THE ROLE OF ANGER IN MANAGERIAL EFFECTIVENESS

Susan Kahn

A Dissertation Submitted to the Department of Psychology, University of Cape Town for the Degree of ~~Master of Social Science in Industrial and Organisational Psychology~~. M.A. (Psychology)

July, 1986.

THE ROLE OF ANGER IN MANAGERIAL EFFECTIVENESS

Declaration

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Master in Social Science at the University of Cape Town. It has not been submitted before for any degree or examination in any other University.

Susan Kahn

July, 1986.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

ABSTRACT

The aim of this study was to investigate the role of anger on managerial effectiveness. To this end, a sample of male managers in a South African financial organisation completed questionnaires on the experience of anger, the expression of anger, and Type A behaviour. Managerial effectiveness was assessed in terms of the behavioural dimensions of the organisation's assessment centre and performance appraisal, as well as a managerial achievement quotient. A factor analysis computed separately for the 11 assessment centre dimensions and the 11 performance appraisal criteria revealed three orthogonal factors in both analyses. Product moment correlation coefficients were calculated between all the variables, including the new factor scores. The performance appraisal factor labled "Emphasising Quality in Solution and Production" was significantly correlated with trait anger ($p<.05$ point), and the performance appraisal factor labled "Maintaining Supportive Interpersonal Relationships" was significantly correlated with state anger ($p<.05$ point), trait anger ($p<.05$ point), anger expression ($p<.05$ point), and Type A behaviour ($p<.05$ point).

The assessment centre factors labled "Making and Communication Decisions" and "Interpersonal Planning" correlated significantly with anger expression ($p<.05$ point) and trait anger ($p<.05$ point), respectively. Finally, the managerial achievement quotient correlated positively and significantly with Type A behaviour ($p<.05$ point). The conceptual and methodological issues confronted in the present research may provide new insight for future investigations regarding stress and organisational psychology.

Acknowledgements

I would like to express my grateful thanks to the following:

My supervisor, Professor Deo Strümpfer, for his encouragement and enthusiasm, for his down-to-earth appraoch, and for his confidence in me.

Willie Marais - the epitome of an effective manager - for his interest and invaluable assistance throughout this study.

Frank Bokhorst, whose patience, support and interest in sharing his knowledge of computing and data analysis made light of what might have been a tedious task.

The managers who participated in this study, without whom this thesis would not have been possible.

Cora Smith for putting me on the road.

Jeni Montgomery and Yvonne van Stolk for their expertise in typing this thesis.

My parents, for always providing the support, encouragement and opportunity for my development and growth in all spheres of my life.

Daniel Rosenzweig, whose love and encouragement is a constant source of strength.

The Human Sciences Research Council for financial assistance towards the cost of this research. Opinions expressed or conclusions arrived at are not to be regarded as those of the Human Sciences Research Council.

Chapter 1

INTRODUCTION

The genesis of the present research lies in two of the foremost concerns of contemporary living, notably, productivity and stress.

Managers in the private sector have only recently begun to acknowledge openly that the overall productivity of an organisation depends heavily upon its management personnel and the top five percent of the staff (Ranftl, 1984). The effectiveness with which management deploys the available resources determines the results of an organisation's endeavours and, as such, management is the key link in the productivity chain. Consequently, managerial effectiveness demands foremost attention in the quest for achieving peak productivity.

In the United States the rate of productivity has been decelerating during the past three decades (Foster, 1983) and managerial ineffectiveness has been identified as the single greatest cause of the decline (Judson, 1982).

In the South African context, in particular, the managerial responsibility for productivity is concomitant with a great deal of stress. The South

African business and industrial environment is characterised by a chronic shortage of high-level human resources (Strümpfer, 1980) and a high manager-to-subordinate ratio (Sadie, 1979).

From a 1980 report by the National Manpower Commission, Strümpfer (1980) estimated that the two highest occupational categories ("Professional and Allied Workers" and "Managers and Allied Workers") constituted 6,5 percent of the work force. In the United States of America in 1970, by comparison, the equivalent categories represented nearly 25 percent of the economically active population. In addition, the South African manager has an executive/non-executive ratio of 1:42 compared with a ratio of 1:16 in the United States and a ratio of 1:12 in Japan (Executives Under Stress, 1985). Sadie (1979), using only the male labour force, found the South African ratio between managers to skilled, semi-skilled and unskilled workers to be 1:52 and estimated that by the end of the century this ratio was likely to deteriorate to 1:76. By contrast, this ratio is in the vicinity of 1:15 in most developed countries.

In as much as the education and training of blacks do not provide a significant reservoir, and in as much as virtually no reserves are left among the

whites, a significant proportion of high level posts are probably held by people with inadequate education, training or experience (Strümpfer, 1983). This seems likely to have a very adverse effect on productivity at both the high level positions and those of inadequately managed subordinates.

In addition to the skills shortage and the high executive/non-executive ratio, the South African work environment is beset by factors such as political and social instability, the collapse of the rand, the recession and a flagging economy. It is a foregone conclusion that managers faced with the responsibility for productivity under these circumstances experience considerable stress. Moreover, if managers want to be productive, or even survive, in this situation, they are required to be hard-driving, ambitious, aggressive, competitive, impatient and excessively committed to work (Strümpfer, 1983). These characteristics are typical of what has been termed coronary-prone, or Type A, behaviour.

The Type A behaviour pattern (TABP), originally identified by Rosenman and Friedman (e.g. 1971, 1974), is not merely a personality type but a life-style attributable to the interaction between personality traits and environmental stressors.

Furthermore, the contemporary Western culture in general, and business and professional environments, in particular, appear to challenge, encourage and reward Type A behaviour (Jenkins, 1975; Rosenman & Friedman, 1974). This observation coincides with the finding that more Type A managers were found in companies with high growth rates than in companies with low growth rates (Howard, Cunningham & Rechnitzer, 1977). In the Western world, productivity and Type A behaviour appear to be closely associated. Moreover, South African managers, bankers and administrators show even more Type A behaviour than their American counterparts (Strümpfer, 1983; Strümpfer & Robinson, 1985). This finding is perhaps accounted for, to some extent, by the stressful demands inherent in the South African milieu, as mentioned previously.

The importance accorded to the Type A behaviour pattern is however mainly attributable to the association between Type A behaviour and coronary heart disease (CHD). CHD is the leading cause of death among adults in the United States and other western countries (Chesney, 1985). According to Wyndham (1978), CHD is also the main cause of death of Whites in South Africa in the economically active

period of their lives, and as such it represents a serious drain on skilled human resources. Research has shown that CHD has a multifactorial etiology (Epstein, 1965) and various factors have been assigned risk status, including habits of diet, physical inactivity and cigarette smoking, as well as high blood pressure, high blood cholesterol levels and genetic factors. However, these CHD risk factors have been unable to explain adequately CHD prevalence and incidence (Rosenman & Chesney, 1982). In the search for additional CHD risk factors, the TABP emerged as the psychosocial factor found to be causally and independently related to CHD. Moreover, TABP appeared to double the risk of CHD at all levels of the other risk factors (Rosenman, Brand, Scholtz & Friedman, 1976).

The association between TABP and CHD has received major confirmation in prospective research (e.g. Rosenman, Brand, Jenkins, Friedman, Strauss & Wurm, 1975; Rosenman et al., 1976; Haynes, Feinleib & Kannel, 1980). However, research has shown that of the characteristic components of the TABP (speed-impatience, ambition-competitiveness and hostility-anger) hostility accounts for much of the health risk associated with TABP (Williams, Haney,

Lee, Kong, Blumenthal & Whalen, 1980; Shekelle, Gayle, Ostfeld & Paul, 1983; Barefoot, Dahlstrom & Williams, 1982). More specifically, anger, hostility and aggression have been increasingly implicated in the etiology of essential hypertension and CHD (e.g. Dembroski, McDougall, Williams & Haney, 1984; MacDougall, Dembroski, Dimsdale & Hackett, 1985; Matthews, Glass, Rosenman & Bortner, 1977; Spielberger, Johnson, Russell, Crane, Jacobs & Worden, 1985). As a result, instead of a continuing focus on the TABP as a whole, researchers have turned their attention to the hostility-anger component, with particular emphasis on anger, as it is considered to be more fundamental than either hostility or aggression (Spielberger, Jacobs, Russell & Crane, 1983).

Although the interest in anger stems from its association with the TABP and related health disorders, it is equally important to consider the effects of anger on a person's behaviour in general. Anger has been shown to have deleterious effects on various aspects of personal efficiency, such as communication patterns (Mace, 1976), interpersonal conflict (Buss, 1966, Holt, 1970), cognitive efficiency (Horowitz, 1963), and task performance

(Novaco, 1976). On the basis of these findings, it is conceivable that anger may have far reaching implications for the behaviour of anger-prone individuals, particularly in highly demanding work environments which predispose the individual to increased levels of general arousal (Novaco, 1985). As behaviour is the key to managerial effectiveness (Boyatzis, 1982a, 1982b; Langford, 1980), anger may influence managerial effectiveness by affecting managerial behaviour. Accordingly, the present research drew from the disciplines of health and organisational psychology in an effort to determine the role of anger in managerial effectiveness.

Chapter 2

ANGER

It is only relatively recently that medical and behavioural scientists have started to investigate the role of anger in ill-health systematically. However, Dr. John Hunter (1729-1793), a famous British surgeon, showed a clear insight into this relationship when he said: "My life is in the hands of any rascal who chooses to annoy me" (Gentry & Williams, 1975, p.5). His opinion was confirmed tragically when he died of a heart attack after a heated argument at a board meeting at St. George's Hospital in London.

Although the recent focus on anger stems from its association with Type A behaviour and coronary heart disease, in this study the chapter on anger precedes the chapter on Type A behaviour since the consequences and correlates of anger take precedence in the present research.

Until recently, when the detrimental effects of anger on health became more apparent, anger had received relatively little attention from behavioural scientists (Chesney, 1985). More specifically, psychological research on the phenomenological experience of anger (angry feelings), anger arousal

and the expression of anger had been largely neglected (Spielberger et al., 1983; Novaco, 1976, 1985; Biaggio, Supplee & Curtis, 1981). It has been suggested that the paucity of anger research is attributable to (a) the recent emphasis on aggression, with anger subsumed as a minor part (Rothenberg, 1971); (b) the difficulties in defining a phenomenal state (Novaco, 1975); and (c) the lack of established research measurements (Biaggio, 1980).

In any study of an emotional state, the conceptualization and measurement of that emotion is of primary concern. These issues are addressed in the first part of this chapter, which concentrates on the subjective experience of anger. In the process, anger is differentiated from related emotions, viz. anxiety, fear and frustration, and from the attitudinal and behavioural elements of anger, viz. hostility and aggression. The second part of the chapter addresses the coneptualization and effects of the expression of anger.

Experience of Anger versus Related Emotions

Anger is defined in the present research as "an emotional state that consists of feelings that vary in intensity, from mild irritation or annoyance to fury and rage" (Spielberger, Johnson, Russell, Crane,

Jacobs & Worden, 1985, p.7). This definition emphasises the subjective affect component of anger arousal. Anger arousal has identifiable autonomic (Ax,1953), central nervous system (Moyer, 1971, 1973) and cognitive components (Lazarus, 1966; Schachter & Singer, 1962; Novaco, 1975). Cognitive labels that semantically proximate anger, such as "annoyed", "irritated", "enraged" or "provoked" may be viewed as the "subjective affect" component of anger arousal (Novaco, 1985). Although the physiological characteristics of anger are of important theoretical concern, they are beyond the scope of the present thesis. Anger is therefore examined here only as subjective affect, according to the definition by Spielberger et al. (1985) given above.

Cognitive and contextual factors are important determinants of how emotional arousal is experienced and labelled (Novaco, 1976). Lazarus (1966) argued that one's response to threat is largely determined by one's cognitive structuring of the situation. According to the James-Lange theory (Cannon, 1927) however, the emotion that one experiences is a function of one's overt behaviour in the situation. Arousal will more likely be construed as anxiety if the individual withdraws from or avoids the

provocation, and as anger if he or she challenges or approaches. In another sense, whether one experiences anxiety or anger is perhaps a function of one's coercive power relative to the provoking person (Novaco, 1976). As the perception of personal control diminishes, the arousal of anxiety during a provocation has an increased probability, though the arousal of anger may be evoked to generate a sense of personal control (Novaco, 1976).

There has been some discussion as to whether anger is a primary or secondary emotion (Novaco, 1976). Because anger has been shown to arise in response to ego threat or insecurity, anxiety is claimed as the more basic emotion (Rimm, De Groot, & Boord, 1971; Rothenberg, 1971). However, the question of whether anger is a primary emotion or an emotion second to anxiety is largely a spurious issue (Novaco, 1976). Although the arousal of anxiety is at times undoubtedly associated with the arousal of anger (Gaylin, 1984), anxiety in contrast to anger is a pervasive feeling of dread, apprehension, and impending disaster (Goldenson, 1984). It is a response to an undefined or unknown threat which in many cases stems from unconscious conflicts, feelings of insecurity, or forbidden impulses within ourselves

(Goldenson, 1984).

Mace (1976) and other researchers (e.g. Gaylin, 1984) also contended that anger is not a primary emotion but that it is induced by other emotions, particularly fear and frustration. Fear is defined as an intense emotion aroused by a recognized threat, a response to a clear and present danger (unlike anxiety) involving general mobilization of the organism for flight or fight (Goldenson, 1984). According to Gaylin (1984), fear and anger are inextricably linked; neither emotion occurs independently of the other. However, he admits that the concept of fear latent in anger is often more readily accepted than the idea of anger latent in fear. Moreover, these emotions do not invariably occur simultaneously.

Researchers have also placed great emphasis on the relationship between frustration and anger. This misconception is perhaps attributable to (a) misrepresenting anger as purely a component of aggression, equating the emotion with action (Gaylin, 1984); and (b) the frustration-aggression hypothesis (Dollard, Doob, Miller, Mowrer & Sears, 1939) which states that frustration nearly always produces aggression, and conversely, aggression is nearly

always an expression of frustration. Frustration results from the thwarting of impulses or actions by internal or external forces (Goldenson, 1984), and although frustration is at times associated with the arousal of angry feelings, the emotion is not necessarily translated into aggressive behaviour. Moreover, anger is not necessarily concomitant with the arousal of frustration.

Anger arousal, as conceptualized by Novaco (1985) is determined by cognitive expectations and appraisals of environmental events. Anger arousal does not necessarily lead to a chain of aggressive or hostile responses, whether these occur only internally or are displayed in open actions (Berkowitz, 1966; Megargee, 1985). Suppose you are standing on a street corner and someone walks into you. Turning, you see he or she is blind. Your anger will probably dissipate immediately as you redefine the situation as an accident rather than an affront. Although action impulses are incorporated in the subjective experience of anger, there is no direct link between external events and the impulse to action on account of cognitive mediation. The translation of anger arousal into aggression and/or hostility largely depends on the nature of the provocation, situational constraints,

expected outcomes and the individual's preferred style of coping (Novaco, 1976).

An individual's angry response to anger arousal includes emotional, attitudinal and behavioural components, separately or in various combinations. These components have been identified as anger, hostility and aggression respectively (Spielberger et al., 1985). Spielberger and his associates refer to them collectively as the "AHA! Syndrome" on account of the overlap in the conceptual definitions of anger, hostility and aggression, and the variety of measures that have been used to assess these constructs. The following discussion attempts to untangle the components of the AHA! Syndrome for purposes of conceptual and operational clarification of anger arousal and response.

Anger is generally considered to be at the core of the AHA! Syndrome since the concept of anger subsumes phenomena that are both more fundamental and less complex than the phenomena of hostility and aggression (Spielberger et al., 1985). However the research literature on hostility, anger and aggression reveals considerable conceptual ambiguity and confusion (Spielberger et al., 1985). Definitions of these constructs are equivocal and sometimes

contradictory (Spielberger et al., 1983). Moreover, anger, hostility and aggression are often used interchangeably (Berkowitz, 1962; Buss, 1961), obscuring conceptual differences between them. It is therefore exigent to differentiate anger from both hostility and aggression.

Hostility is considered to be an enduring complex set of negative attitudes, such as hatred, animosity and resentment, as well as chronic anger (Buss, 1961; Spielberger et al., 1983, 1985). At the core of these attitudes, which stem from an absence of trust in the essential goodness of others, is the belief that others are generally mean, selfish and undependable (Williams, et al., 1985). Buss and Durkee (1957) distinguished between overt manifestations of hostility (e.g. cursing and threatening behaviour) and covert manifestations of hostility (e.g. gossiping and indirect derogation). The former was considered a "motor" component of hostility, and the latter an "attitudinal" component. However, this distinction appears to confound behaviour (aggression) with attitude (hostility).

Hostility is often confused and used interchangeably with aggression (Spielberger et al., 1983). While anger and hostility refer to feelings

and attitudes respectively, the notion of aggression generally implies overt destructive or punitive behaviour directed towards other persons or objects in the environment (Spielberger et al., 1983, 1985; Williams et al., 1985). Aggression is motivated by the acts of others, as well as the individual's own hostility and anger (Williams et al., 1985).

The fact that aggressive behaviour is not always motivated by anger, however, provides the basis for an important conceptual distinction between hostile and instrumental aggressive behaviour (Buss, 1961). Hostile aggression denotes aggressive behaviours that are motivated by angry feelings. In contrast, instrumental aggression refers to aggressive behaviour directed toward removing or circumventing an obstacle that stands between an aggressor and a goal, when such behaviour is not motivated by anger (Spielberger et al., 1983, 1985). Hostile aggression is "rewarded" by the injury or discomfort of the victim, or the damage caused to objects in the environment, whereas instrumental aggression culminates in the attainment of a goal or reinforcer (Buss, 1966).

The common conceptual confusion of anger with aggression and hostility has obscured the recognition of the adaptive functions of anger (Novaco, 1976) and

resulted in anger being given a connotation of destructive forces. Contrary to popularized conceptions, it is crucial to recognize that anger can be a healthy emotion (Mace, 1976) and to accept anger arousal as an important and appropriate response to many life experiences (Gaylin, 1984).

Despite the problems that stem from suppressed or unmanaged anger expression (discussed in the second part of this chapter), anger serves some positive functions (Biaggio, 1980; Novaco, 1985). Anger has an energizing effect, mobilizing the individual to protect himself against threats (Meadows, 1971; Novaco, 1976). Anger translated into aggression may both reduce the physiological tension associated with anger (Hokanson & Burgess, 1962a, 1962b) and also prove instrumental in reducing or terminating the anger-arousing stimulus (Berkowitz, 1962). However, all too often, aggression proves to be destructive (Holt, 1970; Rothenberg, 1971) and leads to an escalating sequence of aggression (Gaines, Kirwin & Gentry, 1977; Novaco, 1976). Anger is potentially constructive since it alerts the individual and provides a basis for communication (Rothenberg, 1971; Novaco, 1976, 1985). Finally, anger can potentiate a sense of personal control and

can short-circuit anxious feelings of vulnerability (Novaco, 1976).

Measures of Anger

The conceptual ambiguity and confusion evident in the research literature on anger, hostility and aggression is reflected in a diversity of measurement operations of questionable validity as has been pointed out by Biaggio, Supplee and Curtis (1981) and by Spielberger et al. (1983). More specifically, Spielberger et al. (1985) have demonstrated that most psychometric measures of hostility confound angry feelings with the mode and direction of the expression of anger.

The early 1970's marked the beginning of empirical efforts to assess anger, as distinguished from the concepts of hostility and aggression (Spielberger et al., 1985). This important theoretical development was heralded by the appearance in the psychological literature of three anger scales, viz. the Reaction Inventory (Evans & Strangeland, 1971), the Anger Self-Report (Zelin, Alder & Meyerson, 1972) and the Anger Inventory (Novaco, 1975). Comprehensive reviews of these scales can be found in both Biaggio et al. (1981) and Spielberger et al. (1983). The limitations of the scales are considered

briefly below.

The Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957), the Anger Inventory (AI), the Anger Self-Report (ASR) and the Reaction Inventory (RI) were evaluated and compared by Biaggio et al. (1981), who concluded that support for the validity of these measures was disjointed and limited. Although the BDHI is generally considered to be the most carefully constructed psychometric measure of hostility, factor analyses (e.g. Bendig, 1962; Russell,cited in Spielberger et al., 1983) did not provide empirical evidence of the validity of the BDHI subscales as measures of the seven types of hostility originally suggested by Buss and Durkee (1957). In addition, the BDHI subscales have been found to be (a) non-significantly correlated, which seems to indicate that they do not measure a central construct (Sarason, 1961); (b) vulnerable to response sets, particularly social desirability (Biaggio, 1980; Buss & Durkee, 1957; Heyman, 1977; Russell, 1981; Sarason, 1961); and (c) of questionable reliability, which to some extent is a function of the small number of items per subscale (Baggio, 1980; Sarason, 1961).

In the same study, Biaggio et al. (1981) found that both the RI and the AI (which inquire about the

extent to which anger is evoked in response to hypothetical provocative situations), confound angry feelings with situational determinants of anger reactions. Moreover, moderate positive correlations between "Degree of Anger" as measured by the RI and Total scores on the BDHI provide support for the concurrent validity of the RI as a measure of hostility (Evans & Strangeland, 1971) but this, in turn, undermines its intended purpose as an anger scale. No significant correlations were found between AI scores and self-report ratings of anger in provocative imaginary and role play situations in a laboratory, nor with the number of anger-provoking incidents experienced during a two-week period (Biaggio et al., 1981). According to Biaggio (1980), the internal reliability of the scale was acceptable, but further validation of the scale was necessary.

Zelin et al. (1972) conducted an anger study on a sample of college students. The students completed the ASR "Awareness of Anger" subscale; and the subjects' aquaintances (outside of this sample) were required to rate the extent to which they perceived the subjects in the sample to "feel anger." These two measures correlated significantly. Although the awareness of anger subscale comes closest to examining

the extent to which subjects experience angry feelings, it does not assess the intensity of these feelings at a particular time (Spielberger et al., 1983). Moreover, the scale correlated significantly with social desirability and showed low test-retest reliability (Biaggio et al., 1981). The scale has been used infrequently and both its predictive and construct validity are yet to be firmly established (Spielberger et al., 1985).

The discussion above has shown that the use of these scales to assess anger as a psychological construct is inherently limited. They tend to confound angry feelings with aggressive behaviour and hostile attitudes, and with situational determinants of angry reactions (Spielberger et al., 1983). In addition, they fail to differentiate adequately between anger as an emotional state and individual differences in anger-proneness or the frequency with which anger is experienced (Spielberger et al., 1985). In other words, these scales fail to make the distinction between an individual's habitual (trait) anger and his or her situation-specific (state) anger response. Spielberger et al. concluded that

> in measuring the fundamental dimensions of anger, it seems essential to assess the intensity of

> angry feelings at a particular time, the frequency that anger is experienced, and whether anger is held in (suppressed) or expressed toward other persons or objects in the environment (1985, p.9).

These considerations, as well as the limitations of previous anger measures (as discussed above) were taken into account by Spielberger and his colleagues in developing the State-Trait Anger Scale (Spielberger, 1980; Spielberger et al., 1983) and later, the Anger Expression Scales (Spielberger et al. 1985). The former measures the experience of anger in terms of anger frequency and intensity, and the latter provides indices of an individual's total anger expression and the frequency with which he or she expresses or suppresses anger over a variety of anger provoking situations typically encountered in everyday life.

The conceptualization and operationalization of anger by Spielberger and his colleagues appears to be superior to previous alternatives for anger research. Although the issues discussed above have also been addressed in another alternative anger scale, namely the Multidimensional Anger Inventory (MAI) recently developed by Siegel (1985), the MAI fails to evaluate the intensity of angry feelings and only indirectly

assesses how often they occur (Spielberger et al., 1984). Consequently, the definitions and measures of anger and its dimensions by Spielberger et al. (1984) were considered the most qualified choice for the present research.

Expression of Anger

The first part of this chapter focused on the conceptualization and measurement of the subjective experience of anger. Yet, from one's own experience it is apparent that one's angry feelings are not necessarily expressed in some form of behaviour. Chesney (1985) pointed out the importance of recognizing the distinction between the emotional and behavioural components of angry responses; this distinction is acknowledged in the second part of the present chapter. This is followed by a comparison between the two components of anger expression, viz. "anger-in" and "anger-out", a review of the literature, which confirms the importance of this distinction, and a discussion of the measurement of anger expression. In the final section of this chapter, the effects of anger expression are considered.

The distinction between the experience of anger and the expression of anger is reflected in the anger

scales developed by Spielberger and his associates (see p.149 to p.151 for a description of these scales). More specifically, the State-Anger Scale (Spielberger, 1980; Spielberger et al., 1983) measures the experience of anger, that is, the subjective experience of angry feelings, or the experience of anger as an emotional state (hence the name State-Anger). In contrast, the Anger Expression (AX) Scale (Spielberger et al., 1985) measures the expression of anger, that is, typical behaviour in terms of the extent to which individuals suppress or express their angry feelings.

In research on anger expression, individuals are typically classified as "anger in" if they tend to suppress their anger or direct it inward toward the ego or self (Averill, 1982; Funkenstein, King & Drolette, 1954; Tavris, 1982). When anger is held in (suppressed), it is subjectively experienced as an emotional state which varies in intensity and may fluctuate over time as a function of the provoking circumstances and the individual's anger threshold (Spielberger et al., 1985). Individuals are classified as "anger out" if they express anger toward other persons or the environment (Spielberger et al., 1985).

The outward expression of anger (in contrast to anger suppression) generally involves two components: the experience of anger as an emotional state and the extent to which an individual engages in aggressive behaviour when motivated by angry feelings (Spielberger et al., 1985). Outward anger expression in the form of physical manifestations (e.g. slamming doors, destroying objects or assaulting other individuals) and verbal manifestations (e.g. criticism, insult, verbal threats, or the extreme use of profanity), may be expressed directly toward the source of provocation or frustration, or indirectly toward persons or objects closely associated with, and thus, symbolic of the provoking agent.

Several recent studies have focused on the clinical implications of anger expression (Biaggio, 1980). .The conceptual distinction between "anger-in" and "anger out" was introduced by Funkenstein, King and Drolette (1954) in their classic studies of the effects of anger expression on the cardiovascular system. It was found that the increase in pulse rate for the "anger in" group was three times greater than for the "anger out" group. In contrast, "anger in" and "anger out" groups did not differ in systolic or diastolic blood pressure.

In a more recent investigation of the relationships between "anger in", "anger out" and blood pressure in a major research program on hypertension by Harburg and his associates (Harburg, Blakelock & Roeper, 1979; Harburg, Erfurt, Hauenstein, Chape, Schull & Schork, 1973; Harburg & Hauenstein, 1980; Harburg, Schull, Erfurt & Schork, 1970) it has been shown that individuals who used "anger in/guilt" coping styles had significantly higher diastolic blood pressure and a greater incidence of hypertension those with "anger out/no guilt" coping styles.

Similarly, Gentry (1972) and his colleagues (Gentry, Chesney, Hall & Harburg, 1981; Gentry, Chesney, Gary, Hall & Harburg, 1982) reported that both blacks and whites classified as high in anger expression ("anger out") had lower diastolic blood pressures than subjects classified as medium or low in expressed anger. Moreover, there was a tendency for the high anger out subjects to have lower systolic blood pressure than those in the medium or low categories. The odds for being diagnosed as hypertensive were greater for blacks, males, persons residing in high stress areas, and subjects who reported low levels of "anger out".

