF PRECISE INSTRUCTIONS.
- 30) A PERSON WHO FITS READILY INTO 'THE SYSTEM'.
- 31) A PERSON WHO NEEDS THE STIMULATION OF FREQUENT CHANGE.
- 32) A PERSON WHO PREFERS COLLEAGUES WHO NEVER 'ROCK THE BOAT'.
- 33) A PERSON WHO IS PREDICTABLE.

Very Hard	Hard	Easy	Very Easy
-----------	------	------	-----------

**APPENDIX 8**

**GHISELLI'S SELF-DESCRIPTION INVENTORY**

## THE SELF-DESCRIPTION INVENTORY

The purpose of this inventory is to obtain a picture of the traits you believe you possess, and to see how you describe yourself. There are no right or wrong answers so try to describe yourself as accurately and honestly as you can.

In each of the pairs of words below, check the one you think *most* describes you

- |   |  |
|---|--|
| 1. capable                                | 11 unaffected                              |
| <input type="checkbox"/> discreet         | <input type="checkbox"/> alert             |
| 2. understanding                          | 12 sharp-witted                            |
| <input type="checkbox"/> thorough         | <input type="checkbox"/> deliberate        |
| 3. <input type="checkbox"/> cooperative   | 13 <input type="checkbox"/> kind           |
| <input type="checkbox"/> inventive        | <input type="checkbox"/> jolly             |
| 4. <input type="checkbox"/> friendly      | 14. <input type="checkbox"/> efficient     |
| <input type="checkbox"/> cheerful         | <input type="checkbox"/> clear-thinking    |
| 5. <input type="checkbox"/> energetic     | 15. <input type="checkbox"/> realistic     |
| <input type="checkbox"/> ambitious        | <input type="checkbox"/> tactful           |
| 6. <input type="checkbox"/> persevering   | 16. <input type="checkbox"/> enterprising  |
| <input type="checkbox"/> independent      | <input type="checkbox"/> intelligent       |
| 7. <input type="checkbox"/> loyal         | 17. <input type="checkbox"/> affectionate  |
| <input type="checkbox"/> dependable       | <input type="checkbox"/> frank             |
| 8. <input type="checkbox"/> determined    | 18. <input type="checkbox"/> progressive   |
| <input type="checkbox"/> courageous       | <input type="checkbox"/> thrifty           |
| 9. <input type="checkbox"/> industrious   | 19. <input type="checkbox"/> sincere       |
| <input type="checkbox"/> practical        | <input type="checkbox"/> calm              |
| 10. <input type="checkbox"/> planful      | 20. <input type="checkbox"/> thoughtful    |
| <input type="checkbox"/> resourceful      | <input type="checkbox"/> fair-minded       |
| 21. <input type="checkbox"/> poised       | 27. <input type="checkbox"/> imaginative   |
| <input type="checkbox"/> ingenuous        | <input type="checkbox"/> self-controlled   |
| 22. <input type="checkbox"/> sociable     | 28. <input type="checkbox"/> conscientious |
| <input type="checkbox"/> steady           | <input type="checkbox"/> quick             |
| 23. <input type="checkbox"/> appreciative | 29. <input type="checkbox"/> logical       |
| <input type="checkbox"/> good-natured     | <input type="checkbox"/> adaptable         |
| 24. <input type="checkbox"/> pleasant     | 30. <input type="checkbox"/> sympathetic   |
| <input type="checkbox"/> modest           | <input type="checkbox"/> patient           |
| 25. <input type="checkbox"/> responsible  | 31. <input type="checkbox"/> stable        |
| <input type="checkbox"/> reliable         | <input type="checkbox"/> foresighted       |
| 26. <input type="checkbox"/> dignified    | 32. <input type="checkbox"/> honest        |
| <input type="checkbox"/> civilized        | <input type="checkbox"/> generous          |

In each of the pairs of words below, check the one you think *least* describes you

- |   |   |
|---|---|
| 33 <input type="checkbox"/> shy<br><input type="checkbox"/> lazy                | 41 <input type="checkbox"/> conceited<br><input type="checkbox"/> infantile |
| 34 <input type="checkbox"/> unambitious<br><input type="checkbox"/> reckless    | 42 <input type="checkbox"/> shallow<br><input type="checkbox"/> stingy      |
| 35 <input type="checkbox"/> noisy<br><input type="checkbox"/> arrogant          | 43 <input type="checkbox"/> unstable<br><input type="checkbox"/> frivolous  |
| 36 <input type="checkbox"/> emotional<br><input type="checkbox"/> headstrong    | 44 <input type="checkbox"/> defensive<br><input type="checkbox"/> touchy    |
| 37 <input type="checkbox"/> immature<br><input type="checkbox"/> quarrelsome    | 45 <input type="checkbox"/> tense<br><input type="checkbox"/> irritable     |
| 38 <input type="checkbox"/> unfriendly<br><input type="checkbox"/> self-seeking | 46 <input type="checkbox"/> dreamy<br><input type="checkbox"/> dependent    |
| 39 <input type="checkbox"/> affected<br><input type="checkbox"/> moody          | 47 <input type="checkbox"/> changeable<br><input type="checkbox"/> prudish  |
| 40 <input type="checkbox"/> stubborn<br><input type="checkbox"/> cold           | 48 <input type="checkbox"/> nervous<br><input type="checkbox"/> intolerant  |

