Prediction of transformational leadership by personality constructs for senior Australian organisational executive leaders.

Malcolm Roy Davies

B.App. Sc. (QUT.), MBA (UQ.), B. Psych. Hons. (Griffith)

Faculty of Health Science,
Griffith University

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ABSTRACT

The purpose of this thesis was to investigate prediction of senior leader transformational leadership behaviour. Transformational leadership was identified as a major theory with substantial practical implications for economic prosperity. It was argued that a better understanding of what predicts transformational behaviour would assist in creating a lift in the effective application of the theory with attendant benefits for all organisational stakeholders.

It was proposed that personality components would predict transformational behaviour. Personality was conceptualised in two ways: as components of the Five Factor Model of personality and as personality disorder components. Specifically, eight personality constructs were hypothesised as predictors. They were three Hogan Personality Inventory based Five Factor Model components and the five Hogan Development Survey personality disorder components. It was further proposed that self-subordinate rating agreement would moderate the prediction of transformational behaviour by the selected personality components.

A survey research methodology was used to gather data from senior Australian organisational executive leaders. Two samples were accessed while subjects were attending training or strategy seminars. The samples incorporated a total of 462 individual senior leader subjects and 1,881 of their subordinates drawn from the top four levels of a range of large multi-level public and private Australian organisations. It was argued that the sample validly represent a senior executive cohort of organisational leaders. Subject leaders completed a brief demographic questionnaire, the leader version of the Multifactor Leadership Questionnaire, and either the Hogan Personality Inventory or the Hogan Development Survey. Subjects’ subordinates completed the rater version of the Multifactor Leadership Questionnaire.
Transformational behaviour was operationalised as charisma, which was calculated as the mean of two subordinate rated transformational components of the Multifactor Leadership Questionnaire, viz., idealised behaviour and inspirational motivation. This dependent variable was regressed on the various personality variables to assess predictive ability. Moderation of the prediction of transformational leadership behaviour by personality components was assessed by multiple regression of transformational leadership behaviour on the various personality components within self-subordinate rating agreement categories.

There were eight specific original contributions from the findings of this thesis. The HPI component ambition was found to positively predict charisma. The HPI component prudence was found to negatively predict charisma. Self-subordinate rating agreement operationalised as an absolute difference score was found to moderate the level of prediction by whole HPI regression model and some of the relationships and predictions of charisma by individual HPI components. It was found that prevalence of personality disorder components among senior executives varied from six percent to 34 percent of the sample cases. The HDS personality disorder components sceptical and cautious were found to negatively predict charisma; whereas the HDS component imaginative was found to positively predict charisma. Self-subordinate rating agreement operationalised as a relative difference score was found to moderate the whole HDS regression model and some but not all of the relationships and predictions of charisma by individual HDS components.

Theoretical and practical implications of the above findings, limitations of this research and recommendations for future research were discussed.
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Fourth, thanks are due to the test owners of the MLQ, the HPI, and the HDS for permission to use the respective tests in this research.

Last but not least, the completion of an extended and often taxing period of study like this would not be possible without the love, support, tolerance and understanding of my wife Dianne and our children, Christopher and Seraphim.

Malcolm R. Davies

Dec 2004
DECLARATION

This work has not previously been submitted for a degree or diploma at any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference was made in the thesis itself.

M. R. Davies
CHAPTER 1: INTRODUCTION

This thesis proposes that subordinate ratings of senior leaders’ transformational leadership behaviour are predicted by components of leader personality. The term transformational leadership behaviour is defined later in this chapter and discussed in detail in Chapter Two. In this thesis transformational leadership behaviour was measured by subordinate ratings of transformational behaviour.

After pilot work a sequence of two large studies was designed to investigate prediction of leader transformational behaviour by personality for senior Australian organisational managers. Personality was operationalised in three ways. Components of the Five Factor Model of personality, which are discussed in detail in Chapter Four of this thesis, were used first. Secondly personality was operationalised as components of the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 1994) taxonomy of personality disorders. Personality disorders are discussed in detail in Chapter Five. Finally, personality was operationalised as self-subordinate rating agreement. Self-subordinate rating agreement was used as a potential dispositional moderator of other predictions. Self-subordinate rating agreement is discussed in detail in Chapter Six.

This thesis extended knowledge in several ways. First, previous work on the prediction of transformational behaviour by Five Factor Model personality components was extended by focusing specifically on an important specific cohort of leaders, namely, senior organisational leaders; and by employing the seven component Hogan Personality Inventory concept of the Five Factor Model. Secondly, previous work was extended by an exploratory investigation of the prediction of transformational leadership behaviour of senior organisational leaders by personality
disorder. Finally, previous work was extended by evaluating the moderating impact of self-subordinate rating agreement on the prediction of transformational leadership behaviour by the personality components mentioned immediately above. It is argued that this makes a significant original contribution to the literature and potentially illuminates areas where the literature was silent or where findings in the literature have not been consistent with scholarly expectations.

1.1 Defining Leadership

The nominalistic fallacy states that the fact that something is given a name does not mean it is understood (Cliff, 1983). Leadership is an ambiguous word with myriad connotations (Yukl, 1998). Rost (1991) in a review of 587 leadership related studies found that 366 of them did not define the leadership construct being studied. Bass (1981), quoting Stogdill (1948), notes, “There were almost as many definitions of leadership as there were persons who have attempted to define the concept” (p. 7). The leadership construct is thus vague unless defined. Campbell (1982) argued the importance of clearly defining a construct being researched. The construct leadership, as it was used in this study, is therefore clearly defined below.

Northouse (1997) posited that four definitional components of leadership were widely accepted in the literature. They were: process, influence, group context, and goal attainment. Based on these components, Northouse (1997) proposed the following general conceptual definition of leadership: “Leadership is a process whereby an individual influences a group of individuals to achieve a common goal” (p. 3).

In this thesis the specific conceptual definition of leadership was based on James MacGregor Burns’ (1978) concept of transformational leadership. He described transformational leadership as the actions of a leader that increase group
motivation and morality, fusing the self interests of the followers with the interests of the group and raising the whole, including the leader, to a higher level of commitment. Thus, transformational leadership theory identified those leadership behaviours that had a transforming effect on the led, the leader, and other stakeholders, in turn, allowing the whole group to transform the situation.

This conceptual definition was selected because it defined leadership in terms of behaviours, because transformational leadership theory had become a dominant theory of leadership since the early 1990s (Bass, 1998), because the transformational approach had been offered as a method to address Australia’s need to develop better leadership (Avolio, 1996; Karpin, 1995), because substantial research had linked transformational behaviours with positive criterion outcomes for organisations (for a review of this literature see Chapter Two of this thesis), and because it offered a method to validly and reliably measure executive transformational behaviour (Avolio, Bass, & Jung, 1995). More is said about the precise operational definition of transformational leadership used in this thesis in Chapter Two.

Senior leadership is defined here as leadership by the top levels in the hierarchies of large public and private organisations within four or fewer levels from the organisation’s CEO. The reason for conducting research in the field of senior organisational leadership was that the social and economic benefit of effective senior leadership can be immensely positive. On the other hand the cost of ineffective senior leadership can be equally large in the negative direction. Ineffective leadership can impact adversely on organisations, economies and the myriad individual men and women who populate them. In mid 2003, Australia was ranked seventh in world competitiveness, which was a slip from the ranking of fifth in 2001 (Cornelius, 2003). Previous major research studies have linked leadership effectiveness to global
competitiveness, demonstrating the importance of increasing understanding of leadership practice and development within a culture (Berger, Dertouzos, Lester, Solow, & Thurow, 1989; Karpin, 1995; Schwab, 2005). On the other hand, the popular press has highlighted the economic and social cost when senior leadership was ineffective. For instance, flawed leadership seems to have been a major contributor to the HIH Insurance collapse in Australia (Brearley, Harris, & White, 2003).

The first reason for conducting research on the prediction of transformational leadership by personality was because, despite the apparent widely held scholarly belief that personal attributes make a difference to leadership, research findings to date have not met scholarly expectations (Bass, 1998; Judge & Bono, 2000). The second reason for the research focus of this thesis is that, given the potential economic impact of better leadership, it is important to understand predictors of transformational leadership.

Myriad studies have related a wide range of personality variables to leadership. But both leadership and personality have been defined in many ways. In some studies the leadership construct being employed was not defined at all (Rost, 1991). This has led to problems relating findings between studies. Only a small number of studies have been published concerning the prediction of transformational leadership behaviour and the Five Factor Model. None of those studies focused on senior executives. No studies have been found specifically linking transformational behaviour with personality disorders. There appear to have been very few studies involving self-subordinate rating agreement as a moderator of the prediction of transformational leadership by personality components.
Moreover, some published studies suffer from a number of methodological and analytical issues rendering conclusions from the findings difficult to make. These limitations are discussed in context in the literature review chapters ahead. The importance of better understanding senior leadership warranted more work in the area. There was a need for research that aimed to overcome some limitations of previous work, such as research that employed more rigorous and broadly based proposition constructs. An aim of this present work was to contribute to a better understanding of why expected levels of prediction have not been found to date. The intention was to do this by overcoming some of these limitations of previous work.

Much published research on leadership has been based on studies involving either university students or practising organisation leaders without differentiating between different hierarchical levels of the leaders. Little prior research seems to have focused on practising senior managers, as opposed to managers in general, undefined subject samples, or university student samples. As a result, critical personal attributes required for success in senior transformational leadership behaviour may have been masked in that prior work by averaging across all levels of managers and/or by including non-managers. It is argued that improved understanding of characteristics that predict transformational behaviour in senior leaders may make a unique and important contribution to the literature on leadership and to better leadership of all types or organisations. This may assist boards of directors and others responsible for the selection and development of incumbent senior manager leaders more informed about what to look for in their selection and how to maximise the effectiveness of their development budgets.
1.2 The Aims of the Research Program

The general question investigated by the present thesis was: “Do senior leader personality components predict ratings of transformational leadership behaviour by their subordinates?” Hence, this thesis investigated the prediction of transformational leadership behaviour of senior Australian organisational leaders (dependent variable, operationalised as subordinate rated transformational leadership behaviour) by personality variables of those leaders (self scored personality and other metric device components as independent variables). The research program had the following specific aims:

1. To replicate and extend prior findings on prediction of transformational behaviour by principal components of the Five Factor Model of personality.

2. To extend the above work further by exploring the prediction of transformational leadership behaviour by personality disorder.

3. To further extend the above work by investigating the moderating impact of self-subordinate rating agreement on the prediction of transformational behaviour by Five Factor Model principal components and personality disorders.

1.3 The Organisation of the Thesis

The following six chapters review literature relevant to the research program. The research sequence of two large studies is discussed in chapters 7 to 10. Chapter Two reviews literature on leadership and transformational leadership to fully define the construct leadership in the context required for this research and establish the utility of transformational leadership for use in this thesis. Chapter Three reviews literature regarding potential predictors of transformational behaviour. Chapter Four investigates the Five Factor Model of personality, in particular principal components
that are hypothesised to predict transformational leadership behaviour. Chapter Five reviews literature on personality disorder. Chapter Five identifies possible predictors of transformational leadership behaviour and develop relevant hypotheses. Chapter Six reviews literature on self-subordinate rating agreement. Chapter Six also addresses the potential moderating impact of self-subordinate rating agreement on the prediction of transformational leadership behaviour by the focal personality components of this thesis and develop relevant hypotheses.

Based on the contents of the review chapters, Chapter Seven summarises key methodological considerations, the research propositions to be addressed, and relevant hypotheses. Chapter Seven goes on to outline the program of studies that was used to address the key research propositions identified. The research component consists of two large studies each of which is addressed in its own chapter, i.e., Chapters 8 and 9. Study one focused on prediction of transformational leadership behaviour by Five Factor Model principal components and the moderating impact of self-subordinate rating agreement constructs. Chapter eight briefly summarises key points from the literature reviewed in chapters two, three, four and six; explains the sample and the data gathering procedure; details the method used to analyse the data; presents the key findings of the analysis; and discusses the findings, their implications and limitations. Chapter Eight sets the pattern for the following chapter and contains detailed explanations of calculations, constructs and methods, which are then referred back to from the subsequent chapter. Chapter Nine summarises the key points from additional literature not already covered in Chapter Eight, viz., Chapter Five, and then builds on and extends the work of Chapter Eight by investigating the prediction of transformational leadership behaviour by personality disorder. An analysis and discussion of both studies’ results is provided in Chapter 10, together with the
implications of the findings, the limitations of the present work and recommendations for future research.

The thesis chapter structure is summarised below.

Chapter 1: Introduction
Chapter 2: Leadership
Chapter 3: Prediction of Transformational Leadership Behaviour
Chapter 4: Five Factor Model of Personality
Chapter 5: Personality Disorder
Chapter 6: Self-Subordinate Rating Agreement
Chapter 7: Summary of Research Propositions, Program of Studies, and Methodological Considerations
Chapter 8: Study One: Prediction of Transformational Leadership Behaviour by Five Factor Model Principal Components and Assessment of the Moderating Impact of Self-Subordinate Rating Agreement.
Chapter 9: Study Two: Prediction of Transformational Leadership Behaviour by Personality Disorder and Assessment of the Moderating Impact of Self-Subordinate Rating Agreement.
Chapter 10: Discussion
Appendices
References

This structure allows the theoretical and research background to the research question to be fully investigated, the studies to be discussed independently, and the results of the studies to be discussed collectively leading to an overall drawing together in the final chapter. We now move to more comprehensive discussion of leadership in Chapter Two.
CHAPTER 2: LEADERSHIP

This chapter reviews literature on leadership relevant to the research questions of this thesis. The chapter commences by building on preliminary comments made in Chapter One. Leadership is defined conceptually and operationally so that the construct being studied in this work is clear and can be measured. Transformational leadership, which is the theory of leadership used in this thesis to operationalise transformational leadership behaviour, is examined next. Literature demonstrating the efficacy of the transformational model is reviewed next. Conclusions are then drawn about the utility of the transformational model in this research. Finally, literature with respect to senior leaders as a specific group is reviewed since this thesis was designed to focus on that under researched but vitally important group.

2.1 Thesis Definition of Leadership

Almost 20 years ago Bennis and Nanus (1985) noted that there had been over 350 definitions of leadership proposed in the previous 20 years. It seems that the situation has not improved since then (Bennis, 2003). The large number of definitions makes hypothesis testing and comparisons among leadership research and theory difficult. It was vital to clearly define the construct being researched (Campbell, Daft & Hulin, 1982). Rost (1991) in a review of 587 leadership related studies found that 366 of them did not define leadership at all. Alimo-Metcalfe and Lawler (2001) noted that the concept of leadership was nebulous and ill-defined in the 30 organizations they studied. It is argued here that definition is especially relevant where the construct being researched, in this case leadership, had been defined in so many different ways in different studies (Yukl & Van Fleet, 1992) or not defined at all in a large number of studies (Rost, 1991).
2.1.1 Conceptual Definition of Leadership

Part of the definitional problem is that leadership has been seen in so many ways – a trait, behaviour, a process, a situational attribute, a personal construct, a multi-dimensional construct, a global construct, a local construct and a construct in the eye of the beholder (Church, Tornow, Burke, Hogan, & Avolio, 2003). As a social behavioural phenomenon leadership manifests itself in a large range of forms (Conger & Kanungo, 1987). Fiedler (1971) noted that: “There are almost as many definitions of leadership as there are leadership theories—and there are almost as many theories of leadership as there are psychologists working in the field” (p. 1).

Katz and Kahn (1978) classify definitions of leadership in terms of three dimensions: “as the attribute of a position, as the characteristic of a person, and as a category of behaviour” (p. 527). Northouse (1997) posited that four definitional components of leadership were widely accepted in the literature. They were: process, influence, group context, and goal attainment. Based on these components, Northouse (1997) proposed the following definition of leadership: “Leadership is a process whereby an individual influences a group of individuals to achieve a common goal” (p. 3). For this thesis leadership was conceptualised as action or behaviour by an individual, here a senior executive, that is focused on influencing others, here subordinates or direct reports. For use in this thesis the construct had to be further defined and operationalised by means of a measurement model that focused on observable characteristics that were attributable to transformational leadership behaviour. This thesis next reviews a selection of 20th Century leadership theories culminating in a discussion of transformational leadership theory.
2.2 Leadership Theories

At the beginning of the 20th century a dominant school of leadership thought was dubbed the Great Man theory of leadership. It was Scottish historian Thomas Carlyle (1795–1881) who declared: "for all things that we see standing accomplished in the world are properly the outer material result, the practical realization and embodiment, of thoughts that dwelt in the Great Men sent into the world" (Carlyle, 1841, p. 6). Carlyle argued that heroes shape history through the vision of their intellect, the beauty of their art, the prowess of their leadership, and, most important, their divine inspiration (Hirsch, Kett, & Trefil, 2002). The great man theory of leadership fell into disfavour around the time of World War I. World War I may have been the first conflict where leadership was systematically studied. It was found that the sons of gentlemen and aristocracy on both sides of the conflict demonstrated no exceptional leadership capability. Moreover, many of those persons who did demonstrate leadership seemed to share only a commoner’s heritage (Hughes, Ginnett, & Curphy, 1999). Further, the great man theory was accused of sexism in ignoring women like Joan of Arc, Elizabeth I, and Catherine the Great who arguably shaped history as much as any man (Bass, 1990). Despite falling into general disfavour with scholars, the theory continued to dominate some western world thinking, some geographic regions, and some cultures. For instance, narcissistic individuals sometimes act as if they believe they have divine right to rule (Macoby, 2000). Moreover, it is argued that certain cultures still have class based societies and inherited royalty suggesting shared beliefs not unlike the Great Man theory.

Traits were defined as enduring individual attributes. Trait theory proposed that a set of unitary traits differentiated leaders. Since the ancient Greeks it was believed that leaders possessed different traits from non leaders (Saracheck, 1968). In
the 1920s traits became a major focus of leadership theory. Between the 1920 and 1950 research to identify universal leadership traits resulted in a number of dead ends (Robbins, 1998). By 1950 a number of leadership traits had been identified, viz., introversion-extraversion, dominance, interpersonal sensitivity, masculinity-femininity, conservatism, intelligence, and adjustment (Mann, 1959). But no universal set of unitary leadership traits that reliably differentiated effective from ineffective leaders had been identified (Stogdill, 1948). Researchers and practitioners therefore began to change focus.

To better explain leadership scholars focused on the behaviour leaders exhibited (Robbins, 1998). Researchers at Ohio State University divided leader behaviour into two major categories: consideration (the extent to which a leader was likely to have job relationships characterized by mutual trust, respect for subordinates ideas, and regard for their feelings), and initiating structure (the extent to which a leader was likely to define and structure his or her role and those of subordinates in the search for goal attainment) (Stogdill & Coons, 1951). Scholars at the University of the Michigan Survey Research Centre also identified two dimensions of leadership behaviour: employee oriented (one who emphasised interpersonal relationships), and production oriented (one who emphasised technical or task aspects of the job) (Kahn & Katz, 1960).

The Ohio and Michigan theories precipitated a great deal of behaviour focused leadership research, which continues to this day. For instance recent research has indicated that both Consideration ($r = .48$) and Initiating Structure ($r = .29$) have moderately strong, nonzero relations with leadership outcomes (Judge, Piccolo, & Ilies, 2004). Some researchers theorised that situation factors played a role in determining which leadership behaviours would be effective (Fleishman, 1957).
From this the idea developed that a leader’s style should be contingent upon the situation being faced (McGregor, 1960, 1985).

Several contingency theories of leadership subsequently emerged. Fiedler (1967) developed the contingency model of leadership. The contingency model held that leadership was determined by the match between a leader’s style and the degree to which the situation gave the leader control and influence. Fiedler isolated three situational criteria: leader-member relations, task structure, and position power. He believed these situation criteria could be manipulated to create a proper match with the leader’s style (Robbins, 1998). Research supported the basic proposition of the contingency model, but not Fiedler’s research methodology using the Least Preferred Co-Worker measurement scale (Peters, Hartke, & Pohlmann, 1985). Scholars eventually concluded that the Fiedler’s contingency model suffered from several major shortcomings that were sufficient to seriously impair its usefulness (Schriesheim & Kerr, 1977).

House (1971) argued that prior studies, analysing the effect of initiating structure and consideration, yielded conflicting results about which combination of behaviours contribute to leadership effectiveness. House (1971) integrated the two behaviour dimensions from the Ohio studies with the expectancy theory of motivation. The expectancy theory of motivation stated that a person was motivated to perform when they were cognisant that their behaviour would lead to an outcome, and that the outcome would result in personal satisfaction. House (1971) proposed the path-goal (contingency) theory of leadership. The path-goal theory proposed that a leader must compensate for the situational variables that make it difficult for followers to achieve their goals. A leader did this by changing the mix of initiating structure and consideration behaviour displayed in order to positively influence the
satisfaction followers would achieve. House argued that when the reward was self-
administered intrinsic satisfaction was achieved, which was preferable to an extrinsic
reward administered by a leader.

Hersey (1969) proposed a contingency theory he called situational leadership
theory. Situational leadership theory stated that there was no one best leadership
behavioural style. Style should be adapted by the leader to fit the situation, and in
particular the function that was to be performed should be directed by taking into
consideration the competencies and motivations of followers. This contrasted with
prior theorising by Fiedler (1967, 1971) and others who had implied that leadership
styles for given individuals were fixed. Hersey’s (1969) situational leadership theory
focused on two variables: task behaviour and leader relationship behaviour, both of
which were said to be functions of the maturity of the follower. Hersey (1974)
proposed four basic leadership styles: (i) high task, low relationship; (ii) high task,
high relationship; (iii) high relationship, low task; and (iv), low relationship, low task.
The leader was required to match the style they used to the maturity level of the
follower’s task performance. Maturity levels were defined as: (i) not willing and not
able, (ii) willing but not able, (iii) not willing and able, and (iv), willing and able. By
using the appropriate style the leader was said to develop followers to the highest
possible maturity level. Several studies found situational leadership theory and the
way it was operationalised to be ineffective (Blank, Weitzel, & Green, 1990; Cairns,
Hollenback, Preziosi, & Snow, 1998; Fernandez & Vecchio, 1997; Goodson, McGee,
Others using qualitative methods generally agreed that situational leadership theory
was theoretically and empirically invalid (Graeff, 1997).
2.2.1 Charismatic Leadership

Max Weber (1947), writing from a sociological perspective, introduced the concept of charismatic leadership in a bureaucracy. For Weber, authority was based on rational, traditional or charismatic means (Eisenstadt, 1968). Weber believed that charismatic leadership was based on emotional means and its “attitude was revolutionary and transvalues everything; it makes a sovereign break with all traditional or rational norms” (Eisenstadt, 1968, p. 24). Further, Weber believed that once charismatic leadership succeeded in changing the status quo, its influence gave way to the rational bureaucratic systems and processes that it overthrew. According to Weber, the cycle from charismatic to bureaucratic and back to charismatic leadership is continuous (Eisenstadt, 1968).

House (1977) defined charismatic leadership as: “leaders who by force of their personal abilities are capable of having profound and extraordinary effects on followers” (p. 189). House (1977) stated that charismatic leaders were role models and objects of identification, commanded loyalty, trust and devotion, and inspired followers to support the leader’s cause and achieve unimaginable goals. These types of leaders challenged the status quo and “through their leadership major social changes are accomplished” (p.189). House (1977) presented an integrated approach explaining the psychological impact of charismatic leaders on followers. He proposed a major shift in the way leadership was conceived (Bass, 1985). House’s (1977) work could be seen as a foundation of contemporary approaches to viewing leadership from a charismatic, transformational, and or emotional perspective (Bass, 1985). His work influenced leadership researchers to begin focusing more on emotional aspects of leadership.
2.2.2 Transformational Leadership

Transformational leadership theory was developed from charismatic leadership theory (Bass, 1985). The idea of transformational leadership was first mentioned by Downton (1973) in a sociological study that looked at differences between rebel, reform, and ordinary leaders (Antonakis, 2001). James MacGregor Burns’ (1978) contribution was to apply the concept of transforming leadership to political leaders. Burns’ (1978) best selling book titled Leadership greatly popularised the idea of transformational leadership. Burns (1978) also differentiated transformational leadership from transactional leadership, precipitating development of currently prominent transformational leadership theories.

Burns (1978) defined transactional leadership as occurring when:

… one person takes the initiative in making contact with others for the purpose of an exchange of valued things. … The bargainers have no enduring purpose that holds them together; hence they may go their separate ways. A leadership act took place, but was not one that binds leader and follower together in a mutual and continuing pursuit of a higher purpose (p. 19, 20).

He contrasted this with transformational leadership, which:

… occurs when one of more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality. … transforming leadership ultimately becomes moral in that it raises the level of human conduct and ethical aspiration of both leader and led, and thus it has a transforming effect on both (p. 20).

Transformational leaders differed from purely transactional leaders in that they attempted to develop stakeholders to higher levels of maturity as well as just understanding their needs.
2.2.2.1 Theories of Transformational Leadership

Following Burns (1978), transformational theory developed rapidly in a number of theoretical streams including charismatic leadership (Conger & Kanungo, 1987; House, 1977), organisational transformation (Tichy & Devanna, 1986), full range of leadership theory (Bass, 1985), and the leadership challenge (Kouzes & Posner, 1987). Russell and Kuhnert (1992) stated that transformational models: “far surpass previous attempts to understand the role of individual differences in leadership” (p. 335). One transformational leadership model was claimed to be broad enough in its conceptualisation and deep enough in its research base to encompass almost all various other theories had proposed (Avolio, 1999). We next discuss that model.

2.3 The Full Range of Leadership Theory

The full range of leadership theory incorporated the task versus relationship dichotomy of the early behavioural theories (Kahn & Katz, 1960; Stogdill & Coons, 1951). The full range of leadership model took a humanistic orientation similar to that of Argyris (1957), and McGregor (1960, 1985). This orientation also contributed to full range of leadership model’s focus on developing and self-actualizing followers by avoidance of coercion. The full range of leadership model implied that organisational and individual goals could be aligned and that a leader should use symbolic influence (cf. Etzioni, 1964). Leadership functions were separated from management functions in the full range of leadership model similar to the theorising of Zaleznik (1977). The full range of leadership model focused on emotional aspects of leadership (cf. Argyris, 1957; Weber, 1968; House, 1977; Zaleznik, 1977). The full range of leadership model took a contingency approach and a follower development perspective (cf. House, 1971; Hersey, 1975). The full range of
leadership model was based on the theoretical work of Burns (1978) and Downton (1973). Because Bass (1985) did not mention Downton (1973), it seems likely that he was unaware of Downton’s work (Antonakis, 2001). A number of subsequent theories have been consistent with the full range of leadership model (Bennis & Nanus. 1985; Gardner, 1988; Kotter, 1990; Bennis, 2003).

2.3.1 The Full Range of Leadership Model and Transformational Leadership Behaviour

Leadership effectiveness focuses on the generation of criterion outcomes; leadership emergence is about being accepted as a leader (Lord, de Vader, & Alliger, 1986). Numerous studies have linked leadership effectiveness and leadership emergence with transformational leadership behaviour, as defined by the full range of leadership model (Bass, 1985). Bass (1998) summarised dozens of such studies in a book wholly devoted to the impact of transformational leadership. Subordinate ratings of transformational leadership were shown to correlate with a range of criterion measures of leadership. For instance, transformational scores were high for US Marine Corps commanders of more highly effective helicopter squadrons (Salter, 1989; cited in Bass, 1998), Methodist ministers with larger Sunday church attendance and membership growth (Onnen, 1987; cited in Bass, 1998), presidents of MBA teams completing simulations with greater financial success (Avolio, Waldman, & Einstein, 1988), middle business managers with better future financial success of their business units (Howell & Avolio, 1993), middle managers with better management committee evaluations (Hater & Bass, 1988), junior naval officers with recommendations for early promotion and better fitness reports (Yammarino & Avolio, 1990), chief executive officers with more positive subordinates' work attitude and higher organization profitability (de Hoogh et al., 2004), top and middle-level
managers’ effectiveness in conveying strategic organizational goals (Berson & Avolio, 2004), and senior managers with lower subordinate burnout rates (Densten, 2005). Sparks and Schenk (2001) in a study of 736 female managers showed that transformational leadership transforms followers by encouraging them to see the higher purposes in their work. Additionally the results showed positive relationships between belief in a higher purpose of one's work and job satisfaction, unit cohesion, and effort.

Presidents of MBA teams completed complex simulations with greater financial success when they behaved in a transformational way (Avolio, Waldman, & Einstein, 1988). Training in transformational leadership had significant effects on subordinates' perceptions of leaders' transformational leadership and subordinates' own organizational commitment (Barling, Weber, & Kelloway, 1996). A study of lower level managers in a manufacturing environment found that transformational leadership behaviours by supervisors moderated the relationship between team members' trust in their leader and satisfaction with their work (Butler, Cantrell, & Flick, 1999). A study in an industrial research and development context found that use of transformational leadership with project leaders predicted the quality of the projects completed and the tendency to meet budget and scheduling requirements as evaluated both by team members and higher management (Keller, 1992). A Singapore study investigated the influence of transformational leader behaviour by school principals. The study found that transformational leadership created significant add on effects to transactional leadership in the prediction of teacher organisational commitment, teacher organisational citizenship behaviour, teacher satisfaction, and significant indirect effects on student academic achievement (Koh, Steers, & Terborg, 1995). A laboratory study involving undergraduate students found
that groups working under high transformational leadership generated more original solutions, supportive remarks, solution clarifications, questions about solutions, and reported higher levels of perceived performance, extra effort, and satisfaction with the leader than groups working under low transformational leadership (Sosik, 1997). A second laboratory study involving undergraduate students assessed the impact of transformational leadership on creativity. The study found that groups working under higher levels of transformational leadership generated more idea elaborations and original solutions than groups working under lower levels of transformational leadership (Sosik, Kahai, & Avolio, 1998). Thite (1997; cited in Avolio, 1999, p. 55), in a study of 36 organisations involving 225 teams and 70 project leaders, evaluated the differential qualities of project teams under transformational and transactional leadership styles. Thite (1997) showed that transformational behaviour, plus the transactional behaviour contingent reward, was positively correlated with team outcomes. Transformational theory was found to apply across organisational and national boundaries (Bass, 1997). A survey based study of 32 Taiwanese organisations found that transformational leadership was related to the level of organisational innovation (Jung, Chow, & Wu, 2003). A study of the 2000 U.S. presidential election found that transformational leadership and attributed charisma were strongly associated with reported voting behaviour for candidates Bush and Gore beyond party affiliation (Pillai, Williams, Lowe, & Jung, 2003). A study of firm performance in a sample of Fortune 500 companies over a 10-year period found that, under highly uncertain conditions, CEO perceived charisma also was related to shareholder value (Tosi, Misangyi, Fanellid, Waldman, & Yammarino, 2004). A study of 69 U.S. and Canadian firms suggested that CEO charismatic leadership
measured at a point in time predicted subsequent firm performance (Waldman, Javidan, & Varella, 2004).

It is argued, from the above review, that transformational behaviours, as detailed in the full range of leadership model, have been significantly related to ratings of leadership effectiveness and emergence.

2.3.2 Applicability of Full Range of Leadership Model for This Thesis

Senior leaders were found to display more transformational behaviours than lower level leaders (Lowe et al., 1996). Twenty years ago it was recognised that top managers differ from managers at other levels (Hambrick & Mason, 1984); that leadership varies qualitatively as one ascends the hierarchy of organizational levels (Katz & Kahn, 1978); and that different skill profiles were required for success at different career stages (Jaques, 1989). People who led successfully early in their careers appeared to be proficient in task-based leadership but were presented with a challenge when higher level job demands begin to require a balance with a more relationship-oriented style (Shipper & Dillard, 1994a). Others argued that a systems perspective was critical for success at top echelons, whereas human relations skills contribute more to success at middle levels (Katz & Kahn, 1978; cited in Day, Shleicher, Unckless, & Hillier, 2002). Levinson (1988) argued that top managers must withstand inordinate pressure, which he called senior pressure. Senior pressure included: pressures created by fast paced complex challenges, high ambiguity and uncertainty, pressure to cut costs, pressure to increase returns, pressure to move faster, to outfox the competition, while not becoming a takeover target, and so on. Levinson (1988) argued that this influenced the personality characteristics senior managers needed for success. Personality characteristics that he further argued that may be different from the personality characteristics required for success at lower levels.
Such pressure also influenced which personality characteristics an individual exhibited when they came under senior pressure; characteristics that may differ from what others came to expect from an individual leader when he or she was in lower level positions or not under pressure. Hambrick, Finkelstein, and Mooney (2005) also assert that senior job demands may be great indeed indicating the need for individuals who can cope with those demands to successfully fill senior roles. The authors point out however that, while job demand may be a stressor, it is not the same as stress, which is an individual reaction to job demand. The authors state that stress may be a key mediator of how well a senior leader individual copes with job demand, i.e., senior pressure.

Jaques (1991) argued that different organisational levels demand different personal attributes for incumbent success. He defined five levels of information complexity and four methods of mental processing complexity (Jaques & Clement, 1991) (p. 23). Jaques (1991) identified the challenges in senior management roles as: more complex, focused over a longer time frame, and requiring higher cognitive capability (Jaques & Clement, 1991, p. 71). Sashkin and Burke (1990) stated that three characteristics differentiated successful senior leaders from successful leaders at lower levels: impact belief, the belief that one could control or affect ones environment; power need, a high need for power; and cognitive time span (capability to think over a longer time span, usually several to many years), senior executives must be capable of visioning over long time spans.

In a series of assessment centre studies in which 25 dimensions of senior executive functioning were assessed by means of simulations, clinical interviews, and projective and pencil and paper instruments, Moses and Lyness (1990) identified ambiguity as a key feature of senior roles. The authors separated individual
executives into groups according to their skill at handling ambiguity (high or low) and their comfort at handling ambiguity (high or low). Those most capable were found to be high in both dimensions. Moses and Lyness (1990) named this group adaptive and showed that they were highest in tolerance of uncertainty, risk taking, creativity and decisiveness.