The findings of Harburg, Gentry and their

colleagues clearly demonstrated the importance of the "anger in" and "anger out" distinction. Their research indicated that elevated blood pressure and hypertension were associated with holding anger in, rather than expressing it in anger-provoking situations. However, Spielberger et al. (1985) suggested that the procedures employed by both Harburg and Gentry in their assessment of anger expression limited their findings for several reasons, some of which are discussed below.

Firstly, in both research groups concepts were defined on the basis of subjects' responses to self-report questionnaires. These questionnaires described several hypothetical anger-provoking situations (e.g. being verbally abused by a police officer or landlord) which many subjects had never actually experienced. Moreover, the questionnaires indicate how subjects responded to a particular situation, rather than how often they had responded in a particular manner. The frequency of occurrence of reactions to the same or similar situations were also not taken into account.

Secondly, in the Harburg and Gentry procedures, subjects who reported that they did not feel angry in a particular anger-provoking situation were also

categorized as "anger-in". This procedure seems to equate individuals who did not experience anger or guilt with those who experienced anger as an emotional state and suppressed it, or who turned anger inward (because they blamed themselves for provoking anger in others) and then felt guilty.

Finally, the Harburg assessment procedure classified subjects into dichotomous groups on the basis of their responses to only two hypothetical situations. A much larger number of situations would be needed to establish the ecological validity of this classification. Equally questionable procedures were employed by Gentry. Subjects were classified into three "anger out" groups - low, medium and high - where a continuous measure of anger expression is clearly required.

Spielberger et al. (1985) pointed out that anger expression was implicitly defined as a unidimensional construct by Funkenstein et al. (1954), Harburg et al. (1973) and Gentry et al. (1982). However, contrary to their intention to construct a continuous measure for assessing individual differences in the direction and extent to which anger was held in, or expressed, Spielberger et al. (1984) found anger-in and anger-out to be two relatively independent dimensions.

Accordingly, they developed the Anger Expression (AX) Scale which contains separate subscales for measuring anger in and anger out as independent dimensions, along with a scale to measure the extent of total anger expression, irrespective of its direction.

Effects of Anger Expression

A major reason for constructing the AX Scale was to investigate the role of anger expression in the etiology of hypertension and coronary disease (Spielberger et al., 1985). Recently, Dembroski et al. (1985) found that high ratings of "potential for hostility" and "anger in" were significantly and positively associated with angiographically documented severity of coronary atherscelerosis. Using the AX scales, Johnson (cited in Spielberger et al., 1985) found that holding anger in was associated with higher blood pressure, particularly with higher systolic blood pressure. However, the total amount of expressed anger had relatively little influence on blood pressure beyond the effect attributable to suppressed anger. Taking into account a number of control measures such as height, weight, dietary factors (salt intake), racial differences, and family history of hypertension and CHD, the Anger/In scores were found to be better predictors of blood pressure

than any other measure.

Other physiological manifestations of the suppression of anger include psychosomatic symptoms (Alexander, 1950; Holt, 1970; Lewis, 1963; Meadows, 1971) and an increase in physiological tension (Hokanson & Burgess, 1962).

The suppression of anger also has deleterious psychological and behavioural effects. A body of evidence indicates that unexpressed anger can result in cognitive inefficiency (Holt, 1970; Horowitz, 1963), disturbances in perception (Kaufman & Feshbach, 1963), inefficient task performance (Novaco, 1976), increased hostility (Buss, 1966), an inability to resolve personal conflict (Holt, 1970), a heightened probability for extreme forms of aggressive behaviour (Leon, 1969; Megargee, 1966, 1985), escalation of angry feelings, sometimes leading to aggressive outbursts (Berkowitz, 1970; Kaplan, 1975), impulsive reactions (Novaco, 1976), endangered interpersonal intimacy (Holt, 1970; L'Abate, 1977; Mace, 1976; Novaco, 1976) and destructive communication patterns (Novaco, 1976; Mace, 1976). By extrapolation, the suppression of anger may have far-reaching implications for individuals affected by these considerations in an occupational career in modern

life situations (Mettlin, 1976). This conjecture will be examined further in the chapters that follow, particularly Chapter 7, in which the links between anger and managerial effectiveness will be made explicit.

Chapter 3

TYPE A BEHAVIOUR

Despite the negative connotations associated with TABP, it has been said that "Type A's are without doubt the great doers of the world. Even if they live shorter lives, they live much more life while they are living it" (Nobel prize winner, Sir Peter Medawar, cited in Friedman & Rosenman, 1974, p.iv). However, these words offer little consolation as a possible epitaph for South African managers.

The reasons for including the TABP as a predictor variable in the present research are two-fold:

Firstly, contemporary business and professional envionments appear to demand, challenge and reward Type A behaviour (Jenkins, 1975; Rosenman & Friedman, 1974). In view of the detrimental effects of TABP on health (Rosenman & Chesney, 1982), it is necessary to examine the effects of TABP on job-related behaviour, particularly managerial effectiveness, to assess whether the effects of TABP in the business environment are as positive as is commonly believed in Western society.

Secondly, the recent focus on anger has its

origins in research on coronary heart disease (CHD) and TABP. More specifically, there is evidence to suggest that it may be the anger/hostility component of the TABP that confers coronary-proneness (Matthews et al., 1977). The TABP is therefore an important milestone in anger research.

This chapter begins with a brief history and definition of the TABP, followed by a discussion of issues related to TABP in the contemporary business and professional context. The chapter then proceeds with a discussion of the relationship between TABP, the anger-hostility component, and CHD, and concludes with a discussion of the findings of several recent hostility studies and their implications for anger research. In the process, the TABP chapter serves as a bridge between the previous chapter on anger and the subsequent chapter on managerial effectiveness.

Coronary-prone Behaviour Pattern

The importance accorded to the TABP is mainly attributable to the association between Type A behaviour and CHD. As was pointed out Chapter 1, CHD is the leading cause of death among adults in the United States and other Western countries (Chesney, 1985), as well as the main cause of death of Whites in South Africa in the economically active period of

their lives (Wyndham, 1978). The association between TABP and CHD represented a major breakthrough in research in the causes and correlates of heart disease, as can be seen from the history of this association.

Research has shown that CHD has a multifactorial etiology (Epstein, 1965). The generally accepted risk factors associated with CHD include habits of diet, physical inactivity, blood pressure, serum lipid-lipoproteins, genetic factors, and cigarette smoking (Rosenman & Chesney, 1982). However, these factors, even taken together, account for less than half the numerical incidence of CHD (Keys, Aravanis, Blackburn et al., 1972) and fail to explain the different rates of CHD in different populations with the same combination of risk factors (Keys, 1970), or individual specificity (Gordon & Verter, 1969). The inability of known risk factors to explain CHD prevalence precipitated the search for additional CHD risk factors.

One of the psycho-social factors found by this search to be causally related to CHD was labled the "coronary-prone" or TABP, and constitutes a specific pattern of overt behaviour typical of CHD patients (Friedman & Rosenman, 1959; Rosenman, Brand, Jenkins,

Friedman, Straus & Wurm, 1975; Rosenman & Friedman, 1962; Rosenman, Friedman, Straus, Wurm, Kositschek, Hahn & Werthessen, 1964). The TABP is strongly related to CHD independent of the classical risk factors mentioned above (Rosenman, Brand, et al., 1975; Rosenman, Brand, Scholtz & Friedman, 1976). Moreover, TABP appears to double the risk of CHD at all levels of the other risk factors (Rosenman & Chesney, 1982). It is particularly important to note that the association between TABP and CHD has received major confirmation in prospective research (e.g. Haynes, Feinleib & Kannel, 1980; Haynes, Feinleib, Levine, Scotch & Kanner, 1978; Jenkins, Zyzanski & Rosenman, 1976; Rosenman, et al., 1975; Rosenman, Brand, Scholtz & Friedman, 1976).

The TABP, originally identified by Friedman and Rosenman (e.g. 1959, 1971, 1974) on the basis of their clinical experience as cardiologists, represents the greatest progress toward an integrated description of the psychological and behavioural contribution to CHD (Gentry & Williams, 1975). The coronary-prone behaviour pattern is defined as an action-emotion complex exhibited by individuals who are typically engaged in a relatively chronic struggle to accomplish an endlessly increasing number of things in ever

decreasing amounts of time, often against the opposing efforts of other persons or things in the same environment (Rosenman & Chesney, 1982). People who manifest this behaviour pattern are called Type A individuals and those who show a relative absence of this behaviour are designated Type B individuals. The Type A and Type B behaviour patterns represent the two extremes of a continuum. Based on extensive practices in typing and observing indivuals, Rosenman and Friedman (1974) found that people are in fact either Type A or Type B, though in varying degrees. Interestingly, there are indications of a tendency toward the Type A end in some cultures and occupational groups (Strümpfer, 1983).

Coronary-prone Type A behaviour is characterised by excessive drive, aggressiveness (although often stringently repressed), ambition, extremes of competitiveness, haste, impatience and an enhanced sense of time urgency, hyperalertness, restless motor mannerisms and a staccato style of verbal response, feelings of being under the pressure and challenge of responsibility, and a pre-occupation with deadlines (Friedman & Rosenman, 1959; Rosenman et al., 1964; Jenkins, Rosenman & Friedman, 1967; Jenkins, Zyzanski & Rosenman, 1979).

The converse, low coronary-risk behaviour pattern, Type B, is characterised by the relative absence of this interplay of phychological traits and situational pressures. The Type B individual is relaxed and more easy going, seldom becomes impatient, not easily irritated and works steadily, but without the feeling of being driven by lack of time. He or she is not preoccupied with achievement and is less competitive in his or her occupational and avocational pursuits. He or she also moves and speaks in a slower and more smoothly modulated style (Friedman & Rosenman, 1959; Rosenman et al., 1964; Jenkins et al., 1967; Jenkins et al., 1979). It is necessary to point out, however, that Type B's may have as much as or more intelligence, "drive" and ambition than their Type A counterparts. Whereas these traits seem to steady the Type B individual and give him/her a sense of confidence and security, they goad, irritate and infuriate Type A's (Rosenman & Friedman, 1974). For a more detailed description Type A and Type B characteristics, the reader is referred to Gentry and Williams (1975).

TABP and the Business Environment

The TABP results from, and is sustained by, the interaction of the person's intrinsic personality

traits and the socio-economic milieu which specifically elicits these traits (Friedman & Rosenman, 1959). The contemporary Western culture, particulary the business and professional environments, seem to challenge, encourage and reward the Type A individual more than the Type B (Jenkins, 1975; Rosenman & Friedman, 1974). The interactive process between the indidual and the environment is illustrated in the following discussion of issues related to the apparent mutual dependence and reinforcement of TABP and the business environment.

Despite the association between TABP and CHD, the Western world appears to endorse TABP an account of its apparent association with productivity and vocational success. Productivity in today's economy practically necessitates managers who are hard-driving, competitive, and excessively committed to work and productivity - characteristics that are typical of the Type A individual. This observation concurs with the finding that more Type A managers were found in companies with high growth rates than in companies with low growth rates (Howard, Cunningham & Rechnitzer, 1977).

The TABP is embedded in the social context of the modern occupational career (Mettlin, 1976). It is

accentuated in many people by occupational competitiveness, heavy workloads, conflicting demands, supervisory responsibilities and associated factors (Howard et al., 1977). Mettlin (1976) found TABP to be related to career achievement and mobility. Similarly, in a South African study (Strümpfer & Robinson, 1985) a progressive increase in mean TABP scores was found with increased organisational ranks in both the head office administration and the sales function of a financial organisation. Interestingly, however, some research has shown a greater proportion of Type B's higher up the managerial hierarchy (Howard et al., 1977; Zyzanski, 1978). Strümpfer and Robinson (1985) also reported slight decreases in mean score at the highest levels of the administrative heirachy of the organisation studied. These findings appear to challenge partially the popular conception that the TABP is a fundamental requirement of career success.

The equivocality surrounding the issues related to TABP and the contemporary socio-economic milieu is somewhat disconcerting. The reason for this uncertainty may be that the physiological correlates of TABP, in particular, CHD and other related health disorders, have become the major focus of TABP research, as can be seen in recent reviews of Type A

behaviour (e.g. Rosenman & Chesney, 1980, 1982). However, the behavioural correlates of the TABP have received little attention. Since TABP and various issues related to the contemporary business environment appear to be closely associated, it is considered both timely and important to examine the relationship between TABP and job-related behaviour. More specifically, the relationship between TABP and managerial effectiveness warrants investigation. Accordingly, TABP was included in the present research (a) to investigate the implied relationship; (b) to provide a bridge between this behaviourally-orientated study and previous physiologically-orientated research on the TABP; and (c) to provide a bridge between the TABP literature and the AHA! Syndrome literature, as indicated below.

TABP and Anger

The discussion in the remainder of this chapter is derived from the other reason for including TABP in the present research: The recent focus on anger has its origins in research on CHD and Type A behaviour. To recapitulate, the characteristic components of the TABP include speed-impatience, ambition-competitiveness, and hostility-anger (Williams, 1984). Research has shown that of the

three components, hostility-anger accounts for much of the health risk associated with TABP (e.g. Barefoot, Dahlstrom & Williams, 1983; Matthews, Glass, Rosenman & Bortner, 1977; Shekelle, Gayle, Ostfeld & Paul, 1983; Thorensen & Ohman, 1985; Williams, Haney, Lee, Kong, Blumenthal & Whalen, 1980). The TABP, as measured by the Structured Interview (SI; Rosenman, 1978), has been shown to contain two main factorial components: (1) "Clinical Ratings", which has been reinterpreted in terms of anger-hostility, and (2) "Pressured Drive", which reflects high drive level and time urgency (Thorensen & Öhman, 1985); of these the Clinical Ratings factor is the most valid indicator of CHD.

More specifically, anger, hostility and aggression have been increasingly implicated in the etiology of essential hypertension and CHD over and above the global TABP (e.g. Barefoot et al., 1983; Dembroski, MacDougall, Williams, Haney & Blumenthal, 1985; MacDougall, Dembroski, Dimsdale & Hackett, 1985; Matthews et al., 1977). Although anger is generally considered to be more fundamental than either hostility or aggression (Spielberger et al., 1983), conceptual and methodological difficulties have precluded its investigation as a correlate of CHD

research. Conceptually it follows, however, that perhaps similar findings to those of the hostility research (cited below) would be expected if anger were the research criterion.

The following study by Williams et al. (1980) was conducted to gain further insight into the mechanisms relating TABP to CHD by investigating the hostility subcomponent of the global TABP. TABP was assessed using the SI (Rosenman, 1978) and hostility level was measured by the MMPI Ho scale (Cook & Medley, 1954) in 424 middle-aged patients who underwent diagnostic coronary arteriography for suspected CHD. It was found that both TABP and Ho scores were independently and significantly related to severity of atherosclerosis or coronary artery disease (CAD). Interestingly, the relationship between Ho score and prevalence of CAD was not linear, but appeared to exhibit a threshold phenomenon; the prevalence of clinically significant CHD was approximately 1.5 times greater in those patients with scores higher than 10, as compared to patients with lower scores. However, when the association between the two psycho-behavioural measures and CHD was evaluated simultaneously, the Ho scores emerged as more strongly related to CHD. Based on this finding, Williams et al. (1980) suggested that

at least some of the variance in prevalence of CAD levels associated with TABP is due to the increased Ho levels among Type A patients.

Interpretation of the association between hostility, as measured by the Ho scale, and CHD is limited by the fact that it is based on concurrent observations using a restricted clinical population (Williams et al., 1980; Williams, Barefoot & Shekelle, 1985; Barefoot et al., 1983). It is clearly necessary to demonstrate this phenomenon in a more representative population using a prospective design (Barefoot et al., 1983).

With respect to the prospective relationship between Ho scores and risk of CHD, Shekelle et al. (1983) used data from the Western Electric Study, an extensive prospective investigation of CHD, to investigate the relationship among Ho scores obtained at the initial examination, subsequent 10-year incidence of CHD, and 20-year mortality. An important finding was a correlation (test-retest reliability) of 0.84 between Ho scores obtained at the initial examination and again four years later for 1653 men who took the MMPI on both occasions. This suggests that Ho scores may be measuring an unusually stable psychological characteristic, at least in middle-aged

men (Williams et al., 1985). After adjustment for age, cigarette smoking, intake of ethanol, systolic blood pressure and serum cholesterol level, it was found that (a) the probability of a major CHD event was 1.47 times greater in men with Ho scores greater than 10, than in men with lower Ho scores (a finding consistent with the relative prevalence of clinically significant CAD previously observed by Williams et al., 1980); and (b) the Ho score was significantly and positively associated with 20-year mortality.

The relationship between Ho scores and subsequent morbidity and mortality was investigated in another prospective study of 225 male physicians who had completed the MMPI while in medical school 25 years earlier - when their mean age was 25 years (Barefoot et al., 1983). These authors found that (a) men with Ho scores at or below the median of 13 experienced a CHD incidence of 1.5 to 3 percent, that was about one-sixth of the incidence of 9 to 12 percent observed in men with Ho scores above the median; and (b) over the entire 25-year follow up period, death came to only 2.25 percent of those in the low Ho group (men with initial scores at or below the median), whereas 13.4 percent of those in the high Ho group (men with initial scores above the median) had died. The

relative risk of dying in the high versus low Ho groups of healthy young physicians was over 6 compared with the relative risk of 1.5 associated with high Ho scores in the middle-aged samples of the previous two studies of significant CAD and CHD respectively.

Williams, Barefoot and Shekelle (1985) suggest an explanation for this discrepancy: By the time middle-age is reached, those who are particularly susceptible to the consequences of high Ho scores will have already died. The shape of the curves relating Ho scores to CAD in the first study, to 10-year CHD incidence in the Western Electric study, and to the CHD morbidity and mortality in this sample of physicians appears to have a "threshold"; with Ho scores up to a certain level - 13 in this sample of young men, 10 in the other two - there was a uniformly low risk of CHD, while above that level the incidence increased rapidly.

The similarity of results of these three studies, viz. the very reliable associations between high Ho scores and increased prevalence of CAD, increased risk of CHD and increased total mortality, as well as the threshold-type functions relating Ho scores to the various health measures, confirm that the anger-hostility component of TABP is worthy of further

investigation. More direct confirmation is provided in two recent studies by Dembroski et al. (1985) and MacDougall et al. (1985). The latter study was undertaken to replicate the findings of the former. These studies aimed to determine what elements of the multidimensional TABP are related to coronary disease severity in a selected group of patients with minimal or severe CAD in the first study (n = 131) and a convenience sample of patients who had undergone diagnostic catheterization (n = 126) in the second study. Global TABP and its components were assessed by scoring of tape-recorded structured interviews (Rosenman, 1978). The components of the TABP include four verbal stylistic dimensions (Loudness of Speech, Explosiveness of Speech, Rapid Accelerated Speech, and Response Latency) and three attitudinal-behavioural dimensions (Potential for Hostility, Anger-In, and Verbal Competitiveness). In both studies, global TABP was unrelated to extent of CAD, while Potential for Hostility and Anger-In were significantly and positively associated with the disease severity.

These findings support previous research (e.g. Williams et al., 1980; Barefoot et al., 1983; Shekelle et al., 1983; Haynes et al., 1980) in suggesting that anger and hostility may be the critical aspects of the

TABP in predisposing individuals to risk of CAD. While the physiological manifestations of anger and hostility have important theoretical and practical implications, the behavioural consequences of anger are of greater concern in the present research. Accordingly, both the global TABP, as measured by a short self-report scale, and the dimensions of the anger component (as identified by Spielberger et al., 1985) were assessed in terms of the relationship between them, and in turn, their respective influence on managerial effectiveness.

Chapter 4

MANAGERIAL EFFECTIVENESS

An enormous amount of literature exists regarding the subject of "management". However, most of this literature concerns management processes in organisations or managerial tools, such as operational decision making systems, marketing and production controls, communication and information systems (Kotter, 1982a). The literature which does focus on management is mostly prescriptive and it is largely based on assumptions drawn from general observations and insights and generalized experience, or on deductions from a theory (Kotter, 1982a; Luthans, Rosenkrantz & Hennessey, 1985). Kotter remarked that "a rather large gap exists between the conventional wisdom on management functions, tools and systems on the one hand and actual managerial behaviour on the other" (1982b, p. 156).

So, despite the importance of contemporary managers to our present and future, relatively little is known about what they do, and why some are more effective than others (Kotter, 1982a). Kotter (1982a) has said that because of the state of the literature on managerial work and behaviour, a literature review

would be extremely short (if it included only comparable studies or real theories of managerial behaviour) or extremely long (if it included all the work in management and the applied social sciences that is relevant in some respect). Caught between the useful and the impractical, this chapter reviews some of the literature in an effort to conceptualize managerial effectiveness and to provide a framework within which it can be analysed and understood.

"What managers do" is discussed as an introduction to the concept of managerial effectiveness. The main theme of this discussion develops along the lines that, while it is possible to determine activities and behaviour that are common to all managers, managerial effectiveness is largely situation-specific. This notion is explained, extended and augmented in the discussion that follows on the meaning of managerial effectiveness, the criteria of managerial effectiveness and the measurement of managerial effectiveness. The chapter concludes with a brief synopsis which serves as an introduction to the operationalisation of managerial effectiveness in the present research.

What do Managers do?

A major impediment to the development of a theory

of managerial behaviour is the lack of answers to the question, "What do managers do?" (Whitely, 1985). Until recently, apart from the work of Carlson (1951), Stewart (1967, 1976) and Mintzberg (1973), managers have not been systematically studied in any depth. Few attempts, if any, have been made to analyse systematically how certain observable behaviours affect effectiveness or success (Luthans et al., 1985). As early as the 1950's, Carlson complained that "the literature on top management is concerned with the general principles governing the way in which executive work should be performed rather than with observational studies of how it is actually carried on" (1951, p. 25). The classic managerial activities have yet to be defined in behavioural terms (Luthans et al., 1985). Thus, the problem is not only what managers do, but also how they do it.

Stewart (1967) is one of the few people who attempted to distinguish between the different requirements of different jobs in different firms (Stewart & Stewart, 1981). She was able to differentiate five different kinds of managerial jobs - emissaries, writers, discussers, trouble-shooters and committee men - based on an analysis of the 'diaries' kept by a sample of managers in a variety of

jobs in diverse industries. Stewart (1967) did not attempt to prescribe what makes for managerial effectiveness; instead she attempted to describe what managers actually do in the context of different jobs and different firms.

Mintzberg (1973) contributed another non-prescriptive analysis of what managers actually do. He identified ten managerial roles - figurehead, leader, liaison, monitor, disseminator, spokesman, entrepreneur, disturbance handler, resource allocater and negotiator - that he argued could be found in all managerial jobs. However, he also presented some discussion of the relative salience of these roles for different jobs and different firms (Stewart & Stewart, 1981). According to Luthans et al. (1985), Mintzberg's (1973) greatest contribution lies in his approach - direct observation of real managers in real organisations - which provided insight into how managers actually behave. However, his findings were based on the observation of only five executives over five day-periods. Therefore, his findings are subject to replication with larger, more representative samples before they may be generalized. In addition, Luthans et al. (1985) reported that, although Mintzberg's (1973) findings

have received some support (e.g. Kurke & Aldrich, 1979), many researchers have found evidence that countered portions of the Mintzberg framework (e.g. Alexander, 1979; McCall & Sergrist, 1980; Morse & Wagner, 1978; Snyder & Glueck, 1980; Snyder & Wheelen, 1981).

Mumford (1984) made the observation that common to the work of Carlson (1951), Stewart (1967) and Mintzberg (1973) was their discovery that any generalized statement about managerial activities was likely to be at least partially, and possibly substantially incorrect for any particular manager or group of managers. The scope and nature of managerial activities were seen to depend on the specific kind of job and on the manager's interpretation and other's interpretation of his/her role and responsibilities within it. More recently, research by Stewart (1982a) lent some support to these findings. She presented a framework for understanding managerial jobs and behaviour based on the demands, constraints and choices of the job, both in fact and as perceived by the job holder. It was found that managerial jobs differ in the nature and extent of both their demands and constraints, and how much these limit the job holder's choice (Stewart, 1982a). Her

central hypothesis was that different individuals exercise different aspects of the choices available, that is, they choose what to do and what not to do. Her findings supported the view that management is a highly individualized art (Livingston, 1971).

Stewart recommended that research "move on from Mintzberg's (1973) roles and propositions about managerial work to an analysis that takes into account the variations in behaviour and the differences in jobs before attempting to generalize about managerial work" (1982b, p. 11). This recommendation of hers was addressed in a recent study which showed that large differences exist among the work behaviours of managers (Whitely, 1985). In addition, even when the behavioural content of the work was similar, Whitely (1985) found differences in the process characteristics or work activities of the managerial job. These findings confirm that managers can have work with similar behavioural content and can still differ as to what behaviour they choose to emphasize (Stewart, 1982a, 1982b).

The most recent comprehensive study of the behaviour and work of effective general managers was conducted by Kotter (1982a, 1982b). He studied 15 general managers, using interviews, questionnaires,

archival data, and approximately 500 hours of direct observation. He found that effective managerial behaviour is largely situation-specific: the bigger the difference in job demands, the bigger the difference in the characteristics of the job incumbents, and hence, the bigger the differences in behaviour. However, Kotter has suggested that some meaningful generalisations of effective managerial behaviour are possible. The nature of the job demands and personal characteristics tend to lead to a certain approach to the job, and that in turn leads to certain commonalities in daily use of time. Kotter referred to this approach as "agenda setting" and "network building".

Manager's agendas consist of loosely connected goals, priorities, strategies and plans that address their long-, medium-, and short-term responsibilities. Their networks involve cooperative relationships among those people they feel are needed to satisfy their agendas - with and among peers, outsiders, superiors, subordinates and their subordinates' subordinates. Effective general managers use the networks to implement and update their agendas. Kotter observed that almost all effective managers use the agenda setting and network

building process, but the best performers do so to a greater degree, more aggressively and more skilfully. Although Kotter's (1982a) findings contribute substantially to our understanding of what managers actually do, they are subject to replication with a larger sample before they may be generalized.