- |   |   |
|---|---|
| 49 <input type="checkbox"/> careless<br><input type="checkbox"/> foolish          | 57 <input type="checkbox"/> opinionated<br><input type="checkbox"/> pessimistic   |
| 50 <input type="checkbox"/> apathetic<br><input type="checkbox"/> egotistical     | 58 <input type="checkbox"/> shiftless<br><input type="checkbox"/> bitter          |
| 51 <input type="checkbox"/> despondent<br><input type="checkbox"/> evasive        | 59 <input type="checkbox"/> hard-hearted<br><input type="checkbox"/> self-pitying |
| 52 <input type="checkbox"/> distractible<br><input type="checkbox"/> complaining  | 60 <input type="checkbox"/> cynical<br><input type="checkbox"/> aggressive        |
| 53 <input type="checkbox"/> weak<br><input type="checkbox"/> selfish              | 61 <input type="checkbox"/> dissatisfied<br><input type="checkbox"/> outspoken    |
| 54 <input type="checkbox"/> rude<br><input type="checkbox"/> self-centered        | 62 <input type="checkbox"/> undependable<br><input type="checkbox"/> resentful    |
| 55 <input type="checkbox"/> rattle-brained<br><input type="checkbox"/> disorderly | 63 <input type="checkbox"/> sly<br><input type="checkbox"/> excitable             |
| 56 <input type="checkbox"/> fussy<br><input type="checkbox"/> submissive          | 64 <input type="checkbox"/> irresponsible<br><input type="checkbox"/> impatient   |

**APPENDIX 9**

**JOB ANALYSIS INTERVIEW FORMAT**

**JOB ANALYSIS INTERVIEW FORMAT**

1. During the two days I was with you recently I got an "outsiders" view of your job; we are having this discussion to enable me to find out how you see your job. To do this, I'd like you to tell me what the main responsibilities of the job are.
2. Now let's take each of these responsibilities in turn, what do you have to do to be successful at meeting your responsibility for.....

Repeat 2 until full record gathered; probe, clarify summarize etc. to ensure that behavioural descriptions are obtained.

3. Conclude the interview.

**APPENDIX 10**

**BIOGRAPHICAL INTERVIEW FORMAT**

**BIOGRAPHICAL INTERVIEW FORMAT**

1. This is our last meeting and today I want to gain an understanding of your life and career. Imagine I am trying to write a biography of you, that I know nothing about you and that I want to find out the basic facts of your career as well as the reasons for critical decisions you have made. Also, I am particularly interested in talking about key people, events and circumstances that have helped to develop your values, knowledge, competencies etc.
2. Let's start at the begining. Tell me about your early life - where you were born, your parents, any brothers and sisters and so on.
3. It's often said that our early family life has a big influence on us, what effect did it have on you?
4. Why did you choose a career in finance?
5. Tell me about each job you've had, what it involved, what you got out of it and what was bad about it.
6. In summary, what or who have been the key influences on your career?
7. Conclude the interview.

## **APPENDIX 11**

### **VARIMAX ROTATION OF THE FOUR FACTOR HPMC MODEL**

FACTOR /VARIABLES is to ao /PRINT INITIAL rotation /FORMAT SORT /CRITERIA  
FACTORS (4) /EXTRACTION PC /ROTATION VARIMAX.

This FACTOR analysis requires 15960 ( 15.6K) BYTES of memory.

Page 7

SPSS/PC+

9/1/89

### FACTOR ANALYSIS - - -

Analysis Number 1 Listwise deletion of cases with missing values

Extraction 1 for Analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
IS	1.00000	*	1	5.46024	49.6	49.6
CF	1.00000	*	2	1.60812	14.6	64.3
CX	1.00000	*	3	1.37811	12.5	76.8
PS	1.00000	*	4	.63153	5.7	82.5
MI	1.00000	*	5	.50312	4.6	87.1
DO	1.00000	*	6	.45377	4.1	91.2
IM	1.00000	*	7	.38567	3.5	94.7
SC	1.00000	*	8	.20578	1.9	96.6
PR	1.00000	*	9	.15210	1.4	98.0
PO	1.00000	*	10	.12974	1.2	99.2
AO	1.00000	*	11	.09181	.8	100.0

PC Extracted 4 factors.