Mintzberg (1973), in a study of practising senior managers in Canada, found that they spent their work time rapidly switching from issue to issue in three main roles: 1. Interpersonal- figurehead, leader, liaison; 2. Informational- monitor, disseminator, spokesperson; 3. Decisional- entrepreneur, disturbance handler, resource allocater, and negotiator. This was contrary to conventional wisdom and classical models of managerial work. Classical models suggested that managers spent their time in planning, organising and controlling activities. Mintzberg (1973) argued that the senior management role behaviours he had identified placed different demands on the individual leader than lower level management roles where classical models of managerial work applied. Mintzberg’s (1973) findings had clear implications for attributes required for success in senior roles, as opposed to middle or junior management roles or functional roles, viz., those persons who were comfortable to rapidly switch between interpersonal, informational, and decisional behaviours. It was further evidence that there may be personal characteristics that were important for success specifically in senior leadership roles.

2.3.3 Full Range of Leadership Model Factor Structure

Bass’s (1985) full range of leadership model incorporated three concepts of leadership behaviour: transformational, transactional and non-transactional. The full range of leadership model contrasted with Burns’ (1978) conceptualisation by seeing the styles as additive not opposites. The full range of leadership model proposed an
augmentation hypothesis, which stated that leadership could be improved by avoiding the non-transactional style, adopting, but not over relying on, a transactional style, and also adopting and relying mostly on a transformational style (Bass, 1985).

Bass’s (1985) initial full range of leadership model included seven components: charismatic leadership, inspirational motivation, intellectual stimulation, individualised consideration, contingent reward, management by exception and non-transactional leadership. More recently Bass noted that although charismatic and inspirational aspects of leadership were conceptually distinct constructs, they were not empirically distinguishable (Bass, 1988). Thus, a six factor model was considered empirically more appropriate. House, Spangler and Woycke (1991) in a study U.S. presidents found that presidential personality and charisma were contributors to effectiveness as a president. The authors provided evidence in their research that charisma could be conceptualised and measured as both attribution, charisma attributed to persons because what they have achieved or who they are, and behaviour, charisma created as a response to the person’s present behaviour. Hater and Bass (1988) provided evidence that the construct of management by exception could be divided into active and passive components. The latest version of the Multifactor Leadership Questionnaire (Version 5X) distinguished attributed charisma from charismatic behaviour and active from passive management by exception resulting in a nine factor model (Avolio, Bass, & Jung, 1999). The full range of leadership model finally consisted of five transformational, three transactional, and one non-transactional leadership components (Avolio et al., 1999).

According to Bass (1997), five factors define transformational leadership: idealised attributes (attributed by others as acting with confidence in ways that build respect, ‘walking the talk’ as it were), idealised influence (talking about purpose,
mission, values and ethics; also called idealised behaviour), inspirational motivation (communicating an inspirational picture of the future and how to get there), intellectual stimulation (helping employees look for new solutions and challenge old assumptions), and individualised consideration (developing employees and coaching to get the best from each individual).

Transactional leadership was defined by three factors. Two were positive: contingent reward (exchanging reward for effort in a bargain), and management by exception-active (where the leader set up systems to detect flaws and focus energy on fixing them) (Bass & Avolio, 1997). One was negative: management by exception - passive (where a leader became involved only when there was a problem, and, usually, to find who was to blame). Finally, there was one non-transactional factor laissez faire, or non-leadership, which was the absence of all the aforementioned leadership factors (absence, abdication, avoidance). The factors are next discussed in more detail.

There are five transformational components. Idealised attributes does not measure transformational behaviour per se but instead measures others’ attributions of leader respect, trust, and faith. Scale items addressing this component include: instils pride in others for being associated with them, goes beyond their self-interests for the good of the group, acts in ways that build others' respect, and displays a sense of power and competence. Idealised influence focuses on behaviour including living one's ideals and walking the talk. Scale items addressing this component include: talks about their most important values and beliefs, specifies the importance of having a strong sense of purpose, considers the moral and ethical consequences of decisions, and emphasises the importance of having a collective sense of mission. The component inspirational motivation also focuses on behaviour and is concerned with
inspiring others. Scale items addressing this component include: talks optimistically about the future, talks enthusiastically about what needs to be accomplished, articulates a compelling vision of the future, and expresses confidence that goals will be achieved. Intellectual stimulation is about behaviours that stimulate others to change. Scale items addressing this component include: examines critical assumptions to question whether they were appropriate, seeks differing perspectives when solving problems, gets others to look at problems from many different angles, and suggests new ways of looking at how to complete assignments. The final transformational component individualised consideration is concerned with coaching and development behaviours. Scale items addressing this component include: spends time teaching and coaching, treats others as individuals rather than just as members of the group, considers individuals as having different needs, abilities, and aspirations from others, and helps others to develop their strengths.

Transactional leadership was defined as a process of gaining compliance from associates through contracts with the leader. The contractual relations may be explicit or implicit. The leader clarifies expectations and may exchange promises of reward or disciplinary threats for the desired effort and performance levels. There are three model components. Contingent reward is about setting expectations regarding goals and rewards. Scale items addressing this component include: provides others with assistance in exchange for their efforts, discusses in specific terms who is responsible for achieving performance targets, makes clear what one can expect to receive when performance goals are achieved, and expresses satisfaction when others meet expectations. Management by exception-active focuses on setting up systems to correct others. Scale items addressing this component include: focuses attention on irregularities, mistakes, exceptions, and deviations from standards, concentrates full
attention on dealing with mistakes, complaints, and failures, keeps track of all
mistakes, and directs attention toward failures to meet standards. A leader using
management by exception- passive gets involved only when there is a problem. Scale
items addressing this component include: fails to interfere until problems become
serious, waits for things to go wrong before taking action, shows a firm belief in only
fixing it if it is broken, and demonstrates that problems must become chronic before
taking action.

Non leadership is the absence of all the transactional and transformational
behaviours mentioned above. The one non leadership component is laissez faire.
Scale items addressing this component include: avoids getting involved when
important issues arise, is not there when needed, avoids making decisions, and delays
responding to urgent questions.

Bass (1985) asserted that the full range of leadership model was additive. The
impact of leadership on outcomes and or followers was said to be negative or zero for
a leader who employed only laissez faire behaviours. But impact was said to increase
when a leader developed transactional leadership skills. Leadership impact was
highest when a leader skilfully enacted transformational capabilities, decreased
reliance on transactional behaviours, and eliminated non-leadership behaviours (Bass,
1999).

It is argued that the theoretical suitability of full range of leadership model for
this thesis is established by the above review. To be of practical use the full range of
leadership model must be measurable. It is to the measurement of full range of
leadership model we turn next.
2.4 The Multifactor Leadership Questionnaire (MLQ)

2.4.1 MLQ History

Bass (1985) developed the MLQ to facilitate full range of leadership model research. A principal-components analysis of a 73-item MLQ with a sample of military officers revealed five leadership factors. Bass originally identified three factors as transformational: (1) charismatic leadership— the amount of faith, respect, and inspiration engendered by the leader; (2) individualized consideration— the degree of attention and support given to individual followers; and (3) intellectual stimulation— the extent to which the leader enables followers to rethink the ways they do things. The remaining two factors were deemed to be transactional: (4) contingent reward— the degree to which the leader provides reinforcement in return for appropriate follower behaviour; and (5) management by exception— the extent to which subordinates hear from the leader only when failures or problems occur.

With more general usage by a range of researchers different versions of the MLQ were created and used. Versions mentioned by Bass in his initial writings (Bass, 1985) were: Form 2, Form 4, a modified Form 4, and an unnumbered 37-item MLQ. In research subsequently published other forms appeared: Form 5 (Hater & Bass, 1988), Form 11R (Waldman, Bass, & Yammarino, 1990), and Form 10 (Howell & Avolio, 1993). The forms appear to vary in a number of ways and for different reasons: the number of questions, the number of factors, the content of the questions, the research issue being investigated, and the target user population. Collective opinion eventually settled on the MLQ (Form 5X) as the MLQ of choice (Avolio et al., 1995). This is the instrument now widely used in research and available as a commercial instrument for leadership evaluation.
2.4.2 MLQ (Form 5X)

The MLQ (Rater Form 5x-Short), hereafter just MLQ, is a 45 item rater-assessment questionnaire designed for research that asks others who know the leader to score the individual leader against five transformational leadership components (idealised attributes, idealised behaviour, inspiration motivation, intellectual stimulation, individualised consideration), two positive transactional leadership components (contingent reward, management by exception active), one negative transactional component (management by exception passive), one non-transactional leadership component (laissez faire), and three leadership outcome components (extra effort, effectiveness, and satisfaction). The nine behavioural components have been described in detail above. We next describe the three outcome components in more detail.

The full range of leadership model relates transformational and transactional leadership to the success of a group. In the MLQ success was measured by three components that measured outcomes of the nine leadership behaviours: extra effort, effectiveness and satisfaction. The question of whether subordinates find themselves investing more effort than they thought they would is measured by extra effort. Scale items addressing this component include: gets others to do more than they expected to do, heightens others' desire to succeed, and increases others' willingness to try harder. Effectiveness measures perceptions of how effectively the leader leads. Scale items addressing this component include: is effective in meeting others' job-related needs, is effective in representing their group to higher authority, is effective in meeting organisational requirements, and leads a group that is effective. How satisfied subordinates are with the leader is measured by satisfaction. Scale items addressing
this component include: uses methods of leadership that are satisfying and works with others in a satisfactory way.

The MLQ was available in two paper based forms. A leader self rating version (Leader Form 5X-Short) is complemented by a form that can be used by others to rate the leader (Rater Form 5X-Short). A sample question from the leader questionnaire is: "I fail to interfere until problems become serious." In both forms of the MLQ there were 45 questions, four questions loaded onto each of the nine leadership components. Nine other questions evaluated the three leadership outcomes. Item scoring was by means of a five point Likert-like scale with responses ranging across five points: 0. Not at all, 1. Once in a while, 2. Sometimes, 3. Fairly often, to 4. Frequently if not always. Descriptive statistics on the MLQ reveal scale reliabilities ranging from .74 to .94 all exceeding standard cut offs. These statistics were presented in the MLQ technical manual (Avolio, Bass, & Jung, 1995) across nine data sets to demonstrate the reliability of the instrument. Discriminant validity of the instrument was acceptable. Intercorrelation between the transformational leadership scales averaged .83 (Bass & Avolio, 1997). A number of studies have replicated this 12 component structure of the MLQ using confirmatory factor analysis (Avolio et al., 1999; Antonakis, 2001). But not all studies have found the same factor structure (Carless, 1998).

2.4.3 Charisma as the Key Measure of Transformational Leadership Behaviour

This thesis focuses on senior executive leaders who were found to differ on a range of dimensions from middle or junior leaders (Hambrick, 1984; Lowe et al., 1996). Waldman, Javidan and Morella (2004) argue from their survey of the literature that key senior leadership behaviours include providing a sense of mission, articulating a future-oriented, inspirational vision based on powerful imagery, values,
and beliefs, showing determination when accomplishing goals, and communicating high performance expectations. A number of studies have found that ‘charisma,’ calculated as the average of MLQ components idealised behaviour and inspirational motivation, captures the essence of transformational leadership behaviour and carries much of the variance (Bono & Judge, 2004). Idealised behaviour focuses on living one's ideals and walking the talk. Scale items addressing this component include: talks about their most important values and beliefs, specifies the importance of having a strong sense of purpose, considers the moral and ethical consequences of decisions, and emphasises the importance of having a collective sense of mission. It is noteworthy that idealised attribution, which is an estimate of followers’ attributions of leader idealised behaviours, is not included in the behavioural measure of leader charisma. The component inspirational motivation is concerned with inspiring others. Scale items addressing this component include: talks optimistically about the future, talks enthusiastically about what needs to be accomplished, articulates a compelling vision of the future, and expresses confidence that goals will be achieved. It is argued that Waldman et al.’s (2004) descriptors of key senior executive behaviours are very consistent with the descriptors for the two components of charisma, as defined above.

There has also been some significant psychometric research support for the charisma factor as defined immediately above. Whist some researchers have confirmed the basic nine factor structure of the MLQ proposed by Bass and Avolio (1995), e.g., Antonakis (2003), Rafferty and Griffin (2004), other researcher have argued for a reduced factor structure (Heinitz, Liepmann, & Felfe, 2005). From the results of their studies, which included 2,840 German public servant leader subjects, Heinitz et al. (2005) argued for a three factor model which captured 86% of the variance of the original nine factor MLQ model. The authors named their first factor
“charismatic goal orientation” (p. 186) a factor that consisted primarily of the original idealised behaviour and inspirational motivation components of the MLQ.

It is argued that charisma, as defined immediately above, will be adequate as the precise measure of transformational leadership for use in this thesis.

2.4.4 Subordinate Ratings as the Source of Measured Data for this Thesis

A key measurement issue for this thesis was who to use as raters to complete the MLQ for leader subjects in this study. Research had shown that different sources of data were better at providing information on different aspects of leadership (Harris & Hogan 1992; Pace, Hartley, & Davenport, 1992). Self-ratings were seen as a poor source of leadership data (Bass & Yammarino 1991; Harris & Hogan 1992). The usefulness of subordinate, superior, peer, and client ratings depended on the researcher's conceptualisation of leadership (Conway & Huffcutt 1997). Leaders’ supervisors seemed to focus on technical or output competence, i.e., leader effectiveness (Harris & Hogan 1992); customers focused on customer service, i.e., leader effectiveness (Pollak & Weiner 1995); and subordinates focused on how they experienced the leader, i.e., the leader’s transformational leadership behaviour, subordinate acceptance, trust of, and willingness to work for, the leader (Edwards 1992). Atwater and Yammarino (1992a) found that subordinate ratings as opposed to peer or superior ratings, were most influenced by the personal attributes of the leader accounting for a significant percentage of the variance in transformational leadership behaviour explained by personal attributes. Halverson, Tonidandel, Barlow and Dipboye (2002) found that self-subordinate agreement was a better predictor of leadership performance than an equivalent self-peer agreement. It is argued that this will be important in assessing the moderating impact of self-other agreement in this thesis. In a study of 129 senior executives Sala (2002) found that subordinate ratings
provided the best result in predicting executive performance suggesting that
subordinates had the most accurate view of executive behavioural capability. This
thesis assesses predictors of transformational leadership behaviour. It is argued that
subordinate MLQ ratings are the most appropriate measures of transformational
leadership behaviour to address the research question of this thesis.

Further there remains the question of how the subordinate raters should be
selected. Studies conducted by Brutus, Petosa and Aucoin (2005) suggest, especially
in cases where the results are for learning rather than performance appraisal, that it is
best to involve the ratee in the selection of raters. This was because ratees select
people who know more about what is of interest in the data gathering leading to more
useful rating data and also because ratee selection of the raters increases the
motivation of the ratee to act upon any feedback they get. The authors further suggest
that any bias that may be introduced by this method of rater selection may not be as
great as previously thought. It is argued that for the purpose of this thesis ratees
should be the ones who select the subordinates to do the ratings.

2.5 Chapter Conclusion

Bass’s (1985) full range of leadership model of transformational leadership
and the MLQ full range of leadership model measurement instrument have been
reviewed. It was argued that transformational leadership, specifically the full range of
leadership model, is an adequate model to operationalise the concept of
transformational leadership behaviour for this present research. It was also argued
that charisma, calculated from components of MLQ ratings completed by
subordinates, is an adequate method with which to measure transformational
leadership behaviour. Subordinates of senior leaders, selected to be raters by their
leader, were identified as the preferred source of data for assessment of the senior leader transformational behaviour dependent variable charisma in this thesis.

In the next chapter the implications of the above review and arguments for addressing the research questions of this thesis are addressed.
CHAPTER 3: 

PREDICTORS OF TRANSFORMATIONAL LEADERSHIP BEHAVIOUR

Lowe et al.’s (1996) meta study found the transformational factors explained between 30 and 50 percent of variance in effectiveness between leaders. Other studies and meta studies have drawn similar conclusions (Gaspar, 1992; cited in Bass, 1998; Coleman, Patterson, Fuller, & Stringer, 1995). But, not all studies have found a consistent positive relationship between transformational leadership behaviours and criterion effectiveness. A study of 40 Air Force leaders found that, for leaders rated as transformational, no effects were found for six different objective measures of criterion outcomes (Ross & Offermann, 1997). It is argued that simply behaving in a transformational way may not be enough to be rated highly by subordinates as a transformational leader. For instance, a field survey study of 170 firms in Singapore by Zhu, Chew, and Spangler (2005) found that human-capital-enhancing human resource management practice fully mediated the relationship between CEO transformational leadership and subjective assessment of organizational outcomes.

There may be other factors that influence the impact of transformational behaviour on subordinates’ perception of how transformational a leader is. It is argued here that consideration should be given to personal attributes that predict transformational leadership behaviour. Such knowledge would potentially help to improve the effective practice of transformational leadership with attendant economic and social benefits.

3.1 Potential Predictors of Transformational Leadership Behaviour

From a comprehensive review of 100 years of leadership theory Chemers (1997) developed and modelled an integrative theory of leadership (Figure 3.1).
Figure 3.1: Integrative model of leadership (Chemers, 1997, p. 163)
Chemers’ (1997) theory attempted to encompass the large diversity of 20th Century theoretical approaches to leadership. The shaded area of Chemers’ (1997) model showed the basic flow of events posited by the model. In the centre of this shaded area is leader action, which is taken in this present study to include transformational leadership behaviours. As indicated by the model, a number of factors may predict leader behavioural action including, leader personal attributes and situational characteristics (objective and subjective). Research on these different aspects is reviewed next.

3.1.1 Situational Characteristics

Despite the importance of leadership and the volume of work on the topic (Hogan et al., 1994), only modest progress had been made in understanding leadership across all situations well enough to ensure leadership success (Yukl, 1998). Contingency theorists argued that leader behaviour must be contingent on the situation (Fiedler, 1967; Fiedler, Chemers, & Mahar, 1976), which means that the situation may influence what is possible for a leader. Pawar and Eastman (1997) argued that organisational contexts with differing levels of receptivity to transformational leadership require different transformational leadership processes. Bass (1985) attempted to allow for this in positing the full range of leadership model, which included a range of behaviours each intended to be applied as the situation demanded it. A taxonomy of situations proposed by Pawar and Eastman (1997) included contextual factors of organisational emphasis on efficiency and adaptation orientation, relative dominance of technical core and boundary spanning units in the organizational task system, organizational structure, and mode of governance. The Pawar and Eastman (1997) model showed how each full range of leadership component impacted the organisation within the situation defined by the model.
It is argued that the particular contextual factors selected by Pawar and Eastman (1997) were but a small subset of an almost unlimited possible set that could have been tested. It is further argued that an all encompassing yet parsimonious taxonomy of situations suitable for theory building has so far not been achieved. This thesis further argues that it is undeniable that the situation may affect transformational leadership behaviour and that understanding the situation is potentially useful. However, attempts to assess situational effects could quickly lead to building large lists of situations and the corresponding characteristics needed to emerge as a leader in each one. Second, as pointed out by Bennis and Nanus (1985), a by-product of situational research is theoretically unlimited numbers of situational definitions and conceptualisations of leadership. This makes model building for the construct of leadership, not just leadership in a situation, difficult. For these reasons there is no further explicit consideration of the situation as an influence on transformational leadership behaviour in this thesis.

3.1.2 Exchanges

Exchange theories suggest that followers may influence the impact of leader behaviour. Leader member exchange theory considers the dyadic linkage between leader and follower (Dansereau, Graen, & Haga, 1975). Studies supporting the contention that the quality of the dyadic relationship does impact on performance also sometimes refer to the behaviour of the leader being transformational, e.g., Gerstner and Day, 1997. One study found an inverse relationship between the quality of innovation in leader-member dyads and transformational leadership behaviour by the leader (Basu & Green, 1997).

It is argued here that these findings highlight a possible confound between exchange and behaviour theories. Logically, the quality of any exchange between
leader and follower could be partly determined by leader behaviour. In other words, leader behaviour and the quality of the exchange between a leader and a follower may be different views of, at least partially, the same underlying construct. For this reason this thesis does not further pursue exchanges as influences on transformational leadership behaviour.

3.1.3 Leader Individual Attributes

A third source of potential predictors of transformational leadership behaviour from Chemers’ (1997) model was enduring personal attributes of the leader. There have been myriad ideas regarding personal attributes since before the beginning of psychology as a science. We will next canvas several dominant and enduring approaches to conceptualising personal attributes that were prominent at some time in the last century. We will briefly consider trait theory, personality theory, personality disorder theory and self-other rating agreement.

3.1.3.1 Traits

Several early major reviews (Bird, 1940; Stogdill, 1948; Jenkins, 1947) criticised trait research for the following reasons: (a) the trait approach had been unsuccessful at identifying a core set of leader characteristics, (b) a large number of traits seemed to differentiate between leaders, and (c) the traits differed from situation to situation. Mischel (1968) denounced the concept of stable personality stating that the situation was all important. He maintained that behaviour was situation-specific, even called forth by the situation. In section 3.1.1 of this thesis it was argued that situations may play a role in leadership. But it was argued that the lack of a parsimonious taxonomy of situations makes leadership theory building employing situational considerations difficult. Contrary to Mischel (1968), Mann (1959) reviewed the personality literature from 1900 to 1957 and found over 500 different
measures of personal characteristics identified as relating to leadership behaviour. Mann found that fewer than 125 of these measures were used in more than one study. Based on the work of French (1953), Cattell (1946; 1956; 1957), and Eysenck (1953), Mann (1959), contrary to the critiques, identified seven factors that reliably classified 350 of the original 500 variables. The seven factors were: introversion-extraversion, dominance, interpersonal sensitivity, masculinity-femininity, conservatism, intelligence, and adjustment. Thus, Mann (1959) found positive relationship between personal traits (intelligence, adjustment, extraversion, dominance, masculinity, and sensitivity) and leadership in 71 to 80 percent of the studies (Bass, 1990).

Bass (1990) summarised Stogdill’s 1948 and 1970 surveys, which identified personal characteristics of leaders. Stogdill’s surveys of research findings identified 43 personal characteristics, which Bass (1998) grouped into six broad clusters including: physical characteristics, social background, intelligence and ability, personality, task-related characteristics, and social characteristics. A total of 16 personality characteristics were identified including: adaptability, adjustment, aggressiveness (assertiveness), alertness, ascendance (dominance), emotional balance (control), enthusiasm, extraversion, independence (nonconformity), objectivity (tough-mindedness), originality (creativity), personal integrity (ethical conduct), resourcefulness, self confidence, strength of conviction, and tolerance of stress (Bass, 1990, p. 80).

Bass (1990) pointed out that positive findings or significant relationships between traits and some measure of leadership can mean several things. First, they could mean that a given trait was significantly correlated with some measure of leader emergence. Second, they can mean that a sample of leaders was found to differ significantly from a sample of followers on the personality attribute measured.
Thirdly, they could mean that a sample of effective leaders who was found to differ significantly from a sample of ineffective leaders on the personality characteristic. Finally, they could mean that a sample of high status leaders (such as top managers) was found to differ significantly from a sample of low status leaders (such as first line supervisors) on the personality characteristic. Moreover, the studies documented showed almost as many negative findings as positive findings and the positive findings were almost all small (Bass, 1990). Despite this lack of research evidence to support the belief that personal attributes were important in transformational leadership behaviour, Bass (1998) commented that: “Some of the variance (and covariance) in any analysis was due to the leader as a person” (p. 121).

From his review of the leadership trait literature, Northouse (2001) identified five traits, intelligence, self-confidence, determination, integrity, and sociability, which often emerged in leadership reviews such as Kirkpatrick and Locke (1991), Lord et al. (1986), Mann (1959), and Stogdill (1948). Kirkpatrick and Locke (1991) identified a number of leadership traits that were consistently related to transformational leadership behaviour. Traits included: “drive (a broad term which included achievement, motivation, ambition, energy, tenacity and initiative); leadership motivation (the desire to lead but not to seek power as an end in itself); honesty and integrity; self-confidence (which was associated with emotional stability); cognitive ability; and knowledge of the business” (p. 48). The authors found less clear evidence for traits they referred to as charisma, creativity, and flexibility. More recently, Bass (1998) reported that traits such as self-acceptance, ascendancy, sociability, and internal locus of control were associated with effective leadership.
Many different personal attributes of leaders have been found to predict transformational leadership behaviour. The size of prediction has commonly been smaller than that hypothesised. Predictions have varied from none to positive to negative across a large number of studies investigating different personal attribute constructs (Bass, 1990). Some researchers have recently advocated the use of personality, as a richer personal attribute conceptualisation of trait theory, to provide a more broadly applicable base for leadership theory (Bycio, Hackett, & Allen, 1995; Hogan et al., 1994; Judge & Bono, 2000; Judge, Bono, Ilies, & Gerhardt, 2002; Bono & Judge, 2004). This thesis turns next to review personality literature.

3.1.3.2 Personality

The definition of the term personality is as varied as the definition of the term leadership previously addressed. A large number of personal attribute constructs are encompassed under this general label. Below three different approaches to personality are explored as ways of defining the term personality in this thesis. Each approach is introduced in a following section of this chapter but explored in much more detail in its own subsequent chapter.

3.1.3.2.1 Five Factor Model of personality.

Hogan (1982) classified definitions of personality into two conceptually distinct definitional domains, which, he argued, were routinely confounded. The first domain of personality definitions was reputation; the unique impression that a person created with other people. The second domain of personality definition referred to the “the dynamic forces, structures, and processes within a person that were somehow associated with his or her unique personality” (p. 345). Moreover, Hogan (1982) argued that there was some consensus in the research community regarding the structure of personality when it was defined as reputation, but there was no such
common view when personality was defined in terms of internal processes. The Five Factor Five model is the main scientific model that operationalised Hogan’s reputational personality category.

A number of studies have specifically assessed relationships between transformational behaviour factors as defined by Bass’s (1985) full range of leadership model and personality attributes that were reputational in nature. Peer ratings of military cadets’ esteem, i.e., value as a person to the organisation, independent of the position they occupied, was found to correlate up to .41 with idealised behaviour and inspirational motivation, and .32 with intellectual stimulation and individualised consideration ($p < .01$ in all cited cases) (Avolio et al., 1994). Air force cadets rated their leaders’ transformational leadership using the Hielbrun Adjective Checklist (Ross & Offermann, 1997). Significant relationships were found between charisma (a combination of the MLQ components idealised behaviour and inspirational motivation) and the following personality constructs: self-confidence and personal adjustment $r = .63$; pragmatism, $r = .69$; need for change $r = .39$; nurturance, $r = .67$; feminine attributes, $r = .54$; lack of aggression, $r = -.47$; and criticalness, $r = -.49$ (Ross & Offermann, 1997). Partial least squares analysis of the personal attribute internal/external locus of control yielded significant standardised path coefficients of .33 with the transformational factor individualised consideration, .25 with intellectual stimulation, and .18 with charisma (Howell & Avolio, 1993). Using the Personality Orientation Inventory it was found that self-assessed inner direction of executives correlated $r = .37$ with subordinates’ ratings of an executive’s charisma, $r = .44$ with the factor individualised consideration, and $r = .33$ with inspirational motivation. Self-acceptance correlated $r = .41$ with charisma, $r = .46$ with individualised consideration, and $r = .43$ with inspirational motivation (Gibbons, 1986; cited in Bass,
Judge and Bono (2000) studied present and past participants in community leadership programs (n~ 170). They found that Five Factor Model components extraversion ($r = .20$) and agreeableness ($r = .24$) significantly and positively predicted transformational leadership, which was measured as the mean of the five MLQ transformational factors. This small size of the prediction, $R^2 \sim .04$, contrasted with the authors’ higher expectations but was consistent with indications from previous work (Barrick & Mount, 1991). In a meta study of 26 independent studies relating personality to transformational leadership Bono and Judge (2004) found that extraversion ($\rho = .22$) and neuroticism ($\rho = -.17$) were linked to the charisma dimension of transformational leadership. Relations of Big Five components with the dimension charisma, which was defined earlier in this section, demonstrated the highest credibility value across all the studies reviewed (Bono & Judge, 2004).

Some studies have not found expected relationships. A study relating seven personal characteristics and transformational leadership found that the personal characteristics were not related as hypothesised (Dubinsky, Yammarino, & Jolson, 1995). Notably, the characteristics used in this study were developed within the context of and unique to that single study. It is argued here that studies failing to find relations, not unlike the many studies reviewed by Mann (1959) mentioned above, may suffer limitations that render the conclusions drawn from them hard to compare or generalise. It is argued that use of well validated and widely used constructs and measures helps to overcome that issue.

Perhaps the key model in the reputation area is the Five Factor Model (Hogan, 1995). With the Five Factor Model, also known as the Big Five Model, a broad consensus emerged that coded reputations into five broad principal categories: emotional stability, conscientiousness, openness to experience, extraversion, and
agreeableness. The principal factors of the Five Factor Model were found to encompass most other constructs of personality (Wiggins & Pincus, 1992). It is argued that this breadth overcomes much of the comparison and generalisation limitation mentioned above. It is therefore argued that Five Factor Model principal components should be the first way that personality is conceptualised in this thesis. Conceptualising personality as principal factors of the Big Five facilitates replication and the significant extension of previous research to senior Australian executives by this thesis. It also enables further investigation of the inability to find predictions at the expected levels. The Five Factor Model and these prospects are investigated further in Chapter Four of this thesis.

3.1.3.2.2 Personality disorder.

Hogan and Kaiser (2005) argue that two aspects of leader personality should be distinguished, which they call the “bright side” and the “dark side” (p. 171). The authors go on to argue: “The bright side concerns the initial impression we make on others - it reflects our social performance when we are at our best. … The Five Factor Model is a taxonomy of the bright side … The dark side reflects the impression we make on others when we let our guard down or when we are at our worst …” (p. 172). Hogan and Hogan (1997) argue that the standard personality disorders described in the Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV; American Psychiatric Association, 1994) provides a categorical taxonomy of dark side personality characteristics. Emerging from a psychiatric-clinical view the categorical model holds that personality disorder categories are personality components distinct from components of normal personality, such as the Big Five. Widiger et al. (1994) have argued for a dimensional model of personality disorder. The dimensional view suggests that personality disorder may simply be exaggerated
or extreme manifestations of normal personality and behaviour (Costa & Widiger, 1994). Costa and McCrae (1990) showed that patients judged clinically to have abnormal personality components exhibit behaviour patterns that differ only quantitatively but not qualitatively from behaviours deemed normal.

In his introduction to the book *The Structure of Personality* (Hall, Bodenhamer, Bolstad, & Hamblett, 2001, p. iii), Professor Carl Lloyd introduces the personality theme of the book by quoting unpublished research conducted by the US Navy in the 1990s. The research suggested that persons best equipped for crewing nuclear submarines evidenced three distinct Diagnostic and Statistical Manual of Mental Disorders (DSM) (American Psychiatric Association, 1994) personality disorders: obsessive-compulsive, schizoid, and avoidant. Those disorders were regarded as personal strengths in the demanding context of safely harnessing the energy of nuclear powered and armed submarines. This was because crew members needed to be preoccupied with orderliness, perfectionism, and control; be socially independent; and be able to fully function even in total isolation. Lloyd concluded from this that whether a personality attribute was ‘ordered’ or ‘disordered’ was merely a reflection of how well resulting individual strengths match contextual requirements (Hall et al., 2001, p. iii).

It is argued here that transformational leadership behaviour, especially the behaviour of senior organisational leaders exposed to leadership senior pressure, is also a demanding role requiring strong drive, effectiveness under pressure, and toleration or even enjoyment of difficult conditions. Moreover, effectiveness and emergence as a leader in such a role may be facilitated personal characteristics not unlike those shared by persons with personality disorder (Board & Fritzon, 2005). Transformational leadership behaviour may therefore be predicted, either negatively
(Hogan & Kaiser, 2005) or positively (Hall et al., 2001), by the presence of situationally relevant leader personality disorder. Following the dimensional model, disorder may exist at sub-clinical levels, or in functional ways, and in combination with a range of other normal personality strengths (Board & Fritzon, 2005). Hogan and Kaiser (2005) argue that even though leaders should not score very highly on personality disorder measures, low scores are not desirable either because they may also be problematic for leadership. Presence of some level of a personality ‘disorder’ may help a person cope with the pressure and difficulty of senior leadership (Lowe, Kroeck, & Sivasubramaniam, 1996; Board & Fritzon, 2005). Personality disorder and associated prospects are investigated further in Chapter Five of this thesis.

3.1.3.2.3 Moderation of Predictions by Self-Other Rating Agreement.

Stogdill (1948) stated that alertness to the surrounding environment and understanding of situations are intimately associated with leadership ability. He was, however, able to cite little conclusive research to support his statement. Robert Hogan (1969) developed a construct he called socio-political intelligence (SPIQ), which he linked directly to Mead’s (1934) construct of role-taking. Hogan (1969) asked trained observers to rate groups of people on five characteristics that he claimed defined empathy. The five characteristics were: 1. is socially perceptive to wide range of interpersonal cues, 2. seems to be aware of the impression he/she made on others, 3. is skilled in social techniques of imaginative play, pretending, and humour, 4. has insight into own motives and behaviour, and 5. evaluates the motivations of others in interpreting situations. Using items from the California Psychological Inventory (Gough, 1987), Hogan created a scale. High scorers on the scale, those with high empathy, were described as perceptive, insightful, and socially astute (Hogan & Hogan, 1999). Hogan and Hogan (1999) built on the previous (1969)
empathy construct to develop SPIQ. The authors declared that SPIQ was the g factor in leadership. Kenny and Zaccaro (1983) reinterpreted Barnlund’s (1962) data and conclusion. They noted that the average correlation in the leadership rank that individuals attained as members of Barnlund’s six study groups was .64. The authors argued that this correlation was substantial evidence of personal consistency in leadership characteristics across Barnlund’s six situations. As a result of their improved statistical analysis techniques, Kenny and Zaccaro (1983) concluded that Barnlund’s results supported the contention that between 49 and 82 percent of the variance in transformational leadership behaviour could be accounted for by a stable personality trait. The authors speculated that this characteristic, rather than being a traditional personality trait, may actually involve the ability to perceive the needs and goals of a constituency and to adjust one's personal approach to group action accordingly. The authors conclude: "... that leadership (as defined by one or more stable personality traits) was much more stable across situations than our introductory texts would indicate" (p. 683). Kenny and Zaccaro (1983) further proposed that leaders became sensitive to differences in group situations and patterned their approaches accordingly. Such leaders develop acuity in foreseeing the needs of their followers and alter their own behaviours to respond more effectively to those needs (cited in Bass, 1990, p. 123). Separately Bass argued that both insight and empathy were important for emergence of transformational leadership (Bass, 1990). Bass (1990) pointed out that in order for a transformational leader to be inspirational, motivational, and individually considerate he or she must have social insight and empathy. He defined social insight and empathy as follows: “In the most general sense, empathy refers to the awareness or appreciation and insight refers to understanding of what others are thinking and feeling about a matter” (p.118).
The research briefly canvassed above all refers to how well a leader understands and acts upon knowledge of how other stakeholders are thinking and feeling. This ability has been measured by self-other rating agreement (Atwater & Yammarino, 1992). It is argued that self-other rating agreement is conceptually related to a number of similar constructs, e.g., role-taking (Mead, 1934), social cognition (Selman, 1974), self-monitoring (Snyder, 1974), empathy (Gough, 1990), emotional intelligence (Goleman, 1995), managerial self awareness (Church, 1997), socio political intelligence (Hogan & Hogan, 1999), and perspective taking (Parker & Axtell, 2001). It is further argued that most of these constructs have been related to leadership in the literature. It is therefore here argued that self-other rating agreement may measure a dispositional component of significance for transformational leadership behaviour. It will be argued in Chapter Six that self-other rating agreement may moderate the prediction of transformational leadership behaviour by other personality components such as those discussed in the preceding sections of this chapter.