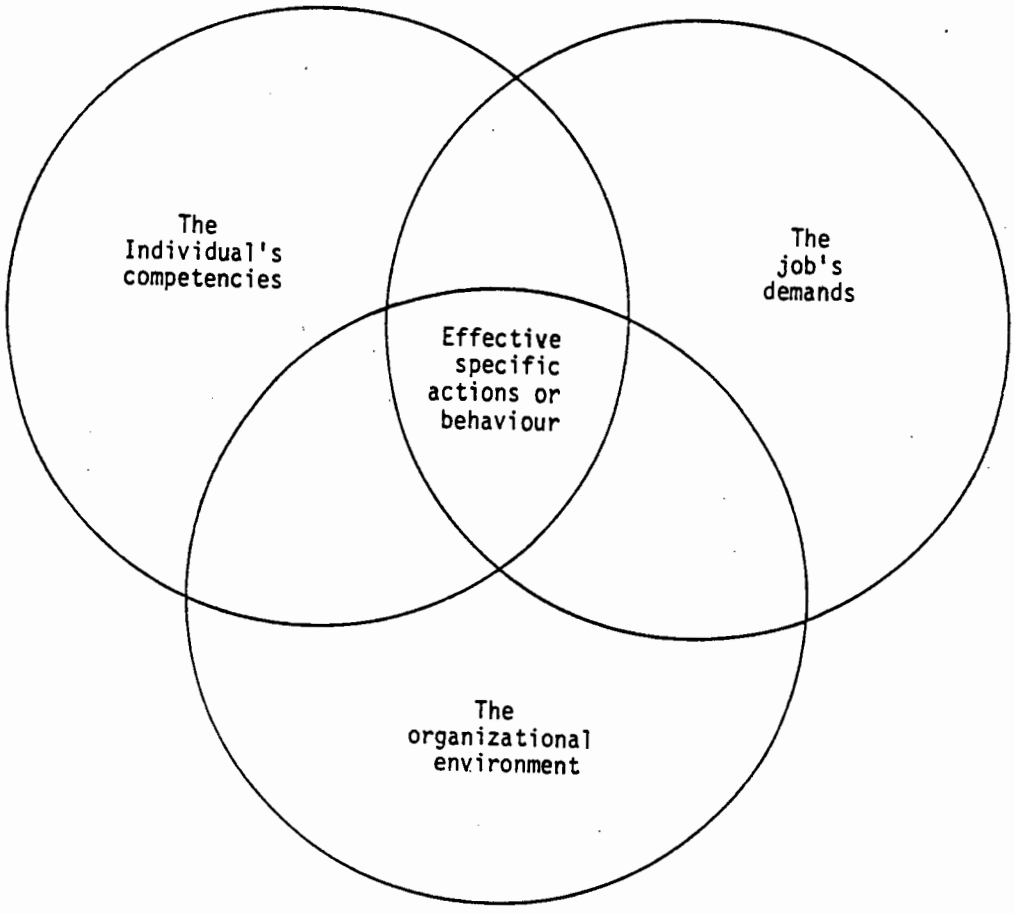
Indirect support for Kotter's (1982a, 1982b) point of view has been offered by Luthans et al. (1985). Rather than evaluate managers on the basis of activities traditionally prescribed for success, Luthans et al. (1985) conducted an observation study of 52 managers from three diverse organisations to determine empirically which activities successful managers actually perform. It was found that the networking activities of interacting with outsiders and socialising/politicising were significantly related to managerial success, as defined by a promotion index and management level. In addition, the study found that some of the activities (e.g. socialising/politicising, decision making and planning/coordinating, and conflict management) of successful managers were organisation-specific and dependent on managerial level. While these finding provide some theoretical support, interpretation of these findings is limited by the fact that they are

based on concurrent observations in a rather limited managerial population. It is also important to note that criteria for managerial success are not necessarily the criteria for managerial effectiveness.

The studies on managerial work and behaviour all seem to share a common thread: while some meaningful generalisations of managerial work and behaviour have been tentatively established (e.g. Kotter, 1982a; Luthans et al., 1985; Mintzberg, 1973; Stewart, 1967, 1976, 1982a, 1982b; Whitely, 1985), it is apparent that the differences in managerial work and behaviour are contingent on the situation. Thus, while it may be possible to determine the activities common to all managers, how they execute these activities and their resultant effectiveness or ineffectiveness can only be determined in the context of a specific situation. Herein lies the crucial distinction which constitutes the core of managerial effectiveness.

Boyatzis (1982a, 1982b) has done some research on this issue. He postulated that managerial effectiveness is determined by the interaction of three components, viz. personal competencies, job demands, and organisational environment demands, as represented in Figure 1 (p.57).

FIGURE 1. A Model of Effective Job Performance from "The Competent Manager : A Model for Effective Performance" by R.E. Boyatzis, 1982, p.13.



Both the job and environmental demands were accepted as situation-specific and were not empirically examined in his research. However,

Boyatzis was able to determine the competencies that one would expect to find in effective managers irrespective of the organisation or specific management job. A job competency is an underlying characteristic - a motive, trait, skill, aspect of one's self-image or social role, or body of knowledge that a person uses - consistently associated with effective performance in a job. A manager's set of competencies reflect his or her capabilities, that is, they describe what he or she can do, not necessarily what he or she does.

Boyatzis (1982a, 1982b) indicated that managerial competencies are necessary, but not sufficient for managerial effectiveness. Only when the manager's competencies produce behaviour that corresponds with the financial requirements and responsibilities of the specific job, and is consistent with the policies, procedures and conditions of the particular organisational environment, will that behaviour be effective. Thus, managerial effectiveness occurs when all three critical components in the model are consistent, or 'fit'. The intersection shared by all three components in Figure 1 represents a fundamental concern of the present research: The notion that managerial effectiveness is situation-specific,

notwithstanding the activities and behaviours that are common to all managers. This view, so clearly presented by Boyatzis (1982a, 1982b), forms the basis of the discussion on the meaning, criteria and measurement of managerial effectiveness.

The Meaning of Managerial Effectiveness

Managerial effectiveness does not lend itself easily to precise definition or conceptual clarification (Langford, 1980). This evasiveness is partly attributable to the fact that the term "management" does not indicate a clearly defined function or activity (Langford, 1980), as illustrated by the discussion at the start of this chapter; and partly because managerial effectiveness differs according to organisational level and function, even in the same organisation, from organisation to organisation, and from country to country, even in the same organisation (Stewart & Stewart, 1981). More specifically, managerial effectiveness seems to be a multi-determined entity depending on the manager, his position, the organisation, and the socio-economic environment (Langford, 1980). It is therefore exceedingly difficult, and also perhaps impractical, to define or conceptualize managerial effectiveness in any generally applicable terms.

The difficulty in the conceptualisation of managerial effectiveness is exacerbated further by the diversity of definitions. Definitions of managerial effectiveness have been academic in character (e.g. Campbell, Dunnette, Lawler & Weick, 1976), prescriptive (e.g. Blake & Mouton, 1964, 1978; Morse & Wagner, 1978; Reddin, 1970), goal orientated (e.g. Kirchoff, 1977), or aphoristic (e.g. Drucker, 1967), with each exclusive of aspects of the others. The definition selected for the present research incorporates the essence of these definitions, viz. a performance component, a results component, a behavioural component and an environmental component. These compnents are included in Boyatzis' (1982a, 1982b) definition of effective job performance, which seems to apply equally well to managerial effectiveness. (This is not unfeasible, as conceptually it follows that effective job performance is a major requirement for effective management.) Accordingly, managerial effectivess is defined as "the attainment of specific results (i.e., outcomes) required by the job through specific actions, while maintaining or being consistent with policies, procedures and conditions of the organisational environment" (Boyatzis, 1982a, p.12).

The definition selected for the present research is consistent with current managerial effectiveness theory, namely situationist or contingency theory (Langford, 1980). The theory states that effectiveness will be contingent upon the situation, the situation being the manager himself, his position or tasks, the organisation and the socio-economic environment. Burgoyne (cited in Langford, 1980) has pointed out that situation or contingency theory results in particularism, i.e., that there is no universal theory or definition of managerial effectiveness and that it can only be defined in terms of particular managers in particular organisations.

From the literature it is apparent that researchers have tended to emphasize either the manager (e.g. Drucker, 1967; Hall & Donnell, 1979; Livingstone, 1971; Miner, 1977; Mintzberg, 1973; Porter & Lawler, 1968; Schleh, 1975; Scholefield, 1968; Shakman & Roberts, 1977; Stewart, 1967) or the organisation (e.g. Kirchoff, 1977; Machin, 1973). Three theories of managerial effectiveness which attempt to balance equally the contribution of the manager himself and of the organisation are presented below.

The basic postulate of the first theory is that

the manager interacts with the environment by implementing "inner plans" or programs with some purpose in mind, and then modifies these plans according to the feedback received from the environment (Burgoyne, cited in Langford, 1980). As described above, in a similar vein, Kotter (1982b) has indicated that managers make agenda setting decisions, both analytically or intuitively, in a process that is largely internal to their minds. According to Burgoyne, effectiveness is related to the appropriateness of the plans and purposes to each other and to the situation, and is determined by ten skills, viz. (a) command of the basic facts of the situation; (b) relevant professional understanding; (c) perceptive skills; (d) problem solving and decision-making skills; (e) people skills; (f) coping with stress; (g) proactivity, achievement needs, persistence; (h) creativity; (i) mental agility; and (j) balanced learning.

In contrast to the first theory, Reddin's (1970) three-dimensional theory of managerial effectiveness emphasizes four basic styles of management, viz. (a) dedicated style, which is predominantly task orientated; (b) related style, which is mostly relationship orientated; (c) integrated style, which

is high on both task and relationship orientations and (d) separated style, which has little of either orientation. The important point is that each of these styles may be effective or ineffective, depending on their appropriateness in a particular situation. The skills he emphasized are "style flexibility" and "style resilience". The former referred to the ability to use a variety of styles to match a variety of situations (but not just for expediency); and the latter implied maintaining an appropriate style under stress rather than clinging to a style because of the fear of change. A third skill, that of situational sensitivity, is a necessary addition if effectiveness depends on using the appropriate behaviour to match the situation. According to Reddin (1970), a situation has five elements: the organisational philosophy, technology and three groups of people - superiors, co-workers and subordinates. "Maps" of these elements are drawn up according to the management style they require. The area of effectiveness exists where the style meets the requirements of the situation. Effectiveness as a function of the interaction between manager and environment is common to both Reddin's (1970) and Burgoyne's (cited in Langford, 1980) theories of

managerial effectiveness.

A third theory, that of Roskin, (1975) subscribed to understanding the Gestalt of effective management. Roskin agreed with Reddin (1970) that the nature of the appropriate management style depends upon the particular situation in which a manager finds himself. Furthermore, he argued that the situation shapes the manager's behaviour, regardless of the pattern of traits which he/she brings to it. Roskin (1975) is also pessimistic about the extent to which self-awareness leads to change in managerial behaviour. Roskin called a manager's position a "mission" and postulated six elements which influence it, namely the five put forward by Reddin (1970), with the addition of organisational structure. His three styles: task centred, situation centred and relationship centred, are similar to Reddin's (1970) dedicated, integrated and related styles. Similarly, in Roskin's theory effectiveness is also dependent upon (a) the extent to which a manager's actions match the behavioural demands of his mission; and (b) his awareness of himself, of others and of the relationships between the elements of the mission.

These three theories of managerial effectiveness indicate that managerial job behaviour is a function

of the individual and the environment or situation (McClelland, 1971). This observation has been supported by other researchers such as Stewart (1967) and Mintzberg (1973). In this regard, Stewart and Stewart (1981) have further suggested that managerial effectiveness is defined by a given position, at a given level, in a given firm.

Criteria of Managerial Effectiveness

Quantifying managerial performance and effectiveness has been industrial psychology's "major bugaboo" since its inception (Campbell et al., 1970). Koontz' (1971) extensive checklist against which to assess managerial effectiveness, is just one example that indicates that managerial effectiveness is not a matter that can be simply described.

In a review of both the psychological and business literature, Campbell et al. (1970) observed that the search for objective criteria has been both exhaustive and exhausting. The focus of managerial effectiveness research has been consecutively:

- The person - the qualities or traits of the manager him-or herself. Qualities such as high intelligence, assertiveness, extroversion, energy, decisiveness, ambition and emotional stability were considered to be essential for effective managers. However, those who

have these qualities may still not be effective managers and those who do not may still be effective (Adamson, 1970).

- The process - what managers actually did. The attempt to define effective management behaviour resulted in a circularity trap (Langford, 1980). Managerial activities were identified and labelled, for example, planning, organising, co-ordinating, staffing, reporting, budgeting, directing. It was claimed at the time that effective managers did these effectively. However, "effectiveness" was still to be conceptualized.
- The product - the goals and objectives achieved. Focus on the product as a criterion for managerial effectiveness was based on the erroneous assumptions that goals and objectives, together with the plans for their implementation, could be established clearly, unambiguously and with organisational consensus, and that the achievements of these goals could be adequately measured.

However, no generally accepted criteria for managerial effectiveness emerged from any of the three channels of investigation.

It is apparent from the literature that the difficulties encountered in establishing effectiveness

criteria have been intensified by the confusion of various concepts. More specifically, managerial effectiveness has often been confused with efficiency, managerial achievement, and leadership. These areas of confusion are considered below.

Reddin (1970) stated that in determining criteria, managerial effectiveness was often confused with either apparent efficiency or with personal effectiveness. Drucker (cited in Mumford, 1984, p.4) explained that "efficiency is concerned with doing things right. Effectiveness is doing the right thing". A manager can appear to be doing things right but still not be effective. Personal effectiveness involves placing the satisfaction of personal objectives before the objectives of the organisation. Furthermore, an effective person may not be an effective manager, although it is likely that an effective manager will also be efficient and personally effective (Langford, 1980).

Another source of confusion is the erroneous assumption of the synonymity between managerial achievement and managerial effectiveness. This source of confusion is illustrated with particular reference to managerial style, as interpreted by Blake and Mouton (1964, 1978).

Managerial style refers to a pattern of behaviour that the manager demonstrates, and values that he or she holds (Boyatzis, 1982a). As represented by Blake and Mouton's (1978) Managerial Grid, managerial style can be classified along two simple dimensions: concern for people and concern for production. According to Blake and Mouton, "effectiveness is associated systematically with grid style" (1985, p.34): The effective manager, designated as 9.9 on the Grid, exhibits maximum concern for people and for production. Less effective managers, designated as 9.1, 1.9 or some numeric combination in between, tend to lean toward one or the other of these dimensions. In two separate investigations of career advancement as a function of Grid styles, it was found that high managerial achievement was related to a high orientation towards the management of both production and people, that is, the 9.9 managerial style (Blake & Mouton, 1978). Based on these findings, it was intimated that managerial achievement and effectiveness are determined by managerial style. However, both managerial achievement and effectiveness encompass more than a two-dimensional people-and-production orientation. Although managerial style may play a part in both managerial

achievement and effectiveness, achievement is measured in terms of results (e.g. profit, number of sales) or, as in the context of Blake and Mouton's (1964, 1978) research, in terms of an individual's career advancement or success, and effectiveness involves the attainment of specific actions in a particular organisational context.

Various other managerial styles have also been prescribed for managerial effectiveness, including a results-orientated style (Ross, 1977) and a delegative management style (Sibson, 1976). Goldberg (1985) commends the view forwarded by Nelson (1984) that no one style of management is appropriate in all situations, a view contrary to that expressed by Blake and Mouton (1964, 1978). Kotter (1982a) also found that the supposition that all effective managers use essentially the same 'style' was not supported by the data in his research. While it appears that management style and managerial effectiveness are both situation-specific, managerial effectiveness amounts to more than just management style. More specifically, managerial styles are generally one or two-dimensional, whereas managerial effectiveness criteria are multi-dimensional. The notion that managerial style determines managerial effectiveness

confounds an understanding of managerial effectiveness through oversimplification.

Interestingly, Blake and Mouton's (1978) findings were duplicated by Hall and Donnell (1979) insofar as the overall implications are concerned: a high-task, high-relationship managerial style characterizes high achievers. However, these researchers concluded that style per se, is not a meaningful predictor of achievement on its own accord. A manager's progress in an organisation is often attributable to factors other than behaviour and performance of the individual which are the crux in determining his/her managerial effectiveness. Therefore, neither managerial achievement nor managerial style can be substituted for managerial effectiveness criteria.

Finally, managerial effectiveness is often confounded with leadership. In fact, more psychologists and management theorists have examined the notion of leadership than managerial ability (Stewart & Stewart, 1981). The confusion between effective leadership and effective management is not surprising, as they do share common elements, such as the concepts of power and situational specificity.

For leadership to be effective, it often must be supported by some measure of power (Beach, 1980).

Leadership involves the attempts by a person (leader) to affect or influence the behaviour of a follower (or followers) in a situation (Tannenbaum, Weschler & Massarik, cited in Beach, 1980). Power is a personal or positional attribute which is the base of one's influence (Hampton et al., 1982). French and Raven (1959) have identified five forms of power, viz. reward power, coercive power, legitimate power, referent power and expert power, while a number of other forms have also been distinguished by other authors too. The extent to which a leader has available for use the various elements of power, frequently determines the degree to which he or she can exert influence on the followers.

Recent research indirectly supports the view that the various forms of power are also significant in determining managerial influence and effectiveness. In analysing the network building process, Kotter (1982a) found that effective managers attempted to make others feel legitimately obliged to them by stressing their formal relationships, which could be interpreted as making use of legitimate, or position power. Effective managers act in ways to encourage others to identify with them, which could be seen as using referent, or personal power. They even

manoeuvre to make others feel that they are particularly dependent on the manager for resources, or career advancement, or other support, which could be understood in terms of using coercive or reward power. Similarly, effective leaders continually work at developing mutual obligations between themselves, superiors, subordinates and peers (Kotter 1982a). The people perceived as having the most organisational influence tend to be those who create the most interdependence with others (Hampton et al., 1982; Kotter, 1982a).

Research by McClelland and Burnham (1976) illustrated the notion of power in effective management. In their study of the motive scores of 50 managers of both high and low morale units in all sections of a large company, they found that better managers (as determined by high morale units) were high in power motivation, low in affiliation motivation, and high in inhibition. It is necessary to point out, however, that in this research power motivation is perceived to be the 'socialized' face of power as distinguished from the concern for personal power. More specifically, power is a measure of a person's desire to influence others for the benefit of the institution as a whole, rather than his/her

personal aggrandizement. This finding supports the view that influence is a central aspect of the managerial role (Hampton, Summer & Webber, 1982) and for influence to occur, managers must possess power.

Situational specificity is another concept that is common to both leadership and managerial effectiveness. Previous trait and behavioural approaches to leadership have been superseded in the academic literature by the "situational" or "contingency" approaches (Hampton et al., 1982). Fiedler's Contingency Theory of Leadership (Fiedler, 1967, 1971, 1978) advocates that leadership effectiveness is a function of the interaction between the leader and the leadership situation. In testing his contingency model of leadership in over fifty studies covering a span of 16 years (1951-1967) Fiedler concluded that both directive, task-orientated leaders and non-directive, relationship-orientated leaders are successful, but in different situations where situational favourability is determined by leader-member relations, task structure, and position power. Similarly, recent research indicates that managerial effectiveness is also contingent on the situation (Kotter, 1982a; Langford, 1980; Luthans et al., 1985; Stewart & Stewart, 1981).

Even though leadership and managerial effectiveness do have concepts in common, they cannot be considered interchangeable. More specifically, the manager has to lead, in addition to many other activities which are not commonly identified with the functions of leaders (Bowers & Seashore, 1966; Stewart & Stewart, 1981), and although a manager may also be a leader, a leader is not necessarily a manager (Hersey & Blanchard, 1982; Langford, 1980).

Over and above the apparent confusion between managerial effectiveness, efficiency, achievement and leadership, the criterion problem is compounded by the fact that the criteria for managerial effectiveness are contingent upon the situation, multiple and dynamic. In addition, they are often interrelated, shifting in nature, and changing in relative importance and composition with time (Langford, 1980). The only clear conclusion that emerges from this section is that the literature regarding criteria for managerial effectiveness is characterised by vagueness and a lack of consensus.

Managerial effectiveness criteria in this study. In a review of the literature on managerial effectiveness, Langford (1980) identified four broad groups of criteria in addition to an overall

effectiveness criterion, viz. (a) criteria primarily related to the manager's work (e.g. decision-making, problem solving); (b) criteria primarily related to the manager himself (e.g. average salary/grade for age, flexibility, judgement); (c) criteria primarily related to the manager's relationship with others (e.g. relationship with subordinates, leadership, power); (d) criteria concerning the manager as part of the organisation (e.g. maintenance of the organisation's policies and procedures, technical competence); and (e) general effectiveness which includes planning, organising, controlling, co-ordinating, achieving purpose, optimal resource allocation and balanced goal attainment. For a more detailed account of the extent to which researchers have used these criteria, the reader is referred to Langford's (1980) review.

The managerial effectiveness criteria for the present research are representative of criteria from each group identified by Langford (1980). These criteria, based on managerial job behaviour, form an integral part of both the performance appraisal system and assessment centre of the participating organisation. The operationalisation of managerial effectiveness in the present research is discussed in

more detail toward the end of this chapter. However, the performance appraisal and the assessment centre method are discussed in Chapters 5 and 6 respectively, and a list of the behavioural criteria can be found in the Method Chapter on pages 156 and 157 to 159.

Methods of Measurement

Second to the problem of establishing managerial effectiveness criteria is the method and technique of measurement. In a review of managerial effectiveness research (Langford, 1980), as many as twenty methods were identified, including repertory grids, critical incidents, attitude scales, personality inventories, interviews, ratings by superiors and ratings by peers, and questionnaires (based primarily on the rating scale). Questionnaires were found to be the method used most often, followed by attitude scales. For a more detailed account of the extent to which various researchers have used each method, the reader is again referred to Langford's (1980) review.

The methods used previously, however, appear to present a number of problems (Langford, 1980). Firstly, it is difficult to devise a universal questionnaire for managerial effectiveness, as questionnaires tend to be constrained by both time and place. Secondly, interviews, observations, critical

incidents and self-reporting techniques are more effective as supplementary, rather than primary sources of information as they are subject to much variance due to the differing expectations and perceptions of raters. The latter two techniques have been used effectively, however, by researchers such as Mintzberg (1973) and Stewart (1967), and observations have been effectively used by Kotter (1982a) though all three researchers were concerned with the nature of managerial work rather than managerial effectiveness per se. Finally, diagnostic and clinical methods (e.g. aptitude and ability tests, attitude scales and personality inventories), together with task simulations, have more value as predictive, selective techniques, rather than as measures of effectiveness.

According to Langford (1980), rating scales were the most commonly used method, while the rating of a manager by his or her peers was the most objective. Campbell et al. (1970) cited numerous studies illustrating the predictive and concurrent validity of peer ratings. However, both Reddin (1970) and Schaffer (1971) cautioned against the lack of rationality and objectivity in ratings; they used the Freudian concepts of defence mechanisms and projection

to illustrate how bias can arise. Similarly, both Porter and Lawler (1968), and Fiedler (1967) give solid statistical and methodological backing to the idea that we respond to others who are like ourselves and rate them accordingly.

More recently, however, the Behaviourally Anchored Ratings Scale (BARS), a rating scale technique developed by Smith and Kendall (1963), has been used to assess effective performance in diverse occupational areas. For example, nurses (Zedeck & Baker, 1972); systems analysts and computer programmers (Arvey & Hoyle, 1974); secretaries (Borman, 1974); supermarket checkout operators (Fogli, Hulin, & Blood, 1971); naval officers (Borman & Dunnette, 1975); university and college lecturers (Harari & Zedeck, 1973; Bernadin, Alvares & Cranny, 1976; Burnanska & Hollman, 1974); and engineers (Williams & Sieler, 1973). However, to the knowledge of the present author, apart from studies which investigated retail management (Campbell, Dunnette, Arvey & Hellervik, 1973; Staples & Locander, 1975), BARS have not been used to measure managerial effectiveness. Researchers continue to investigate whether BARS are superior to other methods in relation to methodological and psychometric concerns, such as

halo effects, leniency errors, reliabilities, central tendencies and discriminant validities (Langford, 1980).

Synopsis

It is evident from this discussion that managerial effectiveness research remains equivocal with regard to both the criteria for managerial effectiveness and method of measurement. However, there appears to be consensus that (a) managerial effectiveness criteria are contingent upon the situation, the situation being the manager himself, his or her position and tasks, his or her relationships with others, the organisation and the socio-economic environment; and (b) that managerial behaviour is the key to determining managerial effectiveness. Furthermore, the literature suggests that within these parameters, it is necessary to consider a broad range of behavioural criteria, including those primarily related to the manager's work, the manager's characteristics, the manager's relationship with others and those pertaining to the manager as part of the organisation (Langford, 1980).

Consistent with these indications, managerial effectiveness was operationalised in the present research in terms of behavioural criteria related to managerial job performance in a specific

organisation. Although this had the effect of reducing the sample size, it was considered more important to conform with the situationist-contingency approach and the notion that behaviour is a function of the individual and the environment (McClelland, 1971). The behavioural criteria form part of the performance appraisal and assessment centre method used by the participating organisation. These techniques will be discussed in Chapters 5 and 6 respectively, and the behavioural criteria will be included in Chapter 8 (pages 156 and 157 to 159). In addition, the Managerial Achievement Quotient (MAQ), a formula developed by Rhodes and used previously in research on managerial achievement (Blake & Mouton, 1978; Hall & Donnell, 1979) was included as a third, objective measure of managerial effectiveness. The derivation of the MAQ is dealt with in Chapter 8.

The use of the behavioural criteria of an organisation's performance appraisal and assessment centre method constitutes both an innovative and exploratory approach to the operationalisation of managerial effectiveness. Yet, at the same time, it is consistent with the lack of generally accepted managerial criteria and methods of measurement, as well as the need to measure managerial effectiveness

in behavioural terms. Chapters 5 and 6 on these techniques do not presume to be in-depth literature reviews. They have been included merely as an explanation and justification of the use of the behavioural criteria that pertain to these two techniques as employed by the participating organisation.

Chapter 5

PERFORMANCE APPRAISAL

Appraisal of others is a naturally occurring phenomenon (Banner & Graber, 1985). In our daily lives we continually evaluate and form opinions of the people with whom we interact (Beach, 1980). Individuals in organisations are also subject to this process. Whereas appraisal is carried out quite casually, often subconsciously, and rarely systematically in social relations, the question arises whether it should be formalized into a systematic programme in the organisational context (Beach, 1980). Pressure to evaluate develops both at the organisational and the individual level: it is assumed that organisational effectiveness is an aggregate of individual performance (Mohrman & Lawler, 1983); employees also desire information about the effectiveness of their contributions (Ilgen & Feldman, 1983). Thus, "performance appraisal of some form or another is a necessity, not an option" (Lawler, Mohrman & Resnick, 1984, p.21). It is not a matter of whether to appraise employees, but a question of "how" to evaluate them.

This chapter is not intended to be a prescriptive

"how to" on performance appraisal. Instead, it deals with various aspects related to contemporary theory and practice of performance appraisal, or "the state of the art", so to speak. It includes a discussion of (a) the measurement of performance appraisal, which includes the purpose, criteria and format of appraisals; (b) performance appraisal techniques; and (c) issues related to performance appraisal effectiveness. However, prior to discussing performance appraisal, it is necessary to first consider what is meant by performance.

Performance

Valence-instrumentality-expectancy, or VIE, theory was selected for the present research as the basis for understanding performance. The reasons it was selected, rather than other motivation theories, are threefold: Firstly, it is one of the few work motivation theories that link motivation with performance. Secondly, VIE theory recognizes the skill/ability component of performance, and the organisational variables that impinge upon it. Finally, it has become central to industrial psychology (Barling, 1986), as can be seen from the emphasis it has attracted in recent reviews of work motivation (e.g. Campbell & Pritchard, 1976). There

are numerous variations of the VIE approach. The brief discussion below is guided by Lawler (1973) and Campbell and Pritchard's (1976) interpretations (Barling, 1986).