Varimax Rotation 1, Extraction 1, Analysis 1 - Kaiser Normalization.

Varimax converged in 6 iterations.  
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Rotated Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
IS	.86270	.31085	.07100	.15185
DO	.82070	.11333	.10455	.22527
CF	.61375	.42220	.17477	.51935
PS	.05384	.86533	.03962	.00537
MI	.11461	.82805	.18073	.07353
CX	.39933	.62599	.11006	.39891
PR	.14304	.20763	.92573	-.01677
SC	.04152	.05026	.88990	.20926
IM	.20747	.52718	.64077	.22410
AO	.3694	.08386	.10505	.92357
PO	.57144	.08187	.35267	.61684

**APPENDIX 12**

**VARIMAX ROTATION OF THE THREE FACTOR INDIVIDUAL  
VARIABLE MODEL**

FACTOR /VARIABLES KAIT SDISUPER SDIDEC SDINACH SDINSACT SDINFIN SDINSEC  
/PRINT INITIAL rotation /FORMAT SORT /CRITERIA  
FACTORS (3) /EXTRACTION PC /ROTATION VARIMAX.

This FACTOR analysis requires 7176 ( 7.0K) BYTES of memory.

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- - - - - FACTOR ANALYSIS - - - - -

Analysis Number 1 Listwise deletion of cases with missing values

Extraction 1 for Analysis 1, Principal-Components Analysis (PC)

Initial Statistics:

Variable	Communality *	Factor	Eigenvalue	Pct of Var	Cum Pct
KAIT	1.00000 *	1	3.45206	49.3	49.3
SDISUPER	1.00000 *	2	1.09231	15.6	64.9
SDIDEC	1.00000 *	3	.84722	12.1	77.0
SDINACH	1.00000 *	4	.69035	9.9	86.9
SDINSACT	1.00000 *	5	.46465	6.6	93.5
SDINFIN	1.00000 *	6	.27197	3.9	97.4
SDINSEC	1.00000 *	7	.18145	2.6	100.0

PC Extracted 3 factors.

Varimax Rotation 1, Extraction 1, Analysis 1 - Kaiser Normalization.

Varimax converged in 8 iterations.

Rotated Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3
SDINSEC	-.84775	-.15568	-.27412
KAIT	.84334	.12921	.29638
SDINACH	.78268	.37537	-.24097
SDINSACT	.56775	.14900	.47090
SDINFIN	-.08378	-.89793	-.24182
SDIDEC	.45773	.63305	-.04902
SDISUPER	.13308	.11001	.93041

**APPENDIX 13**

**CORRELATION OF INDIVIDUAL FACTOR SCORES  
WITH HPMC RATINGS**

CORRELATIONS /VARIABLES IND31 WITH IS TO AO /OPTIONS 5.

Correlations:	IS	CF	CX	PS	MI	DO
IND31	.3173 ( 30) P= .044	.4622 ( 30) P= .005	.1559 ( 30) P= .205	.2014 ( 30) P= .143	.1947 ( 30) P= .151	.3862 ( 30) P= .018

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed

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Correlations:	IM	SC	PR	PO	AO
IND31	.3680 ( 30) P= .023	.3847 ( 30) P= .018	.2191 ( 30) P= .122	.3675 ( 30) P= .023	.3678 ( 30) P= .023

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed

CORRELATIONS /VARIABLES IND32 WITH is to ao /options 5.

Correlations:	IS	CF	CX	PS	MI	DO
IND32	-.1898 ( 30) P= .158	-.2318 ( 30) P= .109	-.1418 ( 30) P= .227	-.0391 ( 30) P= .419	-.1639 ( 30) P= .193	-.1605 ( 30) P= .198

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed

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Correlations:	IM	SC	PR	PO	AO
IND32	-.0964 ( 30) P= .306	.3984 ( 30) P= .015	.1352 ( 30) P= .238	-.0924 ( 30) P= .314	.0629 ( 30) P= .371

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed

CORRELATIONS /VARIABLES IND33 WITH is to ao /options 5.

Correlations:	IS	CF	CX	FS	MI	DO
IND33	.3231 ( 30) P= .041	.0888 ( 30) P= .320	.0376 ( 30) P= .422	-.0980 ( 30) P= .303	.0077 ( 30) P= .484	.3572 ( 30) P= .026

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed

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Correlations:	IM	SC	PR	PO	AO
IND33	.1510 ( 30) P= .213	.0309 ( 30) P= .436	.1840 ( 30) P= .165	.2239 ( 30) P= .117	.2074 ( 30) P= .136

(Coefficient / (Cases) / 1-tailed Significance)

" . " is printed if a coefficient cannot be computed