3.2 Chapter Conclusion

Two personality constructs, Five Factor Model and personality disorder categories, were identified as likely predictors of transformational leadership behaviour. Self-other rating agreement was identified as a personal attribute that may moderate predictions of transformational behaviour by other personality components. These constructs will each be explored in detail in a following chapter.

Chapter Four will explore the Five Factor Model, review how five factor components have been found to be related to transformational leadership behaviour and develop relevant hypotheses. Chapter Five will explore personality disorder as a potential predictor of transformational behaviour and develop relevant hypotheses.
Chapter Six will investigate self-other rating agreement as a personal attribute that may moderate predictions of transformational behaviour by other personality components and develop relevant hypotheses around that proposition.
CHAPTER 4: FIVE FACTOR MODEL OF PERSONALITY

The chapter commences by discussing the genesis of the Five Factor Model. Focus then moves to a discussion of specific aspects of the Five Factor Model. This is followed by a review of measures of the Five Factor Model of personality. Literature relating components of the Five Factor Model personality to leadership is reviewed. Finally, specific attention is focused on personality and senior leadership and hypotheses relevant to the research question of this thesis are developed.

4.1 Genesis of the Five Factor Model

Gradually, over half a century, a range of approaches to modelling personality appear to have converged to what has been referred to as the dominant current theory of personality, the Five Factor Model (Digman, 1990; Digman, 1996; Fiske, 1949; Goffman, 1959; Goldberg, 1992; McCrae & Costa, 1987; Mount, Barrick, & Strauss, 1994; Tupes & Christal, 1961; Widiger & Trull, 1997; Wiggins & Pincus, 1992). The Five Factor Model is based on 50 years of factor analytic research (see Digman, 1990; Goldberg, 1993; Goldberg, 1992; Hogan, Hogan, & Murtha, 1992; McCrae & Costa, 1987 for reviews), which concludes that, when people think about others, they think of them in terms of five broad themes. Wiggins (1992) cited evidence that suggests that all multi-dimensional personality inventory frameworks can be described with the Five Factor Model’s five dimensions. Judge et al. (2002) asserted that the Five Factor Model provides a valuable taxonomy within which much conceptual diversity in the arena of personal attributes, which was previously not able to be integrated, can now be summarised and meta-analysed. A series of longitudinal studies, using adults 30 years of age and older as subjects, clearly showed that the Five Factor Model measures a stable set of personal attributes (Costa & McCrae, 1986, 1988, 1993; McCrae & Costa, 1994).
4.2 The Five Factor Model

The Five Factor Model is a lexical model. Its theoretical development did not rest on an assumption about how people were inside (Hogan & Hogan, 1995). Instead the theory started from the proposition that, if personality was important in human affairs, then humans would have ways of describing personality implicit in language. Most languages were found to be replete with a host of words that allowed people to name and discuss personality traits in general conversation. People use these words to describe one another and as the basis of subjective reasoning processes used to form opinions of one another. When sets of these words were gathered and factor analysed the Five Factor Model emerged. Across languages and cultures a similar set of five empirically verifiable personality factors emerged (Hogan & Hogan, 1995). Hogan also commented that the Five Factor Model provided a common vocabulary through which the results of a wide range of research could be integrated (Hogan et al., 1994).

Two Five Factor Model naming conventions that have been distinguished are the OCEAN model of Costa and McCrae (1985), and the Big Five of Goldberg and colleagues (Goldberg, 1989; Goldberg, 1992; Saucier & Goldberg, 1996). Costa and McCrae’s (1985) model named the five factors in the order of the acronym OCEAN as: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Goldberg named the factors according to their positive poles, and in the order derived from the amount of variance he asserted that each explained: surgency, agreeableness, conscientiousness, emotional stability, and intellect/openness to experience (Goldberg, 1989; Goldberg, 1992; Saucier & Goldberg, 1996).

Some authors have suggested that Five Factor Model components were too broad to be of any use in predicting behaviour (Hough, 1992). Block (1995) argued
for more specific measures than those provided by the Five Factor Model. In their meta-analysis Judge and Bono (2000) found that use of facets or sub-scales of the Big Five did not explain additional variance even though the magnitudes of leadership predictions by principal Big Five components have not met expectations. Despite these latter claims, it is argued here that the breadth of Five Factor Model components potentially offers greater explanatory power and the possibility of integrating much previously diverse conceptual material. It is here speculated that one or more so far undetected moderating or mediating variables may explain the lower than expected findings to date.

4.3 Measures of Five Factor Model Components

For use in this research the Five Factor Model must be measurable using a well validated and researched instrument. Two instruments were identified and evaluated for this purpose: The Neo Personality Inventory (NEO-PI) (Costa Jnr. & McCrae, 1985, 1992) and the Hogan Personality Inventory (HPI) (Hogan & Hogan, 1995).

The NEO-PI is a 240 item pencil and paper self report inventory. It yields scores on each of the Five Factor Model components: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The five principal factors are each made up of six sub-factors, called facets, making a total of 30 facets composing the scale. The HPI is a 206 item pencil and paper self report inventory that yields scores on seven primary factors: adjustment (the positive pole of neuroticism), two factors, sociability and ambition, that together form the original extraversion factor, likeability (agreeableness counterpart), prudence (conscientiousness counterpart), and two factors, intellectance and school success, that together make up openness to experience. Hogan (1995) called scale sub-factors
homogeneous item composites (HICs). The seven primary factors are, in turn, composed of 41 homogeneous item composites.

Both instruments have been extensively used and validated. It is argued here that the HPI has a more corporate feel than the NEO-PI, possibly because the HPI was developed for corporate use. The focal subject group in this research are corporate executives (senior organisational leaders) the HPI was therefore selected as the preferred instrument for use in the present thesis. Further, it is argued that the seven factor conceptualisation of the Big Five by Hogan (Hogan & Hogan, 1995) may add additional perspective. Detail of the structure and psychometric properties of the HPI is presented in chapters four and eight of this thesis. Factor and homogeneous item composite definitions and sample items for the HPI are presented in Table 4.1 below (Hogan & Hogan, 1995).

4.4 Relation of Five Factor Model Factors to Transformational Leadership Behaviour and Implications for Senior Leadership

A large number of studies have related one or more of the Five Factor Model components to transformational leadership behaviour or a related construct. A sample of these studies will be summarised below in five sections. Each section focused on one of the five principal Five Factor Model components. Section headings consist first of the Goldberg name followed by other key related terms in parentheses. The several naming conventions referred to above are used interchangeably within the discussion under each heading.
Table 4.1

Principal factors, associated homogeneous item composites (HICs), definitions and sample items of the HPI

<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
<th>Sample item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1* adjustment</td>
<td>measures the degree to which a person appears calm and self-accepting or conversely, self-critical, and overly self-reflective.</td>
<td>I would rather not criticize people, even when they need it.</td>
</tr>
<tr>
<td>empathy</td>
<td>emotional identification with others</td>
<td>I keep calm in a crisis.</td>
</tr>
<tr>
<td>not anxious</td>
<td>absence of anxiety</td>
<td>I rarely feel guilty about some of the things I have done.</td>
</tr>
<tr>
<td>no guilt</td>
<td>absence of regret</td>
<td></td>
</tr>
<tr>
<td>calmness</td>
<td>lack of emotionality</td>
<td></td>
</tr>
<tr>
<td>even tempered</td>
<td>not moody or irritable</td>
<td>I rarely lose my temper.</td>
</tr>
<tr>
<td>no somatic complaints</td>
<td>lack of health concerns</td>
<td>I almost always feel good.</td>
</tr>
<tr>
<td>trusting</td>
<td>not paranoid or suspicious</td>
<td>People really care about one another.</td>
</tr>
<tr>
<td>good attachment</td>
<td>good relations with one's parents</td>
<td>No matter what happened I felt my parents loved me.</td>
</tr>
<tr>
<td>2* ambition</td>
<td>measures the degree to which a person was socially self-confident, leader-like, competitive, and energetic.</td>
<td>I am an ambitious person and persistent.</td>
</tr>
<tr>
<td>competitive</td>
<td>being competitive, ambitious</td>
<td></td>
</tr>
<tr>
<td>self confidence</td>
<td>confidence in oneself</td>
<td>I am a very self-confident person.</td>
</tr>
<tr>
<td>no depression</td>
<td>feelings of contentment</td>
<td>I am a happy person.</td>
</tr>
<tr>
<td>leadership</td>
<td>capacity for leadership</td>
<td>In a group I like to take charge of things.</td>
</tr>
<tr>
<td>identity</td>
<td>satisfaction with one's life tasks</td>
<td>I know what I want to be.</td>
</tr>
<tr>
<td>no social anxiety</td>
<td>social self-confidence</td>
<td>I don't mind talking in front of a group of people.</td>
</tr>
<tr>
<td>3* sociability</td>
<td>measures the degree to which a person seems to need and/or enjoy interactions with others.</td>
<td>I would go to a party every night if I could.</td>
</tr>
<tr>
<td>likes parties</td>
<td>enjoys parties</td>
<td></td>
</tr>
<tr>
<td>likes crowds</td>
<td>finds large crowds exciting</td>
<td>Being part of a large crowd was exciting.</td>
</tr>
<tr>
<td>experience seeking</td>
<td>preference for variety and challenge</td>
<td>I like a lot of variety in my life.</td>
</tr>
<tr>
<td>exhibitionistic</td>
<td>exhibitionistic tendencies</td>
<td>I like to be the centre of attention.</td>
</tr>
<tr>
<td>entertaining</td>
<td>being witty and entertaining</td>
<td>I am often the life of the party.</td>
</tr>
<tr>
<td>4* likeability</td>
<td>measures the degree to which a person was seen as perceptive, tactful, and socially sensitive.</td>
<td>I work well with other people.</td>
</tr>
<tr>
<td>easy to live with</td>
<td>tolerant and easy going nature</td>
<td></td>
</tr>
<tr>
<td>sensitive</td>
<td>tends to be kind and considerate</td>
<td>I always try to see the other person's point of view.</td>
</tr>
<tr>
<td>caring</td>
<td>interpersonal sensitivity</td>
<td>I am sensitive to other people's moods.</td>
</tr>
<tr>
<td>likes people</td>
<td>enjoys social interaction</td>
<td>I enjoy being with other people.</td>
</tr>
<tr>
<td>no hostility</td>
<td>lack of hostility</td>
<td>I would rather not criticize people, even when they need it.</td>
</tr>
</tbody>
</table>

Continued on the next page
Table 4.1 continued

Principal factors, associated homogeneous item composites (HICs), definitions and sample items of the HPI

<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
<th>Sample item</th>
</tr>
</thead>
<tbody>
<tr>
<td>5* prudence</td>
<td>Measures the degree to which a person was conscientious, conforming, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dependable,</td>
<td>I always practice what I preach.</td>
</tr>
<tr>
<td>HIC moralistic</td>
<td>Adhering strictly to conventional values</td>
<td>I do my job as well as I possibly can.</td>
</tr>
<tr>
<td>mastery</td>
<td>Being hard working</td>
<td>I strive for perfection in everything I do.</td>
</tr>
<tr>
<td>virtuous</td>
<td>Being perfectionistic</td>
<td>Other people's opinions of me were important.</td>
</tr>
<tr>
<td>not autonomous</td>
<td>Concern about others' opinions of oneself</td>
<td>I always know what I will do tomorrow.</td>
</tr>
<tr>
<td>not spontaneous</td>
<td>Preference for predictability</td>
<td>I rarely do things on impulse.</td>
</tr>
<tr>
<td>impulse control</td>
<td>Lack of impulsivity</td>
<td>When I was in school I rarely gave the teachers any trouble.</td>
</tr>
<tr>
<td>avoids trouble</td>
<td>Professed probity</td>
<td></td>
</tr>
<tr>
<td>6* intellectance</td>
<td>Measures the degree to which a person was perceived as bright, creative, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>interested in intellectual matters.</td>
<td></td>
</tr>
<tr>
<td>HIC science</td>
<td>Interest in science</td>
<td>I am interested in science.</td>
</tr>
<tr>
<td>curiosity</td>
<td>Curiosity about the world</td>
<td>I have taken things apart just to see how they work.</td>
</tr>
<tr>
<td>thrill seeking</td>
<td>Enjoyment of adventure and excitement</td>
<td>I would like to be a race car driver.</td>
</tr>
<tr>
<td>intellectual games</td>
<td>Enjoys intellectual games</td>
<td>I enjoy solving riddles.</td>
</tr>
<tr>
<td>generates ideas</td>
<td>Ideational fluency</td>
<td>I am a quick-witted person.</td>
</tr>
<tr>
<td>culture</td>
<td>Interest in culture</td>
<td>I like classical music.</td>
</tr>
<tr>
<td>7* school success</td>
<td>Measures the degree to which a person seems to enjoy academic activities and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>values educational achievement for its own sake.</td>
<td></td>
</tr>
<tr>
<td>HIC good memory</td>
<td>Having a good memory</td>
<td>I have a large vocabulary.</td>
</tr>
<tr>
<td>education</td>
<td>Being a good student</td>
<td>As a child, school was easy for me.</td>
</tr>
<tr>
<td>math ability</td>
<td>Being good with numbers</td>
<td>I can multiply large numbers quickly.</td>
</tr>
<tr>
<td>reading</td>
<td>Enjoys reading</td>
<td>I would rather read than watch TV.</td>
</tr>
</tbody>
</table>

* Principal factors are numbered in the left hand column; homogeneous item composites are not numbered

Quoted directly from (Hogan & Hogan, 1995, p. 14)
4.4.1 Surgency (Extraversion, Ambition, Sociability)

Costa and McCrae (1986) define extraversion in terms of six facets. The facets are: warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions. Gough (1988) reported that leaders who emerged in a leaderless group were described as active, assertive, energetic, and not silent or withdrawn. All of these adjectives are descriptors of the construct surgency. Hough (1992) referred to surgency as two factors: potency and affiliation. Hogan and Hogan (1995) also defined surgency in terms of two component factors: sociability (“the degree to which a person seemed to need and/or enjoy interactions with others” p. 12) and ambition (“the degree to which a person was socially self-confident, leader-like, competitive, and energetic” p. 12). Conn (1994) reported that Five Factor Model extraversion (McCrae & Costa, 1987) is related ($r = -.65$) to the Myers-Briggs Type Indicator® (MBTI®, hereafter just MBTI; Briggs Myers, McCauley, Quenk, & Hammer, 1998) extraversion-introversion (E-I) dimension. Hogan and Hogan (1995) found that ambition and sociability were related to the MBTI E-I dimension ($r = -.31$ and $-.55$, $p < .05$ and $< .001$ one tailed) respectively. Costa and McCrae (1985) found that the MBTI E-I scale correlated -.74 with NEO Five Factor Model extraversion. Hogan and Hogan (1995) constructed ambition with the homogeneous item composites: competitive, self confidence, no depression, leadership, identity, and no social anxiety. Whereas sociability was constructed with the homogeneous item composites: likes parties, likes crowds, experience seeking, exhibitionistic, and entertaining.

In Stogdill’s (1948, 1970) surveys of leadership research findings he found that extraversion and extravert-like characteristics including social participation, interpersonal skills, popularity, dominance and sociability were consistently
associated with leadership. Mann (1959) replicated Stogdill’s (1948) findings and found that extraversion was one of seven factors which differentiated leaders from non leaders. Costa and McCrae (1988), in a six year longitudinal study of self report and spouse personality ratings, found that surgency was strongly related to social leadership. Hogan (1994) noted that surgency was related to being perceived as leader-like. Barrick and Mount (1991), in a meta-analysis of 117 studies published from 1952 to 1988, found that extraversion was a significant predictor for two occupations involving social interaction, managers and sales, \( r = .11 \), and \( .09 \) respectively. A meta analysis of 97 studies found that extraversion was related to criterion measures of performance \( r = .16 \) but the 95 percent confidence interval included zero indicating that the result was not stable, varying from positively related to negatively related, across the studies in the sample (Tett, Jackson, & Rothstein, 1991). A meta-study (Judge & Bono, 2000) reviewed 14 samples of leaders from over 200 organisations where personality was linked to transformational leadership behaviour. The study found a small positive prediction of transformational leadership behaviour by extraversion \( (R^2 = .05, p < .01, \text{ two tailed}) \). In a study of 118 community leaders, 50 percent female, Gordon Personality Profile scores were correlated with MLQ profiles (Avolio & Bass, 1994). The Gordon Personality Profile component ascendancy, a construct measuring assertiveness and dominance that was similar to surgency, correlated \( r = .21 \) and \( .23 (p = .05) \) with charisma and inspirational motivation respectively. The Gordon Personality Profile component sociability, a construct measuring gregariousness that was again a component of surgency, correlated \( r = .23 \) and \( .25 (p = .05) \) with charisma and inspirational motivation respectively.
Lim and Ployhart (2004) replicated Judge and Bono’s (2000) study with junior military leaders using the International Personality Item Pool (Goldberg, 1999) as the Five Factor Model measure. The authors operationalised transformational leadership behaviour as the average of followers’ scores on the five transformational components of a modified version of the MLQ. They found a positive intercorrelation between transformational leadership and extraversion ($r = .31$, $p < .05$, $CIs = .04, .53$) but extraversion did not significantly predict transformational leadership. A recent meta-study that analysed 26 independent studies found that extraversion was positively related ($\rho = .22$) to charisma, i.e., combined idealised behaviour and inspirational motivation (Bono & Judge, 2004). Additionally this study found that credibility values for this particular relationship were consistently positive indicating that extraversion and charisma were positively linked across samples and situations. Credibility values were not consistently positive for relations of extraversion with MLQ components intellectual stimulation, individualised consideration, or a transformational leadership composite. It was argued in section 2.4.3 above that this finding indicates that charisma is the measure of transformational leadership behaviour that should be used in this thesis.

A number of other studies have found that surgency does not predict leadership. In an extensive review no consistent relation between extraversion and leadership was reported (Bass, 1990).

4.4.1.1 Senior Leadership and Surgency

In a study of 17 CEOs, Peterson, Smith, Martorana, and Owens (2003) found that CEO extraversion was related to a tendency to be dominant as opposed to weak in the top management team ($r = .63$, $p < .05$). In their study the authors found that dominance was not related to various measures of organisational success. Dominance
is one of the two trait clusters identified for extraversion, the other being gregariousness (McCrae & Costa, 1987). It is argued that dominance (a) may be related to the ambition component of the HPI, and (b) may be consistent with transformational leadership behaviour as defined in Chapter Two of this thesis. From this perspective it is proposed that ambition could positively predict senior transformational leadership behaviour measured as charisma.

It was demonstrated in section 4.4.1 that the MBTI E-I scale was related to Big Five extraversion. MBTI extraversion is described in part as: “… ease of communication and sociability” (Briggs Myers et al., 1998). It is argued that MBTI extraversion relates more to the gregariousness (sociability) dimension than the dominance (ambition) dimension of Big Five extraversion. A study of 253 vice president and senior level executives and their direct reports found that total subordinate rated transformational behaviour, as measured by the Leadership Assessment Inventory (Burke, 1991), correlated $r = -.23$, $p < .001$ with the MBTI E-I scale (Church & Waclawski, 1998). The Leadership Assessment Inventory is a psychometric device that was developed specifically to measure the transformational constructs associated with Bass’s (1985) full range of leadership model. In a survey study of 914 Singaporean managers 39.1 percent of managing directors, 42.6 percent of executives, and 41.1 percent of general managers were found to score as extraverted on the MBTI indicating that the majority of persons in senior Singapore management roles were low in extraversion, i.e., the majority, approximately 60 percent, scored as introverts (Tan & Tiong, 2000). Opposite results were found in five studies of senior management MBTI reported in Gardner and Martinko’s (1996) literature survey of UK and US studies. MBTI extraversion of senior management subjects’ varied between 54.7 and 66.0 percent. Based on the contrast between the
latter two citations it is speculated here that there may be significant cultural
differences in the sociability profiles of senior organisational leaders. While the
present example refers to differences between national cultures it is argued that the
difference may extend to differences between industry cultures and even differences
between individual organisational cultures (Petty, Beadles II, Lowery, Chapman, &
Connell, 1995).

With senior managers it is argued that the role work experience has had in
shaping the personality characteristics of those who make it through to become
successful senior executives should be considered. From an a priori point of view it is
argued that incumbent senior executives are likely to have learned behavioural skills,
e.g., transformational behaviours and interpersonal skills, no matter what their
underlying personal attribute make up. For instance, persons low in extraversion may
have learned to socialise adequately. It is therefore argued that learned behavioural
strategies may mask any link between sociability and subordinate rated
transformational leadership behaviour. That is persons may be good at senior
transformational behaviour whether they are low of high in sociability. Moreover, it
is argued that this masking may be most complete with those who have reached the
highest levels since they may have undergone the most comprehensive experiential
personal development. From this point of view it is argued that there may be no
discernable link between sociability and senior transformational leadership behaviour
for senior leaders.

The same argument does not, however, apply to ambition. It is argued that
learning to behave in socially adequate way for a role in not the same as learning to be
ambitious. One learns to be socially adequate as part of the process of getting on, one
gets on because one is ambitious. It is argued that without ambition the likelihood of
moving through the ranks, with all the attendant challenges and difficulties, is much reduced. From this point of view it may be expected that a link will be found between ambition and transformational leadership behaviour for senior leaders. Because without ambition it is likely those persons would never have become senior leaders.

In sum research findings on the relationship of extraversion to transformational leadership and senior transformational leadership are equivocal. Some studies have found a relationship and some have not. Additionally, no clear relationship direction emerges from research to date. From an a priori point of view it is likely that there will be no relationship between sociability and senior transformational leadership behaviour but ambition will positively predict senior transformational leadership behaviour. No hypothesis will be offered here for sociability since the argument is that sociability will not predict charisma. It is argued that ambition will positively predict charisma. The first hypothesis of this thesis is therefore framed as follows:

Hypothesis 1: Ambition will positively predict charisma.

4.4.2 Agreeableness (Likeability)

Costa and McCrae (1985) define agreeableness as “fundamentally altruistic … sympathetic to others and eager to help them …believes others will be equally helpful in return” (p. 15). Costa and McCrae (1985) use adjectives like the following to describe highly agreeable people: “forgiving, trusting, -suspicious, -wary, -pessimistic, peaceable, -hard-hearted, -complicated, -demanding, -clever, -flirtatious, -charming, -shrewd, -autocratic, warm, soft-hearted, gentle, generous, kind, tolerant, -selfish, -stubborn, -demanding, -headstrong, -impatient, -intolerant, -outspoken, -hard-hearted, -show-off, -clever, -assertive, argumentative, -self-confident, -aggressive, -
idealistic, friendly, warm, sympathetic, soft-hearted, gentle, -unstable, kind” (p. 49, = minus). Costa and McCrae (1985) go on to point out that, while being highly agreeable may seen as socially preferable, it is also advantageous for people to be able to fight for their rights, be sceptical, think critically, not always say yes, and be challenging. From an a priori stand point it is argued that being highly agreeable may make acting in a leadership role extremely difficult since interpersonal influence is the stock in trade of the leader.

Hogan and Hogan (1995) in their conception of the Five Factor Model used the term likeability for agreeableness and defined it similarly as: “the degree to which a person is seen as perceptive, tactful, and socially sensitive” (p. 12). Hogan and Hogan (1995) constructed the likeability factor from the homogeneous item composites: easy to live with (tolerant and easy going nature), sensitive (tends to be kind and considerate), caring (interpersonal sensitivity), likes people (enjoys social interaction), no hostility (lack of hostility) (p. 14). Agreeableness was related to the MBTI thinking-feeling (T-F) component ($r = .46, p < .001$) (Costa & McCrae, 1985).

Stogdill (1948, 1970) found that diplomacy, tact, nurturance, and cooperativeness were common traits of leaders; Hogan (1994) commented that these were elements of agreeableness. The empathy scale of the California Psychological Inventory, which was related to agreeableness (Hogan, Curphy & Hogan, 1994), was found to be significantly related to staff and peer ratings of transformational leadership behaviour (Gough, 1990). Hogan, Curphy and Hogan (1994) argued that progression into middle management may be a function of likeability and perceived ability to work with senior management. Dunn (1995) found that agreeableness was negatively related to perceived counter-productivity, overall mean multiple correlation value = -.24 (Dunn, Mount, Barrick, & Ones, 1995). Morrison (1997), in
a survey study of business owners/managers, found that scores for Type A behaviour were negatively related to agreeableness. A study that assessed the impact of personality on job performance in jobs requiring interpersonal interactions found that agreeableness was positively related to performance, true estimated mean correlation value = .21 (Mount, Barrick, & Stewart, 1998). A meta-study (Judge & Bono, 2000) reviewed 14 samples of leaders from over 200 organisations where personality was linked to transformational leadership behaviour found a small positive prediction of transformational leadership behaviour by agreeableness ($R^2 = .07, p < .01$, two tailed). Using an Asian military sample Lim and Ployhart (2004) found a negative relationship between transformational leadership and agreeableness ($r = -.29, p < .05$, $CIs = -.52, -.03$). Multivariate regression of transformational leadership, measured as the mean of the five transformational scales of subordinate rated MLQ, on the five factors of the Five Factor Model, revealed that agreeableness was a significant negative predictor of transformational leadership ($\beta = -.30, p < .10$, $CIs = -.58, -.02, p < .01$, one tailed). Bono and Judge (2004), whose meta study was described above in section 4.4.1, found that agreeableness was linked to charisma ($\rho = .21$). Credibility values, however, included zero indicating that agreeableness was linked positively in some studies, not linked in others, and negatively linked in still others. This latter finding is consistent with the differences in direction of relationships found in research results reported earlier in this section.

4.4.2.1 Senior Leadership and Agreeableness

On the basis of their review of research Peterson et al. (2003) hypothesised that agreeableness would be related to decentralised and cohesive top management teams. The authors’ results indicated that agreeableness was related to top management team cohesiveness, corruption, and centralisation ($r = .61, -.58, -.52, p <$
Moreover cohesiveness was related to organisational income growth \( (r = .45, p < .05) \). It is argued that these results may indicate that agreeableness may be positively associated with transformational leadership behaviour.

A relevant question is does a senior leader have to be liked to be transformational. Some of the research reported above would suggest answering that question in the affirmative, some in the negative. In a series of studies Spears, Ellemers, and Doosje (2005) found that competence-based respect and liking-based respect are different constructs and have separate and important impacts on determining the commitment of group members. The authors found that the presence of both forms of respect was the ideal but even when one form of respect is lacking commitment in a group can remain high given the presence of the other form of respect. Since the HPI construct likeability is focused on interpersonal liking and not on respect because of competence it is argued that any relationship between likeability and transformational leadership behaviour may vary according to situational criteria that are usually unidentified in the studies mentioned in the section above. As a result it may be that the relationship of likeability to transformational leadership behaviour is moderated or mediated by factors that were not measured in the research relating likeability to senior management reported above.

From an a priori point of view it is argued that leaders do need to be respected. It is likely that those who make it through to senior roles have found ways of behaving in appropriately interpersonally sensitive ways. It is also likely that they have had to be tough minded in many cases, say no in the face of opposition or pressure, and disappoint some people in the process. From this point of view it is argued that it is unlikely that likeability will predict senior transformational leadership
behaviour. It is more likely that there will be a small positive or negative prediction or null prediction, as much of the research summarised above has found.

In sum, it is argued that findings on the relationship of likeability to transformational leadership and senior transformational leadership equivocal. Some studies have found a relationship and some have not. Further, for senior leaders it is argued that learning and development from their career experience cannot be ignored. It is likely that any impact the personal attribute likeability may have could be masked by learned assertiveness and other interpersonal skills. Additionally, there is the potential confound with respect-based group commitment as opposed to liking-based group commitment. Given there arguments it is proposed that likeability will not predict senior leader charisma and no hypothesis will be offered for prediction of senior transformational leadership behaviour by likeability.

4.4.3 Conscientiousness (Prudence)

Costa and McCrae (1985) define the highly conscientious individual as: “… purposeful, strong-willed, and determined … scrupulous, punctual, and reliable” (p. 16). Costa and McCrae (1985) use adjectives like the following to describe highly conscientious people: “efficient, self-confident, thorough, resourceful, confident, - confused, intelligent, organised, precise, methodical, -absent-minded, -defensive, - distractible, -careless, -absent-minded, -fault-finding, ambitious, industrious, enterprising, determined, confident, persistent, -lazy, energetic, -hasty, -impulsive, - impatient, -immature, -moody” (p. 49). On the negative side highly conscientious people can be fastidious, compulsively neat, and workaholic (Costa & McCrae, 1985, p. 16).
The HPI employs the term prudence for conscientiousness and defines it as: "the degree to which a person is conscientious, conforming and dependable" (Hogan & Hogan, 1995, p. 14). Prudence is constructed from the homogeneous item composites: moralistic, hard working, virtuous, not autonomous, not spontaneous, impulse control, and avoids trouble. Conn (1994) reported that conscientiousness was related -.55 to the judging-perceiving (J-P) dimension of the MBTI. Hogan and Hogan (1995) reported a small relationship between prudence and MBTI J-P ($r = -.26$, $p < .05$) (p. 23). Cost and McCrae (1985) found that NEO conscientiousness was related to the MBTI J-P scale ($r = -.46$, $p < .001$).

A meta-analysis found that conscientiousness showed consistent relations with job performance criteria (job proficiency, training proficiency, and personnel data, $r = .10$, .26, and .11 respectively, for all occupational groups studied, i.e., professionals, police, managers, sales, and skilled/semi skilled (Barrick & Mount, 1991). Conscientiousness was found to be an important attribute negatively related to perceived counter-productivity, overall mean multiple correlation values = -.25 (Dunn et al., 1995). A study that assessed the impact of personality on job performance in jobs requiring interpersonal interactions, e.g., leaders, found that conscientiousness was positively related to performance, true estimated mean correlation values = .26 (Mount et al., 1998). Judge and Bono (2000) in a study including 14 samples relating Big Five personality to transformational leadership found that conscientiousness did not predict transformational leadership behaviour. Working in an Asian military setting, and using a measure of transformational leadership based on an aggregation of military evaluations that were judged as similar to the four MLQ transformational scales by an expert panel, Ployhart, Lim, and Chan (2001) found that conscientiousness was related to transformational leadership behaviour in both typical
and maximum performance contexts. Relationships varied from $r = .08$ to $.18, p < .05$. A study by Judge, Bono, Ilies, and Gerhardt (2002) meta-analysed 222 correlations from 23 samples where some measure of conscientiousness was related to some measure of leadership. Overall conscientiousness was found to be related to leadership ($\rho = .28$). Neither the credibility interval nor the confidence interval included zero indicating that all results in the studies canvassed had shown a positive relationship. Lim and Ployhart (2004) found that transformational leadership, measured as an aggregation of the four MLQ transformational behaviour components, was related to conscientiousness ($r = .31, p = .05$, one tailed). The authors found that although it was related conscientiousness did not predict transformational leadership. Bono and Judge (2004) found that relationships between charisma and conscientiousness varied from positive to zero to negative with the mean correlation being $\rho = .05$. In a longitudinal study of 189 managers who were, on average, 3.5 levels below the CEO in their organisation, Cable and Judge (2003) found that managers scoring high on conscientiousness were more likely to use rational appeal, i.e., transactional rather than transformational behaviour.

4.4.3.1 Senior Leadership and Conscientiousness

In their review of the literature Gardner and Martinko (1996) found that senior executives varied from 51 percent to 77 percent judging, i.e., higher conscientiousness, in their MBTI preference. A large study of Asian managers found that managing directors and general managers were 76.1 and 79.0 percent MBTI judging preference (Tan & Tiong, 2000). The above two studies did not provide any measure of transformational behaviour. Peterson et al. (2003) found that, for the CEO sample employed, conscientiousness negatively predicted crisis (defined as the opposite of control), corruption (defined as the opposite of legalism), and
centralisation ($r = -0.41, -0.69, -0.47, p < .10, .05, .05$) respectively, and predicted rigidity, dominance, and factionalism ($r = 0.56, 0.43, 0.52, p < .05, .10, .05$) respectively.

Kotter (1999) indicated that senior leaders are not and can never be the highly organised analysers and deciders traditionally depicted as senior managers. While lower level managers who have highly structured jobs may need and be able to plan, organise and control in a systematic and ordered way, it is argued that senior managers may not be able to do this. Instead they work with people and networks in a fast changing situation to exert influence, inspire, and motivate change in order to move towards a result in an environment so complex that the very idea of systematic organisation seems nonsense. It is argued that such a manager would benefit from behaving in a transformational way but would be limited by a high conscientiousness personality. From an a priori standpoint it is argued that the early career experience of working in lower level more objective roles may have initially favoured those with high conscientiousness. But as higher roles become increasingly demanding and subjective that initial strength may become a weakness if incumbents cannot learn to deal with ambiguity, complexity, and disorder in effective ways.