The VIE model of performance was originally formulated by Vroom (1964). Unlike the theories of Maslow or Herzberg, this model does not explain the factors or content of what motivates people to work. Rather, it provides insight into the thought processes (which may be conscious and organized, or subconscious and disorganized) of an individual in deciding whether or not to exert the effort (Beach, 1980). The general aim of VIE theory is to predict effort-to-perform. VIE focuses on three cognitive beliefs that together predict effort. Thus:

Effort = f {Expectancy x Instrumentality x Valence of task contingent outcomes}.

To understand the expectancy model of performance, it is necessary to examine these three constituent beliefs and the nature of their interrelationship.

The expectancy component refers to the belief that given sufficient effort, successful performance will ensue. This probability is subjectively determined by the individual. The individual's self-esteem and past experiences in similar situations are the main

determinants of the expectancy belief. Generally, high self-esteem and successful experiences in the past would enhance current expectancy beliefs.

The instrumentality component reflects the belief that successful performance would result in a particular outcome. Outcomes are classified according to two levels: first level outcomes, both intrinsic (e.g. recognition) or extrinsic (e.g. pay) are provided by the organisation and are directly contingent on the task; second-level outcomes would be obtained from the use of a first-level outcome (e.g. the accumulation of pay to make a down payment on a new house). The main determinant of an individual's instrumentality beliefs is the extent to which the organisation links various outcomes to effective performance. If rewards are made contingent on effective performance, the instrumentality belief is likely to be relatively strong, and vice versa.

The final component is that of the valence of task contingent outcomes. This reflects the value any individual places on the outcomes available, or the extent to which he or she desires a particular outcome. The valence belief is determined primarily by two factors, viz. the equity of the outcome or reward (the extent to which the individual considers

the reward to be fair or reasonable) and the extent to which the reward or outcome is perceived to be capable of gratifying the individual's various needs.

These components reflect individuals' beliefs about the relationship between events, not necessarily the reality of the situation. The subjective probability of both the expectancy and the instrumentality belief vary from one to zero, whereas valence is considered to vary from +1 (positive highly desired outcomes) to -1 (negative or aversive outcomes). Moreover the interrelationship between the three VIE beliefs is multiplicative rather than additive. Conceptually, it follows that if any of these beliefs is low, final effort-to-perform would also be low. If the expectancy belief is low, for example, no matter how high an individual's instrumentality or valence beliefs in this situation, actual effort expended would be minimal. In contrast, an additive relationship would suggest that some effort would be expended, which is probably a false assumption. Effort, however, is not synonymous with performance. Effort interacts with skill/ability in predicting actual performance. Again this relationship is multiplicative: A high level of ability accompanied by little skill would result in

minimal performance. To achieve maximal performance, both effort (as a function of {expectancy x instrumentality x valence}) and skill/ability must be optimal.

Performance and Performance Appraisal

With the VIE theory as a framework for understanding performance, it is considered necessary to examine the nature of the relationship between performance and performance appraisal. Performance appraisal is defined as the systematic evaluation of the individual's performance on the job and his or her potential for development (Beach, 1980). To recapitulate - individual performance is the result of the interaction between skills, ability and effort. Lawler and Mohrman (1983) suggest that performance-appraisal information can be used in a number of ways that will in time affect skills, ability and effort in such a way as to improve performance. More specifically, the appraisal of performance affects various organisational activities, which, in turn, influence future performance (and hence, organisational effectiveness). This occurrence is illustrated by the examples cited below, as explained by Lawler and Mohrman (1983).

As a first example, appraisal information is an

indication whether or not previously used selection criteria were able to predict performance. By adjusting the selection criteria accordingly, the level of skills and abilities are affected. Similarly, training based on performance appraisal information also affects the level of skills and abilities found. Appraisal can also identify those individuals appropriate for new job placement or promotion, as well as validate previously used promotion and placement criteria. When pay is based on performance, pay increases can act as incentives to increase effort and performance. Various forms of feedback and performance-orientated discussions between appraisers and appraisees may lead to an increased understanding of effort (through increased knowledge of the valencies, instrumentality, and expectancies of the individual), and an improvement in skills and ability. Clearly, the relationship between performance, performance appraisal and other organisational systems is an important consideration.

Performance appraisal is increasingly recognized as the core of effective human resources management systems and as one of the major tools employed in the organisation control process (Brinkerhoff & Kanter, 1980; Lawler et al., 1984). As an essential part of

the human resources management system, performance appraisal needs to flow from the way job design is approached in the organisation (Lawler et al., 1984). In addition, performance appraisal has to be clearly related to organisational actions such as selection, training, motivation, compensation and career development (Beach, 1980; Lawler et al., 1984; Lee, 1985). Accuracy in measuring performance appraisal has been a major concern, as the actions based on information from the performance appraisal have critical implications for both the individual and the organisation (Lee, 1985).

Measurement in Performance Appraisal

Performance appraisal serves two main purposes, namely, an evaluative or judgemental function, or a developmental function (Banner & Graber, 1985; Brinkerhoff & Kanter, 1980; Cummings & Schwab, 1973; Henderson, 1984). Results of appraisals in the context of the former are used (as described in the previous section) for administrative decisions such as promotions, transfers, training, and decisions concerning pay. Used in the context of the latter, appraisals facilitate improvement in relevant job skills, career planning, employee motivation, and effective coaching and information exchange between

appraiser and appraisee. Interestingly, research found these developmental aspects to be positively linked to employee effectiveness (Brinkerhoff & Kanter, 1980). However, when the same appraisal information is used for multiple personnel decisions (e.g. pay increases, training interventions, identifying areas for improvement and growth), error associated with these judgements will be greater than the error expected if judgements were made on independent sets of evaluation and developmental data (Banks & Murphy, 1985).

In the history of the use of appraisals, the trend has been toward basing appraisal criteria more on observable behaviours than "visible" personality traits, such as dependability, personality, and honesty (Banner & Graber, 1985; Brinkerhoff & Kanter, 1980; Henderson, 1984). Banks and Murphy (1985) observed that, probably since the development of the Critical Incident Technique (Flanagan, 1954), researchers have believed that observation of job behaviour is crucial for the reliability and validity of appraisal. Observation of the appraisee's actual behaviour is assumed to be a determinant of the accuracy of performance appraisal, based on the assumption that such observations are objective,

verifiable and that they can be closely linked to job analysis information (Dunnette, 1966). More recently, research lent support to the association between observation and appraisal accuracy (Bernardin & Walter, 1977; Murphy, Garcia, Kerkar, Martin & Balzer, 1982; Thornton & Zorich, 1980).

In general, measures of effective job performance centre around job-related behaviour (e.g. "presented report clearly" and "followed up promptly with client") and job-related outcomes, output or results (e.g. "increased net sales by seven per cent", "reduced customer complaints by five per cent"). According to Carroll and Schneier (1982), the criteria for performance appraisal formats based on job-related outcomes - such as production data (e.g. number of widgets per hour) or personal data (e.g. attendance) or management by objectives (MBO) - are more objective, as they are typically based on quantitative standards (Henderson, 1984). In contrast, behaviour-based appraisal formats are more subjective, focusing on "how" the task was accomplished, based on qualitative standards. The varieties of checklists, and rating scales, such as BARS, or behaviour observation scales (BOS), describe acceptable behaviours, instead of measuring or quantifying job

output. These and other performance appraisal formats are presented later in this chapter.

Job performance measurement involves establishing what criteria are to be measured (Banner & Graber, 1985). These criteria are generally determined directly from analysis of job content and job behaviour (Henderson, 1984), preferably by both appraiser and appraisee (Banner & Graber, 1985; Henderson, 1984; Lawler et al., 1984). Choice of a behaviour-based and/or outcome-based performance appraisal format should be dependent on the nature of the tasks involved (Lee, 1985). Where end results are out of the employee's control (e.g. due to dependence on co-workers or client demand) or when the manner of performance itself is important (e.g. improves interpersonal relationships among team members, speaks clearly and is easily understood by people attending briefing), job behaviours are probably the best criteria (Banner & Graber, 1985). However, when end results are within an employee's control and important, Banner and Graber (1985) suggested that criteria related to job-outcomes are probably the most appropriate.

Performance Appraisal Techniques

Researchers have developed a wide variety of

appraisal instruments (Henderson, 1984). Depending on the desired outcomes and uses of the performance appraisal programme, one kind of instrument may be more appropriate than another. The extent of the available instrument options is perhaps an indication of the complexity of the matter. Performance appraisal techniques can be classified under three general headings: (1) comparative procedures; (2) absolute standards; and (3) management by objectives. Performance appraisal formats pertaining to these categories are briefly outlined and evaluated below. For a more detailed account of these formats and the procedures involved in their construction, the reader is referred to Cummings and Schwab (1973), Latham and Wexley (1981) and Henderson (1984), on whose work this discussion is based.

Comparative procedures are generally characterised by two features: (a) the evaluation is made by comparing an appraisee against other appraisees on the dimension(s) of interest; (b) this comparison is generally made on one global dimension which attempts to identify the incumbent's overall effectiveness. Four popular comparative procedures are straight ranking, alternative ranking, paired comparison procedures, and forced distribution. The

first three procedures are similar in that they all rank the appraisees. Because the evaluator is required to array appraisees from high to low, ranking procedures are not subject to inter-individual constant errors such as leniency, central tendency and strictness. Moreover, the procedures usually provide adequate inter-rater reliability. However, they are limited in that (a) appraisees are generally ranked on only one dimension as a measure of success, which amounts to an oversimplification of the extremely complex phenomenon of job performance; (b) using ranking procedures for developmental and feedback purposes is difficult; and (c) ranking is weak when comparing the members of one group to those of another.

The fourth procedure, forced distribution, usually includes comparisons on several performance factors rather than on one global dimension, and is considered therefore, superior to the first three procedures. This method requires the rater to allocate a certain percentage of work-group members to categories which together approximate the bell-shaped curve or normal distribution. However, there is always the possibility that the appraisees as a group do not conform to whatever distribution is established.

Appraisal systems using absolute standards can be differentiated generally from comparative systems on two points. Firstly, each individual is evaluated against one or several written standards rather than against other employees. Secondly, several components of overall performance are measured rather than a single global dimension typically measured in comparative procedures.

There are two general absolute standards methods. The first is qualitative methods, such as critical incidents, weighted checklist and forced choice; here evaluators are asked to identify whether the appraisee possesses or does not possess, in a qualitative sense, some performance characteristic. The second is quantitative methods, such as conventional rating and BARS, BOS, Behavioural Expectation Scales (BES), and the Performance Distribution Assessment (PDA); These methods attempt to measure the degree to which each appraisee possesses certain characteristics.

The typical appraisal instrument that uses a rating scale, lists or describes a particular performance related quality and then provides some type of scale for the rater to identify the degree to which the ratee has demonstrated that quality.

Conventional rating scales include the multiple-step rating scale, the graphic rating scale and the summated rating scale. However, performance appraisal by conventional rating is also subject to limitations such as halo error, and the inter-individual errors of leniency, strictness and central tendency. In addition, conventional ratings often focus on appraisees' personality characteristics rather than their performance behaviour. As mentioned previously, the more recently accepted performance appraisal procedures focus on the behaviours, rather than the traits, associated with the job. Finally, the quantification of rating scales may provide a sophistication that has no valid base.

Each of the alternative absolute standards methods were designed to correct one or several limitations of conventional rating. Weighted checklist and forced choice procedures, for example, attempt to differentiate between observing behaviour and the evaluation of that behaviour by keeping the values reflecting the favourability of each item off the appraisal form. These procedures result in reduced constant errors, particularly interindividual errors such as leniency. The behaviourally anchored approach is also a most attractive alternative to

conventional ratings due to its potential value for employee development through a feedback program.

The methods of BES (originally formulated by Smith and Kendall (1963) and later renamed BARS) and BOS (developed by Latham and Wexley (1977)) employed behaviour scales which identified a complete range of job behaviours. These scales, which ranged from unacceptable to superior, were applied to each performance dimension that together describe an entire job. By going over each scale, the appraisee can be shown the types of behaviours which are desired by the organization. The major difference between BARS and BOS is that instead of simply identifying the behaviours of a ratee exhibited during a rating period, the rater scores each item relative to its observed frequency of occurrence. However, a critical weakness of the BOS method is the distinct possibility that a given frequency interval may indicate a much higher level of satisfactory performance for one behaviour than it does for another (Bernardin & Kane, 1980).

Kane (cited in Henderson, 1984) has proposed a new technique, Performance Distribution Assessment (PDA), contending that it offers some unique advantages over all previous methods. These

advantages include: (a) having content tailored to each individual ratee's job while yielding scores on a ratio scale that allows direct comparisons between all jobs and positions, within and between organizations; (b) excluding from consideration in the scoring the extent to which each ratee's output record fell short because of extraneous factors beyond his or her control; (c) allowing the performance of each job function to be scored for its consistency and the degree to which the negative outcome range and average outcome level are avoided; and (d) minimizing the possibility of rater bias by reducing the nature of the data elicited from the rater to the most elementary, non-evaluative level. However, the advantages of the PDA over other appraisal techniques awaits further verification.

MBO is very different in concept from the other appraisal methods. It was initiated primarily as a developmental tool rather than an evaluative one, and, as such, it possesses a number of distinct advantages. MBO, unlike other absolute standards methods, sets unique standards for each ratee. By participating in the setting of goals, the ratee acquires a stake or vested interest in trying to meet them. In addition, the ratee's targets and

responsibilities are set and evaluated in terms of his or her particular situation and abilities. The emphasis is also upon the present and the future, which can be controlled. In conventional appraisal, the focus is upon the past, which cannot be altered. However, from an evaluation perspective, MBO has certain limitations in terms of distributing rewards equitably to groups of individuals. In addition, because goal setting and goal attainment is so individualized, it is difficult to compare the performance of one person with another or to a uniformally applied standard.

The options and combinations possible from the various methods and techniques available for appraising performance are seemingly limitless. It is up to the designers and implementers to analyse their situations, identify the requirements they wish to satisfy, and select those procedures and instruments that will meet both organisational and employee demands.

Effectiveness of Performance Appraisal

Performance appraisal effectiveness refers to "the accuracy of performance observations and ratings as well as the ability of the performance appraisal process to improve the appraisee's future

performance" (Lee, 1985, p.323). Despite the obvious need for formal systems of performance appraisal and the rapid rate of their adoption, there has been relatively little critical examination of what is known about their effectiveness and limitations (Brinkerhoff & Kanter, 1980). More specifically, much of the research on performance appraisal has focused exclusively on the construction and evaluation of performance rating formats and their psychometric properties in an effort to increase performance rating accuracy (Henderson, 1984; Ilgen & Feldman, 1983; Lawler et al., 1984; Lee, 1985; Mohrman & Lawler, 1983). Yet there is still no agreement on the "best way" to appraise performance, as evidenced by the variety of techniques (Walker, 1980). Moreover, Kavanagh (1982), as well as Landy and Farr's (1980) reviews of the performance appraisal literature show no consistent avantage for using one type of performance rating format in increasing the accuracy of rating (Lee, 1985).

It has been suggested that effective performance appraisal continues to be a "compelling but unrealized goal" (Banks & Murphy, 1985, p.335) because the narrow and somewhat simplistic approach of performance appraisal research has tended to

overlook the numerous factors that affect the effectiveness of performance appraisal (Landy & Farr, 1980; Mitchell, 1983). More specifically, Lawler et al. (1984) argue that the effectiveness of performance appraisal is determined by focusing on the process of the appraisal, and on the organisational context in which the event takes place, not on the form or system. The appraisal format used - and the sources of data - should be appropriate to the specific work setting. In addition to illuminating the enigma of the effectiveness of performance appraisal, the contingent nature of performance appraisal is perhaps the reason why "one best method" has not been found (Brinkerhoff & Kanter, 1980).

Contingent nature of performance appraisal.

Mohrman and Lawler (1983) demonstrated how, until recently, the reality that appraisal systems do not exist in a vacuum had hardly been considered. These authors emphasised that the organisation presents a context with a number of dimensions, each of which has a distinct moderating effect on the appraisal system. Among the contextual dimensions, they identified the job characteristics and functional areas of the appraisee, the structural nature of the

organisation (such as its authority relationships and communication networks), and less easily defined aspects, such as the organisational climate and culture, and the nature of interpersonal relationships. Similarly, Mitchell (1983) and Ilgen and Feldman (1983) suggested various social contexts, such as the nature of the task, the continuous work group, the similarity in attitude between rater and ratee, and the opportunity for making observations, all of which possibly influence the effectiveness of appraisal.

Mohrman and Lawler (1983) argued that when the dimensions of the organisational context are not taken into consideration, there is a real possibility that they may undermine the potential effectiveness of a performance appraisal system. Other researchers have also expressed concern regarding the consistency or "fit" between dimensions of the organisational context and the performance appraisal system (e.g. Banner & Graber, 1985; Brinkerhoff & Kanter, 1980; Ilgen & Feldman, 1983; Landy & Farr, 1980; Lee, 1985; Mitchell, 1983). However, empirical research in this area is comparatively sparse (Mitchell, 1983). A recent study by Lawler et al. (1984), reported immediately below, illustrates the potential nature

of contextual effects.

The following findings by Lawler et al. (1984) were based on questionnaires completed by 320 manager-subordinate pairs from nine diverse organizations within the General Electric Corporation. As Resnick and Mohrman (cited in Mohrman & Lawler, 1983) have also found previously, performance appraisal was viewed as more effective by subordinates who perceived their jobs as being enriched or well-specified. Furthermore, subordinates viewed performance appraisal as more effective in an organisational climate characterised by high trust, support and openness. With regard to procedural issues and their impact on performance appraisal, it was found that the discussion of pay seemed to enhance the performance appraisal event for both appraiser and appraisee. In addition to this same finding, Prince and Lawler (cited in Mohrman & Lawler, 1983) also found that as a result of discussing pay during performance appraisal, both parties were more open to constructive discussion of other issues too, such as areas of performance which needed improvement. It appears that in an organisational context where pay for performance is a strong cultural norm, pay is a subject that should be

discussed during performance appraisal (Mohrman & Lawler, 1983).

Based on these findings, Lawler et al. (1984) concluded that aspects such as organisational culture, job design, the relationship between pay and performance, the timing of career-development discussions, and the degree to which subordinates have equal influence on the appraisal process, appear to be more important than the form used. A performance appraisal system is unlikely to be effective where jobs are poorly designed, the culture is negative, and where subordinates are expected to be passive and submissive. In sum, they argued that performance appraisal is only as effective in an organisation as its overall human resources, climate, strategy and policies, and particularly its process of fitting the performance appraisal to these characteristics.

Rating errors and appraisal judgements. In addition to the potential effects of contextual dimensions, rating errors are another potential threat to the effectiveness of performance appraisal (Henderson, 1984; Latham & Wexley, 1981). The prevalence of these errors is often a function of the format of appraisal that is used, as indicated in the

previous discussion on performance appraisal techniques. Rating errors may be defined as "the difference between the output of a human judgement process and that of an objective, accurate assessment uncolored by bias, prejudice, or other subjective extraneous influences" (Latham & Wexley, 1981, p.117). Common rating errors include contrast effects, first impressions, halo effects, similar-to-me effects, central tendency, and positive and negative leniency. The reader is referred to Beach (1980) and Latham and Wexley (1981) for an elaboration of these appraisal errors.

In addition to these often "unconscious" biases, raters are often strongly motivated to record ratings which differ significantly from their evaluations (Mohrman & Lawler, 1983). Banks and Murphy (1985) provided an example: because raters and ratees have to live and work together after the appraisal event, raters are often motivated to avoid giving low ratings, regardless of how poorly the ratees perform. Although research on cognitive processes holds promise for increasing the ability of raters to judge accurately, in the opinion of these authors, it does not necessarily address the rater's willingness to provide accurate ratings. They suggest that

organisations also consider factors which affect each rater's motivation to record the true evaluations he or she has made.

As alluded to above, some recent research has focused on the investigation of the cognitive processes underlying the rater's appraisal of performance (e.g. Cooper, 1981; De Nisi, Meglino & Cafferty, 1984; Feldman, 1981; Ilgen & Feldman, 1983; Murphy, Balzer, Kellam & Armstrong, 1984; Murphy, Balzer, Lockhart, & Eisenman, 1985; Murphy, Garcia, Kerkar, Martin & Balzer, 1982; Murphy, Martin, & Garcia, 1982). In all likelihood, insight gained from such research will provide methods of improving appraisal judgements. The issues that have been studied range from ways in which raters decide what to observe, to distortions in memory for behaviour.

Feldman (1982) and Ilgen and Feldman (1983) have observed, for example, that people judge one another on the basis of factors or categories of which they are unaware (i.e., automatic processing). Raters thus often form their own reality on the basis of information available to them, selectively attending to some behaviours while ignoring others. As a result, performance appraisal rating may be based on a mixture of relevant and irrelevant criteria, or

behaviours unlikely to be representative of the ratee's job-related behaviours. As a way to reduce cognitive errors and to improve the relationship between observational accuracy and accuracy in rating performance, Lee (1985) proposed that the performance appraisal system should be tailored to fit ratee task characteristics. Clearly, the contingent nature of performance appraisal is also an important feature of the cognitive process approach. Although cognitive research has generated much information about processes involved in evaluating others, Banks and Murphy (1985) argued that this knowledge has not yet proved useful in practice.

Conclusion

Thus it is apparent from the above discussion that if there is one point of agreement in the literature on performance appraisal, it is that the best or most effective method of performance appraisal is the method most congruent with the social and situational conditions of a particular organisation. Conceptually, such a conclusion is consistent with the situational specificity of managerial effectiveness (as indicated in the previous chapter), particularly since effective performance is a fundamental component of effective

management (Boyatzis, 1982a, 1982b). As a consequence of the contingency nature of performance appraisal, the validity of a particular performance appraisal method would also be specific to the organisation and the level or function for which it is designed. It is for this reason that the present chapter does not contain a section on the validity of performance appraisal.

The organisation participating in the present research utilizes the conventional ratings approach. Their performance appraisal is based on eleven behavioural criteria, each rated on a nine-point scale. The behavioural criteria are applicable across a range of managerial functions and levels. Performance is therefore judged against consistent criteria. Since the behavioural criteria discriminate between successful and unsuccessful performance in terms of managerial job behaviour, and since managerial job behaviour is fundamental to managerial effectiveness, the eleven behavioural criteria of the performance appraisal were included in the present research as a measure of concurrent managerial effectiveness. A more detailed account of the organisation's performance appraisal procedure and behavioural criteria can be found in Chapter 8.

Chapter 6

ASSESSMENT CENTRES

As an introduction to this chapter, it is considered necessary to examine briefly the relationship between managerial effectiveness, performance and potential. By now, the reader is familiar with the notion, developed in Chapter 4, that managerial effectiveness is a function of the behaviour of a manager in the context of a particular organisation (Boyatzis, 1982a, 1982b; Kotter, 1982a; Langford, 1980; Luthans et al., 1985; Whitely, 1985). Furthermore, managerial behaviours that are consistent with the policies, procedures and strategies of the organisation result in effective job performance (Boyatzis, 1982a; 1982b). In Chapter 5 it was indicated that performance appraisal is the systematic evaluation of job-relevant behaviours (Beach, 1980; Henderson, 1984). In the same chapter, it was explained that performance, which is also situational-specific (Banner & Graber, 1985; Brinkerhoff & Kanter, 1980; Ilgen & Feldman, 1983; Landy & Farr, 1980; Lee, 1985; Mohrman & Lawler, 1983; Mitchell, 1983), is in turn determined by an individual's effort, skill and ability (Vroom, 1964).

The individual's ability or potential therefore assumes considerable importance. Hence, it is necessary to establish whether an individual has the potential to behave in ways conducive to effective managerial performance, in the first place. The approach generally described as "assessment centre" presents such a method.

In a nutshell, an assessment centre is a systematic method for assessing managerial potential in terms of job related behaviours (commonly referred to as behavioural dimensions). The link between managerial effectiveness, performance and potential provides the underlying rationale for using the data from the assessment centre as indications of managerial effectiveness in the present research. The operationalization of managerial effectiveness according to behavioural criteria of an assessment centre (which are related to managerial job performance in a specific organisation) is an innovative application of the assessment centre method. Yet, at the same time, it is consistent with both the lack of generally accepted criteria for managerial effectiveness and method of measurement, as well as the need to operationalize managerial effectiveness in behavioural terms (as indicated in

Chapter 4).

The appropriateness of this approach is demonstrated in the following disscussions of (a) the assessment centre compared with various other methods of assessing potential; (b) the unique method and procedure of the assessment centre; and (c) the validity of assessment centres. The content of this chapter is based on an extensive review of assessment centre methodology and research by Thornton and Byham (1982), which, to the knowledge of the present author, is the most recent review available.

Measures of Potential

According to Thornton and Byham (1982), judgements of competence to perform in a future management position are usually based on one of five sources of information: (a) evaluation of job success and potential by current supervisors; (b) results from traditional paper and pencil tests; (c) clinical evaluations by psychologists and related professionals; (d) background interviews; and (e) observations in job simulations in an assessment centre. While each of these approaches has strengths that can be utilized in a co-ordinated programme for the prediction of management potential, each also has weaknesses.

Some examples could illustrate the potential weaknesses of these approaches. For instance, judgements by supervisors may be biased in several respects, including lack of opportunity to observe the person in situations that are relevant to the higher level job, and/or lack of knowledge of higher level job demands (Adams & Fyffe, 1969). The major problems associated with the clinical interview also stem from lack of knowledge of job demands, as well as the degree of validity inherent in the procedures. More specifically, abstract diagnoses of adjustment are not usually effective predictors of managerial behaviour. The use of paper-and-pencil tests have proved valid in numerous studies (Campbell, Dunnette, Lawler & Weik, 1970) and remains a valuable method. However, the general public and trade unions in particular, are increasingly resistant to such tests on account of their low face validity and even other forms of validity, on occasion, as well as the intrusion on personal privacy. These factors and the growing demands for empirical evidence of validity and fairness (Equal Employment Opportunity Commission cited in Thornton & Byham, 1982) have led to the search for alternative methods of assessment.

Thornton and Byham (1982) argued that the

assessment centre method of using simulations of actual managerial behaviour, has features that avoid the problems inherent in other approaches. In contrast to other measurement procedures, assessment centres are characterised by multiple assessment procedures and multiple assessors, by standardized exercises, by both subjective and objective data gathering, by a behavioural orientation, by judgemental (rather than actuarial) methods of combining the information gathered, by a concern for the whole person, and by prediction of adequacy of performance on a variety of criteria. Despite the many unique features of assessment centres in different organizations, these features are common to all such programmes. These characteristics will become manifest in the ensuing discussion of the assessment centre method and procedure. Thornton and Byham (1982) stressed, however, that an organization could benefit at times from using any one, or a combination of the five approaches listed above, particularly where the use of assessment centres is not practically feasible.

Assessment Centre Method and Procedure

An assessment centre is a standardized procedure (not a location) that uses multiple assessment

techniques to evaluate employees for a variety of manpower purposes and decisions (Thornton & Byham, 1982). Most frequently, the approach has been applied to individuals being considered for selection, promotion, placement, or special training and development in management. Assessment centres have their greatest value when the participant is aspiring to a job significantly different from the position held. The assessment centre simulates the job requirements for the new position, so providing an opportunity - which is not available from observation of performance on the current job - for evaluating skills. Furthermore, the exercises are standardized and facilitate immediate judgements of performance based on specific behaviours.