In the literature reviewed in section 4.4.3 above, which was mostly focused on undefined levels of leaders, conscientiousness did not consistently predict leadership either positively or negatively. Given Kotter’s (1999) position, the arguments and the results presented above it is further argued that there may be a negative relationship between conscientiousness and leader behaviour that is about promoting change, i.e., senior transformational behaviour. The following hypothesis is therefore framed:

Hypothesis 2: Prudence will negatively predict charisma.
4.4.4 Emotional Stability (Adjustment, Neuroticism)

Costa and McCrae (1985) name the emotional stability component neuroticism and state that persons low in neuroticism are: “… calm, even-tempered, and relaxed … able to face stressful situations without becoming upset or rattled” (p. 15). Costa and McCrae (1985) use the following adjectives to describe neuroticism: “anxious, fearful, worrying, tense, nervous, -confident, -optimistic, irritable, impatient, excitable, moody, -gentle, tense, -contented, -self-confident, pessimistic, shy, timid, defensive, inhibited, sarcastic, self-centred, loud, hasty, -clear-thinking, -efficient, -alert, careless” (p. 49). The authors point out that the neuroticism scale does not measure pathology and all scores, whether high or low, are normal personality scores.

The HPI named the emotional stability or neuroticism component by its positive pole as adjustment. Adjustment was defined as: “the degree to which a person appeared calm and self-accepting or conversely, self-critical, and overly self-reflective” (Hogan & Hogan, 1995, p. 14). HPI adjustment was constructed from the homogeneous item composites: empathy, not anxious, no guilt, calmness, even tempered, no somatic complaints, trusting, and good attachment (Hogan & Hogan, 1995). Given that HPI components assess aspects of normal personality; neither a high nor a low score on adjustment is regarded as abnormal (Hogan & Hogan, 1995). Neuroticism was found to relate to the MBTI thinking-feeling (T-F) dimension ($r = .28, p < .001$) (Costa & McCrae, 1985).

In Stogdill’s (1948) review he found emotional control to be a factor related to leadership. Dunn (1995), in a study of hirability and counter-productivity estimations made by managers making hiring decisions, found that emotional stability was related to perceived hirability, overall mean multiple correlation value = .30. Dunn (1995)
also found that emotional stability was the most important attribute negatively related to perceived counter-productivity, overall mean multiple correlation values = -.36 (Dunn et al., 1995). A study that assessed the impact of personality on job performance in jobs requiring interpersonal interactions found that emotional stability was positively related to performance, true estimated mean correlation value =.18 (Mount et al., 1998). Hogan asserted that individuals low in adjustment were less likely to be perceived as leaders (Hogan et al., 1994). Bass’s (1990) review led him to conclude that a small negative relationship existed between neuroticism and leadership, i.e., positive between adjustment, the positive pole, and leadership capability (Bass, 1990). On the other hand the opposite finding that emotional stability is negatively related to leadership is not uncommon. A meta analysis (Lord et al., 1986) found a positive relationship between measures of neuroticism, the opposite pole of emotional stability, and leadership perceptions ($r = .24$). In a meta study including 14 separate samples Judge and Bono (2000) found that neuroticism was not related to and did not predict transformational leadership. Ployhart et al. (2001) working in an Asian military setting, and using a measure of transformational leadership based on an aggregation of military evaluations that were judged as similar to the four MLQ transformational scales by an expert panel, found that neuroticism was related to leadership in typical and maximum performance contexts. Relationships varied from $r = .11$ to .19, $p < .05$. A study by Judge et al. (2002) meta-analysed 222 correlations from 23 samples where a measure judged to be equivalent to neuroticism was negatively related measures of leadership. Overall neuroticism was found to be related to leadership ($\rho = -.24$). Neither the credibility interval nor the confidence interval included zero indicating that all results in the studies canvassed had shown a consistent negative relationship. The results must be
interpreted with some care because of the range of measures of neuroticism employed. Lim and Ployhart (2004), mentioned above in the section on agreeableness, found a negative relationship between transformational leadership and neuroticism \((r = -.39, p < .05, Cls = -.59, -.14)\). Multivariate regression revealed that neuroticism was a significant negative predictor of transformational leadership at \((\beta = -.29, p < .10, Cls = -.57, -.01, p < .01, \text{one tailed})\). The authors found that this negative relationship held in typical performance contexts, i.e., when the leader was not under high levels of pressure \((r = -.56, p < .10)\), but did not hold in maximum performance contexts, i.e., when the leader was under high pressure, where no significant relationship was found. In a further meta study neuroticism was negatively related to charisma \((\rho = -.17)\) (Bono & Judge, 2004). Confidence and credibility intervals did not include zero indicating that this relationship held across samples and situations. Cable and Judge (2002) found that managers high in emotional stability used influence techniques that were positively related to rational persuasion (transactional behaviour) but negatively related to the more transformational behaviour like inspirational appeal \((r = -.18, p < .05, \text{two tailed})\).

### 4.4.4.1 Adjustment and Senior Leadership

It is argued that the evidence presented above was not specifically focused on senior leadership. It has already been argued above that senior leadership may have personal characteristics that differ from those of junior, middle or a mixture of all levels. In their study of 17 CEOs Peterson et al. (2003) found that CEO neuroticism was significantly negatively related to top management team flexibility (opposite of rigidity), dominance (opposite of weakness), and cohesiveness (opposite of factionalism) \((r = -.50, -.59, -.49, p < .05 \text{ for all measures})\) respectively and was significantly positively related to team corruption (opposite of legalism) \((r = .49, p < .05, p < .05\text{ for all measures})\).
This research was based on biographical analysis of 17 US CEOs during tumultuous periods of the history of the various organisations they managed, e.g., Lee Iacocca at the turnaround of Chrysler Motor Company. It is argued that it is likely that the emotional stability of the sample used was tested to the limit because of the nature of the situations faced. Under such circumstances even the most stable person may have seemed to behave in a somewhat emotionally unstable way at times. In their review of the literature Gardner and Martinko (1996) found that senior managers varied between 57.0 percent and 86.8 percent MBTI thinking on the T-F scale. Based on the correlation data presented in the last section thinking may be positively related to adjustment.

In sum findings have been very varied but have leaned towards suggesting a small positive relationship between adjustment and transformational leadership behaviour. Arguing from an a priori perspective it is likely that persons with emotional stability issues may be screened out of the promotional stakes during their career experience. This is based on the proposition that people who behave as if they can’t cope or in some way are dysfunctional emotionally at lower or mid levels don’t tend to be promoted. Alternatively, some persons who have emotional stability issues may develop behavioural strategies to perform effectively under pressure. In the military study cited above (Lim & Ployhart, 2004) it was found that a negative relationship found in typical performance contexts disappeared under maximum performance contexts. As a result it is argued that people with emotional stability issues that have not been behaviourally addressed will not be prominently represented in senior executive ranks. Given the research results and the arguments presented above it is argued that there will be no prediction of senior transformational
leadership behaviour by emotional stability. Based on this argument no hypothesis will be offered for the prediction of charisma by emotional stability in this thesis.

4.4.5 Intellect/Openness to Experience (Intellectance, School Success)

Costa and McCrae (1985) defined openness in terms of the sub factors: fantasy, aesthetics, feelings, actions, ideas, and values (p. 17). The authors say that open individuals are: “curious about their inner and outer worlds and their lives are experientially richer … willing to entertain novel ideas and unconventional values” (p. 15). Costa and McCrae (1985) used the following adjectives to describe openness: dreamy, imaginative, humorous, mischievous, idealistic, artistic, complicated, original, enthusiastic, inventive, versatile, excitable, spontaneous, insightful, affectionate, talkative, outgoing, interests wide, adventurous, optimistic, -mild, interests wide, curious, -conservative, unconventional, -cautious, flirtatious” (p. 49).

Hogan and Hogan (1995) divided the openness factor into two separate factorial components: intellectance: “the degree to which a person is perceived as bright, creative, and interested in a broad range of intellectual matters,” and school success: “the degree to which a person seems to enjoy academic activities and values educational achievement for its own sake” (Hogan & Hogan, 1995, p. 15). Homogeneous item composites of intellectance included: interest in science, curiosity, thrill seeking, intellectual games, and generates ideas, and culture. For school success the homogeneous item composites included: good memory, education, maths ability and reading enjoyment (Hogan & Hogan, 1995, p. 15). It is argued that the HPI intellectance factor is similar to the original openness to experience component. School success, however, introduces an apparently different dimension. Conn (1994) found that openness correlated $r = -.56$ with the MBTI sensing-intuiting (S-N) scale.
Costa and McCrae (1985) found that MBTI S-N scale (intuition) correlated $r = .72, p < .001$ with openness.

Barrick and Mount’s (1991) meta-analysis found that openness to experience was a valid predictor of the training proficiency criterion across occupations ($r = .36$ and .25 respectively). Dunn (1995), in a study of hirability and counter-productivity estimations made by managers making hiring decisions, found that openness to experience was related to perceived hirability, overall mean multiple correlation value $= .22$. A meta-study (Judge & Bono, 2000) already described in the section on agreeableness reviewed 14 samples of leaders from over 200 organisations where personality was linked to transformational leadership behaviour. The study found a positive prediction of transformational leadership behaviour by the Five Factor Model component openness to experience ($R^2 = .04, p < .01$, two tailed). Ployhart et al. (2001) in study also described above found that openness correlated in a range between $r = .17$ and .23, $p < .05$ for maximum performance situation but only in a range between $r = .08$ and .09, $p < .05$ for typical performance situations. In their meta study described above Judge et al. (2002) found that across 73 samples openness correlated $\rho = .24$ with leader emergence. Both the 95 percent interval and the 80 percent credibility interval excluded zero indicating that all correlations across the samples were positive. In an Asian military study Lim and Ployhart (2004) found that openness was not significantly correlated with a measure of transformational leadership calculated by aggregating follower scores of the five MLQ transformational scales. A meta-study by Bono and Judge (2004) found that charisma was related to openness ($\rho = .22$) but the 80 percent credibility interval included zero indicating that some studies had found a zero or negative correlation.
No evidence relating the component school success to leadership was uncovered in the literature search for this thesis.

4.4.5.1 Openness and Senior Leadership

Peterson et al. (2003) in a study of 17 CEOs found that openness was positively related to flexibility, dominance and risk taking ($r = .42, .45, .47, p < .10, < .05, < .05$) respectively. It is argued that flexibility, dominance (as opposed to weakness), and risk taking are transformational leadership like characteristics. Based on this argument it is likely that there will be a positive relationship between transformational leadership behaviour and intellectance. In their review of the literature Gardner and Martinko (1996) found that the percentage of MBTI sensate component varied between 44.3 and 73.0 percent for studies dealing with senior executives. From this it can easily be calculated that the intuitive percentage would vary from 27.0 to 55.7 percent. Since openness relates to the intuition pole of the MBTI sensate-intuition dimension this evidence may offer little guidance as to the possible relationship of senior transformational leadership with openness.

The evidence presented above tends to suggest a small positive prediction of senior transformational leadership behaviour by intellectance. It was argued in Chapter Two of this thesis that senior leadership is about interpersonal influence to engender organisational change. On this basis and from an a priori standpoint it is argued that intellectance may positively predict transformational leadership behaviour. It is further argued that the situation a leader faces may influence this. As Weber (1947) pointed out organisations cycle between period of high change and periods of stability. Though in the modern era the cycle time seems to have decreased (Kotter, 1990), in a period of high change it is likely that high intellectance may be an asset for a leader. In a period of stability, however, low intellectance may be an asset.
Given scholarly findings as to the chaotic real nature of senior managerial roles (Mintzberg, 1973; Kotter, 1999) it is argued that high intellectance is likely to be an asset for senior managers even in a period of comparative stability. Based on this argument the following hypothesis is framed:

Hypothesis 3: Intellectance will positively predict charisma.

For school success the homogeneous item composites included: good memory, education, maths ability and reading enjoyment (Hogan & Hogan, 1995, p. 15). No research was found relating school success to leadership. This thesis is about senior leaders in large public and private organisations. It is likely that many of the people who reach senior leadership roles in large organisations started their career as professionals of some sort, were well educated initially, and may have completed additional studies in order to further their careers. As such they may include people who are on average academically interested or oriented. For such people there may be a positive prediction of senior leadership behaviour by school success. It is argued that such a prediction may be a coincidental artefact of such a cohort. It is also argued that the route to senior leadership may also be via pathways that do not involve higher education, such as ascending through a sales or political function. It is further argued that by the time people occupy senior roles their interest in and focus on academic achievement for its own sake may have disappeared to make way of a pre-eminent focus on the pragmatics of building career success. It is argued that there is little reason to expect that school success would predict senior leadership charisma. Based on these arguments no hypothesis is offered for the prediction of charisma by schools success in this thesis.
4.5 Chapter Conclusion

Five Factor Model components have been used to integrate a large number of personality constructs and studies spanning six decades (Table 4.2). It was argued that the five Factor model therefore offers a potentially useful personality construct with which transformational leadership may be predicted (Judge et al., 2002). The HPI was identified as an adequate instrument with which to measure Five Factor Model components in this thesis (Hogan & Hogan, 1995).

Relationships and prediction levels found in previous studies have often been smaller than expected by scholars, e.g., variance explained of less than five percent. One possible explanation for this is that effects may have been averaged across different levels of leaders. This thesis argues that a study with a more focused sample, viz., senior organisational leaders, may reveal larger statistical relationships.

Research connecting leadership and senior leadership with principal factors of the Five Factor Model was reviewed. It was argued that in several cases life experience may offer receptive leaders the opportunity of behavioural skill learning that may mask the prediction of senior leadership charisma by a Five Factor Model personality components. From the review hypotheses were framed for those principal HPI factors where arguments for prediction were able to be mounted, viz., it was hypothesised that ambition and intellectance would positively predict charisma and that prudence would negatively predict senior leader charisma. Based on research evidence reviewed and a priori arguments put hypotheses were not offered for the other four principal components of the HPI.

This thesis next moves to a review of personality extremes conceptualised as personality disorders as possible predictors of senior leader charisma.
<table>
<thead>
<tr>
<th>Author</th>
<th>adjustment</th>
<th>ambition</th>
<th>sociability</th>
<th>likeability</th>
<th>prudence</th>
<th>intellectance</th>
<th>school success</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stogdill 1948</td>
<td>Self-confidence</td>
<td>Initiative</td>
<td>sociability</td>
<td>Cooperativeness</td>
<td>Dependability</td>
<td>Alertness</td>
<td>Adaptability</td>
<td>Masculinity</td>
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<td>Mann 1959</td>
<td>adjustment</td>
<td>Extraversion</td>
<td>Dominance</td>
<td>Conservatism</td>
<td></td>
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<td></td>
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<tr>
<td>Bass 1990</td>
<td>adjustment</td>
<td>Aggressiveness</td>
<td>Ascendance</td>
<td>Independence</td>
<td>Adaptability</td>
<td>Alertness</td>
<td>Adaptability</td>
<td>Creativity</td>
</tr>
<tr>
<td>Kirkpatrick &amp; Locke 1991</td>
<td>Self confidence (emotional stability)</td>
<td>Drive (achievement, energy, tenacity, initiative)</td>
<td></td>
<td>Integrity</td>
<td></td>
<td></td>
<td></td>
<td>Honesty</td>
</tr>
<tr>
<td>Yukl &amp; Van Fleet 1992</td>
<td>Emotional maturity</td>
<td>High energy level</td>
<td></td>
<td>Integrity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hogan Curphy &amp; Hogan 1994</td>
<td>Emotional stability</td>
<td>Surgency</td>
<td>agreeableness</td>
<td>conscientiousness</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>House &amp; Aditya 1997</td>
<td>adjustment</td>
<td>Achievement motivation</td>
<td>Prosocial influence motivation</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Northouse 1997</td>
<td>Self-confidence</td>
<td>Determination</td>
<td>sociability</td>
<td>Integrity</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Yukl 1998</td>
<td>Stress tolerance</td>
<td>Energy level</td>
<td>Low need for affiliation</td>
<td>Personal integrity</td>
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<tr>
<td>Daft 1999</td>
<td>Self-confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Personal Integrity</td>
<td>Alertness Originality creativity</td>
</tr>
</tbody>
</table>

Adapted from (Judge et al., 2002)
CHAPTER 5: PERSONALITY DISORDER

It was proposed in Chapter Three of this thesis that personality may predict transformational leadership behaviour. In Chapter Four of this thesis impacts of normal or bright side personality characteristics, operationalised as the Five Factor Model, were reviewed. It was proposed earlier in this thesis that so called dark side personality characteristics may predict transformational leadership behaviour. Dark side characteristics are separate components of personality that are regarded as dysfunctional and a source of interpersonal difficulties (Hogan, Raskin, & Fazzini, 1990). But such characteristics may also be seen as functional in that they may contribute towards an individual leader coping better than persons without the so called dark side characteristics in certain situations (Kirkpatrick & Locke, 1991; Hall et al., 2001).

To utilise the dark side concept in this thesis a method of conceptualising and measuring dark side characteristics was required. One way to conceptualise dark side characteristics is as personality disorder (Hogan, Raskin, & Fazzini, 1990). A prominent taxonomy of personality disorder is presented in the DSM-IV (American Psychiatric Association, 1994). In the DSM-IV a personality disorder is defined as: “an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual’s culture, is pervasive and inflexible, has onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment” (American Psychiatric Association, 1994, p. 629). The DSM taxonomy springs from a clinical psychiatric categorical model of personality disorder (Millon, 1981). This thesis builds on the DSM definition but also supports the arguments of Lloyd mentioned above in section 3.1.3.2.2. Whether a particular personality pattern is ordered or disordered may depend upon the context within which the pattern is used.
It may be that so-called disordered personality can be applied in ways that are socially acceptable, even desirable. Persons with a disorder may therefore never come to the attention of criminal justice or mental health services (Board & Fritzon, 2005).

The categorical model, which emerged from clinical experience, was contrasted in Chapter Three of this thesis with the dimensional view (Costa & Widiger, 1994). The dimensional view emerged from scientific investigation of personality. The dimensional model sees personality disorders and related behaviours as extreme or exaggerated forms of normal personality and behaviour not as distinct categories of personality syndromes. Widiger (2005) has argued that the DSM personality disorder can be readily understood as maladaptive variants of the personality traits included within the Five Factor Model. Meta analytic research by Saulsman and Page (2004) showed that each personality disorder may be associated with a meaningful and predictable Five Factor Model profile or syndrome consisting of a pattern of loadings on facet scales. Widiger (2005) argues that: “both poles of every Five Factor Model domain appear to include at least some maladaptive personality functioning” (p. 75). Personality disorder has thus been associated with Five Factor Model syndrome patterns on the one hand and extreme or polar cases of five factor primary scales on the other. Implications of the dimensional view will be taken up later in this chapter when a priori arguments are being considered in the process of hypothesis generation.

Even though the Five Factor Model has been found to encompass dimensions of personality disorder as conceptualised in the DSM (Costa & McCrae, 1990), personality disorders are not directly assessed by measures of the Five Factor Model discussed in Chapter Four. But the DSM-IV personality disorders model offers a
widely known theory of the dark side of personality and a range of associated tools for measuring the characteristics. This chapter reviews literature relating personality disorders and transformational leadership behaviour. It is argued that this approach to prediction of transformational leadership behaviour is new. The work in this thesis should therefore be regarded as an exploratory investigation. It is argued that the DSM personality disorders model will be adequate to operationalise dark side characteristics for the work in this thesis.

It has been argued that senior leaders may have greater personal strength, which was discussed in section 3.1.3.1 above (Kirkpatrick & Locke, 1991), than lower level or non-leaders. It is further argued that this strength may originate from personality and from some level of what was defined on the previous page as personality disorder (Gruen, Hannum, & Hannum, 2002). It is further argued that the potential of personality disorder to predict transformational leadership behaviour can be thought of in two opposite ways. First, is the proposition that a person with a personality disorder would fail or be ineffective as a leader in the eyes of some observers (Hogan & Kaiser, 2005). Therefore, the existence of personality disorder would negatively predict transformational leadership behaviour. Second, the opposite proposition is also possible, i.e., the presence of a personality disorder may positively predict transformational leadership behaviour. Board and Fritzson (2005) in a study of 39 successful British senior business managers and chief executives found that the executives scored as high as or higher in certain personality disorder categories than samples of personality disordered clinical and criminal populations. It was already speculated above that this could occur if a personality disorder equipped a senior leader individual with necessary strength as defined in section 3.1.3.1 (Kirkpatrick & Locke, 1991).
For example, Hitler was popularly said to have a dysfunctional antisocial personality and yet, at least for a few years in the 1930s, could have been described as a transformational leader (Gerstenbrand & Karamat, 1999; Gruen et al., 2002). Mao Zedong may also be described as a transformational leader. He has been evaluated as having had a dysfunctional narcissistic personality (Sheng, 2001). But some observers have projected moral dimensions onto transformational leadership (Avolio, 1999). Bass (1999) argued that transformational leadership is inherently highly moral and ethical. He also conceded that some transformational leaders are not that way. To allow for this Bass (1999) created the term pseudo-transformational leader. A pseudo-transformational leader is one who behaves in a transformational way but who does not meet the high moral and ethical standards that Bass (1999) believes are inherent in transformational leadership. The difference between transformational and pseudo-transformational is described in terms of the reason that the leader implements the transformational behaviours not the skill with which they do so. Those leaders who are self-oriented, self-aggrandising, exploitative, narcissistic, and power oriented are classified as pseudo-transformational (Avolio, 1999). There seems little doubt that both types of leaders may be equivalently skilled in the implementation of transformational behaviour; both potentially capture the commitment of followers to similar degrees; and so both may achieve organisational outcomes and be rated highly on transformational scales by subordinates. This thesis is not designed to ask questions about the moral or ethical behaviour of subject leaders. In this thesis there will be no attempt to separate transformational from pseudo transformational leaders. For this reason conclusions drawn in this thesis will not differentiate between leader subjects on moral or ethical dimensions. There is also no argument made in this
thesis about relative capability of persons with personality disorder characteristics to
think morally and or ethically.

Below in this chapter the DSM taxonomy of personality disorders is reviewed as an integrating dark side theoretical framework (American Psychiatric Association, 1994). It was argued above that this framework offers a robust way to operationalise the personality disorder construct in this thesis. The DSM framework also provides access to well researched tool sets for measurement of personality disorders in this thesis. To investigate the personality disorder concept further measurement of personality disorder will be discussed next. Aspects of the literature on leadership derailment and failure are then reviewed. DSM definitions of personality disorders are compared with the list of dark side characteristics identified in the derailment literature to identify likely relations. Finally, findings about dark side personality and leadership success are reviewed and relevant hypotheses developed.

5.1 Personality Disorder

Hogan, Curphy and Hogan (1994) suggest that the standard DSM-IV, Axis 2 personality disorders provide a preliminary taxonomy of factors leading to managerial derailment. Based on work by Theodore Millon (Millon, 1981; Millon, 1987; Millon & Davis, 1996), 12 personality disorders were listed in the DSM-IV (American Psychiatric Association, 1994). Lenzenweger (1996) argued that the categorisation, while useful, may have little genuine correspondence with the true latent organisation of personality disorder symptomatology. As already mentioned the dimensional view of personality disorder argues that personality disorder may simply be extreme manifestation of normal personality and not a discrete and separate part of personality (Costa & Widiger, 1994). A series of studies using self report, peer and self ratings
on the NEO-PI, the Minnesota Multiphasic Personality Inventory personality disorder scales (MMPI-PD) and the Millon Clinical Multiaxial Inventory indicated that the Five Factor Model encompassed the dimensions of abnormal personality (Costa & McCrae, 1990). It is argued here that the DSM personality disorder taxonomy nevertheless offers an alternative classification focused on psychiatric personality disorder categories, which is a useful alternate perspective for the research questions being investigated here.

Conceptualisations of personality disorders have varied across editions of the DSM. A recent conceptualisation, the DSM-IV (American Psychiatric Association, 1994), proposed 12 personality disorders in four clusters. Cluster A (Odd/Eccentric) included 1. paranoid, 2. schizoid, and 3. schizotypal; Cluster B (Emotional/Dramatic) included: 4. antisocial, 5. borderline, 6. histrionic, and 7. narcissistic; Cluster C (Anxious/Fearful) included: 8. avoidant, 9. dependent, and 10. obsessive-compulsive; and two provisional (proposed) personality disorders included: 11 depressive, and 12. passive-aggressive (American Psychiatric Association, 1994). A brief summary of the characteristics of persons who suffer each of these personality disorders is presented in Table 5.1.

It is argued that these categories can be speculatively contrasted by inspection of their definitions with poles of Five Factor Model components. For instance, very high emotional stability could be compared with schizoid personality disorder; and very low emotional adjustment with paranoid or perhaps histrionic personality disorders. Likewise very high extraversion could be contrasted with histrionic personality disorder, whereas very low extraversion may be definitionally compared with avoidant. High likeability has been compared with dependent personality disorder, but very low likeability may be similar to antisocial or narcissistic
personality disorders in some ways. Very high prudence may have characteristics similar to obsessive compulsive personality disorder. Very low prudence may share similarities with passive-aggressive, and/or borderline personality disorders. Finally, high openness may be compared to schizotypal personality disorder whereas very low openness may be compared with obsessive-compulsive personality disorder.

We turn next to briefly consider measurement tools available for measuring disorder constructs.

5.2 Measurement of Personality Disorder

For this research a robust psychometric device, suitable for use in corporate environments, was required to measure personality disorder tendencies of practising executives. A large number of broad based and narrow focused clinical instruments for measuring personality disorders exist, including the Minnesota Multiphasic Personality Inventory personality disorder scales and the Millon Clinical Multiaxial Inventory.

It is here argued that these, and instruments like them, are too clinical and negatively disorder focused in presentation and orientation for use in corporate environment. It is further argued that it is difficult to get busy executives to complete any sort of survey instrument but one that looks like a measure of something bad is politely but firmly avoided. For this reason the Hogan Development Survey (HDS) (Hogan & Hogan, 1997) was selected. The HDS offers a robust device for measuring personality disorder like factors packaged in a corporately acceptable form. It is a 160 item pencil and paper device, which yields scores on 11 personality dysfunction components, each of which may be directly compared with 10 of the DSM-IV and one of the DSM-IIIR personality disorder categories.
HDS factor definitions differ slightly from those of the DSM personality disorders. They are contrasted in Table 5.1. Hogan and Hogan (1997) argue that the HDS definitions (Table 5.1) have been modified from the DSM definitions to better describe how these personal attributes may manifest in a work situation.

From the above discussion and review it is argued that the DSM taxonomy of personality disorders offers a theoretically robust way to conceptualise dark side personality characteristics in this thesis. Based on comparison of the two sets of factors in Table 5.1, it was further concluded that the HDS offers a psychometrically robust and theoretically effective way of measuring personality disorder within the target population of this research. The HDS version of the DSM personality disorder taxonomy was therefore used as concept of personality disorder characteristics and the method of measuring them in this research.

5.3 Transformational Leadership Behaviour as a Result of Dark Side Personality

A scan of the research literature revealed that personality disorder like characteristics are also sometimes called personality dysfunctions, dark side characteristics, or derailment factors. Personality disorder-like characteristics were frequently related in the literature to ineffective leadership.
### Table 5.1:

**DSM-IV personality disorder characteristics and HDS factor themes**

<table>
<thead>
<tr>
<th>Personality Disorder</th>
<th>DSM-IV Definition</th>
<th>HDS Theme</th>
<th>HDS Definition</th>
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<tr>
<td>paranoid</td>
<td>A pattern of distrust and suspiciousness such that others’ motives were interpreted as malevolent.</td>
<td>sceptical</td>
<td>Cynical, distrustful, and doubting others’ true intentions.</td>
</tr>
<tr>
<td>schizoid</td>
<td>A pattern of detachment from social relationships and a restricted range of emotional expression.</td>
<td>reserved</td>
<td>Aloof, detached, and uncommunicative; lacking interest in or awareness of the feelings of others.</td>
</tr>
<tr>
<td>schizotypal</td>
<td>A pattern of acute discomfort in close relationships, cognitive or perceptual distortions, and eccentricities of behaviour.</td>
<td>imaginative</td>
<td>Acting and thinking in a creative and sometimes odd or unusual ways.</td>
</tr>
<tr>
<td>antisocial</td>
<td>A pattern of disregard for, and violation of, the rights of others.</td>
<td>mischievous</td>
<td>Enjoying risk taking and testing the limits; needing excitement; manipulative, deceitful, cunning and exploitive.</td>
</tr>
<tr>
<td>borderline</td>
<td>A pattern of instability in interpersonal relationships, self-image, and affects, and marked impulsivity.</td>
<td>excitable</td>
<td>Moody and hard to please; intense but short-lived enthusiasm for people, projects, or things</td>
</tr>
<tr>
<td>histrionic</td>
<td>A pattern of excessive emotionality and attention seeking.</td>
<td>colourful</td>
<td>Expressive, animated, and dramatic; wanting to be noticed and needing to be the centre of attention.</td>
</tr>
<tr>
<td>narcissistic</td>
<td>A pattern of grandiosity, need for admiration, and lack of empathy.</td>
<td>bold</td>
<td>Unusually self-confident; feelings of grandiosity and entitlement; over-evaluations of one’s capabilities.</td>
</tr>
<tr>
<td>avoidant</td>
<td>A pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation.</td>
<td>cautious</td>
<td>Reluctant to take risks for fear of being rejected or negatively evaluated.</td>
</tr>
<tr>
<td>dependent</td>
<td>A pattern of submissive and clinging behaviour related to an excessive need to be taken care of.</td>
<td>dutiful</td>
<td>Eager to please and reliant on others for support and guidance; reluctant to take independent action or go against popular opinion.</td>
</tr>
<tr>
<td>obsessive</td>
<td>A pattern of preoccupation with orderliness, perfectionism, and control.</td>
<td>diligent</td>
<td>Meticulous, precise, and perfectionistic; inflexible about rules and procedures; critical of others’ performance.</td>
</tr>
<tr>
<td>aggressive*</td>
<td>A pattern of passive resistance to adequate social and occupational performance; irritated when asked to something he/she does not want to do.</td>
<td>leisurely</td>
<td>Independent; ignoring people’s requests and becoming argumentative if they persist.</td>
</tr>
</tbody>
</table>

* Definition from the DSM-III-R

Paraphrased from Hogan and Hogan, 1997, p. 5
At least two connotations of ineffective leadership were identified (Gustafson, 2000). The first connotation was incompetence; the second was evil, either one potentially resulting from personality issues (Gustafson, 2000). Both incompetent and evil leaders may potentially be highly effective or highly destructive, depending upon the perspective of the observer and the situation confronted. For instance, the Machiavellian leadership style has been seen from many perspectives, mostly negative, e.g., (Holloway, 1995; Russell, 1996; Skinner, 1981). Recent biographical research has, however, indicated that, while Machiavelli himself may have been motivated by excessive ambition and greed, i.e., possible personality disorders, the Machiavellian style was ultimately highly moral and related to transformational leadership behaviour in service of the common good (Gustafson, 2000; Masters, 1996).

US Navy research mentioned above suggested that the submariners best qualified for crewing nuclear submarines evidenced three distinct DSM-IV personality disorders: obsessive-compulsive, schizoid, and avoidant. The author argued that those personality disorders were personal strengths in the context and concluded that whether a personality disorder was ordered or disordered was merely a reflection of how well individual strengths match contextual requirements (Hall et al., 2001). Senior pressure, mentioned above in section 2.3.2, may provide a context within which the presence of a personality disorder is functional for senior leaders.

Hogan and Hogan (2001) documented characteristics of managers who suffer from each personality disorder from a data base of managers who have completed the HDS (N = 10,305). Table 5.2 paraphrases the authors’ findings. It can be seen that most categories do impart some potentially functional strengths to managers. This point will be taken up again in a later section of this chapter.
Table 5.2:

Best and worst characteristics of high scoring managers on HDS theme categories.

<table>
<thead>
<tr>
<th>PD HDS</th>
<th>Best Characteristics</th>
<th>Worst Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>paranoid</td>
<td>Bright, thoughtful, perceptive Visionary and charismatic Persistent, don’t give up without a fight Insightful about organisation politics Good intelligence about others’ ideas Passionate commitment to their world views</td>
<td>Expect to be wronged See world as a dangerous place Specialise in conspiracy theories Alert for signs of mistreatment - inevitably find some Retaliate openly when find it</td>
</tr>
<tr>
<td>sceptical</td>
<td>Tough in the face of political adversity Can take criticism, rejection, opprobrium Stay focused in tumult and stress</td>
<td>Ignore needs, moods, feelings of others Rude, tactless, insensitive Isolate from extreme pressure Become unilateral and non-communicative</td>
</tr>
<tr>
<td>schizoid</td>
<td>Resistant to change and can be difficult to handle</td>
<td></td>
</tr>
<tr>
<td>schizotypal</td>
<td>Have different perspectives on things Enjoy entertaining others with new ideas Bright, colourful, insightful, imaginative, creative Insightful about others’ motives</td>
<td>Eccentric, odd, flighty Distractible, unpredictable as managers Confuse others because change so often Communicate in unusual ways Self absorbed, Insensitive to others’ Indifferent to social and political consequences</td>
</tr>
<tr>
<td>imaginative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>antisocial</td>
<td>Self confident to invulnerability Daring Charming, fun, engaging, courageous Handle stress and heavy work loads well</td>
<td>Expect others to like them Expect to extract favours Others are to be exploited Problems maintaining commitments, easily bored Impulsive, reckless, faithless, remorseless, manipulative, don’t learn from experience</td>
</tr>
<tr>
<td>mischievous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>borderline</td>
<td>Great capacity for empathy Know life is not always fair Can feel others’ pain Enthusiastic and work hard on new projects</td>
<td>Require constant reassurance Hard to please Change jobs and relationships frequently Easily disappointed</td>
</tr>
<tr>
<td>excitable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>histrionic</td>
<td>Have flair, dress well, have presence Perform well interpersonally, Fun Good sales people Bight, colourful, entertaining Become busy and enjoy pressure</td>
<td>Call attention to themselves Make dramatic entrances Impulsive and unpredictable Don’t listen, don’t plan, self promote Sizzle may substitute for substance</td>
</tr>
<tr>
<td>colourful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>narcissistic</td>
<td>Liked, admired, respected by others Energy, charismatic, leader-like Take the initiative Expect success</td>
<td>Sense of entitlement, overbearing, demanding Excessive self esteem, Arrogant Narcissistic rage when things don’t succeed Take most credit for success</td>
</tr>
<tr>
<td>bold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>avoidant</td>
<td>Prudent, careful and meticulous at evaluating risk Rarely make ill advised moves Provide sound prudential advice Good counterfoil for impulsive entrepreneurial types</td>
<td>Avoid innovation, resist change Threatened by the new Reactive rather than proactive Rely on the tried and true Very controlling with staff to avoid embarrassment</td>
</tr>
<tr>
<td>cautious</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dependent</td>
<td>Demonstrate service, loyalty, politeness, cordiality Conforming, eager to please, make few enemies</td>
<td>Deeply concerned with being accepted especially by authority figures Alert for signs of disapproval Use every means to ingratiate themselves Do anything the boss requires so tend to be promoted, Staff feel unsupported Indecisive, won’t take a stand</td>
</tr>
<tr>
<td>dutiful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>obsessive</td>
<td>Concerned with doing a good job, pleasing others, obeying authority Hard working, planful, meticulous Set high standards for self and others, reliable Conservative, detail oriented Good organisational citizens, Good role models Popular with bosses</td>
<td>Irritated when rules not followed Nit picking, micro-managing, fussy, deprive subordinates of control Obsessive concern for quality causes problems and stress, Poor at delegating Don’t often see the vision or big picture Bottle neck to productivity because everything must pass through them</td>
</tr>
<tr>
<td>compulsive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>diligent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>passive</td>
<td>Good social skills Clever at hiding their feelings Confident about own skills and abilities</td>
<td>Cynical of others’ skills and abilities Work at own pace Passively then aggressively resist attempts to change them Need respect and covertly retaliate when they think they don’t get it</td>
</tr>
<tr>
<td>aggressive*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>leisurely</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is possible that personality disorder may predict transformational leadership behaviour either negatively or positively. To investigate negative prediction further this thesis next reviewed selected research evidence on leader derailment and failure.

5.4 Leader Derailment and Failure

This section investigates research related to the proposition that the presence of personality disorder may negatively predict transformational leadership behaviour. Leader derailment characteristics have been called the dark-side of leadership and compared to personality disorders (Hogan, 1995; Hogan & Hogan, 1994; Hogan, Raskin, & Fazzini, 1990). Dark side characteristics have been shown to be negatively related to ratings of team performance (Harris & Hogan, 1992). Kets de Vries and Miller (1984) identified five stable and dysfunctional managerial styles from psychoanalytic theory: paranoid, compulsive, dramatic, depressive and schizoid, all of which resulted from managerial character, and which, unchecked, resulted in unhealthy neurotic organisations. Leaders may exhibit relatively acceptable self ratings on Five Factor Model dimensions. Those same leaders may still possess one or more hidden dark side traits. Such traits may become obvious only to certain people, e.g., those directly in contact with the leader, in certain circumstances, e.g., in stressful circumstances, in the organisation. Reports in the literature of personality disorders negatively impacting in work environments include narcissism (Brown, 1997; Macoby, 2000) and psychopathy (Babiak, 1995b).

The popular press has reported corporate fiascos and failures that have resulted from what were termed personality problems of senior executives, boards, and or CEOs, e.g., (Charan & Colvin, 1999; Colvin, 1997; Gasparino & Beckett, 2000; Goleman, 1990). Derailment was defined as the failure of a previously successful executive (Kovach, 1986). Derailment was thought to occur because of a
“perceived lack of fit between personal characteristics and skills of the leader, and the
demands of the job” (Leslie & Van Velsor, 1996, p. 1). Hogan, Raskin, and Fazzini
(1990) predicted that the prevalence of derailment characteristics in managers was
between 60 and 75 percent. Studies of U.S. corporate executives (DeVries, 1992),
hospital leaders (Shipper & Wilson, 1991), and aerospace organisations (Milliken-
Davies, 1992), suggested that the prevalence of derailment was between 50 and 60
percent of the population of managers.

Bentz (1985), in a 30 year longitudinal research program at the US retailer
Sears, Roebuck, found that, among the leaders with appropriate normal personality
characteristics, e.g., intelligence, confidence, and ambition, a subset had personality
defects that caused them to fail, e.g., playing politics, moodiness, and dishonesty.
Other studies of managerial derailment highlight the stability of negative aspects of
personality (Hellervick, Hazucha, & Schneider, 1992; Lombardo, Ruderman, &
McCauley, 1988; McCall & Lombardo, 1983). A review of research studies
concerning derailed leaders in North America and Europe found that they shared
stable negative personal characteristics such as: inability to develop or adapt, poor
working relations, inability to build and lead a team, authoritarianism, poor
performance, and too ambitious (Leslie & Van Velsor, 1996). These characteristics
were associated with four enduring derailment themes: problems with interpersonal
relationships, failure to meet business objectives, inability to build and lead a team,
and inability to change and adapt during a transition (Leslie & Van Velsor, 1996). It
is argued here that these are qualitatively different from the transformational
behaviours detailed earlier in section 2.3.3 of this thesis. In all cases, across an
extensive research base (Lombardo & McCauley, 1988; McCall & Lombardo, 1983;
Morrison, White, & Van Velsor, 1987), plus a US study and a European study cited in
Leslie & Van Velsor (1996), leadership failure was associated with sets of personality flaws, i.e., such as those listed in the previous paragraph above. Since personality has been found to be stable across situations (Costa & McCrae, 1988), this provided a possible explanation for the stability of leader ineffectiveness across situations (Leslie & Van Velsor, 1996). Van Velsor and Leslie’s (1995) research, mentioned in the previous paragraph, replicated previous derailment research done in the 1970s and 1980s (McCall & Lombardo, 1983). The 1995 study found that, with the exception of overdependence, the factors previously identified remained valid and relevant.

The Centre for Creative Leadership developed a commercial 360 degree feedback device called Benchmarks®. Benchmarks® measured six key behavioural indicators of potential derailment that emerged from extensive research (Lombardo, McCauley, Moxley, Dalton, & Wachholz, 1991). The behavioural indicators included: problems with interpersonal relationships, difficulty in moulding staff, difficulty in making strategic transitions, lack of follow-through, overdependence, i.e., on a boss or a single skill, and strategic differences with management (Lombardo et al., 1991).

In a case study analysis of notable business failures that were associated with management identities Conger (1996) developed a list of leader dark side characteristics that he argued contributed to management failure. The list included:

… potential liabilities of a leader's management practices; poor management of people networks, especially superiors and peers; unconventional behaviour that alienates; creation of disruptive 'in-group/out-group' rivalries; an autocratic controlling management style; an informal impulsive style that was disruptive and dysfunctional; alteration between idealising and devaluing others, particularly direct reports; creation of excessive dependence in others;
failure to manage details and effectively act as an administrator; attention to the superficial; absence from operations; and failure to develop successors of equal ability (p. 668).

Hogan, Raskin and Fazzini (1990) reported a study by Lombardo, Ruderman and McCauley (1988) in which the authors investigated whether executive derailment was a function of the absence of positive qualities of leadership or the presence of negative qualities of leadership. They studied a sample of 169 mid to upper level managers, 83 of whom had been involuntarily terminated. Each person in the sample was rated by his or her supervisor on 61 items related to managerial performance, and the two groups were compared on these ratings. The authors concluded that derailment was a function both of the absence of positive characteristics and the presence of negative, personality disorder like, characteristics. The authors listed the following as characteristics of failed managers:

… unable to build a cohesive team; over-and under-managing; overly ambitious; not supportive and demanding of subordinates; overly emotional; insensitive, cold, and arrogant; maintained poor relations with staff; and overriding personality defects (this last theme was present in every dimension of failure) (p. 347).

From their review of the research Hogan et al. (1990) developed three stereotypes of ineffective managers. They were: the high likeability floater, i.e., congenial, well liked, but ineffective in management roles; hommes de ressentiment, i.e., talented and socially skilled but deeply resentful leading to paranoia and passive aggressive behaviour); and narcissists, i.e., self confident, assertive, self-nominating, concerned about recognition and advancement, exploitive of subordinates, compliant to superiors.
Hughes, Ginnett and Curphy (1995) pointed out that the existence of one or more dark side characteristics does not mean that the leader does not also have positive characteristics. Moreover, the authors argued that the dark side characteristics often do not become apparent until the leader has been incumbent for some time. Common dark side characteristics that emerged from the authors’ studies included: argumentative, interpersonally insensitive, narcissistic, afraid of failure, perfectionistic, and impulsive.

Sigrid Gustafson (1995) identified a constellation of dark side characteristics in a syndrome she named aberrant self promoter. Aberrant self promoters were similar to psychopaths and or antisocial personality disorder sufferers, but sub clinical and different in some key characteristics. They were defined as individuals characterised by a narcissistic personality configuration in combination with antisocial behaviour. Gustafson (2000) argued that when these people reached leadership positions it always led to negative human and organisational consequences since their behaviour was driven by enduring personality disorder.

From the literature reviewed above it is argued that derailment may be explained at least partly by personality disorders suffered by the derailing leader.

Leader derailment concepts identified in those studies are summarised in Table 5.3. The words used by the authors to describe the derailment factors were then compared by inspection to words used in the description of each of the components of the HDS. Table 5.1 presents summary definitions of HDS components and comparative DSM personality disorders. By this method it was possible to identify at least one HDS personality disorder component with each derailment factor in the list. Results are presented in Table 5.3.
Table 5.3:

Relating Derailment Characteristics to HDS Personality disorder components

<table>
<thead>
<tr>
<th>Author</th>
<th>Defect</th>
<th>HDS Link*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmarks</td>
<td>lack of follow-through</td>
<td>I</td>
</tr>
<tr>
<td>Benchmarks</td>
<td>overdependence (on a boss or a single skill)</td>
<td>CA, DU</td>
</tr>
<tr>
<td>Benchmarks</td>
<td>Difficulty in making strategic relationships</td>
<td>S, I, CA</td>
</tr>
<tr>
<td>Benchmarks</td>
<td>problems with interpersonal relationships</td>
<td>R</td>
</tr>
<tr>
<td>Benchmarks</td>
<td>strategic differences with management</td>
<td>S, I</td>
</tr>
<tr>
<td>Bentz</td>
<td>playing politics</td>
<td>M</td>
</tr>
<tr>
<td>Bentz</td>
<td>dishonesty</td>
<td>M</td>
</tr>
<tr>
<td>Bentz</td>
<td>moodiness</td>
<td>E</td>
</tr>
<tr>
<td>Conger</td>
<td>unconventional behaviour that alienates</td>
<td>I</td>
</tr>
<tr>
<td>Conger</td>
<td>creation of disruptive 'in-group/out-group' rivalries</td>
<td>S</td>
</tr>
<tr>
<td>Conger</td>
<td>creation of excessive dependence in others</td>
<td>S</td>
</tr>
<tr>
<td>Conger</td>
<td>an informal impulsive style that was disruptive and dysfunctional</td>
<td>C</td>
</tr>
<tr>
<td>Conger</td>
<td>an autocratic controlling management style</td>
<td>S, CA, D</td>
</tr>
<tr>
<td>Conger</td>
<td>absence from operations</td>
<td>CA</td>
</tr>
<tr>
<td>Conger</td>
<td>attention to the superficial</td>
<td>L</td>
</tr>
<tr>
<td>Conger</td>
<td>poor management of people networks, especially superiors and peers</td>
<td></td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>impulsivity</td>
<td>M, C</td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>argumentative</td>
<td>S, I</td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>interpersonally insensitive</td>
<td>R, I</td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>narcissistic</td>
<td>C, B</td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>perfectionism</td>
<td>D</td>
</tr>
<tr>
<td>Hughes et al.</td>
<td>fear of failure</td>
<td></td>
</tr>
<tr>
<td>Leslie</td>
<td>authoritarianism</td>
<td>CA</td>
</tr>
<tr>
<td>Leslie</td>
<td>too ambitious</td>
<td>B</td>
</tr>
<tr>
<td>Leslie</td>
<td>inability to change and adapt during a transition</td>
<td>S, CA, D</td>
</tr>
<tr>
<td>Leslie</td>
<td>poor working relations</td>
<td></td>
</tr>
<tr>
<td>Leslie</td>
<td>inability to build and lead a team</td>
<td></td>
</tr>
<tr>
<td>Leslie</td>
<td>problems with interpersonal relationships</td>
<td></td>
</tr>
<tr>
<td>Lombardo</td>
<td>not supportive and demanding of subordinates</td>
<td></td>
</tr>
<tr>
<td>Lombardo</td>
<td>insensitive, cold, and arrogant</td>
<td>R</td>
</tr>
<tr>
<td>Lombardo</td>
<td>overly emotional</td>
<td>C</td>
</tr>
<tr>
<td>Lombardo</td>
<td>over-and under-managing</td>
<td>CA, D</td>
</tr>
<tr>
<td>Lombardo</td>
<td>unable to build a cohesive team</td>
<td></td>
</tr>
<tr>
<td>Lombardo</td>
<td>maintained poor relations the staff</td>
<td>I</td>
</tr>
</tbody>
</table>

* S = sceptical, R = reserved, I = imaginative, M = mischievous, E = excitable, C = colourful, B = bold, CA = cautious, DU = dutiful, D = diligent, L = leisurely.

For summary definitions of these components see Table 5.1.
All eleven HDS theme categories were represented and identified as potentially similar to personal characteristics that had been identified as leader derailment factors in the literature summarised above. In decreasing order of similarities they were: CA, cautious, 7 out of a possible 35; S, sceptical, 6 out of a possible 35; colourful, 4 out of a possible 35; D, diligent, 4 out of a possible 35; R, reserved, 3 out of a possible 35; M, mischievous, 3 out of a possible 35; B, bold, 2 out of a possible 35; E, I, imaginative, 1 out of a possible 35; excitable, 1 out of a possible 35; DU, dutiful, 1 out of a possible 35; C, and L, leisurely, 1 out of a possible 35. It is argued that, on the basis of this method, two HDS personality disorder components appeared most likely in their possible connection to published leader derailment factor descriptions. They were and sceptical and cautious.

Based on the above analysis it is argued that the HDS personality disorder model is a suitable model for studying personality disorder tendencies of senior leaders. Further it is argued that HDS components are adequate factors to operationalise personality disorders as possible negative predictors of transformational leadership behaviour in the preliminary work being done in this study.

From this perspective two hypotheses are framed:

Hypothesis 4: Cautious will negatively predict charisma.

Hypothesis 5: Sceptical will negatively predict charisma.

5.5 Leader Success Driven by Personality Disorders

Hughes, Ginnett and Curphy (1995) pointed out that the existence of one or more dark side characteristics does not mean that the leader does not also have positive characteristics. It is argued that the presence of strong normal characteristics
may ameliorate some of the negative effects of a personality disorder leaving the person with the benefit of the positive effects, which may be situationally relevant for a particular leader in a particular organisation setting as was the case with U.S. Navy submariners (Hall et al., 2001). The presence of personality disorder may not therefore necessarily predict failure.

One study concerning prevalence of personality disorder in currently practising executives was found in the literature. Board and Fritzon (2005) surveyed practising senior business leaders in the UK. Since these people were incumbent in reputable organisations and could make the time to complete a survey it is assumed here that the sample does not represent failed executives but rather successful ones. Board and Fritzon (2005) found that their sample of 39 male senior business leaders and chief executives reported a mean level of 13.3 for histrionic personality disorder (HDS colourful) using the Minnesota Multiphasic Personality Inventory Personality Disorder Scales (MMPI-PD) scales. This mean significantly exceeded mean levels of histrionic personality disorder found in criminal psychopathic (mean = 8.88), criminal mentally ill (mean = 8.46), and psychiatric (mean = 11.29) subjects ($p < .0045$ in all cases). The mean MMPI-PD level of narcissistic personality disorder for executives (mean = 15.58) was not significantly different from the level of narcissistic personality disorder found in criminal psychopathic (mean = 14.54), criminal mentally ill (mean = 14.34), and psychiatric (mean = 15.85) subjects. Mean levels for obsessive-compulsive personality disorder for senior executives (mean = 7.35) were not significantly different from criminal psychopathic (mean = 6.92), criminal mentally ill (mean = 7.07), and psychiatric (mean = 8.59) subjects. The mean MMPI-PD level of antisocial personality disorder for executives (mean = 8.64) was significantly lower than the level of antisocial personality disorder found in criminal
psychopathic (mean = 12.43), and criminal mentally ill (mean = 13.80), and psychiatric (mean = 10.64) subjects. The mean MMPI-PD level of all other personality disorders for executives were not zero but were significantly lower than the levels found in criminal psychopathic, criminal mentally ill, and psychiatric subjects. Remaining MMPI-PD levels reported for senior business managers were: borderline 9.23, dependent 5.92, passive-aggressive 5.56, paranoid 5.82, schizotypal 9.17, schizoid 6.61, and avoidant 12.79 (Board & Fritzon, 2005, p. 24). While statistically lower, the executives’ results overlapped for every personality disorder tested. As Hogan and Kaiser (2005) argue “low scores on personality disorders are not necessarily desirable” for leaders (p. 176).

Board and Fritzon (2005) make no claim about the transformational behaviour of their senior business manager subjects. Board and Fritzon (2005) point out that many of the behaviours associated with personality disorder differ perhaps only in degree from those valued in senior executives. For instance, Hogan and Hogan (1997) state that high scorers on the HDS colourful component (DSM-IV histrionic) are often described as: talkative (extraverted), leader like, assertive, creative (promote change and new ideas), like crises (likes change), are self promoting (visionary), and tend to make intuitive decisions (decisive) (edited and paraphrased from p. 34; items in parentheses added).

The information just presented above has deliberately emphasised the positive elements of what Hogan and Hogan (1997) had to say about colourful personality. It is argued that the list of colourful personality positive characteristics immediately above, and the data presented for all the HDS themes in the best characteristics column of Table 5.2 above, both have similarities to a list of transformational leader characteristics. For instance, transformational leaders are said to exhibit: idealised
behaviour (talks about his/her most important values and beliefs, specifies the importance of having a strong sense of purpose), inspirational motivation (talks optimistically about the future, talks enthusiastically about what needs to be accomplished), and intellectual stimulation (seeks differing perspectives when solving problems, looks at problems from many different angles) (Bass, 1990).

On the basis of Hughes, Ginnett and Curphy’s (1995) argument, the Hogan and Hogan (2001) findings presented in Table 5.2 above, Board and Fritzson’s (2005) findings, and of Hogan and Kaiser’s (2005) claim it is argued that successful senior executives may register medium to high levels of certain personality disorders, that these personal characteristics may be functional for them, and that those levels of disorder may positively predict subordinate rated charisma.

The particular personality disorders or HDS themes that may positively predict transformational behaviour can be gleaned by first eliminating those that are likely to negatively predict transformational behaviour. These were identified in the previous section of this chapter as: sceptical and cautious. The remaining HDS themes will be considered in turn.

The positive features of the HDS theme imaginative (DSM schizotypal) include: have different perspectives on things, constantly alert for new ways of seeing things, enjoy entertaining others with new ideas, bright, colourful, insightful, imaginative, innovative, creative, and insightful about others’ motives (Hogan and Hogan, 2001). It is argued that these descriptors are not inconsistent with descriptors that would be used for a visionary or entrepreneurial leader who constantly opened up new opportunities. They also fit well with descriptors of MLQ transformational components: inspirational motivation (talks optimistically about the future, talks enthusiastically about what needs to be accomplished), and intellectual stimulation
(seeks differing perspectives when solving problems, looks at problems from many different angles) (Bass, 1990). It is argued that the HDS theme imaginative may positively predict subordinate rated transformational leadership behaviour.

Hypothesis 6: Imaginative personality will positively predict charisma.

The HDS theme colourful parallels the DSM personality disorder histrionic. Board and Fritzon (2005) found that a sample of British senior business managers scored higher on this disorder than criminal and clinical populations. From Table 5.2 the positive descriptors of this theme are: have flair, dress well, have presence, perform well interpersonally, are fun to be around, are good sales people, are bright, colourful, entertaining, become busy under pressure, and enjoy pressure (Hogan & Hogan, 2001). It is again argued that this HDS theme is consistent with the conventional wisdom of a senior leader. There are no specific descriptors of transformational leadership components in the positive descriptors of colourful. But the descriptors of colourful are not inconsistent with transformational leadership in any obvious way. It is therefore argued that the HDS theme colourful may positively predict transformational leadership behaviour.

Hypothesis 7: Colourful personality will positively predict charisma.

The DSM personality disorder antisocial is similar to the HDS theme mischievous. From Table 5.2 the best characteristics of those who have a mischievous personality attribute are said to include: self confident to invulnerability, daring, charming, fun, engaging, courageous, handle stress and heavy work loads well (Hogan & Hogan, 2001). It is argued that these characteristics are consistent with transformational characteristics. Babiak (1995b) pointed out how industrial
psychopaths generate distrust after a while. But Babiak (1995a) suggested that the modern fast changing work environment may allow such people to reach high positions by always moving on before any crisis erupts as a results of their behaviour. It was mentioned in Chapter Two that this thesis did not differentiate between transformational and pseudo transformational leaders. It is argued that mischievous my therefore positively predict charisma.

Hypothesis 8: Mischievous personality will positively predict charisma.

Bold is the HDS theme which was modelled on the DSM personality disorder narcissistic. Best characteristics of bold include: liked admired, and respected by others; energetic, charismatic, leader-like; take the initiative and expect success (Hogan & Hogan, 2001). It is argued that these characteristics are somewhat similar to transformational behaviour as described in Chapter Two of this thesis. As Macoby (2000) has argued these characteristics can be company saving in a difficult environment. But the negative characteristics of the narcissist rapidly become a negative focus when more normal conditions occur (Macoby, 2000). It is argued that bold may only positively predict transformational leadership when a desperate situation is being faced. Since this is unlikely to occur generally in a sample of over 100 hundred senior leaders it is likely that bold will not predict senior transformational leadership behaviour in a study such as this present one which is not focused on managers in difficult organisational situations. No hypothesis will be offered for bold personality in this thesis.

The HDS theme excitable is similar to the DSM personality disorder borderline. From Table 5.2 positive attributes of the excitable personality include: capacity for empathy, enthusiastic, and work hard on new projects; worst
characteristics include: require constant reassurance, hard to please, and easily disappointed (Hogan & Hogan, 2001). It is argued that neither the positive nor the negative characteristics are consistent with transformational leadership as described in Chapter Two of this thesis. No hypothesis will be offered for excitable in this thesis.

Dutiful is the HDS theme that parallels dependent personality disorder. The Hogan and Hogan (2001) positive descriptors of dutiful were: demonstrates service, loyalty, politeness, cordiality, conforming, eager to please, and makes few enemies (Table 5.2). It is argued that these appear different to the descriptors of transformational leadership behaviour. The difference is significant in that the descriptors of dutiful convey the impression of a follower rather than a leader. It is therefore argued that dutiful will not predict transformational leadership behaviour and no hypothesis will be offered in this thesis.

The HDS theme diligent is related to the DSM category obsessive-compulsive. From table 5.2 positive descriptors of diligent managers include: concerned with doing a good job, pleasing others, obeying authority, hard working, planful, meticulous, set high standards for self and others, reliable, conservative, detail oriented, good organisational citizens, good role models, and popular with bosses (Hogan & Hogan, 2001). It is argued that the majority of these descriptors seem more consistent with transactional leadership than transformational leadership. Moreover the descriptors are more consistent with middle to lower level roles than with senior roles (Kotter, 1990). It is therefore argued that the HDS theme diligent will not predict transformational leadership behaviour. No hypothesis will be offered in this thesis.

The HDS theme leisurely parallels the DSM personality disorder passive-aggressive. Hogan and Hogan’s (2001) descriptors of those who score high on
leisurely when they are at their best include: good social skills, clever at hiding their feelings, and confident about own skills and abilities. It is argued that these descriptors do not indicate leadership or transformational leadership. It is therefore argued that leisurely will not predict transformational leadership behaviour and no hypothesis will be offered here.

Reserved is a HDS theme that parallels the DSM personality disorder schizoid. Positive descriptors of this personality at work include: tough in the face of political adversity; can take criticism, rejection, and opprobrium; and can stay focused in tumult and stress (Hogan & Hogan, 2001). It is argued that these characteristics, while they may be useful under great stress, do not equip a person to be a transformational leader because they say nothing about influencing others. In fact interpersonal issues are highlighted on the worst characteristics side of reserved as: ignore the feelings of others, rude, tactless, and insensitive. It is argued that those with a reserved personality component would be unlikely to be evaluated as transformational by subordinates. No hypothesis is offered for reserved in this thesis.

5.6 Chapter Conclusion

In the literature canvassed above personality disorders have been linked to leadership success and failure. It may be, as Hogan and Kaiser (2005) and Board and Fritzon (2005) imply, that the difference between success and failure is simply one of degree. It is speculated that too much or too little of a disorder may precipitate failure, or lack of opportunity in the first place. The right amount of disorder may well provide the personal characteristic a leader needs for success especially if it is accompanied by strengths in so called normal personality components.
The HDS was selected as an adequate device for measuring personality disorders in this thesis. It was argued above that the HDS themes sceptical and cautious may negatively predict subordinate ratings of transformational leadership behaviour in senior leaders. Hypotheses were framed accordingly. It was also argued above that the HDS themes imaginative, colourful and mischievous may positively predict subordinate ratings of transformational leadership behaviour in senior leaders. Additional hypotheses were framed along these lines. Finally, it was argued above that the HDS themes excitable, bold, reserved, dutiful, diligent, and leisurely may not predict subordinate ratings of transformational leadership behaviour in senior leaders. No hypotheses were offered for these six HDS components.

We next turn to review self-other rating agreement as a personality component with potential to moderate the prediction of transformational leadership behaviour by Big Five and personality disorder components.
CHAPTER 6:
SELF-OTHER RATING AGREEMENT AS A MODERATOR OF THE
PREDICTION OF TRANSFORMATIONAL LEADERSHIP BEHAVIOUR BY
PERSONALITY COMPONENTS

In a study of US Navy cadets and officers Atwater and Yammarino (1992) found that agreement between self and other leadership ratings moderated the relationships found between personal attribute test results and leadership behaviour. The authors suggested that self-other rating agreement should be considered in all attempts to predict leader behaviour. Subsequent research has confirmed these findings (Church, 1997; Atwater et al., 1998; Sosik & Megerian, 1999). It is a proposition of this thesis that self-other agreement may moderate the prediction of transformational leadership behaviour by Big Five components and by personality disorder components.

When a leader’s self ratings are in agreement with ratings by others who know the leader, specifically subordinates in the context of this present research, a number of inferences can be made. First, that the leader is self aware (aware of their own behaviour), second that the leader is other aware (aware of other’s motivations and the impact the leader’s own behaviour has on others), and third that the leader is motivated to adapt his or her behaviour according to their awareness and as a result the leader increases his or her effectiveness in a given context. There have been a large number of conceptualisations of constructs which appear to overlap with self-other rating agreement. In order to demonstrate the relevance of self-other agreement to this research we next review a range of such conceptualisations and their relationship to the research questions at hand in this thesis.
6.1 Conceptualisations of Constructs Similar to Self-Other Rating Agreement

We first briefly review various conceptualisation followed by a review of research connecting the various concepts to transformational leadership behaviour. Conceptualisations to be reviewed include: role-taking (Mead, 1934), intraception (Edwards, 1959), empathy (Hogan, 1969), social cognition (Selman, 1974), self-monitoring (Snyder, 1974), self awareness (Atwater & Yammarino, 1992), managerial self awareness (Church, 1997), and socio-political intelligence (Hogan & Hogan, 2002).

6.1.1 Role-Taking

George Herbert Mead (1934) posited a critical human attribute he called generalised role-taking, which will be referred to in this thesis as just role-taking. Mead (1934) said:

But only by taking the attitude of the generalized other toward himself, in one or another of these ways, can he think at all; for only thus can thinking - or the internalized conversation of gestures which constitutes thinking -occur. And only through the taking by individuals of the attitude or attitudes of the generalized other toward themselves was the existence of a universe of discourse, as that system of common or social meanings which thinking presupposes at its context, rendered possible (p. 156).

Role-taking has been defined as: “Where an individual looks at their own role performance from the perspective of another person. In taking the view point of another, they were able to see themselves as an object, as if from the outside” (Thomson-Nelson Online Dictionary of the Social Sciences, n.d.). According to Mead (1934) role-taking develops from the capacity to evaluate a particular other, such as a parent, to learning to internalise the expectations of the generalised other,
such as the attitudes and viewpoints of society as a whole. Mead (1934) conceived role-taking as the essence of socialisation; the ability and willingness to anticipate what others expect and to evaluate and control one’s own behaviour accordingly.

6.1.2 Intraception

Edwards (1959) developed a measure of personality characteristics of leaders called the Edwards Personal Preference Schedule. The scale yielded scores on 15 personality components. One component that Edwards conceptualised was intraception. Intraception was defined as: “the ability to analyse your feelings and motives, observe others, understand how others feel about problems, judge people on the basis of why they do things rather than what they do, analyse the motives of others, and predict how they will act” (Cangemi, Miller, & Hollopeter, 2002, p. 8). Effective or healthy leaders are said to score above 75 out of 100 on intraception (Cangemi et al., 2002).

6.1.3 Empathy

Robert Hogan (1969) asked trained observers to rate groups of people on five characteristics he used to define empathy: 1. was socially perceptive to wide range of interpersonal cues, 2. seemed to be aware of the impression he/she made on others, 3. was skilled in social techniques of imaginative play, pretending, and humour, 4. had insight into own motives and behaviour, and, 5. evaluated the motivations of others in interpreting situations. Then, using items from the California Psychological Inventory (Gough, 1987), Hogan created a scale. High scorers on the scale, those with high empathy, were described as perceptive, insightful, and socially astute.

6.1.4 Social Cognition

Selman (1980) described role-taking as social cognition, which he defined as a person's automated comprehension of information about another person's internal
experiences, their understanding of other people and the impact they may be having on those other people. Selman (1980) theorised that social cognition developed through a sequence of four levels between the ages of four and 12 years: Level 0: ego-centric (4 years) where the individual makes the implicit assumption that everyone thinks and feels as they do. Level 1: subjective (6-8 years) where the individual has their first realisation that other people may think or feel differently but their own feelings still dominate because they can't think about their own thoughts and feelings and those of others at the same time. Level 2: self-reflective (8-10 years) was the beginnings of thought about other's perspectives, how others view them, anticipation how others will react to their own actions and ideas, the start of role-taking development. Level 3: mutual (children over 10) was where the individual can think about their own point of view and that of others simultaneously.

6.1.5 Self Monitoring

Snyder (1974) argued that people differ in the extent to which they monitor (observe, regulate, and control) the public appearances of self displayed in social settings and interpersonal relationships. Snyder named this individual difference characteristic Self Monitoring (Snyder & Gangestad, 1986). Snyder (1974) constructed a Self Monitoring Scale with three factors: concern for social appropriateness, sensitivity to social cues, and the ability to control one's behaviour according to social cues. Snyder (1974) proposed that self-monitoring may be related to consistency in expression across situations and between channels of expressive behaviour. A decade later, in a series of studies involving 732 undergraduates, Lennox and Wolfe (1984) developed the Self Monitoring Scale – Revised. Using factor analysis the authors argued for a refined self-monitoring construct, which
included only two components: sensitivity to the expressive behaviour of others and ability to modify self-presentation.

6.1.6 Self Awareness

Self awareness was defined by Atwater and Yammarino (1992) in terms of agreement between self and other leadership ratings. The authors estimated this difference using relative difference scores calculated as the mean of the differences between self report and average other score for each self-other item.

6.1.7 Managerial Self-Awareness

Church (1997) defined managerial self-awareness as: “the ability to reflect on and accurately assess one’s own behaviours and skills as they were manifested in workplace interactions” (p. 281). Further Church (1997) claimed that self-other rating difference should be estimated as the absolute average profile difference in the ratings obtained. Referred to in the literature as $d$ (Nunnally, 1978), “computed with the square root of squared (i.e., absolute) differences between self report and average direct report score for each self-other item comparison divided by the total number of items for that sample” (p. 284).

6.1.8 Socio-Political Intelligence

Building on Hogan’s (1969) earlier work on empathy mentioned above, Hogan and Hogan (1999; Hogan & Hogan, 2002; 2000) asserted that Mead’s (1934) role-taking was the core ability required to build and maintain a team. The authors conceptualised Mead’s (1934) role-taking as a personal attribute construct they re-named from the earlier empathy to socio-political intelligence (SPIQ). Hogan and Hogan (2002) declared that SPIQ was the $g$ factor in leadership. Hogan and Hogan (2002), describe SPIQ as part disposition, i.e., the preparedness to try to put oneself in
another person’s place and see the world from their point of view, and part skill, i.e.,
the accuracy with which that preparedness was implemented by the individual.

It is argued that these eight conceptualisations stretching across the last 70
years overlap in their reference to the general construct that is described here as self-
other rating agreement. The term self-other rating agreement is used here, rather than
any of the other individual construct names, because it is precisely that construct, viz.,
the agreement between a leader’s self ratings and the average of subordinate ratings
for the same leader, this section of this thesis focuses on. Moreover, use of any of the
other constructs introduces definitional vagaries and measurement issues that cannot
be adequately addressed within the ambit of this thesis.

Having defined the basic construct this thesis turns first to a review of
literature relating self-other rating agreement and related constructs to
transformational leadership behaviour, Focus them moves to specifically address
moderation of prediction of transformational leadership behaviour by personality
components by self-other rating agreement.

6.2 Self-Other Rating Agreement and Related Constructs and Transformational
Leadership Behaviour

Stogdill (1948) asserted that alertness to the surrounding environment and
understandings of situations were intimately associated with leadership. Kenny and
Zaccaro (1983) proposed that effective leaders were sensitive to differences in group
situations and pattern their approaches accordingly. Such leaders’ develop acuity in
foreseeing the needs of followers and alter their own behaviours to respond more
effectively to those needs (cited in Bass, 1990). Bass argued that both insight and
empathy were important for emergence of transformational leadership (Bass, 1990).
Sosik and Megerian (1999) asserted that an understanding of one's own and others' feelings was a central aspect of the motivational mechanism of transformational leadership. Hogan and Hogan (1999; Hogan & Hogan, 2002; 2000) posited that Mead’s (1934) role-taking ability was the core of the leadership ability required to build and maintain a team.