Assessment centres employ a number of assessment techniques to ensure extensive coverage of management abilities. These techniques or exercises are designed to sample behaviour relevant to the job requirements, without however duplicating the actual job situation. In a management assessment centre, for example, behaviours relevant to planning, problem analysis, and interpersonal sensitivity, can be elicited by an exercise, without replicating the company policies, procedures and personnel of the actual target job for

which candidates are being considered. Typical exercises include management games, leaderless group discussions, role-playing, analysis problems, interview simulation exercises, in-baskets, and written case studies. These and other simulation techniques are used most frequently, and a few organisations also use a background interview or psychological tests. The reader is referred to Thornton and Byham (1982) for a detailed account of these techniques. In the previous chapter it was noted that there is no "best method" of performance appraisal (Walker, 1980), possibly due to situational peculiarities. Similarly, there is no agreement on the best type of assessment instrument. Assessment centre research strongly suggests that each technique contributes uniquely to the overall assessor judgements of management potential, and subsequent performance and progress in management positions (Thornton & Byham, 1982).

The job simulations allow the participant to engage in job-like managerial situations and to display job-relevant behaviours, such as administrative decision making, discussions in small groups, and one-to-one interactions with employees. Decisions pertaining to the selection of exercises are

based on the ability of the exercises to elicit efficiently (a) the target behaviours defined as important in terms of job performance; and (b) reliable observer judgements of behaviour. Each exercise in an assessment centre should tap one or more behavioural dimensions of managerial work. Attempts are made to identify behaviours associated with successful and less successful job performance by means of various job analysis techniques, and the most common and important behaviours are then grouped together under labels, usually referred to as dimensions. A dimension is defined as a cluster of behaviours that are specific, observable and verifiable, and that can be reliably and logically classified together. Dimensions are chosen if they are essential to the job and can be observed in the exercise.

It is important to explain further the conceptualization and operationalization of dimensions. The use of dimensions is fundamental to the assessment centre method, and hence to the measurement of managerial effectiveness in the present research. Dimensions differ from both "tasks" and "traits" constructs which have in the past been used previously to identify effective managers. In

contrast to tasks, which state what is accomplished on the job, dimensions are defined in terms of the specific behaviours the person carries out to accomplish the tasks. For example, "planning" is considered a common managerial function or task. The dimension "planning" is often used in assessment centre programmes and is defined by behavioural examples such as, "made a list of meetings with agenda items for his return to the job", "anticipated and stated several problems that might arise if the recommendations were adopted", and "gave suggestions for dealing with each problem".

The use of behaviour to define dimensions also distinguishes dimensions from traits. This distinction echoes the trend towards basing performance appraisal criteria on job-related behaviours rather than traits (Banner & Graber, 1985; Brinkerhoff & Kanter, 1980; Henderson, 1984), as indicated in the previous chapter. Usually traits are thought to be underlying personality constructs that determine behavioural consistency across situations. They are assumed to be "causal" variables that define a person's stable and enduring nature at work, at home, or during leisure time. Although some dimensions may look like traits, they are

behaviourally defined and observed and do not require judgements about underlying personality constructs. For example, "sensitivity" subsumes such behaviours as, "asked the person how she would feel if the plan were implemented" and "repeated and rephrased what the subordinate suggested to clarify understanding between them".

The behavioural measures of the assessment centre are intended to be predictive, i.e., attempts are made to identify those individuals with potential for effective managerial behaviour at higher levels in the organization. The assumption is made, however, that these same individuals would display similar behaviour when the situation is conducive to doing so in their present jobs. Therefore, to some extent, the assessment centre data are indicative of current behaviour in addition to their primary function of identifying those with potential for effective future managerial behaviour at higher levels. This line of reasoning substantiates further the use of the behavioural dimensions of the assessment centre as measures of managerial effectiveness in the present research.

Individuals are usually assessed in groups. Group assessment affords opportunities to observe peer

interactions and aids the efficiency of observation. Anywhere from one to twelve people might be observed in a programme.

Staff members of the assessment centre may consist entirely of trained management personnel, all professional psychologists, or a combination of both. Management personnel who serve as assessors are usually two or more levels above the participants in the organizational hierarchy. They are usually trained for the task of assessment, and preferably they should not be in a direct supervisory capacity over the participants. The low ratio of assessees to assessors (typically 2:1) allows close contact and observation of the participant and makes multiple evaluations possible. The presence of participants is required for one to three days and that of assessors from three to five days.

Each assessor observes and records in objective terms the behaviour of one or two participants. The assessee is usually observed by a different assessor in each exercise. All of the behavioural evidence of the dimensions is reviewed by the observer for each exercise, and ratings of the dimensions are made. After the participants have departed, the exercise reports are typically read and discussed in a meeting

of the various assessors. Assessors usually report behavioural observations and dimension ratings for each exercise and then make independent ratings of overall dimension performance. The assessors then reach consensus on dimension ratings and finally make predictions of managerial success. All information for one participant is usually reported and integrated before considering the next participant.

After the the discussion, the administrator or one of the assessors typically prepares a written report of the assessment and makes recommendations regarding the management potential and developmental needs of the participant. Feedback given to the participant forms the basis for self-insight and development planning. Results of the centre are often also communicated to appropriate levels of management and can be used for personnel decisions involving such things as career planning, promotions and transfers.

Validity of Assessment Centres

The issue of validity of the measures used in a study is usually treated as part of the methodology, according to convention. However, the validity of assessment centres remains an area of contention, despite the extensive utilization of the assessment centre method, as can be seen from the numerous

studies cited by Thornton and Byham (1982). Consequently, assessment centre validity is included as part of the literature review. Furthermore, since prediction is an inherent objective of the assessment centre approach, and since predictive validity is the most pragmatic form of validity, predictive validity is the focus of this discussion.

The problem of establishing a satisfactory criterion against which to validate assessment programs is the crux of assessment centre validation. The literature reveals that the predominant criterion for assessment centre validation research has been supervisory ratings of both performance and potential, even when more objective data were also gathered, such as salary progress (e.g. American Airlines, cited in Thornton & Byham, 1982; Bray & Grant, 1966; Dodd, 1971), progress in management (e.g. Bray & Grant, 1966; Hinrichs, 1978; Moses, 1972), field observations of performance (e.g. Bray & Campbell, 1968) and field interview data (e.g. Campbell & Bray, 1967; Huck & Bray, 1976; Jaffee, Bender & Calvert, 1970). However, selecting the appropriate criteria for assessment centre validation remains a contentious issue (Rice, 1978), particularly with regard to performance versus progress criteria.

Criterion controversy. Cohen, Moses and Byham (1974) suggested that ratings of potential are often more accurately predicted than performance ratings. Based on the reported validity coefficients of 19 studies, they found a correlation of .63 between assessment centre predictions of potential and management ratings of potential, but a correlation of only .33 between assessment centre predictions and actual job performance. Hence, these authors concluded that assessment centres are more valid for ratings of potential than performance.

In contrast, Thornton and Byham (1982) argued that, while it may appear at first glance that assessment centres are more predictive of one type of criterion than another, a chi-square analysis of the data revealed no such association. Their conclusions were based on validity findings by type of criterion (job ratings of performance, job ratings of potential, objective indicies of progress, objective indicies of salary, and miscellaneous criteria such as turnover and resignations) and outcome (significant or nonsignificant results) of numerous previous studies. Where more than one type of criterion was reported in a study, each was treated as a separate piece of data. Ninety-three findings were analysed in all.

Thornton and Byham (1982) suggest that the discrepancy between their own findings and those of Cohen et al. (1974) is attributable to the fact that the latter authors considered the magnitude of predictive accuracy, but did not test the significance of differences they noted.

Klimoski and Strickland (1977), concurring with Cohen et al. (1974), noted that the majority of criterion data for assessment centre validation research has been restricted to indices of job progress such as promotion and salary increase, rather than performance measures such as job behaviours. In a review of over 90 studies, they found that validities with advancement criteria were positive and high (median = .40) Klimoski and Strickland (1977) questioned assessment centre validation efforts on grounds of both the validity magnitude and the characteristics of the criteria. They contended that the criteria used most frequently had less to do with managerial effectiveness, competence, or superior performance than with managerial adaptation and survival. They suggested that spurious assessment centre validity coefficients had been the result of indirect criterion contamination, through knowledge of the predictor

data. They argued further that assessment centres are merely prescient, that is, they simply record the biases of managers and assessors prior to assessment centres.

Thornton and Byham (1982) admitted that criterion ratings of performance, potential and actual progress in both management level and salary are all susceptible to some probability of contamination from exposure to, and use of, the assessment results. However, they contended that the findings cited below dispelled many of the earlier criticisms that assessment centres merely predict management progress criteria and not management performance.

Among the studies that found positive results for performance and potential ratings, Thornton and Byham (1982) considered findings of the following studies to have been relatively free from contamination due to exposure to and use of assessment centre results: Bray (1964), Bray and Campbell (1968), Campbell and Bray (1967), Hinrichs (1969), Huck and Bray (1976), and McConnell and Parker (1972). Studies using objective indices of progress and salary considered relatively contamination-free included Bray, Campbell and Grant (1974), Bray and Grant (1966), Dodd (1971), Hinrichs (1978), Kraut and Scott (1972), Moses (1971, 1972),

and Moses and Boehm (1975).

For present purposes, the Management Progress Study (Bray, Campbell & Grant, 1974; Bray & Grant, 1966), conducted at American Telephone and Telegraph Company (AT & T) was selected as an example of a validity study as various authors have considered it to be the most comprehensive and renowned study of an assessment centre programme (Beach, 1980; Cohen et al., 1974; Thornton & Byham, 1982). This study compared the assessment centre performance of 123 college and 144 noncollege graduates and their subsequent progress in management. The subjects were nonsupervisory personnel at the time of initial assessment. Each participant was assessed during the years 1956 to 1960 during one-week programmes. The assessment techniques were chosen to measure important characteristics of middle management positions at AT&T. Based on the assessment centre data, the assessment staff made a global prediction whether or not each subject would reach middle management within ten years from the time of assessment. Neither participants nor management had access to the assessment results, to prevent any possible contamination of the study information.

Criterion data were gathered in 1965 regarding

level of management attained over approximately eight years since assessment. Predictions by the assessment staff were largely successful. Of the 103 subjects predicted to advance to middle management, 42 percent had actually attained this level by 1965. Only 7 percent of the assessees who were judged not to have the qualities for middle management had progressed to this level. Similarly, in the high-potential assessment group, only 4 percent still remained at the entry management level five to eight years later, while 42 percent of the low-rated group had not been promoted.

Bray et al. (1974) presented extensive follow-up data for the college sample. The data showed that 64 percent of the college subjects predicted to reach middle management in ten years had done so, whereas only 32 percent of the low potential group reached this level. In a personal communication to Thornton and Byham (1982), Howard reported that the predictive validity for the college group reached .46 in early years but declined to .33 in the sixteenth year of study. In contrast, the predictive validity for the noncollege subjects reached the same level, .46, in the early years but remained above .40 into the sixteenth year. In the opinion of Thornton and Byham,

in view of the findings of the Management Progress Study, there can be little doubt that the assessment process yielded valid predictions of the future progress of young managers in AT&T.

In the present study, managerial job performance was a more important issue than management progress. Thus, it is considered appropriate to cite another example of a validity study, by Huck and Bray (1976), that used job performance criteria. The sample consisted of 91 white women and 35 black women assessed in Michigan Bell's selection programme of nonmanagement level employees for advancement to first level management. Criterion data were collected one to five years after assessment of the sample, of whom all had been promoted. Supervisors were asked to rate their immediate subordinates on a confidential basis according to performance effectiveness measures. These included six BARS (initiative, interpersonal skills, administrative skills, development of subordinates, communication, and job knowledge) and ratings of overall effectiveness and potential for advancement. The researchers found that the assessment ratings correlated with all six rating scales of job performance for the white women and four of the six scales for the black women. Overall job performance

and potential for advancement were predicted equally well for both groups. However, ratings of potential were more accurately predicted than performance ratings.

Other longitudinal studies also support the predictive validity of the assessment centre method (e.g. Bray & Grant, 1966; Bray et al., 1974) in terms of both progress and performance criteria. The overall assessment rating (OAR) correlated significantly with subsequent measures of a variety of progress criteria, including progress in management level (e.g. Hinrichs, 1978; Bray et al., 1974) and salary (e.g. Bray & Grant, 1966; Dodd, 1971; Mitchel, 1975). Promotions may be influenced in operational programs where assessment information is disseminated to the person making the promotion decision, but it is unlikely that further promotions are contaminated in this way. Thus, concluded Thornton and Byham (1982), in studies that used second and third promotions and progress over a period of three to five years, the criteria probably reflected uncontaminated job advancement.

The variety of performance criteria predicted by the assessment centre information in various longitudinal studies is perhaps of even more

significance than the progress criteria mentioned above. Criteria have included ratings of overall performance (e.g. Huck & Bray, 1976), overall performance and potential (e.g. Dodd, 1971; Huck & Bray, 1976; Moses, 1971, 1972; Moses & Boehm, 1975), increases in management responsibility, including job complexity, financial responsibility, and skill requirements (e.g. Wollowick & McNamara, 1969), ratings on behavioural scales for performance dimensions (e.g. Carleson, 1970; Thompson, 1970), measures of personal effectiveness and reactions to problems on the job (e.g. Marquardt, cited in Thornton & Byham, 1982). However, the need for more validation criteria concerned with effective performance in the management job is ever present (Hinrichs, 1978; Huck, 1977). The sources of the criterion data have been the immediate supervisor, second-level supervisors, specially trained research interviewers, and training-staff members who performed field reviews.

With regard to the organisation which participated in the present research, Sakinofsky (1979) had originally intended to conduct a comparison study of managerial performance prior to and subsequent to the implementation of the assessment centre. However, he was unable to do so at the time

due to inadequate records and too many extraneous variables. Instead, he attempted to measure the relationship between assessment centre ratings and managerial job performance. The sample consisted of individuals that had been promoted to the level of assistant divisional manager regardless of either participation in the assessment centre, or of assessment centre ratings. Mintzberg's (1973) Ten-Role set was applied as the job performance criterion. The manager's typical daily activities were diarised by the researcher (for a period not reported) and analysed according to Harrison's (cited in Sakinofsky, 1979) operationalization of Mintzberg's roles. It was found that those who were rated favourably on the assessment centre actually performed differently on the job to those rated unfavourably; that is, they had a different role set. Sakinofsky (1979) concluded that the assessment centre ratings effectively differentiated between successful and unsuccessful on-the-job performance.

Closer scrutiny of Sakinofsky's (1979) study indicates a discrepancy, however, between conceptualization and methodology. More specifically, it appears that an unqualified valuation was placed on one set of roles as opposed to another. The study

should have been carried further to justify the claim that the assessment centre effectively differentiated between successful and unsuccessful performance. Only direct evaluation of the effectiveness of these roles in the organizational context would provide the necessary clarification. In addition to this point, the inadequate operationalization of effective job performance in Sakinofsky's (1979) study is indicative of the shortcomings of managerial effectiveness research outlined in Chapter 4. His research suffered from the common problem of a conceptual basis that is too narrow.

Relative effectiveness of the assessment centre method. Another issue of concern which is of a more general nature, is the relative effectiveness of the assessment centre method and the more traditional methods of selection. Thornton and Byham (1982) indicated that comparison group studies generally supported the superiority of the assessment centre approach over existing methods of selecting managers (e.g. Bray, 1964; Campbell & Bray, 1967). In general, the assessed group performed better than a comparison group promoted prior to assessment. Only two out of nine comparisons reviewed by Thornton and Byham (1982) showed no differences in job performance. Summarizing

the comparison group studies available at that time, Cohen et al. (1974) found that large percentages of the assessed groups, as opposed to the non-assessed, were high in subsequent job performance (.68 versus .59), job potential (.59 versus .28) and progress (.38 versus .08). These studies suggested that assessment centres were more able to pick candidates who were more likely to be successful, than the traditional methods being used in these organisations at the time. Similarly, Byham (1970, 1971) found that studies comparing the success of candidates promoted with assessment to those promoted without it showed a 10 percent to 30 percent improvement. Based on these findings, Byham argued that using an assessment centre for identifying management potential was a sounder and fairer method than the methods traditionally used by management.

Conclusion. Predictive validity has been discussed in terms of (a) the criterion measures for evaluating the effectiveness of assessment centres; and (b) the relative effectiveness of assessment centres and traditional methods of selection. There are strong indications of predictive validity, but these are not conclusive (Stewart & Stewart, 1981). There are several reasons for the difficulties

encountered in establishing assessment centre validity. Firstly, the validity of an assessment centre is organisation-specific, i.e., the validity (and utility) of an assessment centre is closely linked to the nature of the organization and its particular structure, policies, and procedures (Byham, 1971; Klimosky & Strickland, 1977). In addition, the research reported in this review indicates that assessment centre validity is often also criterion specific. Moreover, comparisons across studies are not always possible where so many differences are operational, such as the organizational and/or job context, assessment centre dimensions, techniques, criterion measures and so on. More specifically, a "typical" assessment centre does not exist (Bender, 1973). However, it is the accumulation of research findings from a variety of centres that lends considerable credibility to the general validity of the technique (Byham, 1970). In addition, Klimoski and Strickland (1977) reported that of over 90 studies reviewed for their paper, they found that very few validity studies per se had been published after 1972, indicating a general acceptance of the validity of assessment centre methodology.

Today, assessment centres are recognized as a time

tested human resources management method (Cohen, 1985). Over the past few years, however, the published literature on assessment centres has generally tailed off. This observation is supported by the recent decision to cease publication of the Journal of Assessment Centre Technology, due to a lack of significant contributions (Cohen, 1985). Cohen (1985) added that this decision in no way reflected the amount of interest in, or use of, the assessment centre process in business, industry and goverment. On the contrary, the validity of the technique in other contexts, such as education (e.g. Schmitt, Noe, Meritt & Fitzgerald, 1985), is also being considered. Perhaps this is also an indication of a shift in emphasis from research, to practice.

Chapter 7

AIMS AND RATIONALE OF STUDY

This chapter presents the aims and rationale of the present research on the role of anger in managerial effectiveness. The following discussion demonstrates that anger and managerial effectiveness are conceivably related, on account of common behaviour patterns and environmental conditions. Although the effects of the experience and expression of anger on managerial effectiveness constitute the primary focus of this study, the effects of the TABP on managerial effectiveness will also be considered. The formulation of the hypotheses of the present research is discussed toward the end of the chapter.

Anger and Stress

While behaviour is the key to managerial effectiveness, the emotional experience of angry feelings is not necessarily expressed in some form of behaviour (Chesney, 1985). According to Novaco (1985), anger can, however, be understood as an affective stress reaction; he explained that anger arousal is one kind of response that occurs in conjunction with exposure to environmental demands or stressors. More specifically, there is the

possibility that prolonged exposure to high pressure job environments may have a cumulative effect of elevating general arousal or tension levels so as to prime the person to experience anger. In his opinion, anger-proneness reflects a combative orientation in responding to situations of threat, challenge and hardship, which can be considered characteristic of the manager's job. He adds that individuals who are prone to provocation may negatively affect their families and work organisations, in addition to suffering impairments to their own well-being.

Anger responses reflect a mode of coping with stress linked to cognitive structures and behaviour patterns (Novaco, 1985). In Chapter 3, anger has already been identified as a core component of the TABP (e.g. Matthews et al., 1977; Rosenman & Friedman, 1974). It is this link between anger and behaviour patterns that forms the basis of the present investigation. More specifically, since behaviour is the key to managerial effectiveness (Boyatzis, 1982a, 1982b; Langford, 1980) it is conceivable that managerial behaviour is influenced by the experience and expression of anger. Although this line of inquiry may appear somewhat intuitive at first glance, it is indirectly supported by previous findings on

anger suppression, as well as theories of conflict, managerial style and anger expression. In order to facilitate the interpretation of these considerations, it seems necessary to first present a framework of the context in which managerial behaviour takes place.

Managerial Job Behaviour and Anger Expression

As established in Chapter 4, managerial behaviour that is consistent with the organisational context is the key to managerial effectiveness (Boyatzis, 1982a, 1982b; Langford, 1980). Behaviour is a function of the individual and the environment (McClelland, 1971). Various elements, such as the organisational culture, structure, policies and procedures, the functional requirements of the job (e.g. planning, controlling, organizing, coordinating) and their constituent tasks, the network of interpersonal relationships (Kotter, 1982a), and the individual's 'competencies' (Boyatzis, 1982a, 1982b) or characteristics (e.g. skills, abilities, traits, VIE beliefs) interact to determine effective behaviour in a particular situation. In turn, a manager's job behaviour impinges on these elements and overall organisational results, including profit, productivity, standards, quality and other objectives.

The findings of previous anger research may

impinge upon various situational factors of managerial effectiveness. For example, the suppression of anger may result in coghitive inefficiency (Holt, 1970; Horowitz, 1963) and disturbances in perception (Kaufman & Feshbach, 1963) - consequences which may affect the manager him- or herself and, in turn, his or her job behaviour. Inefficient task performance has also been attributed to the suppression of anger (Novaco, 1976). In addition, suppression of anger may also affect a manager's relationship with others in the form of inability to resolve personal conflict (Holt, 1970), increased hostility (Buss, 1966) and destructive communication patterns (Novaco, 1976; Mace, 1976). As anger suppression appears to influence various situational determinants of managerial job behaviour, it is conceivable that job behaviour is often also affected, with possible deleterious effects on organisational outcomes.

The diverse, yet consistently detrimental, effects of anger suppression lend support to the conjecture that anger expression may have beneficial effects on managerial effectiveness. This view is supported by the clinical concept of catharsis, whereby the expression of anger is presumed to be associated with some form of general arousal reduction. Indeed, there

is research evidence to this effect. In a series of studies (Hokanson & Burgess, 1962a, 1962b; Hokanson, Burgess & Cohen, 1963; Hokanson & Edelman, 1966; Hokanson & Shetler, 1961) it was found that direct verbal or physical aggression toward an equal status instigator was associated with a rapid return of elevated systolic blood pressure to prefrustration resting levels. Unfortunately, however, the evidence of a cathartic effect is not consistent (e.g. Hokanson, Burgess, & Cohen, 1963; Hokanson & Burgess, 1962; Hokanson & Edelman, 1966; Hokanson & Shetler, 1961). For instance, when the target of the subject's counter aggression was a person other than the instigator, for example, the rapid post-aggression vascular reductions were not observed (Hokanson, Burgess & Cohen, 1963).

In addition to the uncertainty with regard to the cathartic effect of anger expression, there are other indications that the expression of anger may be troublesome. For example, the expression of anger in the form of aggression generally proves to be destructive in that it tends to threaten the target person's integrity and self-esteem, thus eliciting anger and aggression from the target, and thereby intensifying, rather than reducing interpersonal

conflict (Holt, 1970).

Yet, analysis of the functional properties of anger (see Chapter 2, p.17) indicate that it should not automatically be viewed as negative or undesirable (Novaco, 1985). It appears that it is not the experience of anger that is prohibitive, but rather, the way in which anger is expressed. Further implications of the expression of anger will be illustrated in the following discussion of anger expression, conflict, and managerial style.

Anger, Conflict and Managerial Style

Anger is one of many emotions (e.g. fear, anxiety, doubt, hostility) that typically accompany conflict (Blake & Mouton, 1978). It is commonly accepted that conflict is inevitable in the modern organisational context. Increasing complexity and interdependence have been identified as the major causes of conflict in today's organisations (Hampton et al., 1982). The conflict process is described as "the deliberate interaction of two or more complex social units which are attempting to define or redefine the terms of their interdependence" (Walton & McKersie, 1965, p.3). Although conflict is potentially destructive and unproductive within certain limits, conflict and the attendant tension are beneficial if they reflect

an organisational commitment which promotes challenge, effort, creativity, and innovation (Blake & Mouton, 1978). Coser (1956) argued that it is not conflict per se that is alarming, but rather its mismanagement. Similarly, Holt (1970) differentiated between the constructive and destructive expression of anger. The danger is not in the experience of anger as subjective affect, but rather in the manner in which it is expressed.

It is apparent from the literature that the way in which an individual deals with both conflict and anger can be traced to his or her perception of the interpersonal transaction as a "win-win" or "win-lose" situation. Moreover, the individual's conflict orientation is considered a key element in managerial style (Blake & Mouton, 1978). The win-lose orientation is hypothesized to be a major determinant of aversive conflict behaviour. Similarly, in the destructive expression of anger, the interpersonal situation is implicitly perceived as a zero-sum, all-or-nothing situation in which there can only be one winner (Holt, 1970). The angry person wants to win at any cost to the preexisting or possible relationship. The basis of the destructive expression of anger is therefore consistent with the win-lose

orientation to conflict. The link between managerial effectiveness and an individual's approach to anger and/or conflict, as reflected in his or her managerial style, is illustrated in the examples cited below.

Blake and Mouton's (1978) description of what they labled the "9,1 manager" could serve as a first example of how managerial behaviour can be affected adversely by the manager's perception of the interpersonal transaction as a win-lose situation. The management style of the 9,1 manager reflects this orientation to conflict and the destructive expression of anger. The 9,1 orientated manager views conflict as a threat to his or her control. The manager's rèaction to conflict is characterized by rigid adherence to his or her position, tunnel vision, an all-or-nothing attitude, and the use of a variety of methods, such as pulling rank on subordinates, in order to suppress disagreement and bring the adversary to his or her knees. The objective of a 9,1 orientated manager is to win at all costs, even if it results in ineffective job performance. The 9,1 manager's temper flares when things are not going according to his or her wishes. By becoming angry and aggressive, the anger-prone manager can impart a sense of control or mastery over the provoking individual or

situation. Individuals who are so inclined are reluctant to abandon this sense of effectiveness (Novaco, 1985).

Interpersonal relationships are considered crucial situational determinants of managerial behaviour (Kotter, 1982a; Luthans et al., 1985) and hence, managerial effectiveness. Conceptually it follows, therefore, that managerial effectiveness may be influenced by the way in which an individual deals with anger. More specifically, anger may influence managerial effectiveness by affecting managerial behaviour. The proposed relationship is demonstrated further with the following example of the converse situation.

According to Holt (1970), in the constructive expression of anger the interpersonal transaction is perceived as a win-win or non-zero sum situation. The constructively angry person is able to establish, restore, or maintain a positive relationship with the other individual. This approach is consistent with the conflict orientation of what Blake and Mouton (1978) consider to be effective, the 9,9 manager in their terminology. Fundamental to the 9,9 managerial style is the assumption that conflict is resolvable. A manager with this style encourages two-way

communication that stimulates openness and trust. He or she evaluates alternative points of view, confronts differences and looks for solutions based on facts. In this way, the reasons for conflict can be examined and assessed, and the conditions for its resolution can then be discussed by those who are involved. In contrast to the conflict orientation of the 9,1 manager, the 9,9 orientation promotes positive interpersonal relationships. Clearly, the constructive expression of anger and a win-win conflict orientation are conducive to more effective managerial behaviour.