Based on Mead’s (1934) conceptualisation, Stogdill’s (1948) claim regarding alertness to the surrounding environment and understanding of situations, Kenny and Zaccaro’s (1983) statement, Selman’s (1974, 1980) theorising regarding role-taking development, Sosik and Megerian’s (1999) proposition, and Hogan and Hogan’s (1999, 2000, 2002) assertions, it is argued here that self-other rating agreement is an individual difference variable that may be demonstrated to different degrees by different senior leaders. Hogan and Hogan (2002) argued that role-taking was part disposition, the preparedness or motivation to role-take, and part skill, the accuracy of the judgement made. It is therefore here argued that self-other rating agreement may moderate the relationship between other self assessed personality variables and subordinate rated transformational leadership behaviour. (For a discussion of mediation and moderation refer to the section later in this chapter.) In the context of the present research it is argued that self-other rating agreement may moderate the prediction of transformational leadership behaviour by Five Factor Model components and/or personality disorder components. If that was the case a leader’s level of self-other rating agreement may influence the level of prediction of transformational leadership behaviour by other personality constructs. Such moderation, if it occurs, may explain the lower than expected findings in many studies that have investigated relationships between components of personality and aspects of leadership.
Relevant literature is reviewed next, under specific construct headings.

6.2.1 Self-Monitoring and Transformational Leadership Behaviour

An experimental study involving 124 undergraduates found that high self-monitors were more likely than low self-monitors to speak first in interactions and to initiate more conversation sequences (Ickes & Barnes, 1977). A survey study of 195 staff nurses indicated that nurses low in self monitoring attended more to internal cues, whereas those high in self monitoring attended to situational cues and leadership behaviour (Anderson & Tolson, 1989). Two studies explored the relationship between self-monitoring and leadership with 236 university students (Kent & Moss, 1990). Results indicated that high self-monitors were more likely to see themselves and be seen by others as leaders in group situations. A combined survey and experimental study of 108 students found that self-monitoring was significantly correlated with average leader rankings (Zaccaro, Foti, & Kenny, 1991).

In a student based group leadership experiment it was found that self-monitoring, measured by the Self Monitoring Scale, was significantly correlated with average leader rankings on two experimental group tasks (Zaccaro et al., 1991). In a field study involving 387 managers Ashford and Tsui (1991) found that those managers who sought negative feedback (demonstrated sensitivity) increased superior, subordinate and peer perceptions of leadership. A study involving 193 undergraduate students (Ellis & Cronshaw, 1992) found that self-monitoring related to leadership in men, but not in women, in mixed-sex groups. The authors also found that behaviour modifiability (flexibility and adaptation), but not social sensitivity, was related to leadership. A longitudinal study of 139 MBA graduates indicated that, over a five year period, high self-monitors as measured in second year MBA, were more likely to be promoted (stand out as leaders) both within and across organisations.
In a field study in which survey data was collected from 64 managers and 194 of their subordinates it was found that leader self-monitoring was positively related to charismatic leadership ratings by subordinates (Sosik & Dworakivsky, 1998). For this study charismatic leadership was measured using MLQ transformational leadership behaviour components idealised attributes, idealised behaviours, and inspirational motivation, which were described in detail in Chapter Two of this thesis. An assessment centre study of 191 managers found that self monitoring was positively related to supervisor and assessor ratings of interpersonal effectiveness, e.g., empowerment, managing teams, influencing others (Warech, Smither, Reilly, Millsap, & Reilly, 1998). Meta-analysis of 136 samples (total N = 23,191) investigated the relationship between self-monitoring and work-related variables. Results suggested that self-monitoring had significant relevance for understanding transformational leadership behaviour (Day et al., 2002).

From the above review it is argued that that self monitoring has been related to leadership in a number of field and experimental studies. It is further argued that self monitoring is a conceptually similar construct to self-other rating agreement as defined above. It is argued that this supports the proposition that self-other rating agreement is possible moderator of transformational leadership behaviour predictions by personality components.

### 6.2.2 Managerial Self Awareness and Transformational Leadership Behaviour

Mabe and West (1982) concluded that managers had poor knowledge of their own managerial strengths and weaknesses when they meta-analysed 55 studies and found a mean correlation of .04 between self ratings and ratings of leadership performance by others. A meta-analysis conducted by Harris and Schaubroeck (1988) reviewed studies that contrasted leader behaviour ratings by leaders themselves and
by various categories of other raters. The authors found moderate agreement between self and peer ratings ($a = .36$) and between self- and supervisor ratings ($a = .35$) after correcting for measurement error and range restriction. Agreement between peer and supervisor ratings was ($a = .62$). The authors found that self-supervisor and self-peer correlations were lower for managerial-professional employees ($r = .27$ and .31, respectively) than for blue-collar/service employees ($r = .42$ and .40 respectively). In discussion Harris and Schaubroeck (1988) suggested that egocentric bias was more likely to occur in ambiguous contexts, e.g., managerial jobs.

Wohlers and London (1989) defined self-awareness as the degree to which individuals understand their own strengths and weaknesses. The authors surveyed 36 middle managers and 283 of their co-workers. They measured self-awareness in four ways: 1. Correlation, for each target manager rated, between self- ratings and the average of co-worker ratings across a range of 30 author developed managerial characteristic items; 2. Difference scores, which contrasted leaders’ self ratings with those of others on the same scales. The smaller the difference score the higher self awareness was said to be (Nunnally & Bernstein, 1994); 3. Direct rating of self-awareness by managers themselves and by their peers; and, 4. Correlation between self and average co-worker ratings across the sample for each item. The study found that leader self ratings had higher correlations with the average of all subordinate ratings than with any individual subordinate rating. Correlations of leader self-ratings and subordinate ratings for the managerial characteristics ranged from $r = -.24$ to .55. Interestingly, the managerial characteristic with the lowest self-subordinate correlation was leader self-objectivity ($r = .00$). Organisation sensitivity and organisation awareness, argued here as two constructs potentially related to self-other rating agreement had self-other correlations of $r = .18$ and .21 respectively. The
sample size for this study was small \( (n = 36) \), and the sample focused on middle rather than senior managers, but the study results suggested that managerial self- and organisational awareness, i.e., self-other rating agreement, was low.

An investigation employed three data sets generated by responses to the 360 degree management questionnaire Benchmarks® (Lombardo et al., 1991). The first data set consisted of 648 managers randomly selected from the Benchmarks® database. The second data set included 168 upper level managers from a Fortune 100 organisation. The final data set consisted of 79 hospital administrators who completed Benchmarks® (Van Velsor, Taylor, & Leslie, 1993). Van Velsor, Taylor and Leslie (1993) used relative difference scores (Nunnally & Bernstein, 1994), calculated from self-subordinate differences on 15 of the 16 Benchmarks® scales, and, separately, the 16th Benchmarks® scale, self awareness, to measure self-awareness. Relative difference scores facilitated the creation of three categories of respondents: under-, over-, and accurate raters. The Benchmarks® self-awareness scale consisted of four items, two formed a subscale which addressed knowledge of self and two formed a subscale that addressed willingness to change (Lombardo et al., 1991). Results across all three samples, and for both measures, indicated that under raters were perceived by subordinates as the highest performing managers, more than both accurate and over-rater managers. The authors conjectured that subordinate raters may be more lenient in rating leaders who were seen to lack self confidence and or exhibit humility. Based on these results, the authors argue that neither of these subordinate based measures was a good measure of self-awareness for the under rater leader categories. The authors further argue that self-subordinate rating difference scores may be a good measure of self awareness for people who over-rate themselves. It is argued here that such ratings for over-raters could simply be subordinates being
hard on people whom they perceive to be arrogant, or failing to listen. It is further argued here that the implication for this current thesis is that measures of self-awareness that involve use of subordinate data may be valid only for accurate leader self-raters.

Alan Church (1997) set out to replicate previous work and to investigate whether managerial self-awareness differentiated between high performing and average performing managers. Church (1997) gathered four independent datasets which included 134 high performing and 470 average performing managers. Manager performance levels were based on ratings by superiors. Participants in the study were all current or past attendees at leadership, management, or executive training seminars, prior to which various measures of managerial behaviour were collected from their subordinates. Church (1997) operationalised managerial self-awareness by assessing the congruence between self and averaged subordinates’ behavioural ratings. Congruence was assessed in three ways. First by absolute difference scores, calculated as the square root of the sum of squared differences between self report and average subordinates score for each self-other item comparison divided by the total number of items for that sample (Nunnally & Bernstein, 1994). Second, by relative average item difference scores between self-reports and subordinates across each of the behaviour of the based questions, calculated the same way as the absolute different score without the squaring and square root taking (Nunnally & Bernstein, 1994). Third and finally, Church (1994) used Pearson correlation coefficients between the leader self ratings and the corresponding averaged others’ ratings.

Church (1997) found a general tendency for higher performing managers to have lower difference scores, i.e. higher self-other rating agreement, than average performing managers ($M = .85$ versus $M = .74$, $F (1,596) = 10.70$, $p < .001$) with an
effect size somewhere between a small and medium result \( (H^2 = .033) \) (Cohen, 1977).

Church commented that, given the number of variables analysed, there may have been insufficient power to detect significant differences among certain groups. It was argued that this would have been particularly relevant in the case of the high performing managers \( (n = 134) \).

Shipper and Dillard (1994b; cited in Hogan & Hogan, 2002) asked a sample of 1035 middle managers in a large, non-traditional, high technology firm to describe him/herself using the Survey of Management Practices (Wilson & Wilson, 1991); four subordinates then described each manager on the same form. Shipper and Dillard (1994) identified four sets of managers: (1) new managers who were evaluated as being in the bottom 20\% of their cohort; (2) new managers evaluated as being in the top 20 percent of their cohort; (3) mid-level managers evaluated as being in the bottom 20 percent of their cohort; (4) mid-level managers evaluated as being in the top 20 percent of their cohort. Consistent with Church (1997), self-ratings of high performing managers more closely agreed with subordinate ratings than self-ratings of low performing managers.

From the above review it is argued that that managerial self-awareness has been related to leadership behaviour. It was further argued that that managerial self-awareness is a similar construct to self-other rating agreement as defined above lending further weight to the argument that self-other rating agreement may predict transformational leadership behaviour.

6.2.3 Socio-Political Intelligence and Transformational Leadership Behaviour

In a sample of 25 managers, from a large US, mid-west retail firm, SPIQ correlated as follows with several criteria based on supervisors' ratings: leadership \( r = .52 \); management skills \( r = .53 \); administrative skills \( r = .73 \); technical skills \( r = .45 \);
and communication skills $r = .66$. Persons with higher ratings for every aspect of corporate leadership rated had higher SPIQ scores (Hogan & Holland, 1998; cited in Hogan & Hogan, 2002). Research with a sample of 140 managers found that SPIQ correlated $r = .65$ with supervisors' ratings of overall manager effectiveness (Hogan & Ross, 1998). In a meta analysis, which included 24 studies ($N = 3,817$), SPIQ was correlated with rated leadership of focal managers (Holland, Hogan, & Landuyt, 2002). SPIQ scores predicted leadership performance with an estimated true correlation $r = .47$. The authors concluded that SPIQ was both a valid and generalisable predictor of leadership effectiveness across management jobs (Holland et al., 2002). It is argued that SPIQ is a self-other rating agreement like construct and that has been shown to be related to leadership.

On the basis of the research on self-monitoring, managerial self awareness, and socio-political intelligence reviewed above it is argued that self-other rating agreement has been related to leadership behaviour.

6.3 Self-other rating agreement as a Moderating Variable

6.3.1 Mediation and Moderation

A moderating variable is defined as one that influences the strength and/or direction of a relationship between a predictor or causal variable and a dependent variable (Baron & Kenny, 1986) (Figure 6.1A). For instance, a particular personal attribute may influence the strength of the relationship between (say) a Five Factor Model personality component (an independent variable) and transformational leadership behaviour (the dependent variable).

In the context of this thesis it is argued that the presence of a moderating variable may help explain why findings, such as the prediction of transformational
leadership behaviour by personality, have to date shown diverse and disappointing levels of prediction (Bass, 1999).

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Where P= personality IV, TLB = transformational leadership behaviour DV, Mod= moderating variable, Med= mediating variable.

Figure 6.1: Mediating and moderating variable relationships

A Mediating Variable is one that accounts for the relationship between a predictor variable and the dependent variable (Baron & Kenny, 1986). Thus, for instance, there may be no significant relationship between personality and transformational leadership behaviour except through personality’s impact on a particular personal attribute, and that particular personal attribute’s impact in turn on transformational leadership behaviour (see Figure 6.1B).

6.3.2 Self-other rating agreement as a Moderating Variable

In two studies of naval subjects self-other rating agreement was measured by means of difference scores. The moderating impact of self-other rating agreement on the relationship between transformational leadership behaviour and leader performance was investigated in two studies (Atwater & Yammarino, 1992). The authors’ first study used naval cadets (n = 91). That study was used to assess the moderating impact of self-other agreement on the predictor/leader behaviour
relationship. The authors’ second study used junior serving naval offices \((n = 158)\). That second sample was used to assess the moderating impact of self other agreement on the relationship between leader transformational behaviour and leader performance. The authors’ study one results are directly relevant to the question posed here.

Atwater and Yammarino (1992) assessed transformational leadership with three forms of the military MLQ, viz., self, subordinate, and superior versions. The military form of the MLQ scale employed in the study used 24 items to measure four components of transformational leadership at six items per component. The four components were: charisma, individualised consideration, intellectual stimulation and inspirational leadership. Transformational leadership behaviour was measured as the mean of the four subordinate rated MLQ transformational behaviour ratings. Leadership predictors used included a range of criterion measures. For cadets in the first study criterion performance measures included: SAT verbal and mathematics scores, high school principal recommendations, engineering /science interest scores, conduct record at the naval academy, responsibility of positions held in prior academic years, and participation in athletics. For serving officers in the second study criterion performance measures included annual performance review data such as: contributions to the unit, effective integration of personnel and to the mission, recommendation for early promotion, and completion of assigned tasks. In both studies subjects were divided into three groups, over-, under-, and accurate raters, based on relative difference scores.

Concern had been expressed about the unreliability of difference scores when used as statistics entered into a statistical equation (Johns, 1981). It was for that reason that Atwater and Yammarino (1992) employed relative difference scores only
as a means of categorizing subjects into categories prior to statistical analysis.

Atwater and Yammarino (1992) investigated the moderating effect of self-other rating agreement within three difference score categories: over-raters, and under-raters (both were forms of low self-other rating agreement) and accurate raters (high self-other rating agreement). Over raters were those whose difference scores were more than .5 standard deviations above the mean difference score for the whole sample. Accurate raters were those whose difference scores were between .5 standard deviations above and below the mean difference score for the whole sample. Under raters were those whose difference scores were more than .5 standard deviations below the mean difference score of the whole sample.

For the overall Atwater and Yammarino (1992) sample in study one \( (n = 91) \) Pearson correlations between predictors and transformational leadership behaviour were significant for engineering/science interest \( (r = -.20, p <= .05) \) and athletics participation \( (r = .32, p <= .01) \). For the accurate rater category \( (n = 42) \) there were three significant correlations: SAT-mathematics \( (r = -.35, p <= .05) \), leadership positions held \( (r = .38, p <= .05) \), and athletics participation \( (r = .35, p <= .05) \). For the under rater category \( (n = 28) \) there were also three significant correlations: engineering/science interest \( (r = -.33, p <= .05) \), conduct at the academy \( (r = .33, p <= .05) \), and athletics participation \( (r = .35, p <= .05) \). For the over rater category \( (n = 21) \) there were two significant correlations: principal recommendations \( (r = -.54, p <= .01) \), and engineering/science interest \( (r = -.57, p <= .05) \). As mentioned at the start of this chapter Atwater and Yammarino’s (1992) findings indicate that self other agreement category moderated the size and significance of correlations between the predictors of transformational leadership behaviour and subordinate MLQ ratings of transformational leadership behaviour.
It is argued here that self-other rating agreement may also moderate the prediction of transformational leadership behaviour by other predictors of transformational leadership behaviour such as personality variables. Personality variables are operationalised in this thesis as HPI components and HDS components. It is therefore proposed here that self-other rating agreement may moderate the prediction of transformational leadership behaviour by the above mentioned personality variables. Further, the above studies focused on cadets and junior managers. It is argued that replication with senior manager subjects potentially adds to knowledge because senior managers have been found to systematically different in many characteristics from more junior managers (Hambrick & Mason, 1984; Lowe, Kroeck, & Sivasubramaniam, 1996).

Three Five Factor Model prediction hypotheses were developed in Chapter Four of this thesis and five personality disorder prediction hypotheses were developed in Chapter Five. It is proposed that those eight hypothesised relationships may be moderated by self-other rating agreement. Self-other rating agreement will be operationalised as difference score categories and regression coefficients will be compared within each of these categories. Where inspection reveals an obvious difference between results a moderation effect will be indicated. Rather than state this as eight more hypotheses it will be stated as one hypothesis and when tested for each of the 8 conditions it will be designated hypothesis 9(X). Where X is a number from one to eight referring to the specific personality component predictor being dealt with at the time.

Hypothesis 9 (X): Self-subordinate rating agreement will moderate the prediction of charisma by personality component X.
6.4 Measurement of Self-Other Rating Agreement

Self awareness studies utilised a range of methods which contrasted self ratings by leaders with ratings on the same dimensions by others, such as superiors, peers or subordinates. Two types of difference scores were used: absolute difference scores (Church, 1997), and relative difference scores (Atwater & Yammarino, 1992). A third method employed in later papers entered self scores, other scores, and the various second order terms into polynomial multiple regressions where the predictive effect of their interaction was assessed based on the significance or otherwise of the second order self by other term (Edwards, 1994). All methods require a self score and an other score.

In this thesis self ratings and subordinate ratings are available for 12 components of the MLQ. Two of these components will be used to measure the dependent variable transformational leadership behaviour. To minimise common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) those two components should not be used in the calculation of difference measures. That leaves ten other components some or all of which could be utilised in the calculation of difference measures. This issue is discussed further in the section on methodological considerations in Chapter Seven of this thesis.

6.7 Chapter Conclusions

In this chapter the self-other rating agreement construct was first defined and related to previous theorising about leadership. It was argued that a number of constructs from recent literature operationalised self-other rating agreement albeit in different ways. The constructs were: role taking, intraception, empathy, social
cognition, self-monitoring, self-awareness, managerial self awareness, and SPIQ. Relevant literature regarding the major constructs was reviewed. It was argued that the findings reviewed supported the proposition that self-other rating agreement was a variable related to transformational leadership behaviour. Based on the work of Atwater and Yammarino (1992) it was also concluded that self-other rating agreement may moderate the prediction of transformational leadership behaviour by personality constructs. It was hypothesised that self-other rating agreement would modify all of the predictions hypothesised in Chapters Four and Five of this thesis.

Chapter Seven will draw brief summary conclusions together from the five literature review chapters, discuss methodological considerations, summarise hypotheses for the program of research studies in thesis, and delineate studies designed to investigate the hypotheses.
CHAPTER 7: OVERVIEW OF THE RESEARCH PROGRAM

In Chapter Two of this thesis it was argued that leader personal attributes may predict transformational leadership behaviour. A large number of personal attributes that influence leadership behaviour have been investigated in the scholarly literature over the last century. Despite extensive research few findings have found the strength of prediction that some researchers anticipated (Judge & Bono, 2000). This present thesis identified two personal attribute constructs which, it was proposed here, potentially predict transformational leadership behaviour: components of the Five Factor Model of personality and personality disorder components. Self-other rating agreement was proposed a personal attribute that may moderate prediction of transformational leadership behaviour by those personality components.

This thesis earlier proposed replication of previous work on the prediction of transformational leadership behaviour by personality constructs and extension of that work in five ways. First, it was proposed to extend previous work by focusing specifically on senior organisational leaders as distinct from other groups of leaders (Hambrick & Mason, 1984). A second extension was to focus on Australian organisational leaders. Thirdly, it was proposed that the HPI seven factor conceptualisation of the Big Five be used. Fourthly, an exploratory evaluation of the role of personality disorders in predicting senior transformational leadership behaviour was proposed. And finally, extension of previous research by assessing the moderating impact of self-other rating agreement on the prediction of transformational leadership behaviour by personality constructs, viz., components of the Five Factor Model and personality disorder components, was proposed.

In this chapter methodological issues of concern in this thesis are discussed first. Conclusions and propositions developed in earlier chapters of this thesis are
then summarised and allocated to studies designed to investigate the focal research questions. Hypotheses were generated in three chapters, viz., hypotheses regarding the Five Factor Model in Chapter Four, hypotheses regarding personality disorders in Chapter Five, and hypotheses regarding the moderating impact of self-other rating agreement in Chapter Six.

7.1 Leadership

The full range of leadership model of leadership behaviour, developed by Bernard Bass (1985), was selected as the operational model of leadership for this thesis. The MLQ (Avolio et al., 1995) was selected as the measure of the full range of leadership model for use in this thesis. In this thesis the dependent variable was transformational leadership behaviour operationalised as subordinate MLQ ratings of leader transformational behaviour. The methodological considerations section next in this chapter will present more detail on this issue.

7.2 Methodological Considerations

In this section general methodological issues concerning the whole of the present research program are discussed.

7.2.1 Common Method Variance

Common method variance is variance that is attributable to the measurement method rather than to the constructs the measures represent (Podsakoff et al., 2003). The term method refers to measurement issues such as the context of specific items, scale type, response format, and the general context. For instance, if research is investigating two constructs X and Y, it is likely that X and Y will be correlated to some degree. However, if X and Y were gathered from the same subjects, using the same items of the same scales, that methodology will exert a systematic effect on the observed correlation between the measures. This systematic effect is common
method variance. When a relationship is found common method variance offers an alternate explanation of the result to that proposed by the hypothesis under investigation.

Three separate actions were taken to minimise common method variance in this thesis. First, ratings of the criterion variable transformational leadership behaviour were gathered from subordinates not from the focal leaders. Whereas measures of the predictor variables, viz., personality constructs, were gathered from the focal leaders themselves (Podsakoff & Organ, 1986).

Second, the subordinate measures were gathered anonymously in order to minimise the influence of social desirability on the subordinate ratings thereby tending to minimise common method variance. (Podsakoff & Organ, 1986).

Third, it was necessary to calculate both a dependent variable measure and difference variable measures from the MLQ data (see later in this chapter). To minimise common method variance predictor and criterion measures were calculated using separate components of the 12 available MLQ components (Podsakoff & Organ, 1986).

7.2.2 Bonferroni Correction

The Bonferroni correction is a statistical adjustment that is made when multiple comparisons are made in the one test. When testing $n$ outcomes there is increased probability that one of the outcomes will be statistically significant (Tabachnick & Fidell, 1996). To allow for this the alpha level selected for the research is divided by $n$. In this research the selected alpha level was .05. The following adjustment was made when multiple comparisons were made in this thesis. The .05 alpha level was divided by the number of comparisons to arrive at the new required alpha level for accepting the hypothesis being tested. In the case of the
exploratory research concerning personality disorders it is argued that all significant
found should be considered as indicative, whether or not they meet the strict
Bonferroni criteria.

7.2.3 Study Variables

7.2.3.1 Transformational Leadership Measure

The MLQ was available as a commercial instrument offering the opportunity
for corporate respondents to complete the questionnaires for scoring by the MLQ
organisation. Permission to use the MLQ for research was purchased initially from
the US MLQ marketing agent and later also from a newly appointed Australian test
marketing agent. Results were calculated either from a scoring key, when the
instrument was used only for research, or by the MLQ organisation, when the
instrument was used commercially. Scoring and results were identical in both cases.
A mixture of research only and commercial instrumentation were used in the data
collection for this thesis.

Self MLQ ratings were gathered from each subject leader. Subordinate MLQ
ratings were gathered from at least three subordinates for each leader. Subordinate
ratings were used as the dependent variable transformational leadership behaviour.
Following Bono and Judge (2004), the construct charisma was estimated by taking the
mean of idealised behaviour and inspirational motivation. In their extensive meta
study Bono & Judge (2004) found that this construct produced the strongest
correlation across the 384 correlations in the 26 studies includes in their meta study.

7.2.3.2 Self-Subordinate Rating Agreement Variable

Differences between self ratings and ratings of others, like subordinates,
have been used as a measure of self awareness. Separate self and subordinate scores
were required for estimation of self-subordinate rating agreement. Common method
bias occurs when the same components are used for both variables. The MLQ provides 12 components. Two of those components were used for the calculation of the aggregated transformational leadership behaviour criterion variable charisma. Ten components remained unused. They were: three transformational components (two behavioural and one attributional), the four components designated as transactional and non transactional, and the three components designated as outcome factors in full range of leadership theory.

To assess the relevance of these factors for use as a measure of self-other rating agreement factor component questions were compared with definitional components of self-other rating agreement. It was argued in Chapter Six that role-taking was a similar construct to self-other rating agreement. Role taking was operationally defined by Hogan (1969) as: 1. was socially perceptive to wide range of interpersonal cues, 2. seemed to be aware of the impression he/she made on others, 3. was skilled in social techniques of imaginative play, pretending, and humour, 4. had insight into own motives and behaviour, and 5. evaluated the motivations of others in interpreting situations. This prescription was compared with the MLQ questions for each of the available components in Table 7.1 below. It is argued that the questions that were most compatible with self-other rating agreement as it was defined above were the outcome questions. Compatibility was assessed by looking for questions that indicated the possibility that one or more of the above listed attributes of self-other rating agreement may be present in the leader. The outcome components were also a homogeneous group theoretically, according to the full range of leadership model, and statistically, since all were positively correlated with one another according to the MLQ manual (Avolio et al., 1995).
Table 7.1

MLQ questions: transactional, non transactional and outcome components

<table>
<thead>
<tr>
<th>Question</th>
<th>MLQ Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instils pride in others for being associated with him.</td>
<td>IA</td>
</tr>
<tr>
<td>Goes beyond self-interest for the good of the group.</td>
<td>IA</td>
</tr>
<tr>
<td>Acts in ways that build my respect.</td>
<td>IA</td>
</tr>
<tr>
<td>Displays a sense of power and confidence.</td>
<td>IA</td>
</tr>
<tr>
<td>Seeks differing perspectives when solving problems.</td>
<td>IS</td>
</tr>
<tr>
<td>Gets me to look at problems from many different angles.</td>
<td>IS</td>
</tr>
<tr>
<td>Suggests new ways of looking at how to complete assignments.</td>
<td>IS</td>
</tr>
<tr>
<td>Spends time teaching and coaching.</td>
<td>IC</td>
</tr>
<tr>
<td>Treats others as an individual rather than just as a member of a group.</td>
<td>IC</td>
</tr>
<tr>
<td>Considers me as having different needs, abilities, and aspirations from others.</td>
<td>IC</td>
</tr>
<tr>
<td>Helps others develop their strengths.</td>
<td>IC</td>
</tr>
<tr>
<td>Seeks differing perspectives when solving problems.</td>
<td>IS</td>
</tr>
<tr>
<td>Provides assistance in exchange for efforts.</td>
<td>CR</td>
</tr>
<tr>
<td>Discusses in specific terms who was responsible for achieving performance targets.</td>
<td>CR</td>
</tr>
<tr>
<td>Makes clear what one can expect to receive when performance goals are achieved.</td>
<td>CR</td>
</tr>
<tr>
<td>Expresses satisfaction when I meet expectations.</td>
<td>CR</td>
</tr>
<tr>
<td>Focuses attention on irregularities, mistakes, exceptions, and deviations from standards.</td>
<td>MA</td>
</tr>
<tr>
<td>Concentrates his full attention on dealing with mistakes, complaints, and failures.</td>
<td>MA</td>
</tr>
<tr>
<td>Keeps track of all mistakes.</td>
<td>MA</td>
</tr>
<tr>
<td>Directs his attention toward failures to meet standards.</td>
<td>MA</td>
</tr>
<tr>
<td>Fails to interfere until problems become serious.</td>
<td>MP</td>
</tr>
<tr>
<td>Waits for things to go wrong before taking action.</td>
<td>MP</td>
</tr>
<tr>
<td>Shows that he was a firm believer that “If it ain’t broke, don’t fix it.”</td>
<td>MP</td>
</tr>
<tr>
<td>Demonstrates that problems must become chronic before taking action.</td>
<td>MP</td>
</tr>
<tr>
<td>Avoids getting involved when important issues arise.</td>
<td>LF</td>
</tr>
<tr>
<td>Is absent when needed.</td>
<td>LF</td>
</tr>
<tr>
<td>Avoids making decisions.</td>
<td>LF</td>
</tr>
<tr>
<td>Delays responding to urgent questions.</td>
<td>LF</td>
</tr>
<tr>
<td>Gets me to do more than I expected to do.</td>
<td>EE</td>
</tr>
<tr>
<td>Heightens my desire to succeed.</td>
<td>EE</td>
</tr>
<tr>
<td>Increases my willingness to try harder.</td>
<td>EE</td>
</tr>
<tr>
<td>Is effective at meeting my job-related needs.</td>
<td>E</td>
</tr>
<tr>
<td>Is effective in representing me to a higher authority.</td>
<td>E</td>
</tr>
<tr>
<td>Is effective in meeting organisational requirements.</td>
<td>E</td>
</tr>
<tr>
<td>Leads a group that was effective.</td>
<td>E</td>
</tr>
<tr>
<td>Uses methods of leadership that are satisfying.</td>
<td>S</td>
</tr>
<tr>
<td>Works with me in a satisfactory way.</td>
<td>S</td>
</tr>
</tbody>
</table>


The outcome components extra effort, effectiveness, and satisfaction were therefore selected to be aggregated for the difference measures. The self measure was
calculated by taking the mean of extra effort, effectiveness and satisfaction scores on the leader’s self rating MLQ scale. The subordinate variable was calculated using the same components from the subordinate rating MLQ scale. The remaining MLQ components were not used.

7.2.4 Difference Scores

Difference scores compare leaders’ self ratings with those of others on the same scales (Nunnally & Bernstein, 1994). Difference scores are also known as distance measures and profile similarity indices (Nunnally & Bernstein, 1994). In one study the smaller the difference between a leader’s self ratings and the averaged ratings of others the higher the leader’s managerial self awareness was said to be (Church, 1994). Two of the several types of difference scores in common usage are absolute and relative difference scores. Absolute difference scores are calculated as: $Da = \sqrt{\frac{\sum (m_{self} - m_{other})^2}{N}}$. Relative difference scores are calculated as: $Dr = \frac{\sum (m_{self} - m_{other})}{N}$. In both formulae $m_{self}$ and $m_{other}$ are the self completed scale measure and the scale measure completed by the other person(s) respectively.

Concern was expressed about the unreliability of difference scores when they were used as statistics entered into a statistical analysis (Edwards, 1994; Johns, 1981). As a result a growing number of researchers use difference scores merely as a means of categorizing subjects into groups prior to statistical analysis (Atwater & Yammarino, 1992; Tisak & Smith, 1994).

Absolute difference scores $Da$ facilitate division of response pools into two approximately equal categories: high self-other rating agreement, i.e., low difference scores, and low self-other rating agreement, i.e., high difference scores (Church, 1997). This can be achieved by dividing the sample into two $Da$ categories. Each category could contain approximately half of the total subject pool. The sample could
be divided either by use of the mean, for a normal or almost normal distribution of difference scores, or by the median, for a slightly skewed distribution. Relative difference scores facilitate division of response pools into three categories: under-, accurate- and over-raters (Atwater & Yammarino, 1992). They also facilitate division of the sample into four categories, over raters, under-raters, accurate raters good, and accurate raters bad (Atwater & Yammarino, 1998) or six categories in-agreement good, in-agreement poor, over-estimator good, over-estimator poor, under-estimator good, and under-estimator poor (Brutus, Fleenor, & Taylor, 1996). In the three category case, for a near normal distribution of relative difference scores, under-raters can be categorised as those with relative difference scores more than .5 standard deviations below the average difference score for the sample. Accurate raters are those with difference scores between -.5 and +.5 standard deviations from the average difference score for the sample. Over-raters are those with difference scores more than .5 standard deviations above the averaged difference score (Atwater & Yammarino, 1992).

Church (1997) has argued that the absolute difference score Da, calculated by the formula above, is preferable because it has superior sensitivity to differences in profile level, dispersion, and shape (Nunnally & Bernstein, 1994; Tisak & Smith, 1994). He points out that relative difference scores are ultimately measuring the general rating tendency of an individual, i.e., an under-rater, accurate rater or over-rater, and not the cumulative degree of congruence across a specific series of comparisons (Church, 1997). In the present research we are interested more in the cumulative degree of congruence and its capacity as a moderator than we are in the rating tendencies of leaders who were sample subjects. Accordingly absolute difference scores will be employed in the first study of this thesis.
Difference scores have problematic status as continuous variable statistics (Johns, 1981). That is why they have been employed in published research as categorical variables. In past published research samples were divided into categories based on difference scores and then statistics were calculated within each category. Differences between the statistics of different categories were then used to argue the efficacy of the construct the difference score was used to estimate, e.g., self awareness. Arguments have been raised in support of this use difference scores (Tisak & Smith, 1994).

Edwards (1994) has criticised difference scores as being inferior to polynomial multiple regression response surface methodology. Edwards (1994) criticisms appear to be levelled at difference scores when they are used to assess match between two different sources of data. Edwards (1994) work is discussed in more detail in the next section of this chapter. In this thesis it is proposed to employ difference score categories not to assess how well subordinates and leaders’ scores match one another but to assess the moderating effect of the degree of congruence between self scores and subordinate scores as is argued above. Despite this there will be applications of regression in this thesis and so it is to a discussion of regression analysis that we turn next.

7.2.5 Use of Multiple Regression To Test The Hypotheses

This thesis was focused on prediction. The statistical technique of choice for prediction when there is one interval scale independent variable and range of interval scale dependent variables is multiple regression (Tabachnick and Fidell, 1996).
7.2.5.1 Requirements for Simple and Multiple Regression

A number of practical matters were considered to maximise the validity of regression analysis (Tabachnick & Fidell, 1996). Firstly, data sets were screened before use for accuracy of input and missing data. Distributions of regression variables should be approximately normal. Normality was assessed by skewness and kurtosis. Recommendations indicated that when skewness is greater than +/- 3 and or kurtosis was greater than +/- 7 the distribution is sufficiently non-normal to warrant some sort of transformation (West, Finch, & Curran, 1995).

The ratio of cases to independent variables should exceed recommended minimum cut offs. Recommendations are: \( N \geq 50 + 8m \) for multiple regression and \( N \geq 104 + m \) for testing individual predictors where \( m \) was the number of independent variables (Tabachnick & Fidell, 1996, p. 132). Other recommendations indicate that there should be five to 20 times the number of cases as there is independent variables being tested depending upon the size of the effect being researched and the type of multiple regression being employed (Hair, Anderson, Tatham, & Black, 1984).

Outliers are extreme cases which have a disproportionate impact on the regression solution. Univariate outliers are cases with an extreme value on one variable; multivariate outliers are cases with an unusual combination of scores on two or more variables. Univariate outliers were detected using the Casewise Diagnostics facility in SPSS Regression. This facility was set to detect univariate outliers with absolute standard residuals greater than three standard deviations, which was the commonly accepted cut off (Kinnear & Gray, 2000). Univariate outliers found using this criterion were reviewed using scatterplots to assess whether any practical reasons
for their removal could be found. Cases where no practical reason for removal could be ascertained were retained in the sample.

To detect multivariate outliers Mahalanobis distances were calculated at \( p < .001 \) within SPSS regression. Mahalanobis distance is the distance of a case from the centroid of the remaining cases where the centroid is the point created by the means of all the variables (Tabachnick & Fidell, 1996, p. 67). Mahalanobis distances are evaluated using Chi Squared with degrees of freedom equal to the number of variables (Tabachnick & Fidell, 1996, p. 94). In this thesis cases with Mahalanobis distances that exceeded the Chi Squared value were identified and inspected to determine if any practical reason could be found to back up the statistical conclusion that the case was an outlier. Where practical reasons could not be found cases were not excluded. When practical reasons could be found cases were excluded from subsequent calculations. In such situations a determination was made about the likely impact on results, and on generalisability of results. Removal of potentially large quantities of outliers may significantly reduce sample size. In all cases in this thesis deletion of multivariate outliers did not impact regression results. This issue is given separate consideration in the reports on the various regression analyses in the results section of each of the study chapters following.

Regression assumes linearity and homogeneity of variance. These were evaluated by plotting the regression standardised predicted value, i.e., the predicted value transformed to a scale with a mean of 0 and a standard deviation of 1, and the standardised residual, i.e., the residual value transformed to a scale with a mean of 0 and a standard deviation of 1. If the plot showed no obvious pattern it was assumed that the assumptions of linearity and homogeneity of variance had been met.
Multicollinearity and singularity occur when regression variables are highly correlated. This is particularly problematic when interaction effects are being investigated using regression. To minimise the potential impact of multicollinearity first order variables used in the multiple regression analyses employed in this study were centred when intercorrelations of variables were significant. A centred variable is one put in deviation score format so that its mean is zero (Aiken & West, 1991, p. 9). From theory it was not necessary to centre the criterion variable, i.e., transformational leadership behaviour. So that variable was left uncentred. Singularity refers to redundant variables. A rule of thumb was to combine or exclude one of any two variables with Pearson correlation coefficients greater than .70 (Tabachnick & Fidell, 1996, p. 86).

7.2.5.2 Assessing moderation with multiple regression

Some investigations of self-other rating agreement as a moderating variable, i.e., moderating the prediction by personality variables of transformational leadership behaviour, have been operationalised in terms of difference scores as discussed above (Nunnally & Bernstein, 1994). Use of difference scores has been criticized (Johns, 1981; Edwards, 1994). Alternatives recommended have included using difference scores to categorize subjects into groups. This does not overcome all of the criticisms made of difference score techniques (Edwards, 1994).

A recommended statistical alternative was to enter different leader and subordinate score data sequentially into a polynomial multiple regression model. A response surface polynomial regression method is recommended as a method that has a number of advantages over difference scores (Edwards & Parry, 1993). The procedure is to enter variables sequentially into a hierarchical regression model as
follows. First, the self term and the subordinate term are entered, then the self term squared and the subordinate term squared are entered as the next layer hierarchically, and finally, in the third stage of the hierarchy, the product of the self and subordinate score is entered. If the regression coefficient of the product term is significant and if it adds a significantly to the variance explains by the regression model then there is a moderating effect.

To apply the Edwards and Parry (1993) procedure where the task is to assess the moderating impact of self and subordinate interaction on the prediction of transformational leadership behaviour by a personality variable a three way interaction is necessary. Use of a three way multiple regression process to assess the moderating impact of role taking would involve assessing the regression equation:

\[ Y = b_0 + b_1X + b_2Z + b_3W + b_4XZ + b_5XW + b_6ZW + b_7XZW \]

where \( Y \) was the dependent variable transformational leadership behaviour, \( b_0, b_1, b_2, b_3, b_4, b_5, b_6, \) and \( b_7 \) were the regression beta coefficients, \( X \) was the personality variable, e.g., ambition, \( Z \) was the self variable, \( W \) was the subordinate variable, and \( XZ \) was the product of the personality and self variables, and so on for the other second order terms, and with \( XZW \) being the three way product of the personality, self and subordinate variables. The above equation can be rearranged into simple regression equation format as follows:

\[ Y = (b_1 + b_4Z + b_5W + b_7ZW) X + (b_2Z + b_3W = B6ZW + b_0) \]

This equation shows that the slope of regression of \( Y \) on \( X \) was given by the expression: \( (b_1 + b_4Z + b_5W + b_7ZW) \), which was the simple slope of the regression equation and depends on the value of \( W \) and the value of \( Z \) at which the \( Y \) on \( X \) relationship was considered.
Research has found that regression coefficients for terms higher than second order have a very low probability of reaching significance even when a significant moderating effect is present in the data (Aguinis & Stone-Romero, 1997). It is argued that the likelihood of a significant three way interaction under the circumstances in each of the studies in this thesis is low. It was therefore considered likely that if moderating effects did exist they would not be found by this technique. For that reason absolute difference scores were employed to categorise the sample where a three way interaction would have been necessary. Straightforward linear multiple regressions were then conducted within categories and differences between categories were inspected as a means of determining the existence or otherwise of a moderating effect.

7.2.6 Sample Sizes and Power

7.2.6.1 Data Collection

Focal leaders for this thesis were Australian senior executives from both public and private enterprise. A pilot data collection organised through the human resource department of a large organisation enrolled 21 executives. Useable returned document response rates were low, only three of the responses received were complete enough to be usable. It was concluded that data collection options that involved accessing managers at their place of work, would require an extremely large target population to obtain the necessary sample size. It was felt that this was unrealistic within the resources available for this research. A further problem was that the senior leader time and focus necessary to complete the selected test materials reliably did not appear to be consistent with on the job conditions of the senior leaders accessed. Leaders required a clear span of between 60 and 90 minutes to complete a survey. It is argued that the time and attention span necessary for reliable completion
of the test battery were not consistent with on the job or mail out data collection methods. An alternative data collection method was therefore sought.

It was noted that many of the published studies in this area of research collected data in the context of training programs, e.g., at a military academy (Atwater & Yammarino, 1992), in organisational leadership programs (Church, 1997) and as consultants running courses as a business (Fleenor et al., 1996). This methodology allowed uninterrupted time to be provided for the executives to complete the necessary metrics and a context within which there was something in it for them, viz., they were undertaking leadership training in which the feedback on the metrics would form a significant and useful component. Ultimately data collection for this thesis was achieved predominantly in the context of leadership and or planning seminars. This method was selected to control the size of the necessary target population from which to draw the sample to that which was considered achievable in this thesis, maximise the response rate of those subjects accessed, and enhance the reliability of completion. Subject responses were gathered in the context of in-organisation leadership, strategy or planning seminars conducted by the author, with the agreement of the sponsoring organisation.

7.2.6.2 Required Sample Size

This thesis focuses on the prediction of transformational leadership behaviour by personality components. Multiple regression analysis was used as the preferred method to investigate prediction levels. In each study hypotheses involving personality predictors were assessed using multiple linear regression.

To assess the prediction of transformational leadership behaviour by Five Factor Model components and personality disorders will involve the entry of seven
and 11 terms respectively into the multiple regression equation. Power analysis was conducted using G-Power (Faul & Erdfelder, 1992). With Big Five components for a medium effect size, \( f^2 = .15 \), a sample size of 150, and a beta to alpha ratio of 1, the power, for 7 predictors, was .95. When the sample was halved into two categories within which multiple regressions were conducted the power was projected to be .83. With personality disorder components for a medium effect size, \( f^2 = .15 \), a sample size of 180, and a beta to alpha ratio of 1, the power, for 11 predictors, was .95. When the sample was halved into two categories within which multiple regressions were conducted the power was also projected to be .83. These power values were considered adequate for this research. It was determined to seek samples of 150 and 180 valid responses would be sought in the two studies respectively.

7.2.7 Reverse Causality

This thesis concerns the prediction of transformational leadership behaviour by personality components. While arguments are put here that personality predicts or is related to transformational behaviour that is not the same as saying that personality causes transformational leadership behaviour. If results of this thesis suggest that personality components predict transformational leadership behaviour further research of an experimental nature would be required to address a claim of causality (Tabchnick & Fiddell, 1996).

There is also the issue of reverse prediction and reverse causality. The idea here is that transformational leadership behaviour causes personality. Transformational leadership behaviour consists of a set of learned behaviours enacted within a specific organisational context in such a way that organisational outcomes may be influenced (Bass, 1985). In Five Factor theory personality is defined as an
enduring set of personal attributes (Costa & McCrae, 1986), which some believe has a genetic basis (McCrae & Costa, 1999). Alternatively Social Investment theory proposes that it is largely the result of experiences in universal social roles in young adulthood and enduring from then on (Roberts, Wood, & Smith, 2005). From both perspectives the net result is that personality is extremely stable with changes accompanying aging being minor and thought to also have a genetic basis (McCrae, 2002). Given the very different nature of the two constructs, one a behaviour and the other a personal attribute, it is reasonable to propose that enduring aspects of a person influence their behaviour in a systematic way. However, it is argued that the opposite is not reasonable. It is not sensible to posit that senior executive behaviour of any type will systematically influence or be antecedent to the personality of that leader. The issue of reverse causality is therefore not tested in this thesis.

7.3 Summary of Thesis Hypotheses

Hypotheses developed earlier are summarised in Table 7.2 below. Hypotheses one, two and three were developed in Chapter Four; hypotheses four to eight were developed in Chapter Five; and hypothesis nine was developed in Chapter Six. Please refer to those chapters for the arguments supporting these hypotheses.

7.4 Research Studies

To explore the research questions a sequence of two studies was conducted. The purpose of the first study was to replicate and extend previous working linking Big Five personality components with transformational leadership behaviour. This allowed the testing of hypotheses one, two, three and 9(1), 9(2) and 9(3), which directly address the research question of this thesis. The first study involved the collection of survey data from senior Australian executives. Executives and their subordinates completed the relevant versions of the MLQ. The executives also
completed a brief demographic survey and the HPI. The sample and data collection scales were analysed, hypotheses were tested and results were reported in Chapter Eight.

Table 7.2

Summary of HPI & HDS components and related thesis hypotheses

<table>
<thead>
<tr>
<th>Components</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>adjustment *</td>
<td></td>
</tr>
<tr>
<td>ambition</td>
<td>1: Ambition will positively predict charisma.</td>
</tr>
<tr>
<td>sociability *</td>
<td></td>
</tr>
<tr>
<td>likeability *</td>
<td></td>
</tr>
<tr>
<td>prudence</td>
<td>2: Prudence will negatively predict charisma.</td>
</tr>
<tr>
<td>intellectance</td>
<td>3: Intellectance will positively predict charisma.</td>
</tr>
<tr>
<td>school success*</td>
<td></td>
</tr>
<tr>
<td>mischievous</td>
<td>8: Mischievous will negatively predict charisma.</td>
</tr>
<tr>
<td>bold *</td>
<td></td>
</tr>
<tr>
<td>reserved *</td>
<td></td>
</tr>
<tr>
<td>sceptical</td>
<td>5: Sceptical will negatively predict charisma.</td>
</tr>
<tr>
<td>cautious</td>
<td>4: Cautious will negatively predict charisma.</td>
</tr>
<tr>
<td>excitable *</td>
<td></td>
</tr>
<tr>
<td>imaginative</td>
<td>6: Imaginative will positively predict charisma.</td>
</tr>
<tr>
<td>colourful</td>
<td>7: Colourful will positively predict charisma.</td>
</tr>
<tr>
<td>dutiful *</td>
<td></td>
</tr>
<tr>
<td>diligent *</td>
<td></td>
</tr>
<tr>
<td>leisurely *</td>
<td></td>
</tr>
<tr>
<td>9: Self-subordinate rating agreement will moderate the prediction of charisma by personality component X.</td>
<td></td>
</tr>
</tbody>
</table>

* components where no relationship was expected and no hypothesis was offered.

The purpose of the second study was to extend study one of this thesis. Little appears to be known about personality disorder and transformational leadership. This study therefore extends work on the prediction of transformational leadership into new territory. For that reason this study should be regarded as exploratory. This study is designed to test hypotheses four through to eight and 9(4) through to 9(8). The second study involved collection from a further sample of the same target subject.
group. The subject leaders and their subordinates also completed the MLQ. The leaders completed the HDS instead of the HPI. The sample and data collection scales were analysed, hypotheses were tested and results presented in Chapter Nine of this thesis.

7.5 Chapter Conclusion

After briefly re-visiting the purpose of this thesis general methodological issues impacting on this research and the design of the studies to test the hypotheses were discussed. Hypotheses were summarised in Table 7.2. The program of two studies designed to test these hypotheses was then reviewed. The next two chapters, 8 and 9, discuss the studies in which the above hypotheses, which directly relate to the research questions of this thesis are tested. Chapter 10 is a discussion of the research results, the limitations of this work, and recommendations for further research.
CHAPTER 8

STUDY 1:

PREDICTON OF CHARISMA USING FIVE FACTOR MODEL PERSONALITY COMPONENTS AND ASSESSMENT OF SELF-OTHER RATING AGREEMENT AS A MODERATOR OF THOSE PREDICTIONS

National surveys and leadership research have shown that leadership is an important contributor to organisational effectiveness and national economic well-being (Berger, Dertouzos, Lester, Solow, & Thurow, 1989; Karpin, 1995). Day and Lord (1986), in a meta-study of executive leadership and organisational performance, found that up to 45% of an organisation’s performance is a function of top management leadership. Leadership is, therefore, an important subject and a popular focus of investigation in the applied psychology literature (Hogan, Curphy, & Hogan, 1994).

In the last 20 years one theoretical perspective has come to dominate the leadership research literature. The importance of the transformational leadership model is that it appears to describe a set of leader behaviours that have been repeatedly shown to increase the impact of leadership on followers and on organisational outcomes (Bass, 1998). Inspired by Burns’ (1978) work, Bernard Bass (1985) developed a transformational leadership model he called the full range of leadership theory. Components of the full range of leadership model were measured by means of the Multifactor Leadership Questionnaire (MLQ) (Avolio, Bass, & Jung, 1995). Research using the MLQ has shown that transformational leadership is related to improved leadership outcomes across a wide range of contexts and cultures. The full range of leadership model measured by the MLQ was selected for use in this thesis. Transformational leadership was measured using the average of subordinates’
MLQ ratings. Previous studies have found that the five transformational components of the MLQ are closely related and may be aggregated for hypothesis testing (Judge & Bono, 2000). Later work revealed that an aggregation of two MLQ transformational components, viz., idealised behaviour and inspirational motivation aggregated as a variable called charisma may be superior. In a large meta study relating measures of personality to measures of transformational leadership charisma was shown to yield higher correlation levels with personality components than variables calculated from other combinations of the five transformational MLQ components (Bono & Judge, 2004).

Some authors state that transformational leadership is a behavioural process capable of being taught, learned and managed (Barling, Weber, & Kelloway, 1996; Tichy & Devanna, 1986). Senior managers can learn the behaviours required to be transformational with attendant increase in the probability of positive outcomes (Bass, 1998). But, not all studies have found a consistent relationship between transformational leadership behaviour and leader performance (Ross & Offermann, 1997). Moreover, not all leaders behave transformationally in all situations (Lewis, 1996). It is argued that it is important to better understand predictors of transformational behaviour in order to facilitate its wider application.

Leadership literature provides clues to the answer to the important question of predictors. Some researchers have acknowledged that differences in transformational leadership behavioural capability can be traced to personal attributes or characteristics (Avolio & Gibbons, 1988). Calls have been made for more research on leader selection based on personality traits (Yukl & Van Fleet, 1992). Bass (1990) has commented on the resurgence in interest in personal factors of leaders. He pointed out that there is widespread folk belief that leader personalities are important in
leadership but comments that, as yet, there seems little strong empirical support linking personal attributes to transformational behaviour, highlighting the need for research in this area. Kuhnert and Lewis (1987) suggested that leader personal attributes may lead to the formation of transformational leadership style. Some researchers have advocated the use of personality to provide a more broadly applicable base for leadership theory (Bycio, Hackett, & Allen, 1995; Hogan et al., 1994). Lord et al. (1986) reanalysed previous leadership and personality trait research by Mann (1959) in an extensive meta-analysis. The authors found that leadership perceptions were associated consistently and to a high degree with leader personality. Lord et al. (1986) concluded that the study of personality with respect to leadership should be resurrected. It is argued in this thesis that personality components may predict transformational leadership behaviour. This thesis therefore reviewed three different conceptions of personality, viz., Chapter Four the Five Factor Model, Chapter Five personality disorders, and Chapter Six self-subordinate rating agreement as a moderator of other predictions.

Recently one model of personality, known as the Five Factor Model, has become widely (Digman, 1996), though not universally (Block, 1995), accepted. The Five Factor Model was reviewed in Chapter Four and identified as a suitable model for use in this thesis to replicate prior research on the prediction of transformational leadership behaviour by personality. The HPI (Hogan & Hogan, 1995) was selected as the Five Factor Model measurement instrument for this thesis.

A meta-analysis included 14 studies that related Five Factor Model personality components to transformational leadership (Judge & Bono, 2000). In that study corrected Pearson correlation coefficients between transformational leadership behaviour, measured by subordinate ratings of the leader using the MLQ, were
significant at the .01 (two tailed) level for extraversion ($r_c = .28$), openness to experience ($r_c = .26$), and agreeableness ($r_c = .32$). Corrected standardised regression coefficients were significant for extraversion ($\beta_c = .20, \rho < .05$ one tailed) and agreeableness ($\beta_c = .28, \rho < .01$ two tailed). These results demonstrated lower effect size than the authors’ expectations but were similar to results found in previous studies (Barrick, Day, Lord, & Alexander, 1991; Barrick & Mount, 1991). It is argued here that the subject group of the Judge and Bono (2000) meta study may have mixed different levels of leaders creating the possibility that some effects were averaged out and others created as artefacts of the data. Lim and Ployhart (2004) replicated Judge and Bono’s (2000) study with Asian military leaders. They found that neuroticism and agreeableness negatively predicted transformational leadership behaviour ($\beta = -.29, \rho < .10$ and $\beta = -.30, \rho < .10$ both one tailed) respectively. It is argued that with Bonferroni correction for five variables entered into the multiple regression none of the above results were significant at the required .01 level for a study with required alpha set at .05.

Judge and Bono’s (2000) meta study results further indicated that specific sub-factors of the Five Factor Model traits, facets of the NEO-PI in their case, predicted transformational leadership less well than the general constructs. This finding is also consistent with prior research (Barrick et al., 1991; Barrick & Mount, 1991). Based on this latter finding, only principal factors of the HPI were employed as independent variables to investigate the relevant hypotheses that were developed in Chapter Seven of this thesis.

The small effect size of the research findings reviewed above indicates that something more than a Five Factor Model approach may be required if a larger portion of the variance in transformational leadership behaviour is to be explained. In
Chapter Six of this thesis the personality construct self-subordinate rating agreement was introduced both as a possible moderator of the relationship between Five Factor Model factors and transformational leadership behaviour.

The construct self-subordinate rating agreement was shown in Chapter Six of this thesis to be a similar construct to the more recently developed constructs self-monitoring (Snyder, 1974), self awareness (Atwater & Yammarino, 1992), managerial self awareness (Church, 1997), and socio-political intelligence (Hogan & Hogan, 2002). Transformational leadership behaviour, as defined in Chapter Two of this thesis, has been described as lifting both leader and follower onto a higher plane of involvement and commitment along with the rest of the organisation (Avolio, 1999). Some authors have suggested that leaders with higher self-subordinate rating agreement ability appear similar to transformational leaders as defined in this thesis (Cangemi & Martray, 1975). A number of authors have argued that self-subordinate rating agreement is a measure of a personal attribute or attributes of a leader and that that attribute contributes to achieving managerial excellence (Ashford & Tsui, 1991; McCall, Lombardo, & Morrison, 1988). Church (1997) defined managerial self awareness, shown in Chapter Six to be a construct as self-subordinate rating agreement, as: “the ability to reflect on and accurately assess one's own behaviours and skills as they are manifested in workplace interactions” (p. 281).

Transformational leaders were defined in this thesis as leaders who were rated more highly by their subordinates on transformational leadership behaviours. It is argued here that such leaders may have a well-developed self-subordinate rating agreement characteristic. The dispositional characteristic self-subordinate rating agreement was operationalised as congruence between MLQ self ratings and the mean of subordinates’ MLQ ratings.
Atwater and Yammarino (1992) found that self-subordinate rating agreement moderated the relationship between predictors of transformational leadership behaviour and transformational leadership behaviour. A study of high versus average performing managers showed that the high performers, i.e., those rated more highly by their managers, had higher levels of managerial self-awareness, viz., congruence between self and direct reports' behavioural ratings (Church, 1997). In a study of managers that investigated relationships between emotional intelligence, personality and transformational leadership, it was found that the relationship varied as a function of the self-subordinate rating agreement of the focal manager (Sosik & Megerian, 1999). In a study of middle level staff officers in a public agency managerial self-subordinate rating agreement was found to contribute significantly to relationship management aspects of individual effectiveness (Church & Waclawski, 1999).

Based on the studies reviewed above, this thesis argued in Chapter Six that the personality characteristic self-subordinate rating agreement may moderate the prediction of transformational leadership behaviour by Five Factor Model components.

The remainder of this chapter discusses the first of two studies reported in this thesis. The present study investigated hypothesised predictions developed in Chapter Four and Chapter Six for senior Australian organisational leaders. This study replicated previous work investigated the prediction of transformational leadership behaviour by Five Factor Model components. The study extended previous work and made original contributions in four ways. Firstly, it employed the Hogan Personality Inventory as the measure of Five Factor Model personality variables. Secondly, this study focused on a specific cohort of managers, namely, senior organisational managers. Thirdly the study was focused on Australian senior managers. Finally, the
The intervening nature of self-subordinate rating agreement on the prediction of transformational leadership behaviour by Five Factor Model components was assessed.

8.1 Method

8.1.1 Subjects

For this study a final sample of 279 useable responses was obtained. 400 questionnaires were printed; 309 were issued; 304 were completed and returned, and 279 of these were useable in that they met the following criteria: informed consent signed (appendix 1), questionnaire booklets completed by focal leaders sufficiently for valid HPI and MLQ results, and valid MLQ subordinate rater questionnaire data returned. The response rate was 90% of those issued and 92% of those returned. It is argued that the high response rates were assisted by the data collection method.

Subject demographic data was collected on a Brief Demographic Questionnaire form designed for the purpose (appendix 2). Date, name, and position data were collected for administrative purposes only. Age, gender, highest education level reached and job classification level data were sought to validate the leadership level focus of the sample.

Subject leaders were all drawn from large public and private organisations. Participating organisations were all large and multi-level such that executives who did not report directly to a CEO, or the equivalent position, were still senior executives, not middle or junior executives. The seminars and programs used for the data gathering for this thesis were specifically for senior executives. Middle and junior level managers were deliberately and actively screened from attendance. Based on
the proposition that different levels of managers have different challenges other workshops were provided for the other levels of managers. It is therefore argued that all of the participants in this research can be regarded as senior executives. It is further argued that the sample is indicative of the Australian senior organisational leadership population and adequate for the work being undertaken here. It is not claimed that the sample is representative of the Australian senior organisational leadership population.

8.1.2 Dependent Variable Measure

The full range of leadership model (Bass, 1985) was used in this study. The model was operationalised by means of the MLQ (Bass & Avolio, 1997). It was argued in Chapter Two that the MLQ (Avolio et al., 1995), completed by subordinates of each subject leader using the MLQ Rater form, offered an adequate instrument to measure transformational leadership behaviour, which was the dependent variable in this study.

The MLQ (Rater Form 5X-Short) is a 45 item rater-assessment questionnaire designed for research and commercial use that asks others, in the case of this study subordinate employees, to score individual leaders against nine leadership factors and three leadership outcome factors. A sample question from the rater questionnaire was: "Fails to interfere until problems become serious." The MLQ (Leader Form 5X-Short) is the leader self rating form of the questionnaire. A sample question from the leader self-assessment questionnaire was: "I fail to interfere until problems become serious." In both forms of the MLQ four questions loaded onto each of the five transformational, three transactional, and one non-transactional component. Nine questions evaluated three leadership outcome components. Item scoring was a five point Likert-like scale. Responses ranged from: 0. Not at all, 1. Once in a while, 2.
Sometimes, 3. Fairly often, to 5. Frequently if not always. MLQ scoring was done by the MLQ organisation. Published descriptive statistics on the MLQ revealed scale reliabilities ranging from 0.74 to 0.94 all exceeding standard cut offs (Avolio et al., 1995). These statistics were presented across nine data sets demonstrating the reliability of the instrument. Discriminant validity of the instrument was classified as acceptable (Bass & Avolio, 1997). Published intercorrelation between the five transformational factor scales was .83 and between idealised behaviour and inspirational motivation, the two components of charisma, it was .86 (Bass & Avolio, 1997).

8.1.3 Independent Variable Measures

A basic proposition of this study is that aspects of a leader’s personality predict transformational leadership behaviour. Personality as evaluated by Five Factor Model principal components was investigated as an independent variable set and personality as self-subordinate rating agreement was investigated as a moderator of predictions of charisma by Big Five components.

8.1.3.1 Five Factor Model of Personality

The Hogan Personality Inventory, Second Edition (HPI) (Hogan & Hogan, 1995), was selected as the measure for use in this thesis. This thesis argues that the HPI offered unique advantages in this study for three reasons. First it contained an implicit integrity scale the utility of which for screening low validity responses had been validated by independent research (Ones & Viswesvaran, 1999). Second, the item pool of the HPI had been specifically designed for organisational use. This presented respondent leaders with familiar non-clinical questions. It was argued that this was vital for response rate in this thesis given the apparent aversion to completion of clinical instruments found in pilot study of this first study. Third, there had been
little HPI based prior published research on the prediction by personality of senior
transformational leadership behaviour. A possible disadvantage of the HPI was that
the scoring methodology was kept secret. Since analysis in this thesis was conducted
at the primary factor level in line with previous work (Judge & Bono, 2000; Lim &
Ployhart, 2004; Bono & Judge, 2004), it is argued that the scoring method did not
pose a problem for this research.

Hogan (1995) constructed the self-scored HPI, based on his seven factor
interpretation of the Five Factor Model (Hogan, 1982). The HPI used was a 206 item
pencil and paper questionnaire in which respondents designated true or false to each
item statement. A typical statement was, “My success depends upon how others
perceive me.” The 206 items were divided into 43 homogeneous item composite
subscales, which in turn loaded onto seven principal Five Factor Model components.
An integrity or validity result, which was designated only as valid response/invalid
response, was also reported. Only valid responses were used in this thesis. Primary
scale item make up varied from 37 items, made up of eight homogeneous item
composites, for adjustment, to 14 items, made up of four homogeneous item
composites, for school success. Published coefficient alpha statistics (Cronbach,
1951) for the scales varied from a high of .89 for adjustment to an adequate .71 for
likeability. The construct validity of each of the scale constructs had been established
by comparing HPI results with MMPI and other test results (Hogan & Hogan, 1995,
p. 19). Analysis had shown that the scales did not exhibit any racial or gender bias
(Hogan & Hogan, 1995). On the basis of the above psychometric properties it is
argued that the HPI was a statistically adequate measure of Five Factor Model
components.
8.1.3.2 Self-Subordinate Rating Agreement

The self-subordinate rating agreement dispositional variable, proposed as a moderating variable, was discussed in Chapter Six. To avoid common method variance issues, the components of the MLQ used as the dependent variable in this study were not used in the calculation of self-subordinate agreement. Selection of which MLQ components used to calculate the dependent variable and separately for the calculation of self-subordinate agreement variable is resolved later in this chapter.

8.1.4 Procedure

Data were gathered from subjects who were attending training or planning seminars. Leader and subordinate MLQ data were gathered by mail prior to the workshop as a part of workshop pre-work. For each subject the subordinate ratings gathered for that subject were averaged to provide one composite subordinate rating in line with recommended practice (Atwater, Ostroff, Yammarino, & Fleenor, 1998). Demographic and HPI questionnaires were administered at the beginning of the seminar after a brief introduction to the research and clear explanation of the voluntary nature of responses and the need to complete informed consent. Once completed questionnaires had been collected at a seminar a more thorough explanation of the research, including theories of leadership that had led up to the posing of the research questions, was undertaken. In cases where the seminar was specifically for leadership training the theories surrounding this research were often used as a central conceptual pillar of the workshop. It was argued that this data collection method positively influenced the response rate.

Submitted leader and rater questionnaires were evaluated for completeness. Follow-up of subject leaders was undertaken where leader questionnaire completion deficits were judged to be minor. No follow-up was attempted for subordinate rater
Data were imported into SPSS (Version 11.0) for calculation and statistical analysis.

8.2 Results

Data were first manually scanned and maximum and minimum scores calculated for each variable to check for obvious data entry errors. One obvious error was detected and corrected from original data.

8.2.1 Sample Demographics

The sample consisted of 279 subject leaders and 1199 of their subordinates gathered across 13 separate senior leader training events. The subject leader sample consisted of 189 males and 90 females (32.3%). 193 subjects (69%) reported age information. The overall average age was 44.7 years ($SD = 6.4$), ages ranged from 27 years to 60 years. The mean for the 54 females who reported age was 43.1 years ($SD = 6.5$) with a minimum of 27 years and a maximum of 56 years. For 139 males the average age was 45.4 years ($SD = 6.3$) with a minimum of 33 years and a maximum of 60 years.

262 subjects (94%) reported the highest formal education level they had attained. In the whole sample reported achievement and frequencies varied across: high school 9, technical school 5, diploma 12, bachelor’s degree 145, master’s degree 78, and doctorate 13. For males the educational achievement was: high school 4, technical school 4, diploma 10, bachelor’s degree 101, master’s degree 53, and doctorate 7. For females the educational achievement was: high school 5 (55%), technical school 1 (20%), diploma 2 (20%), bachelors degree 44 (31%), masters degree 25 (32%), and doctorate 6 (46%). Women were slightly better educated than
men in that they were under represented in the lower education categories and slightly over represented in the higher education categories.

Three categories were provided for subjects to identify the level of their organisational leadership role. The levels and frequencies of response for the 265 subjects (95%) who supplied this information were: CEO 3, Executive/CEO direct report 119, and Executive non CEO direct report 143. The latter category included person between two and four levels below the CEO in large organisations. It is here argued that these subjects can all be validly considered to be senior managers. For 83 females the levels supplied were: CEO 0, Executive/CEO direct report 26, and Executive non CEO direct report 57. For males the levels supplied were: CEO 3 (100%), Executive/CEO direct report 93 (78%), and Executive non CEO direct report 86 (60%). Males were generally of a higher level in that they were over represented in the higher level categories and under represented in the lower level categories.

8.2.2 Scale Reliability

Scale reliability was evaluated by calculating coefficient alpha (Cronbach, 1951) with SPSS 11.0. MLQ reliability was calculated for the two scale components used to calculate the dependent variable. For the subordinate data the two factor scale yielded an acceptable scale reliability of alpha = .86. For the three scale components used to calculate the self and subordinate variables reliabilities were calculated using the self rating and subordinate rating MLQ data respectively. Reliabilities found were an acceptable .76 and .88 respectively. HPI reliability was calculated using the 29 homogeneous item composites that make up the five primary scales employed in this research as input. This calculation yielded an acceptable Cronbach alpha of .80.
8.2.3 MLQ Scale Inter-Correlations

The MLQ measures 12 components. From full range of leadership theory (Bass, 1985, 1991) the five behavioural transformational factors are: idealised attributes, idealised behaviour, inspirational motivation, intellectual stimulation, and individualised consideration. The transactional factors are: contingent reward, management by exception – active and management by exception – passive. The non-transactional factor was laissez faire. There were three outcome factors: extra effort, effectiveness, and satisfaction. More detail and explanation of these factors was provided in Chapter Two of this thesis.