Formulation of Hypotheses

The previous discussions of anger as a stress response linked to cognitive structures and behaviour patterns, the research findings on anger suppression and on the cathartic value of anger expression, as well as theories of conflict orientation, managerial style and the destructive versus constructive expression of anger, all provide indirect support for the present line of inquiry. More specifically, it was hypothesized that managerial effectiveness is affected by the experience and expression of anger.

The equivocality surrounding the effects of anger are largely attributable to diversity in the

definition, operationalization and measurements of anger and its expression (as outlined in Chapter 2). Studies should define more specifically the way in which anger is expressed in order to evaluate more accurately the positive or negative effects of anger.

In the present study specific anger questionnaires were used as predictor variables. The performance appraisal and assessment centre data that were used as criterion variables were subjected to factor analyses for data reduction purposes. Consequently, the formation of detailed research hypotheses had to be postponed until after the factor analyses. These will be presented in context in Chapter 8. In addition, the present research examined a subsidiary hypothesis which postulated that managerial effectiveness is influenced positively by the TABP. The rationale for this portion of the investigation was fairly straightforward: The contemporary business environment appears to endorse TABP (Jenkins, 1975; Rosenman & Friedman, 1974) on account of its apparent association with productivity and vocational success (e.g. Howard et al., 1977; Mettlin, 1976) despite the association between TABP and CHD as substantiated in Chapter 3. Moreover, the business and professional environments seem to elicit and sustain the

characteristics of the TABP (Friedman & Rosenman, 1959; Strümpfer, 1983; Strümpfer & Robinson, 1985). It was therefore considered timely to investigate whether TABP does in fact influence the effectiveness of managerial behaviour, particularly in view of the scarcity of behaviourally-orientated research on TABP.

The instrumentation and statistical procedures used to assess the hypotheses are presented in the following chapter.

Chapter 8

METHOD

Subjects

The study was undertaken in the headquarters of a large financial institution in Cape Town. Subjects had participated in the organisation's assessment centre targeted at the level known in the organisation as Assistant Divisional Manager (Level 5) at some stage during 1982 to 1985. The levels of the organisational heirachy will be shown in Table 1 (p. 155). Questionnaires were distributed to a sample of 70 male managers currently employed in the organisation. Although all questionnaires were returned, 10 were eliminated as a result of incomplete or insufficient data. The final sample thus consisted of 85 per cent of the original sample.

The following biographical information was obtained: age, years of service at the company, organisational grade at the time of participating in the assessment centre, and current organisational grade. The mean age of the 60 men was 32.7 years, with a range of 25 to 47 (SD = 4.9). Their mean number of years of service was 4.8 with a range of 1 to 17 (SD = 3.8). The mean organisational grade prior to assessment centre participation was 8.3, with a

range of 7 to 10 (SD = 0.8) and the mean current organisational grade was 7.7, with a range of 6 to 10 (SD = 0.9). Age and current organisational grade were used in the calculations of the Managerial Achievement Quotient (MAQ), the objective measure of managerial effectiveness.

Procedure

The organisation where the research was carried out had well established assessment centre procedures, as well as a performance appraisal system. This information was retrieved, with the permission of the Personnel Evaluation Manager, from confidential company records for those managers who consented to participate in the present research. Participants were approached individually and requested to complete paper-and-pencil questionnaires privately and voluntarily. Participants were assured confidentiality. They were informed that the information would be used for research purposes only and that findings on an individual basis would not be divulged to any members of the organisation.

Measures

It was hypothesised that the way in which managers deal with anger influences their managerial effectiveness. To investigate this proposition, the independent variables, viz. the experience and

expression of anger, and TABP, were measured by a battery of self-report questionnaires. The dependent variable, managerial effectiveness, was assessed in terms of three sets of data obtained from company records, viz. the managerial achievement quotient (MAQ) and the behavioural criteria of the organisation's assessment centre and performance appraisal. Each of these measures is described and discussed below.

Independent variables.

Experience of anger: The State-Trait Anger Scale (STAS) measures the experience of anger as an emotional state and individual differences in anger-proneness as a personality trait (Spielberger, 1980; Spielberger et al., 1983). State anger (SA) consists of subjective feelings of tension, annoyance, irritation, fury and rage, with concomitant arousal of the autonomic nervous system. State anger varies in intensity and fluctuates over time as a function of perceived threat, or frustration resulting from the blocking of goal-directed behaviour (Spielberger et al., 1983). It consists of 10 items rated on a four-point scale : (1) Not at all; (2) Somewhat; (3) Moderately so; (4) Very much so (scale minimum = 10 and maximum = 40). Sample items include: "I am furious", "I am burned up", "I feel like breaking

things". High internal consistency of coefficients (alpha .88 to .97) have been reported, with an alpha of .93 for adult working males (Spielberger et al., 1983).

Trait anger (TA) is indicative of individual differences in the frequency that SA is experienced over time. Persons high in TA perceive a wider range of situations as anger-provoking, and experience the arousal of SA more often and more intensely (Spielberger et al., 1983). The TA items are rated on a four point scale: (1) Almost never; (2) Sometimes; (3) Often; (4) Almost always (TA scale minimum = 10 and maximum = 40). Sample items include: "I am quick-tempered", "It makes me furious when I am criticised in front of others", "When I get mad, I say nasty things". High internal consistency of coefficients (alpha .81 to .96) have been reported for the 10-item TA scale, with an alpha of .90 for adult working males (Spielberger et al., 1983).

Expression of anger: Spielberger et al. (1985) developed the 20-item Anger Expression (AX) scale to assess individual differences in anger expression as a personality trait. The AX scales provide an index of the frequency with which subjects respond in a particular manner, rather than how they respond to a particular situation (Spielberger et al., 1985). In

addition to measuring total anger expression, the AX scale provides two separate 8-item subscales for measuring anger-in (A/In) and anger-out (A/Out) as independent dimensions. Anger-in refers to how often angry feelings are experienced but not expressed. Anger-out refers to the extent that an individual engages in aggressive and hostile behaviours when motivated by angry feelings (Spielberger et al., 1985).

The AX, A/In and A/Out scales are rated on a four point scale: (1) Almost never; (2) Sometimes; (3) Often; (4) Almost always. (AX Scale minimum = 20, maximum = 80; A/In and A/Out subscale minimum = 8, maximum = 32.) Sample items include: "I control my temper", "I boil inside, but I don't show it", "I do things like slam doors". The internal consistency of the anger expression scales for male and female high school students (Spielberger et al., 1985) was highest for the A/In subscale (alpha = .81 and .84) and satisfactory for both the AX scale (alpha = .77 and .80) and A/Out subscale (alpha = .75 and .73).

Type A Behaviour Pattern: The Jenkins Activity Survey (JAS) developed by Jenkins, Zyzanski and Rosenman (1979) is considered to be the best studied paper-and-pencil questionnaire for assessment of the TABP (Rosenman & Chesney, 1980). The validity of the

JAS for assessment of the TABP is based upon (a) agreement between its scores and ratings made by the structured interview (Jenkins, Rosenman & Friedman, 1967); and (b) its ability to predict CHD prevalence and incidence (Jenkins, Zyzanski & Rosenman, 1976; Jenkins, Zyzanski, Rosenman, & Cleveland, 1971) as well as the degree of basic coronary atherosclerosis (Jenkins, Zyzanski, Ryan, Flessas & Tannenbaum, 1977; Zyzanski, 1976).

The JAS was developed from the item pool of the structured interview (Rosenman, Friedman, Straus, Wurm, Kositchek, Hahn & Werthessen, 1964) as well as clinical experience. Only those items that validly discriminated between Type A and Type B men were retained. Behaviour pattern ratings made by means of the structured interview and the JAS scores corresponded 72% of the time in comparing only those subjects who were given same interview ratings in the Western Collaborative Group Study both at intake (1960/1961) and at the first follow-up examination, 12 to 20 months later (Jenkins, Zyzanski & Rosenman, 1971).

Examination of the 19 items of the Type A Scale of Form N of the JAS revealed that 13 of the standardized beta weights for these items are substantial and six are very small. Zyzanski and Jenkins (1984) proposed

therefore that the 13 items which contributed most considerably to the total Type A score can be used as a reasonably reliable short form of the JAS. The 13-item Short Type A Scale from Form N of the JAS was used in the present research to provide both a bridge between this study and previous TABP research and, to a minor extent, direct evidence on TABP and managerial effectiveness.

Dependent variables.

Managerial effectiveness was assessed in terms of an objective measure, namely the Managerial Achievement Quotient (MAQ), and behavioural criteria obtained from two subjective measures, viz. the assessment centre and performance appraisal. The information for the subjective measures was obtained from company records. Of the two subjective measures, the former provides postdictive data whereas the latter provides concurrent data. The three managerial effectiveness measures were therefore treated separately throughout the study.

Managerial Achievement Quotient (MAQ): The MAQ is based on a formula developed by Rhodes (cited in Blake & Mouton, 1964) which affords a comparative evaluation of an individual's career progress and the adequacy of his or her performance. The MAQ was used by Blake and Mouton (1964, 1978) in their study of managerial style

as related to career accomplishment, and in modified form by Hall and Donnel (1979) in their study of managerial achievement. According to Blake and Mouton (1964), the MAQ is based on the assumptions that (a) capability increases with age; (b) the higher the organisational level, the greater the managerial capability required; and (c) the greater the prospect of promotion.

The Rhodes MAQ is computed according to the following formula:

$$MAQ = \frac{5\,(9 - L)\ X\ 100}{Age}$$

In the numerator, the number 5 is a constant progression factor. It represents time (in years) available at each level per number of career moves if one were to spend one's 40 year work life in an eight level organisation. In addition, it reflects potential mobility upward in the absence of other restraining or facilitating factors, such as politics, seniority, chance, economic climate, etc. The numerator term (9-L) amounts to a rank index obtained by assigning numerical values of 1 to 8 to organisational levels ranging from top management (L1) to nonmanagement, clerical level (L8), subtracted from the correction factor of 9. In the denominator, Age (20 to 50 years) represents a seniority index : the time, given a standard entry age of 20 and a ceiling

of age 50 beyond which age is no longer a consideration, in which an individual might advance from lowest to highest organisational level if advancement were purely mechanical. Finally, the constant multiplier of 100 is used to eliminate decimals.

The organisational hierarchy of the participating organisation is schematized below (Table 1), showing the organisational grades and the equivalent levels used in calculating the MAQ.

Table 1

Organisational Grade and MAQ Level

Position/Title	Organisational Grade	MAQ Level
Managing Director	0	1
General Manager	1	2
Assistant General Manager	2	3
Divisional Manager	3/4	4
Assistant Divisional Manager	5/6/7	5
Department Head	8/9/10	6
Section Head	11/12	7
Clerk	13/14	8

Performance Appraisal: Performance appraisal was based on a conventional rating scale. The scale consisted of 11 behavioural criteria which the participating organisation had found to be fundamental for effective job performance. These criteria are listed below.

1. Building and maintaining interpersonal relationships.
2. Finding and using opportunities to improve work results.
3. Developing job knowledge and abilities.
4. Planning and organizing work and time.
5. Meeting and maintaining the required quality of work.
6. Meeting and maintaining the required level of work output.
7. Assisting in coping with work demands.
8. Maintaining productive work habits.
9. Solving problems.
10. Keeping people informed.
11. Team building.

The behavioural criteria were rated on a nine-point scale, and the ratings for each candidate

were established by consensus between the candidate and his immediate supervisor. A total score was not calculated for the performance appraisal criteria; each criterion was treated as an individual item to avoid loss of information. The performance appraisal of each participant was conducted routinely, in the normal run of affairs in the organisation in the middle of 1985. As such, this data provided concurrent criteria for managerial effectiveness in the present research.

Assessment Centre Data: Information was based on assessment centres carried out over the past four years. Managerial potential was measured in terms of the 11 dimensions of the assessment centre. An Overall Assessment Rating was not computed since it would have resulted in the loss of too much information. Instead, each behavioural dimension was treated as an individual item.

The 11 behavioural dimensions are listed and defined below:

1. INITIATIVE: Active efforts to influence events rather than passive acceptance; self-starting and making the best use of opportunities.

2. TENACITY: The determination to succeed even in the face of opposition/obstacles.

3. SENSITIVITY: Active concern for the feelings and needs of others, personal warmth and encouragement.

4. UTILIZATION OF PEOPLE: Extent to which he utilizes the abilities of others and provides opportunities for them to grow to a higher level of performance.

5. DECISIVENESS: Readiness to give direction by committing himself and others to a definite course of action and willingness to stand by his decisions.

6. ANALYTICAL ABILITY: Ability to grasp the implications of a situation quickly, to identify the relative data, and to determine the source of a problem.

7. JUDGEMENT: The ability to arrive at logical conclusions and to make effective decisions and recommendations.

8. FLEXIBILITY: Willingness to explore the ideas of others and to re-examine and adapt own viewpoints in the light of better arguments.

9. ORAL PRESENTATION: The ability to organise and present facts and ideas in a logical and cohesive manner.

10. ORAL PERSUASIVENESS: The ability to influence and change the views and ideas of others, by means of a convincing manner, with a view to achieving a goal.
11. PLANNING AND ORGANISING: The extent to which objectives are clearly defined and a systematic approach is taken in achieving them.

The behavioural dimensions of the assessment centre are assessed in terms of a written "in-basket" exercise and an analysis-presentation exercise, carried out individually; three interpersonal exercises, viz. a counselling interview, a background interview and a "research project" exercise; as well as two leaderless group exercises, viz. the "compensation committee" and the "conglomerate" management game. These exercises have been designed to elicit combinations of the 11 behavioural dimensions as shown in Table 2. In view of the proprietary nature of the assessment centre concerned, more complete descriptions cannot be given here. However, the general approach followed recognized procedures in the area of assessment centres, and the actual contents were developed by experienced industrial/organisational psychologists.

TABLE 2

Combinations of Assessment Centre Exercises and Behavioural Dimensions

Dimension	Background Interview	Research Project	Management Game	Compensation Committee	Analysis Problem	Counselling Interview	In-Basket
Initiative	x		x	x	x		x
Tenacity			x	x			
Sensitivity				x		x	x
Utilization of People	(x)		x			x	x
Decisiveness			x	x	x	x	x
Analytical Ability		x	x	x	x		x
Judgement		x		x	x	x	x
Flexibility		x	x	x		x	
Oral Presentaion		x		x	x	x	
Oral Persuasiveness			x	x	x		
Planning and Organizing	(x)		x	x	x		x

In accordance with the assessment centre method described in Chapter 6, the exercises are not related directly to the policies, procedures or personnel of the actual target job for which candidates are being considered. Rather they simulate the job requirements for the target position, allowing the participants to engage in joblike managerial situations and to display job-relevant behaviours. For example, in the "conglomerate" management game, teams of participants trade shares of company stock in order to first gain control of companies and then to merge the companies into conglomerates. The teams have to plan and organize their activities during three fast-paced trading sessions. Although the game involves a hypothetical situation, it elicits behaviour relevant to the job requirements (such as flexibility, decisiveness, analytical ability and utilization of people) without duplicating the actual job situation.

The candidates were generally one or two organisational grades below the target grade (Level 5: Assistant Divisional Manager) which the assessment centre was designed to simulate. They were assessed by trained observers over a period of six days, with one observer per candidate per exercise. The assessors, who were familiar with the jobs for which

the participants were being assessed, were line managers from within the organisation, two or more grades above the participants, professional psychologists and trained members of the personnel evaluation team. The candidates were rated for each dimension along a four-point scale ("poor" to "excellent"). The overall ratings for each candidate per dimension were established by observer consensus in accordance with the assessment centre method discussed in Chapter 6.

Statistical Procedures

First, a principal components factor analysis, with varimax rotation, was computed for the assessment centre and performance data separately. Factor analysis simplifies the data by grouping together those variables which are highly correlated; it reduces the number of variables with the minimum possible loss of information. Therefore, factor analysis was considered preferable to computing total scores for the two behavioural measures. A second reason for using factor analysis is to uncover any underlying structure in the data.

Factor scores were subsequently calculated for each participant for each of the factors that had been identified. This provided new sets of scores, used in

further calculations. Product moment correlation coefficients were then calculated between all the variables, including the new factor scores. The correlation matrix made it possible to locate areas for further analysis, and to check for multicolinearity among the independent variables, a necessary precaution for subsequent regression analyses.

In multiple regression analysis, the values of a dependent variable are described or predicted in terms of more than one independent or explanatory variable. To determine the linear impact of TABP and the five dimensions of anger on managerial effectiveness, stepwise multiple regression analysis was employed. The objective MAQ measure of effectiveness, and the factor scores derived from the two subjective behavioural effectiveness measures were all considered separate, dependent managerial effectiveness variables. Consequently, a regression analysis was performed on each criterion variable individually. The stepwise multiple regression procedure begins by selecting the independent variable which is most highly correlated with the dependent variable and then a regression is performed. Next, the variable which produces the greatest marginal improvement in

prediction (the variable which has the largest partial correlation with the dependent variable) is added, and a second regression run. The procedure continues until it reaches a specified number of variables, or ceases to add variables which do not achieve a specified level of improvement in prediction.

The results of the present study are presented in the following chapter.

Chapter 9

RESULTS AND DISCUSSION

The present investigation of the relationship between the experience and expression of anger and managerial effectiveness is the first of its kind. As such, it confronts important conceptual and methodological issues in the field of stress research, as well as the discipline of organisational psychology, in general. These issues are crystalized in the following discussion of the results, the limitations of the present study, and the theoretical implications and recommendations for future research.

Following the presentation of the descriptive statistics, the results obtained from the computation of the factor analysis, correlation and multiple regression procedures will be presented consecutively in three main sections of this chapter, dealing with each respectively.

Descriptive Statistics and Reliabilities

The descriptive statistics and reliabilities of the TABP, the anger variables, and the MAQ (the objective managerial effectiveness measure) are presented in Table 3. One is immediately struck by the apparent discrepancy between the reliabilities for the anger scales reported previously (see Chapter 8, p.149 to

p.151) and the reliabilities for these scales in the present study.

TABLE 3

Descriptive Statistics for the Variable Totals

Variable	Mean	SD	Min.	Max.	Alpha
Type A Behaviour (TAB)[a]	25.0	6.4	11.7	35.5	.51
State Anger (SA)	12.2	2.9	10.0	21.0	.77
Trait Anger (TA)[b]	18.8	4.0	11.0	30.0	.60
Anger Expression (AX)	44.5	4.8	36.0	57.0	.58
Anger Suppression (A/IN)	15.8	3.3	8.0	24.0	.65
Anger Expression (A/OUT)	13.4	2.8	9.0	22.0	.73
Managerial Achievement Quotient (MAQ)	53.4	9.9	32.0	77.0	

[a] n = 58; raw scores used.

[b] n = 59

Contrary to the reliabilities reported for the State Anger (alpha = .93) and Trait Anger (alpha = .90) scales for adult working males (Spielberger, et al., 1983), the reliabilities for these scales in the present research were .77 and .59 respectively. Similarly, the reliabilities for Total Anger Expression (alpha = .58) and Anger-In (alpha = .65) were not within the reliability range (.77 to .80, and .81 to

.84, respectively) reported by Spielberger et al. (1985). The low reliability of the anger scales in the present research indicated a larger than desirable proportion of error variance in most of the measures. Consequently, high correlations between anger and managerial effectiveness could not be expected.

Another important consideration pertaining to the descriptive statistics in Table 3, was the relative strength of the TABP as evidenced by the group of managers in the present study. The TABP scores presented in Table 3 were raw scores; Zyzanski and Jenkins (1984) presented a formula for converting raw scores to standard scores ($\bar{X}$ = 0, $\underline{SD}$ = 10) used for the full-length JAS (Jenkins et al., 1979). In these terms, the present mean was 3.97, which is in the Type A direction but sill fairly low. The percentile equivalent of the mean Type A score corresponds with the 65th percentile reported in the JAS Manual (Jenkins et al., 1979) for the American standardization sample. Interestingly, however, the percentile rank of the present sample is lower than the percentile ranks for six out of seven South African samples having similar occupations (including managers, bankers and administrators) previously reported by Strümpfer (1983). In addition, he observed that only one out of the seven South African samples did not exceed the percentile ranking for the five highest ranking

American samples reported in the Manual (Jenkins et al., 1979) which were all in turn higher than the American standardization sample. Thus, while the present sample of managers constituted a Type A-leaning group, these managers were not as strongly Type A as some of their South African counterparts.

Finally, it should be kept in mind that, as a result of the selection process and the "pyramidal" structure of the organisation, the ineffective managers have already been filtered out of the sample in this study.

Factor Analyses

Two principal components factor analyses with varimax rotation were computed: one on the eleven behavioural criteria of the performance appraisal (PA) measure of managerial effectiveness, and the other on the eleven behavioural dimensions of the assessment centre (AC) measure of managerial effectiveness. Using Harris' (1967) definition of a robust factor, as one which consistently has two or more items with loadings of 0.3 or higher, three "robust" factors emerged in each analysis. The resultant loadings for the three PA factors and the three AC factors are shown in Tables 4 and 5 respectively. Those items with large communalities and factor loadings equal to or greater than .57 in Table 4, and .47 in Table 5 are underlined in the tables to facilitate identification of the underlying structures. The percentage of common

variance accounted for by each of the rotated factors and the eigenvalues are shown at the bottom of Tables 4 and 5.

Table 4

Factor Structure of the Performance Appraisal Measure of Managerial Effectiveness

		Factor Loadings		
Performance Appraisal Items		1	2	3
9	Solving problems	.85	-	-
5	Meeting and maintaining required quality of work	.76	-	.31
2	Finding and using opportunities to improve work results	.72	.37	-
3	Developing job knowledge and abilities	.67	.48	-
8	Maintaining productive work habits	.57	-	.48
4	Planning and organizing work and time	-	.86	-
6	Meeting and maintaining required level of work output	.37	.68	.31
11	Team building	-	.62	.46
10	Keeping people informed	.36	.60	.30
1	Building and maintaining interpersonal relationships	-	-	.87
7	Assisting in coping with work demands	.47	-	.68
	Eigenvalues	5.6	1.1	1.0
	% Common Variance Accounted for	50%	10%	9%

Note. Factor loadings $\geq$ .57 are highlighted for the sake of clarity.

Table 5

Factor Structure of the Assessment Centre Measure of Managerial Effectiveness

	Assessment Centre Items	Factor Loadings 1	2	3
5	Decisiveness	.84	-	-
10	Oral persuasiveness	.78	-	-
1	Initiative	.73	-	.40
2	Tenacity	.70	-	.39
9	Oral presentation	.63	.48	-
7	Judgement	.47	.46	-
3	Sensitivity	-	.81	-
8	Flexibility	-	.77	-
11	Planning and organizing	.54	.65	-
6	Analytical ability	.33	.54	-
4	Utilization of people	-	-	.91
	Eigenvalues	4.8	5.2	1.01
	% Common Variance Accounted for	44%	14%	9%

Note. Factor loadings $\geq$ .47 are highlighted for the sake of clarity.

In the interpretation of the PA factor analysis data a cut-off point of .57 was established for the items loading on each factor, to simplify interpretation. The first PA factor accounted for

50 percent of the common variance. The items loading .57 or higher on this factor (9, 5, 2, 3, 8) revealed an underlying emphasis on standards and quality of work-related activity. This would entail taking personal responsibility for acquiring the knowledge and skills necessary to perform effectively, strong practical judgement and a sense for what is important, a tendency to be resource efficient, high internal standards and a need to "measure up". Consequently this factor was labelled Emphasising Quality in Solution and Production.

This factor resembles the well-known factor labelled "initiation of structure" in factor analyses of leader behaviour by a group of researchers at Ohio State University (Fleishman, Harris & Burtt; Stogdill & Coons, both cited in Hampton et al., 1982). According to these researchers, actions of initiating structure emphasise standards of quantity, time and quality, whether planning work, directing work or controlling work, in the leaders's effort to 'get the work out' (Hampton et al., 1982). However, "initiating structure" referred to a leader's behaviour toward his or her subordinates, whereas the factor labelled "emphasising quality in solution and production" in this study reflected the personal work habits of the manager himself. With the task

orientation dimensions in the schemes of Blake and Mouton (1978), Hersey and Blanchard (1982) and Reddin (1970) so similar to the initiation of structure factor, the present PA Factor 1 could also be thought of in that context.

The second PA factor accounted for 10 percent of the common variance. The items loading greater than .57 on this factor (4, 6, 11, 10) were indicative of the network of transactions and interactions between people reporting to the manager, who in turn offer the manager feedback. As a result, they facilitate the manager's controlling the flow of work, information and relationships. While there is a strong relationship component in this factor, it also seems to reflect planning, organising and coordinating team-work toward production. This factor was accordingly labelled Controlling Work, Information and Relationship Flow.

Finally, the third PA factor reflected the extent to which managers initiate interpersonal relationships through which they manage. These relationships occur in all directions, up, down, and sideways both inside and outside the organisation. Two items loaded greater that .57 on this factor (1 and 7), accounting for 9 percent of the common variance. This factor was called Initiating and Maintaining Supportive

Interpersonal Relationships. This factor, in turn, seems somewhat reminiscent of the Ohio State University Leadership factor of "consideration" (Hampton et al., 1982) as well as the relationship orientation dimensions in the models mentioned above (Blake & Mouton, 1978; Hersey & Blanchard, 1982; Reddin, 1970).

The relevance of interpersonal relationships in both the second and third PA factors is consistent with the findings of several researchers: Kotter (1982a) found that effective managers build networks of interpersonal relationships, which they use to implement and update their agendas. In a similar vein, Luthans et al. (1985) found that networking activities and socializing/politicizing were significantly related to managerial success. Fiedler (1967, 1971, 1978) also found that relationship-orientated leaders (as opposed to task-orientated leaders) are successful in certain situations. Similarly, concern for people has been identified as a fundamental element of effective managerial style (Blake & Mouton, 1964, 1978). Clearly, interpersonal relationships are crucial determinants of a manager's effectiveness. In the present research, the underlying dimensions of PA Factors 2 and 3 tended to support this conclusion.

Overall, the underlying dimensions of the three PA factors strongly resembled crucial facets of effective management, viz. quality, production and human resources. Together they accounted for almost 70 percent of the common variance. The results suggested that the three factors adequately summarised managerial effectiveness as measured by the performance appraisal criteria.

The factor analysis of the assessment centre (AC) measure of managerial effectiveness also identified three factors. A cut-off point of .47 was used for the items loading on each factor to facilitate interpretation. The first AC factor accounted for 43 percent of the common variance. The items loading .47 and upward on this factor (5, 10, 1, 2, 9, 7, 11; see pp. 157-159 for discriptions) were fundamental to making and communicating decisions. Managers are required to deal with a lot of information and make decisions within tight and often unplanned time frames. They are required to determine the essence of problems, discriminate between different kinds of information and arrive at effective solutions independently or with others. Effective communication is essential both in arriving at and implementing decisions. Consequently, this factor was labelled Making and Communicating Decisions.

The second AC factor accounted for 13 percent of the common variance. The items loading higher than .47 on this factor (3, 8, 11, 6) seem essential for effective planning of work in an interpersonal context. While the descriptions of Items 3 and 8 (Sensitivity, Flexibility, see p. 158) are reminiscent of the Ohio State University leadership factor of "consideration" (Hampton et al., 1982), the contributions of Item 6 (Analytical ability, p. 158) and particularly Item 11 (Planning and organising, p.159) seem to twist it back in a more task orientated direction. This factor was accordingly labelled Interpersonal Planning.

The third AC factor reflected the notion that managers manage through others. Only one item (4) loaded higher than .47 on this factor, accounting for 9 percent of the common variance. This factor was thus labelled Utilization of People.

The three AC factors were strongly interpersonally orientated and as such, they depicted a fundamental component of managerial effectiveness. At the same time, all three factors had components that related them clearly to the work situation. None of these factors reflected a pure relationship, consideration or affiliative motivation orientation. All three factors reflected the interaction between relationship

and task orientations but in different proportions. This combination of emphases resembled Blake and Mouton's (1978) concept of 9,9 style, and was not incompatible with Reddin's (1970) notion of different combinations of relationship and task orientations being required for effectiveness in different situations.

The predominance of interpersonal concerns in a job context in the underlying structures of the second and third factors of both the PA and AC analyses point towards the likely incidence of the experience and expression of anger, particularly since conflict is inevitable in situations of interdependence (Hampton et al., 1982; Blake & Mouton, 1964, 1978) and given that conflict management is an important managerial function (Hampton et al., 1982; Luthans et al., 1985). A more direct indication of the relationship between anger and managerial effectiveness is provided by the intercorrelational procedure discussed below.

Intercorrelations of Variables

Pearson's product moment correlations were computed between TABP, the anger variables, the MAQ, and between the six factor scores. The correlation matrix is presented in Table 6. The results of the correlational study are discussed in order of the intercorrelations between (a) the predictor variables, (b) the criterion variables, and (c) the predictor and criterion variables.

TABLE 6

Intercorrelations Between Variables

Variable	Abbreviation	SA	TA	AX	A/IN	A/OUT	TABP	PAF1	PAF2	PAF3	ACF1	ACF2	ACF3
State Anger	SA												
Trait Anger	TA	.22											
Anger Expression	AX	-.02	.18										
Anger-In	A/IN	.37[b]	.37[b]	-.46[c]									
Anger-Out	A/OUT	.24	.54[c]	.69[c]	.19								
Type A Behaviour	TABP	.04	.26[a]	.21	.09	.29[a]							
Performance Appraisal Factor 1	PAF1	-.09	-.22[d]	-.09	-.10	.15	.03						
Performance Appraisal Factor 2	PAF2	.14	.05	.13	-.05	.19	.19	.69[c]					
Performance Appraisal Factor 3	PAF3	-.23[d]	-.42[e]	-.19	-.16	-.31[e]	.24[d]	.37[b]	.09				
Assessment Centre Factor 1	ACF1	.13	.05	.23[d]	-.10	.18	.14	.32[a]	.37[b]	.09			
Assessment Centre Factor 2	ACF2	.17	.23[d]	-.03	.20	.18	.16	.16	.19	-.10	.52[c]		
Assessment Centre Factor 3	ACF3	.08	.06	.22	-.03	.20	.18	.24	.29[a]	-.15	.88[c]	.48[b]	
Managerial Achievement Quotient	MAQ	-.08	-.06	.05	-.00	.08	.31[e]	.16	.07	-.16	.35[b]	.07	.36[b]

[a] $\underline{p} < .05$

[b] $\underline{p} < .01$

[c] $\underline{p} < .001$

[d] $\underline{p} <$ .05 point

[e] $\underline{p} <$ .01 point

Correlations between predictor variables.

In the present study, the correlation between the TA (trait anger) and SA (state anger) scales was small and non-significant. This is not unexpected, given the manner of their construction and the results reported by Spielberger et al. (1983).

According to Table 6, AX (total anger expression) did not correlate significantly with either TA or SA. This result is confirmation that the scales measure different anger dimensions. Similarly, A/In (anger suppression) was not significantly related to A/Out (anger expression). However, in an analysis of the correlations between anger scales for males in a sample of high school students, Johnson (cited in Spielberger et al., 1985) found relatively small, but significant positive correlations between AX scores and TA, and relatively small, but significant negative correlations between the AX scores and SA.

The AX was significantly correlated with both anger expression subscales, A/In and A/Out, which was to be expected, given the overlap of subscale items with the total anger expression scores. The AX was negatively correlated with anger suppression, due to the scoring directions.

In Johnson's (cited in Spielberger et al., 1985)

research, small but significant correlations were found between SA and the A/Out subscale. Similarly, in the present study, SA correlated positively but non-significantly with A/Out. This finding indicated that people who feel themselves to be in a state of anger have an inclination to suppress their anger, possibly due to pressures of social desirability in our culture. In both this, and Johnson's (cited in Spielberger et al., 1985) study, the correlations between SA and A/In subscale were significant, positive and slightly higher than the correlations between SA and the A/Out subscale. The correlation between SA and A/In suggests that managers who suppressed their anger felt somewhat more angry in the testing situation than managers low in anger suppression.

Johnson (cited in Spielberger et al., 1985) found moderate correlations between TA and both the A/In and A/Out subscales, but the correlations between TA and the latter subscale were somewhat higher. This finding suggested that people with the more frequent experience of anger as a personality trait are more likely to express their anger outward, i.e., toward other persons and objects in the environment. Moreover, it confirmed the concern expressed by

Spielberger et al. (1985) that it is necessary to assess anger in terms of both its frequency and mode or direction of expression. Interestingly, the correlations between TA and the two anger expression subscales were higher than the correlation between TA and AX. The intercorrelations between these anger scales were consistent in the present research. Both A/In and A/Out are positively and significantly correlated with TA. This finding is not surprising since both anger suppression and anger expression are necessarily associated with the more frequent experience of anger as a personality trait.

The relationship between the experience and expression of anger and TABP assumes some importance, particularly in view of Rosenman's (1985) observation that there appears to be some confusion as to whether the effects of anger are independent of TABP (e.g. Barefoot et al., 1983; Dembroski et al., 1985; MacDougall et al., 1985; Shekelle et al., 1983; Williams et al., 1980) or whether anger and hostility are the dominant Type A behaviours that relate TABP to CHD (Matthews et al., 1977; Spielberger et al., cited in Rosenman, 1985). In this research, very low correlations were found between TABP and both SA and the A/In subscale. The lack of an association between

TABP and A/In is consistent with recent findings reported by Dembroski et al. (1985) and MacDougall et al. (1985), though both TABP and A/In were assessed according to the Structured Interview in these two studies. According to Table 6, TABP was positively and significantly related to both TA and A/Out, which suggested that TABP was associated with anger expression and the more frequent experience of anger as a personality trait. This result confirmed the relationship between TABP and anger, hostility and aggression previously indicated by other researchers (e.g. Barefoot et al., 1983; Dembroski et al., 1985; Matthews et al., 1977). However, the correlations were low enough to suggest that the Type A scale of the JAS (at least the short form) does not measure this component of TABP very well. It is suggested that a more in-depth analysis is required before arriving at any definite conclusions as to the exact nature of the relationship between the various dimensions of anger and TABP.

Correlations between criterion variables.

The intercorrelations of the criterion variables, viz. the three performance appraisal factors, the three assessment centre factors, and the MAQ, deserve special attention as they were statistically somewhat

incongruous. Moreover, there was no apparent explanation for the lack of independence between the factors. Consequently, the correlates of these highly intercorrelated factors would have to be considered with caution.

Correlations between the factor scores revealed that the PA Factor 1, "Emphasizing Quality in Solution Production" correlated positively and highly significantly with both PA Factor 2, "Controlling Work, Information and Relationship Flow", and PA Factor 3, "Initiating and Maintaining Supportive Interpersonal Relationships".

The AC Factor scores were also intercorrelated: the AC Factor 1, "Making and Communication Decisions" correlated positively and highly significantly with both AC Factor 2, "Interpersonal Planning" and AC Factor 3, "Utilisation of People"; and AC Factor 2 and 3 were also positively and significantly correlated. However, in both the PA and the AC factor analyses, the first factor was the dominant factor by quite a wide margin. If one were to be strictly parsimonious, only the first factor in each analysis would be used as a dependent managerial effectiveness measure in subsequent statistical analyses.

The correlations between the PA factors and the AC

factors revealed that AC Factor 1 correlated positively and significantly with both PA Factor 1, and PA Factor 2. Similarly, PA Factor 2 correlated positively and significantly with AC Factor 3. A possible explanation of the relationship between these factors is that they are convergent components of managerial effectiveness, i.e., the one confirmed the other. If both are to be viewed as having construct validity, they cannot be expected - on theoretical grounds - to be correlated.

In terms of the intercorrelations between the PA and AC factors - the subjective criterion variables - and the MAQ - the objective managerial effectiveness criterion, the MAQ correlated positively and significantly with both AC Factor 1, "Making and Communicating Decisions", and AC Factor 3, "Utilization of People". Apart from confirming that the MAQ and these AC factors measure a similar construct (presumably managerial effectiveness), this result suggests that a manager's career progress is related to (a) the characteristics (e.g. decisiveness, tenacity, judgement) involved in making and communicating decisions; and (b) managing through people. It is interesting to note that together, AC Factors 1 and 3 were consistent with Kotter's (1982a)

view that the activities characteristic of effective managers entail agenda setting and network building. More specifically, it is conceivable that these elements are important determinants of managerial success or advancement, as measured by the MAQ.

Correlations between predictor and criterion variables.

Research hypotheses had to be formulated in the light of the specific nature of the PA and AC Factor scores and the MAQs used as criterion variables, as well as the specificity of the self-report scales used to operationalize the anger and TABP constructs. The nature of these measures provided theoretical bases for predicting (in advance of analysing the intercorrelations of the criterion and predictor variables) the directions of the relationships.

It was hypothesized that the PA Factor 1 (Emphasizing Quality in Solution and Production) and Factor 2 (Controlling Work, Information and Relationship Flow) would both show significant positive relationships to SA, TA, AX, A/Out and TABP. The reasoning was that all of the behaviours resulting from the constructs so represented would favour the kind of managerial behaviour represented by these two PA Factors. Anger and aggressive, win-lose,

task-orientated behaviour seems likely to push subordinates toward meeting the manager's objectives in the areas of these dimensions. On the other hand, since anger suppression, as represented by A/In, would not have the same effect, significant but negative correlations were hypothesized between these PA factors and A/In.

The third PA Factor (Initiating and Maintaining Supportive Interpersonal Relationships) was hypothesized to have the reverse pattern of correlations with the predictor variables hypothesized for PA Factors 1 and 2, since interpersonal relationships are likely to be affected adversely by angry behaviour as represented by SA, TA, AX and A/Out, as well as the TABP; i.e., negative correlations were hypothesized. It was, in turn, hypothesized that this kind of managerial behaviour would be affected favourably by A/In, leading to a positive correlation coefficient.

As indicated above, all three AC factors were characterized by an emphasis on relationships in a task context. Since none of them seemed to reflect a pure relationship orientation, the same hypotheses were fomulated for all AC factors: that they would show significant positive correlations with SA, TA,

AX, A/Out and TABP but a significant negative correlation with A/In. These hypotheses were the same as those for the first two PA factors. They were based on the same sequence of thinking, that the presence of anger, as well as its expression would be likely to favour effective behaviour in the areas represented by these factors, while holding back one's anger would interfere with effectiveness. The high positive correlations that were found between the three AC factors (Table 6) also indicated that these factors had the same directionality.

Hypothesis testing required one-tailed tests of significance, in view of the directional hypotheses presented above. In the case of the correlation coefficients concerned, the probability obtained was referred to in Table 6 as a point, rather than a level; the value of a correlation significant at the .05 point was the same as the .01 level, and that at the .01 point the same as the the .02 level.

Among the correlations with PA Factor 1 with the criterion variables (Table 6) only one reached the .05 point of significance but its sign was negative, i.e., the reverse of what was predicted. Neither were any of the hypothesized relationships found in the case of PA Factor 2. PA Factor 3 showed significant

correlations in the predicted direction, with SA at the .05 point, and with both TA and A/Out at the .01 point. These results suggested that the more frequently the manager experiences anger as an emotional state, the more anger-prone he is, and the more he expresses anger outward toward people (or objects) in his environment, the less effective he will be in initiating and maintaining supportive interpersonal relationships.

In the case of AC Factor 1 and AX, as well as AC Factor 2 and TA, significant correlation coefficients ($p < .05$ point), in the hypothesized direction, were found (Table 6). These findings implied that in making and communicating decisions a manager tends to be more successful if he expresses anger. Similarly, interpersonal planning seems to benefit from, what should probably be interpreted as forceful aggressiveness.

Among the managerial effectiveness criterion variables in the present research, only the PA Factor 3 and the MAQ correlated positively and significantly with TABP (Table 6; $p < .05$ and .01 points respectively). However, in the case of the PA Factor 3, a negative correlation had been hypothesized. This hypothesis was not confirmed in this study. The

thus remains an area for future investigation.

Regression analysis.

Based on the correlation matrix presented in Table 6, stepwise multiple regression was attempted using the dependent (criterion) variables mentioned above. However, as no independent (predictor) variables achieved a significant improvement in prediction over and above the zero-order correlation, no more than one step was executed in each case. In addition, the partial correlations were generally very low. The significant zero-order correlations have already been discussed above and therefore are not repeated here.

Limitations of Study

Several limitations in this study are apparent. Firstly, examination of individual scores on the managerial effectiveness measures revealed a truncated sample range. The sample is only representative of "average" to "good" managers. However, this may be a finding in itself. Perhaps at the level of management assessed, "natural selection" has already precluded ineffective managers from entering higher levels. An alternative explanation for the limited range could be that managers prefer not to use the lower categories of rating in performance appraisals, as a matter of kindness towards subordinates, as a matter of saving

themselves the embarrassment of having to deal with the low-rated subordinates, and/or as a matter of denying that they could have week subordinates. The truncated sample range reduced the variance, which in turn, reduced the size of the correlation coefficients, thus providing a partial explanation for the limited relationship between anger and managerial effectiveness in the present study. Since promotion means leaving some people behind, those managers who were not promoted may differ in the way in which they experience and express anger from those promoted to higher levels; this consideration limits the generalization from the present findings to lower organisational levels.

Another limitation of the present research emerged due to the fact that there are no generally accepted criteria or measures of managerial effectiveness (Langford, 1980). The use of the assessment centre and performance appraisal in the present research is justified on the grounds that both measures were based on job-related behaviour and performance. Although conceptually it follows that both were therefore potential measures of managerial effectiveness (as behaviour and performance are at the core of the construct), the dimensions and criteria did not

necessarily tap managerial effectiveness.

A further limitation of this study was the relatively low reliabilities of the self-report measures; as was pointed out earlier in this chapter, high correlations between the criterion and predictor variables were unlikely on these grounds too. The small sample size (n = 60) was also, in itself, an unavoidable limitation of the present research. Nevertheless, significant results were obtained, which suggests that a larger sample would confirm, and perhaps extend, these findings.

The final limitation of this research is imposed by the cross-sectional design. Although the current design indicated that there were some significant relationships between the predictor and criterion variables, causality can only be inferred from a longitudinal design. However, as the results stand, it seems more likely that anger and TABP affect managerial effectiveness rather than the reverse.

Theoretical Implications and Recommendations for Future Research

Since the effects of anger have never been studied in terms of managerial effectiveness, the present study has made a novel contribution to the field of stress and discipline of organisational psychology.

Consequently, there are implications for both theory and future research, and these are discussed below.

From the literature it is apparent that there is equivocality surrounding the notion of anger and its effects (as discussed in Chapter 2.) Spielberger and his associates have alleviated this confusion to some extent. However, the present author believes that further improvement of the measures employed to assess anger and the way in which it is expressed, can only be of benefit to future studies in this area (i.e., better measures lead to more accurate and relevant findings).

Anger manifests itself in many spheres of a person's experience. In the past, research has focused on the association of anger with TABP and related health disorders (as discussed in Chapter 3). The present study has shifted the focus from health to the work situation through examining the role of anger on managerial effectiveness. In the light of this, it is conceivable that the experience and expression of anger may affect other occupational groups and their activities. This remains to be investigated.

The methodological approach adopted in the present study also has implications for future research on managerial effectiveness. It emphasises the necessity

for establishing organisation-specific managerial effectiveness criteria prior to investigating related issues. To establish these criteria, it is suggested that future researchers conduct research in a particular organisation, further specified according to organisational level and function if necessary. Although past research has been unable to identify a universal set of criteria, this may yet emerge through comparing findings conducted in the organisation-specific framework.

In addition to the above, the present research has also exposed three major relationships worthy of further study, viz. the relationship between the experience and expression of anger and TABP, the relationship between TABP and managerial effectiveness, and the relationship between both the experience and expression of anger and managerial effectiveness. In conclusion, it is evident that research is only beginning to uncover the extent of the role of anger in the lives of individuals, and in this regard, further investigation is still necessary. The conceptual and methodological issues encountered in the present study thus provide a valuable foundation for future research in the pertinent areas of stress and organisational psychology.

REFERENCES

Adams, S., & Fyffe, D. (1969). The corporate promotables. Houston, TX: Gulf.

Adamson, A. (1970). The effective leader. London: Pitman.

Alexander, F.(1950). Psychosomatic medicine. New York: Norton.

Arvey, R.D., & Hoyle, J.C. (1974). A Guttman approach to the development of BARS for systems analysts and programmer analysts. Journal of Applied Psychology, 59, 61-68.

Averill, J.R. (1982). Anger and aggression: An essay on emotion. New York: Springer-Verlag.

Ax, A.F. (1953). The physiological differentiation between fear and anger in humans. Psychosomatic Medicine, 15, 433-442.

Banks, C.G., & Murphy, K.R. (1985). Toward narrowing the research - practice gap in performance appraisal. Personnel Psychology, 38, 335-345.

Banner, D.K., & Graber, J.M. (1985). Critcal issues in performance appraisal. Journal of Management Development, 4, 26-35.

Barefoot, J.C., Dahlstrom, G., & Williams, R.B. (1983). Hostility, CHD incidence, and total mortality: A 25-year follow-up study of 255

physicians. Psychosomatic Medicine, 45, 59-63.

Barling, J. (1986). Work motivation in South Africa: An historical overview. In J. Barling, C. Fullagar & S. Bluen (Eds.), Behaviour in organizations: South African perspectives. Johannesburg: McGraw-Hill.

Beach, D.S. (1980). Personnel: The management of people at work (4th ed.). New York: MacMillan.

Bender, J.M. (1973). What is "typical" of assessment centers? Personnel, 50(4), 50-57.

Bendig, A.W. (1962). Factor analytic scales of covert and overt hostility. Journal of Consulting Psychology, 26, 200.

Berkowitz, L. (1966). On not being able to aggress. British Journal of Social and Clinical Psychology, 5, 130-139.

Berkowitz, L. (1962). Aggression: A social psychological analysis. New York: McGraw-Hill.

Berkowitz, L. (1970). Experimental investigations of hostility catharsis. Journal of Consulting and Clinical Psychology, 35, 1-7.

Bernardin, H.S., Alvares, K.M., & Cranny, C.J. (1976). A re-comparison of B.E.S. to summated rating scales. Journal of Applied Psychology, 61, 564-70.

Bernardin, H.J., & Walter, C.S. (1977). The effects of rater training and diary keeping on psychometric error in ratings. Journal of Applied Psychology, 66, 458-463.

Bernardin, H.J., & Kane, J.S. (1980). A second look at behavioral observation scales. Personnel Psychology, 33, 809-814.

Biaggio, M.K. (1980). Assessment of anger arousal. Journal of Personality Assessment, 44, 289-298.

Biaggio, M.K., Supplee, K., & Curtis, N. (1981). Reliability and validity of four anger scales. Journal of Personality Assessment, 45, 639-648.

Blake, R.R., & Mouton, J.S. (1964). The managerial grid. Houston, TX: Gulf.

Blake, R.R., & Mouton, J.S. (1978). The new managerial grid. Houston, TX: Gulf.

Blake, R.R., & Mouton, J.S. (1985). Presidential (Grid) styles. Training and Development Journal, 3, 30-34.

Borman, W.C. (1974). The ratings of individuals in organizations : An alternative approach. Organizational Behavior and Human Performance, 12, 105-24.

Borman, W.C., & Dunnette, M.D. (1975). Behavior based versus trait orientated performance ratings : an

empirical study. Journal of Applied Psychology, 60, 561-565.

Bowers, D.G., & Seashore, S.E. (1976). Predicting organization effectiveness with a four factor theory of leadership. Administration Science Quarterly, 11, 238-263.

Boyatzis, R.E. (1982a). The competent manager: A model for effective performance. New York: Wiley.

Boyatzis, R.E. (1982b). Competence at work. In A.J. Stewart (Ed.). Motivation and society (pp.221-243). San Francisco: Jossey-Bass.

Bray, D.W. (1964). The assessment center method of appraising management potential. In J.W. Blood (Ed). The personnel job in a changing world. New York: American Management Association.

Bray, D.W., & Campbell, R.J. (1968). Selection of salesmen by means of an assessment center. Journal of Applied Psychology, 52, 36-41.

Bray, D.W., Campbell, R.J., & Grant, D.L. (1974). Formative years in business: A long-term AT and T study of managerial lives. New York: Wiley.

Bray, D.W., & Grant, D.L. (1966). The assessment center in the measurement of potential for business management. Psychological Monographs, 80 (17, Whole No. 625).

Bray, D.W., & Moses, J.L. (1972). Personnel selection. In P.H. Mussen & M.R. Rosenzweig (Eds.), Annual Review of Psychology. Palo Alto : Annual Reviews.

Brinkerhoff, D.W., & Kanter, R.M. (1980). Appraising the performance of performance appraisal. Sloan Management Review, 21(3), 3-16.

Burnanska, R.F., & Hollmann, T.D. (1974). An empirical comparison of the relative effects of rater response biases in three rating scale formats. Journal of Applied Psychology, 59, 307-12.

Buss, A. (1961). The psychology of aggression. New York: Wiley.

Buss, A.H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21, 343-349.

Buss, A.H. (1966). Instrumentality of aggression, feedback, and frustration as determinants of physical aggression. Journal of Personality and Social Psychology, 3, 153-162.

Byham, W.C. (1970). Assessment center for spotting future managers. Harvard Business Review, 48(4), 150-160.

Byham, W.C. (1971). The assessment center as an aid in management development. Training and Development Journal, 25(12), 10-22.

Byham, W.C., & Bobin, D. (1972). Alternatives to paper and pencil testing. Pittsburgh, PA: Development Dimensions Press.

Campbell, R.J. & Bray, D.W. (1967). Assessment centers: An aid in management selection. Personnel Administration, 30(2), 6-13.

Campbell, J.P., Dunnette, M.D., Arvey, R.D., & Hellervik, L.W. (1973). The development and evaluation of behaviorally based rating scales. Journal of Applied Psychology, 57, 15-22.

Campbell, J.P., Dunnette, M.D., Lawler, E.E., & Weick, K.E. (1970). Managerial behavior, performance and effectiveness. New York: McGraw-Hill.

Campbell, J.P., & Pritchard, R.D. (1976). Motivation theory in industrial and organizational psychology. In M.D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago : Rand McNally.

Cannon, W.B. (1927). The James-Lange theory of emotion. American Journal of Psychology, 39, 106-124.

Carlson, R.E. (1970). Effect of applicant sample on ratings of valid information in an employment setting. Journal of Applied Psychology, 54, 217-222.

Carlson, S. (1951). Executive behaviour: A study of the workload and the working methods of managing directors. Stockholm: Strombergs.

Carroll, S.J., & Schneier, C.E. (1982). Performance appraisal and review systems. Glenview, IL: Scott, Foresman.

Chesney, M.A. (1985). Anger and hostility : Future implications for behavioral medicine. In M.A. Chesney & R.H. Rosenman (Eds.), Anger and hostility in cardiovasular and behavioral disorders (pp.227-290). New York : Hemisphere.

Cohen, B.M., Moses, J.L., & Byham, W.C. (1974). The validity of assessment centers: A literature review. (Monograph No. 2). Pittsburgh, PA: Development Dimensions Press.

Cohen, S.L. (1985, May 16). Newsletter to subscribers and friends of the journal. Journal of Assessment Centre Technology.

Cook, W.W., & Medley, D.M. (1954). Proposed hostility and pharisaic-virtue scales for the MMPI. Journal of Applied Psychology, 38, 414-418.

Cooper, W. (1981). Conceptual similarity as a source of halo in job performance ratings. Journal of Applied Psychology, 66, 302-307.

Coser, L. (1956). The functions of social conflict.

New York: Free Press.

Cummings, L.L., & Schwab, D.P. (1973). Performance in organizations: Determinants and appraisal. Glenview, IL: Scott, Foresman.

Dembroski,T.M., MacDougall, J.M., Williams, R.B., & Honey, T.L. (1985). Components of Type A, hostility, and anger-in: Relationship to angiographic findings. Psychosomatic Medicine. 47, 219-233.

De Nisi, A., Meglino, B., & Cafferty, T.P. (1984). A cognitive view of the performance appraisal process: A model and research propositions. Organizational Behavior and Human Performance, 33, 360-369.

Dodd, W.C. (1971). Validity studies at IBM. In W.C. Byham (Chair), Validity of assessment centers. Symposium presented at the 79th Annual Convention of American Psychological Association, Washington, D.C.

Dollard, J., Doob, L., Miller, N., Mowrer, D., & Sears, R. (1939). Frustration and aggression. New Haven, CT: Yale University Press.

Drucker, P.F. (1967). The effective executive. London: Heinemann.

Dunnette, M.D. (1966). Personnel selection and

placement. Belmont, CA: Wadsworth.

Epstein, F.H. (1965). The epidemiology of coronary heart disease : A review. Journal of Chronic Diseases, 18, 735-774.

Evans, D.R., & Strangeland, M. (1971). Development of the reaction inventory to measure anger. Psychological Reports, 29, 412-414.

Executives under stress : Gimme a break (1985, November 8). Financial Mail, p.30.

Feldman, J.M. (1981). Beyond attribution theory: Cognitive processes in performance appraisal. Journal of Applied Psychology, 66, 127-148.

Fiedler, F.E. (1967). A theory of leadership effectiveness. New York: McGraw-Hill.

Fiedler, F.E. (1971). Validation and extension of the contingency model of leadership effectiveness: A review of empirical findings. Psychological Bulletin, 76, 128-148.

Fiedler, F.E. (1978). The contingency model and the dynamics of the leadership process. In: L. Berkowitz (Ed.), Advances in experimental and social psychology (pp. 59-112). New York: Academic Press.

Flanagan, J.C. (1954). The critical incident technique. Psychological Bulletin, 51, 327-358.

Fletcher, C.A., & Dulewicz, V. (1984). An empirical

study of a U.K.-based assessment centre. Journal of Management Studies, 21(1), 83-97.

Fogli, L., Hulin, C.L., & Blood, N.L. (1971). Development of first level behavioral job criteria. Journal of Applied Psychology, 55, 3-8.

Foster, L.W. (1983). Better management for better productivity: The role of goal setting. National Productivity Review, 2(2), 157-163.

French, J.R.P., & Raven, B.H. (1959). The bases of social power. In D. Cartwright (Ed.), Studies in social power. Ann Arbor, MI: University of Michigan Press.

Friedman, M., & Rosenman, R.H. (1959). Association of specific overt behavior pattern with blood and cardiovascular findings. Journal of the American Medical Association, 169, 1286-1296.

Friedman, M., & Rosenman, R.H. (1971). Type A behavior pattern: Its association with coronary heart disease. Annals of Clinical Research, 3, 300-312.

Friedman, M., & Rosenman, R.H. (1974). Type A behaviour and your heart. London: Wildwood House.

Funkenstein, D.H., King, S.H., & Drolette, M.E. (1954). The direction of anger during a laboratory stress inducing situation. Psychosomatic Medicine,

16, 404-413.

Gaines, T., Kirwin, P.M., & Gentry, W.D. (1977). The effect of descriptive anger expression, insult, and no feedback on interpersonal aggression, hostility, and empathy motivation. Genetic Psychology Monographs, 95, 349-367.

Gaylin, W. (1984). The rage within. New York: Simon & Schuster.

Gentry, W.D., Chesney, A.P., Hall, R.P., & Harburg, E. (1981). Effect of habitual anger-coping pattern on blood pressure in black/white, high/low stress area respondents. Psychosomatic Medicine, 43.88.

Gentry, W.D., Chesney, A.P., Gary, H.G., Hall, R.D., & Harburg, E. (1982). Habitual anger-coping styles:I.Effect on mean blood pressure and risk for essential hypertension. Psychosomatic Medicine, 44, 195-202.

Gentry, W.D., & Williams, R.B. (Eds.). (1975). Psychological aspects of myocardial infarction and coronary care. Saint Louis : Mosby.

Goldberg, J.A. (1985). Management style: A catalyst to productivity improvement in the public sector. National Productivity Review, 3, 256-264.

Goldenson, R.M. (Ed.). (1984). Longman dictionary of psychology and psychiatry. New York : Longman.

Gordon, T., & Verter, J. (1969). Serum cholesterol, systolic blood pressure, and Framingham relative weight as discriminators of cardiovascular disease. In W.B. Kannel & T. Gordon (Eds.), The Framingham study: An epidemiological investigation of cardiovascular disease. Washington, D.C.: U.S. Government Printing Office.

Hall, J., & Donnel, S.M. (1979). Managerial achievement : The personal side of behavioral theory. Human Relations, 32, 77-101.

Hamilton, R.P. (1984). Management Commitment: Key to productivity improvement. Bobbin, 25(5), 39-42.

Hampton, D.R., Summer, C.E., & Webber, R.A. (1982). Organizational behavior and the practice of management (4th ed.). Glenview, IL: Scott, Foresman.

Harari, O., & Zedeck, S. (1973). Development of behaviorally anchored scales for the evaluation of faculty teaching. Journal of Applied Psychology, 58, 261-265.

Harburg, E., Blakelock, E.H., & Roeper, P.J. (1979). Resentful and reflective coping with arbitrary authority and blood pressure:Detroit. Psychosomatic Medicine, 3, 189-202.

Harburg, E., Erfurt, J.C., Hauenstein, L.S., Chape, C., Schull, W.J., & Schork, M.A. (1973).

Socio-ecological stress, suppressed hostility, skin color, and black-white male blood pressure: Detroit. Psychosomatic Medicine, 35, 276-296.

Harburg, E. & Hauenstein, L. (1980). Parity and blood pressure among four race-stress groups of females in Detroit. American Journal of Epidemiology, 111, 356-366.

Harburg, E., Schull, W.J., Erfurt, J.C., & Schork, M.A. (1970). A family set method for estimating heredity and stress. - I. Journal of Chronic Diseases, 23, 69-81.

Haynes, S.G., Levine, S., Scotch, N., Feinleib, M., & Kannel, W.B. (1978). The relationship of psychosocial factors to coronary heart disease in the Framingham Study. American Journal of Epidemiology, 107, 362-383.

Haynes, S.G., Feinleib, M., & Kannel, W.B. (1980). The relationship of psychosocial factors to coronary heart disease in the Framingham study. Part III: Eight Year incidence of CHD. American Journal of Epidemiology, 3, 37-58.

Harris, C.W. (1967). On factors and factor scores. Psychometrika, 32, 363-379.

Henderson, R.I. (1984). Performance appraisal (2nd ed.). Reston, VA: Reston Publishing.

Hersey, P., & Blanchard, K. (1982). Management of organizational behavior: Utilizing human resources. (4th ed.). Englewood Cliffs, NJ: Prentice - Hall.

Herzberg, F. (1966). Work and the nature of man. Cleveland, OH: World.

Heyman, S.R. (1977). Dogmatism, aggression, and gender rates. Journal of Clinical Psychology, 39, 694-698.

Hinrichs, J.R. (1969). Comparison of "real life" assessments of managerial potential with situation exercises, paper-and-pencil ability tests, and personality inventories. Journal of Applied Psychology, 53, 425-432.

Hinrichs, J.R. (1978). An eight-year follow up of a management assessment centre. Journal of Applied Psychology, 63, 596-601.

Hokanson,J.E., & Burgess, M. (1962a). The effects of three types of aggression on vascular process. Journal of Abnormal and Social Psychology, 64, 446-449.

Hokanson, J.E., & Burgess, M. (1962b). The effects of status, type of frustration, and aggression vascular processes. Journal of Abnormal and Social Psychology, 65, 232-237.

Hokanson, J.E., Burgess, M., & Cohen, M.F. (1963). Effects of displaced aggression on systolic blood pressure. Journal of Abnormal and Social Psychology, 67, 214-218.

Hokanson, J.E., & Elderman, R. (1966). Effects of three social responses on vascular processes. Journal of Personality and Social Psychology, 3, 442-447.

Hokanson, J.E., & Shetler, S. (1961). The effect of overt aggression on physiological arousal. Journal of Abnormal and Social Psychology, 63, 446-448.

Holt, R.R. (1970). On the interpersonal and intrapersonal consequences of expressing or not expressing anger. Journal of Consulting and Clinical Psychology, 35, 8-12.

Horowitz, M. (1963). Hostility and its management in classroom groups. In W.W. Charters, & N.L. Gage (Eds.), Readings in the social psychology of education. Boston, MA: Allyn & Beacon.

Howard, J.M., Cunningham, D.A., & Rechnitzer, P.A., (1977). Work patterns associated with Type A behavior: A managerial population. Human Relations, 30, 825-836.

Huck, J.R. (1977). The research base. In J.L. Moses & W.C. Byham (Eds.), Applying the assessment center

method. New York: Pergamon Press.

Huck, J.R., & Bray, D.W. (1976). Management assessment center evaluations and subsequent job performance of black and white females. Personnel Psychology, 19, 13-30.

Ilgen, D.R., & Feldman, J.M. (1983). Performance appraisal: A process focus. In B.M. Staw & L.L. Cummings (Eds.), Research in organizational behavior, 5, 141-197. Greenwich, CT: JAI Press.

Jaffee, C.L., Bender, J., & Calvert, O.L., (1970). The assessment center technique : A validation study. Management of Personnel Quarterly, 9(3), 9-14.

Jenkins, C.D. (1975). The coronary prone personality. In W.D. Gentry & R.B. Williams (Eds.), Psychological aspects of myocardial infarction and coronary care (pp. 5-23). Saint Louis: Mosby.

Jenkins, C.D., Rosenman, R.H., & Friedman, M. (1967). Development of an objective psychological test for the determination of the coronary-prone behavior pattern in employed men. Journal of Chronic Diseases, 20, 371-379.

Jenkins, C.D., Rosenman, R.H., & Zyzanksi, S.J. (1974). Prediction of clinical coronary heart disease by a test for the coronary-prone behavior

pattern. New England Journal of Medicine, 290, 1271-1275.

Jenkins, C.D., Zyzanski, S.J., & Rosenman, R.H., (1971). Progress toward validation of a computer scored test for the Type A, coronary-prone behavior pattern. Psychosomatic Medicine, 33, 193-202.

Jenkins, C.D., Zyzanski, S.J., & Rosenman, R.H. (1976). Risk of new myocardial infaction in middle-aged men with manifest coronary heart disease. Circulation, 53, 342-347.

Jenkins, C.D., Zyzanski, S.J., Rosenman, R.H., & Cleveland, G.L. (1971). Association of coronary-prone behavior pattern scores with recurrence of coronary heart disease. Journal of Chronic Diseases, 24, 601-611.

Jenkins, C.D., Zyzanski, S.J., & Rosenman, R.H. (1979). Jenkins Activity Survey manual. New York: Psychological Corporation.

Jenkins, C.D., Zyzanski, S.J., Ryan, T.J., Flessas, A., & Tannenbaum, S.I. (1977). Social insecurity and coronary-prone Type A response as identifier of severe atherosclerosis. Journal of Consulting and Clinical Psychology, 45, 1060-1067.

Judson, A.S. (1982). The awkward truth about productivity. Harvard Business Review, 60(5), 93-97.

Kaplan, R.M. (1975). The cathartic value of self-expression : Testing, catharsis, dissonance, and interference explanations. Journal of Social Psychology, 97, 195-208.

Kaufmann, H., & Feshback, S. (1963). Displaced aggression and its modification through exposure to anti-aggressive communications. Journal of Abnormal and Social Psychology, 67, 79-83.

Kavanagh, M.J. (1982). Evaluating performance. In K.M. Rowland & G.R. Ferris (Eds.), Personnel management, (pp. 187-226). Boston, MA: Allyn & Bacon.

Kelly, G.A. (1955). The psychology of personal constructs. New York: Norton.

Keys, A. (1970). Coronary heart disease in seven countries. Circulation, 41 (Suppl.1), 1-211.

Keys, A., Aravanis, C., Blackburn, H., Vanbuchem, F.S.P., Buzina, R., Djordjenic, B.S., Fidanza, F., Karvonen, M.J., Menotti, A., Puddu, V., & Taylor, H.L. (1972). Probability of middle-aged men developing coronary heart disease in 5 years. Circulation, 53, 342-347.

Kirchoff, B.A. (1977). Organization effectiveness measurement and policy research. Academy of Management Review, 2, 347-355.

Klimoski, R.J., & Strickland, W.J. (1977). Assessment centers: Valid or merely prescient. Personnel Psychology, 30, 353-363.

Koontz, H. (1971). Appraising managers as managers. New York: McGraw-Hill.

Kotter, J.P. (1982a). The general managers. New York: Free Press.

Kotter, J.P. (1982b). What effective general managers do. Harvard Business Review, 60(6), 156-167.

Kraut, A.I., & Scott, G.J. (1972). Validity of an operational management assessment program. Journal of Applied Psychology, 56, 124-129.

L'Abate, L. (1977). Intimacy is sharing hurt feelings: A reply to David Mace. Journal of Marriage and Family Counselling, 3, 13-16.

Landy, F.J., & Farr, J.C. (1980). Performance ratings. Psychological Bulletin, 87, 72-107.

Langford, V. (1980). Managerial effectiveness: Criteria and measurement. Management Bibliographies and Reviews, 6(2), 93-111.

Latham, G.P., & Wexley, K.N. (1977). Behavioral observation scales. Personnel Psychology, 30, 255-268.

Latham, G., & Wexley, K.N. (1981). Increasing productivity through performance appraisal. Reading,

MA: Addison-Wesley.

Lawler, E.E. (1973). Motivation in work organizations. Belmont, CA: Wadsworth.

Lawler, E.E., Mohrman, A.M., & Resnick, S.M. (1984). Performance appraisal revisited. Organizational Dynamics, 13(1), 20-35.

Lazarus, R.S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.

Lee, C. (1985). Increasing performance appraisal effectiveness: Matching task types, appraisal process, and rater training. Academy of Management Review, 10, 322-331.

Leon, C. (1969). Unusual patterns of crime during La Violencia in Columbia. American Journal of Psychiatry, 125, 1564-1575.

Lewis, W.C. (1963). Some observations relevant to early defenses and precursors. International Journal of Psychoanalysis, 44, 132-142.

Livingston, J.S. (1971). Myth of the well-educated manager. Harvard Business Review, 49(1), 79-88.

Luthans, F., Rosenkrantz, S.A., & Hennessey, H.W. (1985). What do successful managers really do? An observational study of managerial activities. Journal of Applied Behavioral Science, 21, 255-270.

MacDougall, J.M., Dembroski, T.M., Dimsdale, J.E., &

Hackett, T.P. (1985). Components of Type A, hostility and anger-in: Further relationships to angiographic findings. Health Psychology, 4, 137-152.

Mace, D. (1976). Marital intimacy and the deadly love-anger cycle. Journal of Marriage and Family Counselling, 2, 131-137.

Machin, J. (1973). The effectiveness of management control systems. Management Decision, 11, 260-280.

Matthews, K.A., Glass, D.C., Rosenman, R.H., & Bortner, R.W. (1977). Competitive drive, Pattern A, and coronary heart disease: A further analysis of some data from the Western Collaborative Group Study. Journal of Chronic Diseases, 30, 489-498.

McClelland, D.C. (1971). Assessing human motivation. New York : General Learning Press.

McClelland, D.C., & Burnham, D.H. (1976). Power is the great motivator. Harvard Business Review, 54(2), 100-110.

McConnell, J.J., & Parker, T. (1972). An assessment center program for multiorganizational use. Training and Development Journal, 26(3), 6-14.

Meadows, C.M. (1971). Constructive view of anger, aggression, and violence. Pastoral Psychology, 22, 9-20.

Megargee, E.I. (1966). Under controlled and overcontrolled personality types in extreme antisocial aggression. Psychological Monograph, 80(3, whole No. 611).

Megargee, E.I. (1985). The dynamics of aggression and their application to cardiovascular disorders. In M.A. Chesney & R.H. Rosenman (Eds.), Anger and hostility in cardiovascular and behavioral disorders (pp.31-57). New York: Hemisphere.

Mettlin, C. 1976. Occupational careers and the prevention of coronary-prone behavior. Social Science and Medicine, 10, 367-372.

Miner, J.B. (1977). Implications of managerial talent. Academy of Management Review, 2, 412-420.

Mintzberg, H. (1973). The nature of managerial work. New York: Harper & Row.

Mitchell, J.O. (1975). Assessment center validity: A longitudinal study. Journal of Applied Psychology, 60, 573-579.

Mitchell, T.R. (1983). The effects of social, task, and stiuational factors on motivation, performance, and appraisal. In F. Landy, S. Zedeck, & J. Cleveland (Eds.), Performance measurement and theory (pp.29-59). Hillsdale, NJ: Erlbaum.

Mohrman, A.M., & Lawler, E.E. (1983). Motivation and

performance-appraisal behavior. In F. Landy, S. Zedeck, & J. Cleveland (Eds.), Performance measurement and theory (pp.173-189). Hillsdale, NJ: Lawrence Erlbaum Associates.

Morse, J.J., & Wagner, F.R.,(1978). Measuring the process of managerial effectivenes. Academy of Management Journal, 21, 23-35.

Moses, J.L. (1971). Assessment center performance and management progress. In W.C. Byham (Chair). Validity of assessment centers. Symposium presented at the 79th annual convention of the American Psychological Association, Washington, D.C.

Moses, J.L. (1972). Assessment center performance and management progress. Studies in Personnel Psychology, 4(1), 7-12.

Moses, J.J., & Boehm, V.R. (1975). Relationshp of assessment center performance to management progress of women. Journal of Applied Psychology, 60, 527-529.

Moyer, K.E. (1971). The psychology of aggression and the implication for aggression control. In J.L. Singer (Ed.), The control of aggression and violence. New York: Academic Press.

Moyer, K.E. (1973). The physiological inhibition of hostile behavior. In: J.F. Kautson (Ed.), The

control of aggression. Chicago: Aldine Publishing.

Mumford, A. (1984). Effectiveness in management development. Journal of Management Development, 3 (2), 3-16.

Murphy, K.R., Balzer, W., Kellam, K., & Armstrong, J. (1984). Effects of the purpose of rating in observing teaching behavior and evaluating teaching performance. Journal of Educational Psychology, 76, 45-54.

Murphy, K.R., Balzer, W., Lockhart, M., & Eisenman, E. (1985). Effects of previous performance on evaluations of present performance. Journal of Applied Psychology, 70, 72-84.

Murphy, K.R., Garcia, M., Kerkar, S., Martin, C., & Balzer, W.K. (1982). Relationship between observational accuracy and accuracy in evaluating performance. Journal of Applied Psychology, 67, 320-325.

Murphy, K.R., Martin, C., & Garcia, M. (1982). Do behavior observation scales measure observation? Journal of Applied Psychology, 67, 562-567.

Nelson, H. (1984). Reality supervision. Supervision, 46(10), 8-10.

Novaco, R.W. (1975). Anger control: The development and evaluation of an experimental treatment:

Lexington, MA: Lexington Books.

Novaco, R.W. (1976). The functions and regulation of the arousal of anger. American Journal of Psychiatry, 133, 1124-1128.

Novaco, R.W. (1985). Anger and its therapuetic regulation. In M.A. Chesney & R.H. Rosenman (Eds.), Anger and hostility in cardiovascular and behavioral disorders (pp. 203-226). New York: Hemisphere.

Peter, L.J., & Hull, R. (1969). The Peter principle. New York: Bantam Books.

Porter, L.W., & Lawler, E.E. (1968). Managerial attitudes and performance. Homewood, IL: Irwin.

Ranftl, R.M. (1984). Training managers for high productivity : The Hughes approach. National Productivity Review, 3(2), 170-180.

Reddin, W.J. (1970). Managerial effectiveness. New York: McGraw Hill.

Rice, B. (1978, December). Measuring executive muscle. Psychology Today (pp. 95-110).

Rimm, D.C., de Groot, J.C., & Boord, P. (1971). Systematic desensitization of an anger response. Behavior Research Therapy, 9, 273-280.

Rosenman, R.H. (1978). The interview method of assessment of the coronary prone behavior

pattern. In T.M. Dembroski, S.M. Wiess, J.L. Shields, S.G. Haynes, & M. Feinleib (Eds.), Coronary-prone behavior. New York: Springer-Verlag.

Rosenman, R.H., Bawol, R.D., & Oscherwitz, M. (1975). A 4-year prospective study of the relationship of different habitual vocational physical activity to risk and incidence of ischemic heart disease in volunteer male federal employees. In P.Milvy (Ed.), The Marathon. New York.

Rosenman, R.H., Brand, R.J., Jenkins, C.D., Friedman, M., Straus, R., & Wurm, M. (1975). Coronary heart disease in the Western Collaborative Group Study: Final follow-up of 8.5 years. Journal of the American Medical Association, 233, 872-877.

Rosenman, R.H., Brand, R.J., Sholtz, R.I., & Friedman, M. (1976). Multivariate prediction of coronary heart disease during 8.5 year follow-up in the Western Collaborative Group Study. American Journal of Cardiology, 37, 903-910.

Rosenman, R.H., & Chesney, M.A. (1980). The relationship of Type A behavior pattern to coronary heart disease. Activitas Nervosa Superior, 22, 1-45.

Rosenman, R.H., Chesney, M.A. (1982). Stress, Type A behavior, and coronary disease. In L. Goldberger & S. Breznitz (Eds.), Handbook of stress: Theoretical and clinical aspects. New York: Free Press.

Rosenman, R.H., & Friedman, M. (1971). The central nervous system and coronary heart disease. Hospital Practice, 6, 87-97.

Rosenman, R.H., & Friedman, M. (1974). Neurogenic factors in pathogenesis of coronary heart disease. Medical Clinics of North America, 58, 269-279.

Rosenman, R.H., Friedman, M., Strauss, R., Wurm, M., Kotsitcheck, R., Hahn, W., & Werthessen, N.T. (1964). A predictive study of coronary heart disease: The Western Collaborative Group Study. Journal of the American Medical Association, 189, 15-22.

Roskin, R. (1975). Situational management skills. Journal of European Training, 1, 133-62.

Ross, J.E. (1977). Managing Productivity. Reston, VA: Reston.

Rothenberg, A. (1971). On anger. American Journal of Psychiatry, 128, 454-460.

Russell, G.W. (1981). A comparison of hostility measures. Journal of Social Psychology, 113, 45-55.

Sadie, J.L. (1979). Socio-political requirements for stability and growth in Southern Africa. Journal for Studies in Economics and Econometrics, 6, 57-66.

Sakinofsky, I. (1979). An investigation into the validity of Old Mutual's assessment center method as a predictor of management performance. Unpublished master's thesis, University of Stellenbosch, Stellenbosch.

Sarason, I.G. (1961). Intercorrelations among measures of hostility. Journal of Clinical Psychology, 17, 192-195.

Schachter, S., & Singer, J.E. (1962). Cognitive, social and psychological determinants of emotional state. Psychological Review, 69, 379-399.

Schaffer, R.M. (1971). Psychological barriers to management effectiveness. Business Horizons, 14(2), 7-25.

Schleh, E.C. (1975). Managing for success. SAM Advanced Management Journal, 40(4), 13-22.

Scholefield, J. (1968). The effectiveness of senior executives. Journal of Management Studies, 19-34.

Schmitt, N., Noe, R.A., Merritt, R., & Fitzgerald, M.P. (1984). Validity of assessment center ratings for the prediction of performance ratings and school climate of administrators. Journal of Applied

Psychology, 69, 207-213.

Siegel, J.M. (1985). The measurement of anger as a multidimensional construct. In M.A. Chesney & R.H. Rosenman (Eds.), Anger and hostility in cardiovascular and behavioral disorders (pp.59-82). New York : Hemisphere.

Shakman, R.J., & Roberts, R.C. (1977). An evaluation of management effectiveness. Business Review, 29(1), 24-27.

Shekelle, R.B., Gayle, M., Ostfeld, A.M., & Paul, O. (1983). Hostility, risk of coronary heart disease, and mortality. Psychosomatic Medicine, 45, 109-114.

Smith, P.C., & Kendall, L.M. (1963). Retranslation of expectations: An approach to the construction of unambiguous anchors for rating scales. Journal of Applied Psychology, 47, 149-155.

Spielberger, C.D. (1980). Preliminary manual for the State-Trait Anger Scale (STAS). Tampa, FL: University of South Florida Human Resources Institute.

Spielberger, C.D., Jacobs, G., Russell, S., & Crane, R.S. (1983). Assessment of Anger: The State-Trait Anger Scale. In J.N. Butcher & C.D. Spielberger (Eds.), Advances in personality assessment (Vol. 2, pp. 159-187), Hillsdale, NJ: Lawrence Erlbaum

Associates.

Spielberger, C.D., Johnson, E.H., Russell, S.F., Crane, R.J., Jacobs, G.A., & Worden, T.J. (1984). The experience and expression of anger: Construction and validation of an anger expression scale. In M.A. Chesney & R.H.Rosenman (Eds.), Anger and hostility in behavioral medicine (pp. 5-30). New York: Hemisphere.

Staples, W.A., & Locander, W.P., (1975). Behaviourally Anchored Scales: A new tool for retail management, evaluation and control. Journal of Retailing, 52, 39-48 and 94-95.

Stewart, A., & Stewart, V. (1981). Tomorrow's managers today. Southampton: Camelot Press.

Stewart, R. (1967). Managers and their jobs : A study of the similarities and differences in the way managers spend their time. London : MacMillan.

Stewart, R. (1976). Contrasts in management. Maidenhead, England: McGraw-Hill.

Stewart, R. (1982a). Choices for the manager : A guide to understanding managerial work and behaviour. Englewood Cliffs, NJ: Prentice-Hall.

Stewart, R. (1982b). A model for understanding managerial jobs and behavior. Academy of Management Review, 7, 7-13.

Strümpfer, D.J.W. (1980). Higher level manpower shortage, stress and coronary disease. South African Mechanical Engineer, 30, 2-10.

Strümpfer, D.J.W. (1983). Executive dystress, executive eustress, and what makes the difference. Fact and Opinion Papers. Graduate School of Business Administration, University of the Witwatersrand, No. 18.

Strümpfer, D.J.W., & Robinson, J.J. (1985, October). The distribution of the coronary-prone behaviour pattern in a financial organization. Paper presented at the Annual Congress of the Psychological Association of South Africa, Pretoria.

Tavris, C. (1982). Anger, the misunderstood emotion. New York: Simon & Schuster.

Thomson, M.A. (1970). Comparison of predictor and criterion judgements of managerial performance using the multitrait-multimethod approach. Journal of Applied Psychology, 54, 496-502.

Thornton, C.E., & Öhman, A. (1985). The Type A behaviour pattern : A person - environment interaction perspective. In D. Magnursson & A. Ohman (Eds.), Psychopathology : An interaction perspective. New York: Academic Press.

Thornton, G.C., & Byham, W.C. (1982). Assessment

centers and managerial performance. New York: Academic Press.

Thornton, G.E., & Zorich, S. (1980). Training to improve observer accuracy. Journal of Applied Psychology, 65, 351-354.

Vroom, V.H. (1964). Work and motivation. New York : Wiley.

Walker, J. W. (1980). Human resource planning. New York: McGraw-Hill.

Walton, R.E., & McKersie, R.B. (1965). A behavioral theory of labor negotiations - An analysis of a social interaction system. New York : McGraw-Hill.

Whitely, W. (1985). Managerial work behavior : An integration of results from two major approaches. Academy of Management Journal, 28, 344-362.

Williams, R.B. (1984, September). An untrusting heart: cynicism lies at the core of the pernicious Type A personality. The Sciences, pp. 31-36.

Williams, R.B., Barefoot, J.C., & Shekelle, R.B. (1985). The health consequences of hostility. In M.A. Chesney & R.H. Rosenman (Eds.), Anger, hostility and behavioral medicine. New York: Hemisphere.

Williams, R.B., Haney, T.L., Lee, K.L., Kong, Y., Blumenthal, J., & Whalen, R.E. (1980). Type A

behavior, hostility, and coronary athersclerosis. Psychosomatic Medicine, 42, 539-549.

Williams, W.F., & Seiler, D.A., (1973). Relationships between measures of effort and job performance. Journal of Applied Psychology, 57, 49-54.

Wollowick, H.B., & McNamara, W.J. (1969). Relationship of the components of an assessment center to management success. Journal of Applied Psychology, 53, 348-352.

Wyndham, C.H. (1978). Ischaemic heart disease mortality in white South Africans compared to other populations. South African Medical Journal, 54, 595-601.

Zedeck, S., & Baker, H.T. (1972). Nursing performance as measured by behavioural expectation scales: A multitrait multi-rater analysis. Organizational Behavior and Human Performance, 7, 457-66.

Zelin, M.L., Adler, G., & Meyerson, P.G. (1972). Anger self-report: An objective questionnaire for the measurement of aggression. Journal of Consulting and Clinical Psychology, 39, 340.

Zyzanski, S.J. (1976). Psychological correlates of coronary angiographic findings. Archives of Internal Medicine, 136, 1234-1237.

Zyzanski, S.J. (1978). Coronary-prone behavior

pattern and coronary heart disease : Epidemiological evidence. In T.M. Dembroski, S.M. Weiss, J.L. Shields, S.G. Haynes, & M. Feinleib (Eds.), Coronary prone behavior. (pp.46-66). New York: Springer-Verlag.

Zyzanski, S.J., & Jenkins, C.D. (1984). Short Type A scale from the Activity Survey, Form N. Unpublished circular.