Pearson correlations between the MLQ factors were calculated using SPSS 11.00 (Table 8.1). The high positive intercorrelations between the first five of the nine behavioural factors, and for the three outcome factors, were as expected from the MLQ Technical Manual (Avolio et al., 1995). These correlations support the proposition that two or more transformational behaviour components could be combined into one aggregate dependent variable. Exactly which components are to be used is discussed later in this chapter. The high correlations between the three self (Table 8.2) and, separately, the three subordinate (Table 8.1) outcome components can be likewise combined into one self-subordinate rating agreement factor. The method used for this calculation is discussed later in this chapter.
Table 8.1

Intercorrelations between MLQ subscales for study one subordinate responses

<table>
<thead>
<tr>
<th>Subscale</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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<tr>
<td>Idealised attributes</td>
<td>279</td>
<td>3.02</td>
<td>.47</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idealised behaviour</td>
<td>279</td>
<td>2.91</td>
<td>.49</td>
<td>.65</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>279</td>
<td>3.07</td>
<td>.50</td>
<td>.68</td>
<td>.76</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>279</td>
<td>2.93</td>
<td>.42</td>
<td>.68</td>
<td>.57</td>
<td>.57</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualised consideration</td>
<td>279</td>
<td>2.81</td>
<td>.51</td>
<td>.76</td>
<td>.61</td>
<td>.65</td>
<td>.73</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contingent reward</td>
<td>279</td>
<td>2.89</td>
<td>.49</td>
<td>.70</td>
<td>.57</td>
<td>.65</td>
<td>.66</td>
<td>.76</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBE* - active</td>
<td>279</td>
<td>1.66</td>
<td>.59</td>
<td>-.07</td>
<td>.01</td>
<td>-.11</td>
<td>-.07</td>
<td>-.13**</td>
<td>-.01#</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBE* - passive</td>
<td>279</td>
<td>1.03</td>
<td>.57</td>
<td>-.28</td>
<td>-.21</td>
<td>-.19</td>
<td>-.26</td>
<td>-.25</td>
<td>-.29</td>
<td>.09#</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Laissez faire</td>
<td>279</td>
<td>0.65</td>
<td>.44</td>
<td>-.47</td>
<td>-.31</td>
<td>-.33</td>
<td>-.39</td>
<td>-.45</td>
<td>-.46</td>
<td>.10#</td>
<td>.49</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Extra effort</td>
<td>279</td>
<td>2.69</td>
<td>.47</td>
<td>.66</td>
<td>.55</td>
<td>.58</td>
<td>.60</td>
<td>.62</td>
<td>.57</td>
<td>-.10#</td>
<td>-.28</td>
<td>-.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>279</td>
<td>3.18</td>
<td>.37</td>
<td>.67</td>
<td>.42</td>
<td>.54</td>
<td>.54</td>
<td>.60</td>
<td>.60</td>
<td>-.03#</td>
<td>-.35</td>
<td>-.53</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>279</td>
<td>3.21</td>
<td>.44</td>
<td>.70</td>
<td>.43</td>
<td>.50</td>
<td>.51</td>
<td>.63</td>
<td>.55</td>
<td>-.14*</td>
<td>-.30</td>
<td>-.50</td>
<td>.66</td>
<td>.82</td>
<td></td>
</tr>
</tbody>
</table>

All correlations significant at .01 level (2 tailed) except: # correlations not significant, ** correlations significant at .05 level (2-tailed).

*MBE = management by exception
Table 8.2

Intercorrelations between study one MLQ self rating outcome components

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>279</td>
<td>2.78</td>
<td>.56</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>279</td>
<td>3.16</td>
<td>.47</td>
<td>.53</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>279</td>
<td>3.16</td>
<td>.52</td>
<td>.44</td>
<td>.61</td>
<td>-</td>
</tr>
</tbody>
</table>

all correlations significant at .01 level (2-tailed).

8.2.4 Variable Construction from MLQ Components

In this study MLQ data was put to two separate uses: calculation of the transformational behaviour dependent variable, charisma, and calculation of a self-subordinate agreement moderating variable. These two different uses of MLQ data are discussed separately below.

8.2.4.1 Dependent Variable

Subordinate ratings of transformational behaviour were used as the dependent variable transformational leadership behaviour. Following Bono and Judge (2004), the variable charisma was calculated as the mean of the MLQ subordinate scale components idealised behaviour and inspirational motivation. These two components were factor analysed to investigate whether they could be aggregated for use as a single dependent variable in further analysis.

A principal components analysis of the two subordinate MLQ transformational components idealised behaviour and inspirational motivation was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity (Table 8.3). The factor, Eigenvalue = 1.76, consisted of MLQ components 2 and 3 with...
component loadings equalling .94. This factor explained 88.0 percent of the variance. This analysis confirmed that the two transformational factors could be productively combined into one aggregate transformational leadership behaviour factor. That factor is called (subordinate rated) charisma, which henceforth in this chapter is synonymous with transformational leadership behaviour.

Table 8.3
Component matrix of principal components analysis of idealised behaviour and inspirational motivation transformational variables of the subordinate rated MLQ scale

<table>
<thead>
<tr>
<th>Component 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>idealised behaviour</td>
</tr>
<tr>
<td>inspirational motivation</td>
</tr>
</tbody>
</table>

8.2.4.2 Self-Subordinate Rating Agreement Variable

Ten MLQ components remained unused when the components for the dependent variable were put aside. Argument for the selection of the three components, designated as outcome factors in full range of leadership theory, to be aggregated to create the self-subordinate agreement variables was presented in Chapter Seven.

A principal components analysis of the three self rated MLQ outcome components was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity. The factor, Eigenvalue = 2.06, consisted of the three MLQ self rated outcome components with component loadings varying from .78 to .87 (Table 8.4). This factor explained 68.7 percent of the variance. This analysis
confirmed that the three outcome factors could be productively combined into one agreement variable.

Table 8.4

Component matrix of principal components analysis of the three outcome variables of the self and subordinate rated MLQ scales

<table>
<thead>
<tr>
<th>Component</th>
<th>Self</th>
<th>Subordinate</th>
</tr>
</thead>
<tbody>
<tr>
<td>extra effort</td>
<td>0.78</td>
<td>0.86</td>
</tr>
<tr>
<td>effectiveness</td>
<td>0.87</td>
<td>0.93</td>
</tr>
<tr>
<td>satisfaction</td>
<td>0.83</td>
<td>0.92</td>
</tr>
</tbody>
</table>

A further principal components analysis of the three subordinate MLQ outcome components was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity. The factor, Eigenvalue = 2.44, consisted of all three MLQ outcome components, with component loadings varying from .86 to .93 (Table 8.4). This factor explained 81.4 percent of the variance. This analysis confirmed that the three subordinate outcome factors could be productively combined into one agreement variable.

The remaining MLQ components were not used.

8.2.4.3 Five Factor Model Independent Variables

Bi-variate correlations between the five primary scale variables of the HPI to be used in this study were computed using SPSS 11. The results are presented in Table 8.5. They were compared with published HPI primary scale intercorrelations.
The pattern of correlations was similar to that expected from the validation data presented in the HPI manual.

Table 8.5
Intercorrelations between study one HPI primary scale components

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>279</td>
<td>24.78</td>
<td>6.50</td>
<td>-</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2</td>
<td>279</td>
<td>23.33</td>
<td>4.19</td>
<td>0.46**</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>279</td>
<td>13.14</td>
<td>4.90</td>
<td>0.15*</td>
<td>0.43**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>279</td>
<td>17.86</td>
<td>3.11</td>
<td>0.33**</td>
<td>0.28**</td>
<td>0.43**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>279</td>
<td>17.88</td>
<td>4.69</td>
<td>0.19**</td>
<td>-0.02</td>
<td>-0.32**</td>
<td>0.14*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>279</td>
<td>13.90</td>
<td>4.60</td>
<td>0.17**</td>
<td>0.24**</td>
<td>0.39**</td>
<td>0.29**</td>
<td>-0.20**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>279</td>
<td>9.09</td>
<td>2.80</td>
<td>0.08</td>
<td>0.21**</td>
<td>0.07</td>
<td>0.10</td>
<td>0.10</td>
<td>0.31**</td>
<td>-</td>
</tr>
</tbody>
</table>

** p < .01 (2 tailed)
* p < .05 (2 tailed)
SS = school success

8.2.5 Testing the Hypotheses

All of the regression checks and tests mentioned in Chapter Seven were made in the process of running the regression analyses described below. Specific results are presented below.

8.2.5.1 Regression Variable Calculations and Parameters

Regression variables calculated in SPSS and variables from input data are in described in narrative form below and summarised in Tables 8.6, and 8.7.

The transformational leadership behaviour dependent variable charisma was calculated within SPSS 11 by taking the mean of the two transformational behaviour variables. Relevant descriptive statistics were: mean 2.99, median 3.00, standard deviation .46, skewness -.64 with a standard error of .15, kurtosis was .78 with a
standard error of .29, minimum 1.10, and maximum 4.00. It is argued here that the transformational leadership behaviour variable is statistically adequate for the regression analyses to be performed in this thesis.

To estimate self-subordinate rating agreement an absolute difference score was calculated according to the formula: \[ Da = \sqrt{\frac{\Sigma (m_{self} - m_{other})^2}{N}} \], where \( m_{self} \) and \( m_{other} \) are the self completed scale measure and the mean of scale measures completed by subordinates respectively. The MLQ outcome components, extra effort, effectiveness, and satisfaction, were used to calculate the difference score. Relevant descriptive statistics for the absolute difference score variable were: mean .52, median .45, standard deviation .26, skewness .72 with a standard error of .15, kurtosis was .19 with a standard error of .29, minimum .00, and maximum 1.43. It is argued here that the absolute difference score variable was adequate for the analyses to be performed in this thesis.

Three of the HPI principal factors were used as an independent predictor variables. Statistics for each of these variables are reported in narrative form below and summarised in Table 8.6.

Relevant descriptive statistics for the ambition independent variable were: mean 23.33, median 24.00, standard deviation 4.19, skewness -.89 with a standard error of .15, kurtosis was .56 with a standard error of .29, minimum 7, and maximum 29. It is argued here that the ambition variable was adequate for the regression analyses to be performed in this thesis.

Prudence independent variable descriptive statistics were: mean 17.88, median 18.00, standard deviation 4.69, skewness .15 with a standard error of -.36, kurtosis was -.35 with a standard error of .29, minimum 5, and maximum 28. It is argued here
that the prudence variable was adequate for the regression analyses to be performed in this thesis.

Intellectance independent variable descriptive statistics were: mean 13.90, median 14.00, standard deviation 4.60, skewness -.09 with a standard error of .15, kurtosis was -.63 with a standard error of .29, minimum 3, and maximum 23. It is argued here that the intellectance variable was adequate for the regression analyses to be performed in this thesis.

Table 8.6
Descriptive statistics of the HPI primary factor variables

<table>
<thead>
<tr>
<th></th>
<th>ambition</th>
<th>prudence</th>
<th>intellectance</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>279</td>
<td>279</td>
<td>279</td>
</tr>
<tr>
<td>Mean</td>
<td>23.33</td>
<td>17.88</td>
<td>13.90</td>
</tr>
<tr>
<td>Median</td>
<td>24</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>4.19</td>
<td>4.69</td>
<td>4.60</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.89</td>
<td>-0.26</td>
<td>-0.09</td>
</tr>
<tr>
<td>SE of Skewness</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.56</td>
<td>-0.36</td>
<td>-0.63</td>
</tr>
<tr>
<td>SE Kurtosis</td>
<td>0.29</td>
<td>0.29</td>
<td>0.29</td>
</tr>
<tr>
<td>Minimum</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Maximum</td>
<td>29</td>
<td>28</td>
<td>23</td>
</tr>
</tbody>
</table>

The four remaining HPI components were not the subject of hypotheses in this thesis.
8.2.5.2 Testing Direct Relationship Hypotheses

Hypotheses one to three (see Table 7.2 for a summary of hypotheses) referred to prediction of transformational leadership behaviour by each the Five Factor Model components. These hypotheses were evaluated by multiple regression within SPSS 11.0. Table 8.6 summarised the HPI regression variable parameters.

The aggregate dependent variable transformational leadership behaviour variable was scatter plotted against each of the Five Factor Model components. Apparent outlier cases were inspected for apparent abnormalities. None were found so the cases were all left in the sample because no practical reason for their removal could be found. Previous research has recommended that a multivariate framework rather than a bivariate framework be used to evaluate Five Factor Model components because in practice the various components influence individual behaviour in combination (Murphy, 1996; Lim & Ployhart, 2004). The dependent variable charisma was therefore regressed on the seven HPI principal personality variables. SPSS Casewise Diagnostics set to detect univariate outlier beyond three standard deviations found no such outliers. No obvious pattern appeared in the scatterplot of standardised residuals against standardised predicted values indicating that assumptions of linearity and homogeneity of variance had been met (Figure 8.1).

The maximum Mahalanobis distance recorded in the regression calculation was 35.15, which was over the limit of Chi Squared = 24.32 for seven regression variables. Inspection of the frequency table indicated one multivariate outlier. Inspection of the case involved revealed no practical reason for removal of the case and so it was left in the sample. Final sample size was n = 279. ANOVA analysis ($F (7,271) =6.00, p < .001$) indicated that a significant linear relationship was present. After Bonferroni correction the required significance level for acceptance was .007.
There were six significant Pearson correlation coefficients for relationships between the Five Factor Model components and the dependent variable charisma. They were: adjustment ($r = .11, p = .034$), ambition ($r = .28, p = .000$), sociability ($r = .11, p = .033$), likeability ($r = .12, p = .022$), prudence ($r = -.168, p = .002$), and school success ($r = .14, p = .011$).

Scatterplot
Dependent Variable: M23CHAR

Where: M23CHAR = charisma, numbers are case numbers

Figure 8.1
Whole sample scatterplot of standardised residuals and standardised predicted scores

Multiple linear regression coefficient betas were significant for five of the seven variables: ambition ($\beta = .27, p = .000$, 95% confidence interval (CI) bounds .011 to .036), likeability ($\beta = .12, p = .071$, 95% CI bounds -.001 to .031), prudence ($\beta = -.24, p = .000$, 95% CI bounds -.030 to -.009), intellectance ($\beta = -.12, p = .061$, .051 to .003).
95% CI bounds -.021 to .000), and school success ($\beta = .14, p = .025$, 95% CI bounds .002 to .034) Results are summarised in Table 8.7 below.

Adjustment did not predict charisma as was anticipated in Chapter Four. Ambition strongly predicted charisma, the prediction was significant after Bonferroni correction, and the 95 percent confidence levels did not include zero so hypothesis one can be accepted as expected. Sociability did not significantly predict charisma as was argued above in Chapter Four. Likeability predicted charisma at the .10 level but the 95 percent confidence interval included zero, the size of prediction was small, and, after Bonferroni correction the prediction failed to reach significance, likeability does not predict charisma as argued in Chapter Four. After Bonferroni correction prudence significantly negatively predicted charisma and the 95 percent confidence interval did not include zero so hypothesis two is accepted as was anticipated in Chapter Four. A small prediction of charisma by intellectance failed to reach significance after Bonferroni correction so, contrary to expectations, hypothesis three cannot be accepted. School success predicted charisma and the 95 percent confidence interval did not include zero but the prediction was not significant after Bonferroni correction. It is therefore concluded that school success did not predict charisma as argued in Chapter Four. These results are discussed in a later section of this chapter and again in the final chapter of this thesis.

8.2.5.3 Testing Moderating Variable Hypotheses

Hypotheses 9(X) all posit that self-subordinate rating agreement will moderate the prediction of transformational leadership behaviour by personality variables, viz., selected HPI primary factors. The moderating impact of self-subordinate rating agreement was tested by dividing the sample into two categories based on the absolute
difference score (Da). Two approximately equal Da categories were created by dividing the whole sample into two at the 50th percentile of Da. Transformational leadership behaviour was then regressed on the independent variables separately within each of the Da categories. The regression procedure within each category was identical to that followed in the previous section. Results for the whole sample and the two categories were then compared (Table 8.7).

The absolute difference score Da was calculated as described in section 8.2.5.1. In this study the variable was approximately normally distributed and had a mean of .50, median (50th percentile) .4482, standard deviation .25, skewness .80, and Kurtosis .387. The sample was divided into two categories above and below the median in order to create two categories with an approximately equal numbers of cases in each category. A high agreement score, i.e., Da < .4482, meant that the leader’s ratings and the subordinates’ ratings were similar suggesting that the leader had a high self-subordinate rating agreement attribute. A low agreement score, i.e., Da >= 4482, meant low self-subordinate rating agreement. The selection variable facility within SPSS Regression was used to select cases for a category. Regressions were run as before with the selection variable set as required. The two categories’ results were then compared with the results of the whole sample above to assess the presence of a moderating effect. Results are presented in narrative form below and are summarised for the whole sample, the high self-subordinate rating agreement category, and the low self-subordinate rating agreement category in Table 8.7.

8.2.5.3.1 High self-subordinate rating agreement.

To test hypotheses 9(X), where X varies from 1 to 3 referring back to hypotheses 1 to 3, multiple regressions were run in each of the two Da categories.
Comparison of results between the whole sample and each of the two categories was then used as evidence for drawing conclusions regarding hypotheses 9(X). The dependent variable was regressed on the HPI primary personality variables. To select the high self-subordinate rating agreement category sample cases were selected within SPSS Regression such that only cases with Da < .4482 were included in the sample.

SPSS Casewise Diagnostics set to detect univariate outlier beyond three standard deviations found no such outliers. No obvious pattern appeared in the scatterplot of standardised residuals against standardised predicted values indicating that assumptions of linearity and homogeneity of variance had been met (Figure 8.2).

The maximum Mahalanobis distance recorded in the regression calculation was 30.00, which was over the limit of $\text{Chi Squared} = 24.32$ for seven regression variables. The frequency table indicated one multivariate outlier. Inspection of the case involved revealed no practical reason for removal of the case and so it was left in the sample. Sample size was n = 140. ANOVA analysis ($F(7,132) = 3.69, p = .001$) indicated that a significant linear relationship was present. After Bonferroni correction the required significance level for acceptance was .007. There were six significant Pearson correlation coefficients for relationships between the Five Factor Model components and the dependent variable charisma. They were: ambition ($r = .23, p = .004$), sociability ($r = -.20, p = .010$), likeability ($r = -.17, p = .026$), prudence ($r = -.21, p = .006$), intellectance ($r = .15, p = .038$), and school success ($r = .14, p = .049$).

Multiple linear regression coefficient betas were significant for two of the seven variables: ambition ($\beta = .30, p = .005$, 95% confidence interval (CI) bounds .008 to .046), and prudence ($\beta = -.25, p = .009$, 95% CI bounds -.036 to -.005). Results are summarised in Table 8.7.
Where: M23CHAR = charisma, numbers are case numbers

Figure 8.2

High rating agreement sample scatterplot of standardised residuals and standardised predicted scores

8.2.5.3.2 Low self-subordinate rating agreement.

The above analysis was repeated for the low self-subordinate rating agreement category, i.e., sample sorted such that only cases with Da >= .4482 were included. SPSS Casewise Diagnostics set to detect univariate outlier beyond three standard deviations found no such outliers. No obvious pattern appeared in the scatterplot of standardised residuals against standardised predicted values indicating that assumptions of linearity and homogeneity of variance had been met (Figure 8.3).
Where: M23CHAR = charisma, numbers are case numbers

Figure 8.3

Low rating agreement sample scatterplot of standardised residuals and standardised predicted scores

The maximum Mahalanobis distance recorded in the regression calculation was 34.55, which was over the limit of $Chi^2 = 24.32$ for seven regression variables. The frequency table indicated one multivariate outlier. Inspection of the case involved revealed no practical reason for removal of the case and so it was left in the sample. Sample size was $n = 139$. ANOVA analysis ($F (7,131) = 3.26$, $p = .003$) indicated that a significant linear relationship was present. After Bonferroni correction the required significance level for acceptance was .007. There were four significant Pearson correlation coefficients for relationships between the Five Factor Model components and the dependent variable charisma. They were: adjustment ($r = .13, p = .063$), ambition ($r = .23, p = .004$), prudence ($r = -.14, p = .057$), and school success ($r = .13, p = .059$).
Linear regression coefficient betas were significant for four of the seven variables: ambition ($\beta = .26, p = .010$, 95% confidence interval (CI) bounds .005 to .039), prudence ($\beta = -.26, p = .006$, 95% CI bounds -.035 to -.006), intellectance ($\beta = -.28, p = .006$, 95% CI bounds -.037 to .006), and school success ($\beta = .17, p = .058$, 95% CI bounds -.001 to .046). Results are summarised in Table 8.7.

There was no apparent change in the strength or significance level of the prediction of charisma by adjustment. This is not surprising since no prediction was expected. Small variations occurred between the size of the beta factor in the prediction of charisma by ambition. Further, the results all remained significant after Bonferroni correction. Hypothesis 9(1) cannot therefore be accepted. For sociability results did not change obviously between the whole sample and the two Da categories. This again is not surprising since no prediction was expected. Results for likeability did not vary between the whole sample and the two Da categories. This is also not surprising since no prediction was expected. For prudence predictions remained strong and significantly negative with little variation across all three samples; so, contrary to expectations, hypothesis 9(2) cannot be accepted.

In the case of intellectance results were not significant after Bonferroni correction in the whole sample or the high agreement category, but were strong and significantly negative in the low rating agreement category meaning that hypothesis 9(3) can be accepted. Results for school success remained similar in magnitude and below the required level of significance in three categories, which is not surprising since no prediction was expected.
Table 8.7

Intercorrelations and regressions of transformational leadership behaviour on Five Factor Model components for the whole sample and two Da categories

<table>
<thead>
<tr>
<th></th>
<th>Whole Sample</th>
<th>Da &lt; .45 high self-subordinate rating agreement</th>
<th>Da &gt;= .45 low self-subordinate rating agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 279</td>
<td>N = 140</td>
<td>N = 139</td>
</tr>
<tr>
<td>Pearson r</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adjustment</td>
<td>.11**</td>
<td>.08</td>
<td>.13*</td>
</tr>
<tr>
<td>ambition</td>
<td>.28***</td>
<td>.32***</td>
<td>.23***</td>
</tr>
<tr>
<td>sociability</td>
<td>.11**</td>
<td>.20***</td>
<td>.01*</td>
</tr>
<tr>
<td>likeability</td>
<td>.12**</td>
<td>.17**</td>
<td>.08</td>
</tr>
<tr>
<td>prudence</td>
<td>-.17***</td>
<td>-.21***</td>
<td>-.14*</td>
</tr>
<tr>
<td>intellectance</td>
<td>.04</td>
<td>.15**</td>
<td>.07</td>
</tr>
<tr>
<td>school success</td>
<td>.14**</td>
<td>.14**</td>
<td>.13*</td>
</tr>
</tbody>
</table>

|                  |              |                                              |                                              |
|                  | Beta         |                                              |                                              |
| adjustment       | .11          | -.04                                         | .02                                          |
| ambition         | .27***       | .30***                                       | .26***                                       |
| sociability      | -.10         | -.14                                         | .10                                          |
| likeability      | .12*         | .15                                          | .13                                          |
| prudence         | -.24***      | -.25***                                      | -.26***                                      |
| intellectance    | -.12*        | .04                                          | -.28***                                      |
| school success   | .14**        | .10**                                        | .17*                                         |

|                  |              |                                              |                                              |
| Variance         |              |                                              |                                              |
| $R$              | .36          | .40                                          | .39                                          |
| $R^2$            | .11          | .16                                          | .15                                          |
| $F$              | 6.00***      | 3.69***                                      | 3.26***                                      |

* $p < .10$  ** $p < .05$, *** $p < .01$;

after Bonferroni correction $p < .01$ was required for significance

Table 8.7 contrasts regression results for the whole sample with those for the two Da categories. It is interesting to note that the explained variance of the whole regression model increased substantially for each of the two Da category samples from 11 percent of the whole sample to 16 and 15 percent respectively for the high
and low self-subordinate rating agreement categories. This suggests that the whole
model may have been moderated by self-subordinate rating agreement.

8.3 Discussion

Transformational leadership behaviour has been suggested as a means of
increasing organisational effectiveness (Bass, 1998). Yukl and Van Fleet (1992) have
called for more research on the selection of transformational leaders. It has been
shown that leaders can learn to behave transformationally (Barling, Weber, &
Kelloway, 1996). But few studies have cast light on the personal attributes a leader
may require to successfully become a senior transformational leader (Lim and
Ployhart, 2004).

8.3.1 Direct Prediction Hypotheses

The first purpose of this study was to examine predictors of transformational
leadership behaviour for senior organisational leaders from large business and
government organisations. It was argued in Chapter Four that adjustment would not
be related to transformational leadership behaviour for senior executives and no
relationship was found in this study. This finding is reasonable given the argument
that people who reach senior positions have most probably had the time and
experience necessary to learn to manager the impact of emotional stability on their
behaviour whatever their underlying level of adjustment. This argument is supported
by the emotional intelligence literature (Goleman, 1998; Goleman, Boyzatis, &
McKee, 2002), which argues that emotional intelligence skills can be learned.
Emotional intelligence skills include such things as: self-awareness skills, self-
managements skills, social awareness skills and relationship management skills. If
these skills can be learned and retained to be used in appropriate circumstances by
leaders then stakeholders’ experience of such leaders will not be influenced by the
leader’s underlying level of the personal attribute adjustment. This is consistent with the present findings.

This present finding adds to previous findings. Judge and Bono (2000) found no relationship; Ployhart et al. (2001) found a small positive relationship $r = .11$ to .19; Judge et al. (2002) found a negative relationship $r = -.24$; Lim and Ployhart (2004) found a negative relationship in typical performance contexts $r = -.29$ but no relationship in maximum performance context; and Bono and Judge (2004) found a negative relationship $r = -.17$. Unlike the present study none of the above studies were specifically focused on senior executives. The results suggest that emotional stability has little impact on subordinate ratings of charisma for senior leaders. This may be because senior leaders with emotional stability problems are eliminated from the ranks before reaching senior leadership roles; may learn to behave appropriately as part of their experiential career development; or may for some other reason simply be accepted by subordinates as transformational despite emotional stability issues. Further research is required to clarify these issues.

Adjustment is a measure of normal variation in emotional stability. The present finding says nothing of leaders whose emotional stability is outside the normal range. Widiger (2005) has argued that both poles of every five factor domain may include some maladaptive personality functioning. Further research is required to ascertain if more extreme emotional stability issues are related to transformational leadership behaviour.

In Chapter Seven it was argued that ambition would positively predict charisma and this was found in this study. Being ambitious is quite consistent with being transformational. It is argued that an ambitious person is likely to have a personal vision, to be motivated and enthusiastic, to strive to achieve, to develop
themselves as one means of achieving their personal goals, to achieve organisation
goals, and so on. In microcosm these behaviours are similar to behaviours required of
a transformational leader such as: have a vision, be a role model, be inspirational, try
new things and so on. This finding is consistent with previous findings for the more
general construct extraversion. Correlations reported in Chapter Four varied from .05
(Judge & Bono, 2000) to .31 (Lim & Ployhart, 2004). Variation in the findings may
have been because extraversion is a broader construct than ambition. The additional
facets that make up extraversion may each have different impacts on the nature of any
prediction found. There is a clear indication here that those senior executives who are
likely to be seen as transformational will also be ambitious. This has implications for
senior leader selection and development.

But ambition may get out of hand. Being overly ambitious was mentioned in
Chapter Five as a derailment factor (Lombardo, Ruderman, & McCauley, 1988). In
such extreme cases it is likely that a negative relationship would exist between
ambition and charisma. Over ambition may be a symptom of personality dysfunction
such as a personality disorder like narcissism. Under ambition may eliminate
candidates from senior executive ranks all together. Further work is required to check
the prediction of charisma by extreme manifestations of personality that may be
associated with ambition.

In the present study sociability did not predict charisma. This was expected
and argued in Chapter Four. The arguments here are similar to the arguments made
above for adjustment. It was argued in Chapter Four that persons intent on becoming
successful senior executives, i.e., ambitious people, will learn the interpersonal skills
they perceive are necessary to do the job as well as needed for them to achieve their
ambitions. As a result such people can and do reach senior levels regardless of their
underlying level of sociability. This proposition may be another reason why findings on extraversion have varied widely from negligible levels in previous studies. The dispositional gregariousness element of extraversion may be substituted by learned behavioural skills for those persons who perceive the need to learn interpersonal skills and not by others who are not motivated to learn the necessary skills. It is argued that persons aspiring to success in any level of management may be comparatively more motivated to learn how to deal with people effectively; moreover, many large organisations legitimise the learning of such skills by providing training in such skills for supervisors and managers of various levels.

Questions are again relevant about the likely impact of the poles of sociability. Widiger (2005) argued that very high or low extraversion may lead to disorders of interpersonal relatedness. It can be speculated that the low pole may be associated with disorders such as sceptical (paranoid) or reserved (schizoid), whereas the high pole may be associated with disorders such as colourful (histrionic). Further research is required to begin clarification of these issues.

Similar argument may also be applied to likeability. Previous findings have suggested that likeability was related to transformational leadership. But predictions have varied from positive .21 (Bono & Judge, 2004) to negative -.29 (Lim & Ployhart, 2004). In this study a small relationship was found ($r = .12$, $p < .05$) but prediction was not significant after Bonferroni correction. This finding was as expected in Chapter Four. It is argued that a leader scoring high on likeability may find a senior leadership role difficult unless they have learned to be assertive. This is because, given characteristics associated with a high likeability score documented in Chapter Four, any action that may result in her or his disapproval would potentially be stressful for the high likeability leader. A high likeability person who wanted to be a
successful leader may therefore be motivated to learn the interpersonal skills necessary to mask any issues that may arise as a result of their personality; issues such as problems with confrontation. It is argued that people who cannot or will not do this may fail to emerge as a leader or be effective as one and would most likely not reach senior levels. Senior levels may therefore consist of low likeability types, who may have learned interpersonal skills to reduce the impact of their personal orientation, and those higher in likeability who have nevertheless learned to say no and skilfully confront others in ways that do not come naturally to a high likeability person.

High likeability has been linked to dependent personality disorder (Blais, 1997). As was argued in Chapter Five, dependent persons may be successful if they are promoted behind a favourite boss to whom they never say no. Subordinates of such leader may not share the positive opinion the boss has of such a leader in that they may feel abandoned or worse. It is unlikely such leader would be rated as transformational by their subordinates. Having argued that it must also be argued that very low likeability may not be desirable either and people with very low likeability may have to learn appropriate interpersonal skills to take the edge of their interpersonal presentation. In the extreme very low likeability may manifest as antisocial personality disorder or psychopathy. Such persons may be clever manipulators of others for their own benefit. It is likely that they would not be rated highly on transformational leadership by subordinates either. So, at both extremes of the likeability scale there may be predictions which are not picked up by a normal measure of personality such as the HPI used here. Further research designed to access the more extreme manifestations of likeability may lead to significant predictions being found, albeit significant negative predictions.
Consistent with expectations, based on arguments presented in Chapter Four, in this study prudence was found here to be significantly negatively related to charisma ($r = -.17, p < .01$) and to be a significant negative predictor of charisma ($\beta = -.24, p < .01$). Previous meta study research has found varying strength and direction of relationship between transformational leadership and conscientiousness. Judge and Bono (2000) found no relationship; Ployhart et al. (2001) found a small positive relationship $r = .08$ to .18; Judge et al. (2002) found a positive relationship $r = .28$; Lim and Ployhart (2004) found a negative relationship $r = -.31$; and Bono and Judge (2004) found a small positive relationship $r = .05$. The present results were expected because senior managers were seen here as change agents for whom a high conscientiousness personality may have represented a significant difficulty. One of Bass’s (1985) five key dimensions of being transformational is intellectual stimulation. Intellectual stimulation is about promoting change and continuous improvement in every way at every level. This stands in stark distinction from being transactional, which requires detecting and eliminating even minor deviations from established procedure. Being a transactional manager is often required in lower level highly objective leadership jobs like supervisor or junior manager. But those person’s who are going to excel at transformational leadership may need low prudence. Such persons may learn to be effective in highly structured environments and may have to do so to be promoted through the lower ranks. The opposite may also be true. People high in prudence may learn to be effective in the chaos and disorder that characterises senior leadership roles and may therefore be effective in senior leadership roles.

Again it is worth considering those persons who are on the extremes and may not be adequately measured by devices like the HPI. For instance very high prudence may be associated with micro-management, workaholism, poor delegation,
perfectionism, and other behaviours that may be associated with obsessive-compulsive personality disorder. Very low prudence may be associated with destructive irresponsibility and inattention to detail and rules, which do sometimes seem to be characteristics mentioned in popular press reports of senior management in notable corporate and executive government failures. Further work is needed to investigate these extremes to further elucidate the prediction found here.

Intellectance was not found to significantly predict transformational leadership behaviour in the whole sample of this study. This finding was again in line with previous research findings for openness to experience. Judge and Bono (2000) found a small prediction $R^2 = .04$; Ployhart et al. (2001) found a positive relationship $r = .08$ to $.09$ in typical performance context and $r = .17$ to $.23$ in maximum performance context; Judge et al. (2002) found a positive relationship $r = .24$; Lim and Ployhart (2004) found no relationship; and Bono and Judge (2004) found a positive relationship $r = .22$ but the 95 percent confidence interval included zero. Unlike the present study none of the above studies were specifically focused on senior executives. This present finding is surprising. High intellectance has been associated with success in many professions (Hogan & Hogan, 1994). It therefore seemed natural that it be associated with transformational leadership behaviour in senior leaders. The finding that intellectance did not predict transformational leadership behaviour therefore represents a departure, in these and in previous findings, from a priori reasoning. More light may be cast on this finding when the moderating influence of self-subordinate rating agreement is discussed below.

School success did not significantly predict transformational behaviour. The result ($\beta = .14$, $p < .05$) was not significant after Bonferroni correction. This was an expected result even though the demographics of the present sample showed a
comparatively well educated cohort. The predicted non result adds weight to Goleman’s (1995) proposition that it is the high EQ (emotional intelligence) people who run the world not the high IQ people.

8.3.2 Moderated Prediction Hypotheses

In Chapter Six of this thesis it was argued that self-subordinate rating agreement was a personality variable that potentially moderated the prediction of transformational leadership behaviour by other personality variables. It was argued that this could be an explanation for the smaller than expected predictions of transformational leadership found in prior work. It was found here that self-subordinate rating agreement, operationalised as absolute difference between a leader’s own scores and those of his or her subordinates, did moderate the prediction of transformational leadership behaviour by intellectance but not by any of the other HPI components (Table 8.7). For intellectance there was no significant prediction in the whole sample or the high self-subordinate rating agreement sub-sample but a significant negative prediction ($\beta = -.28, p < .01$) in the low self-subordinate rating agreement sub-sample.

The implication here is that high intellectance people who are out of touch with themselves and others are not seen as transformational. It may be speculated that when a leader high self-subordinate rating agreement is also high in intellectance the latter variable may be forgiven or have less impact on subordinates than their feeling that they leader understands them, and they rate the leader accordingly. Other leaders may not have a good connection to subordinates. For them, being perceived as high in intellectance may be seen negatively by subordinates, who then rate the leader accordingly. Hogan (1995) has suggested that intellectance can be thought of as a
surrogate of general intelligence. So the above proposition can be restated as:

intelligent people who are not socially aware, who could perhaps be referred to as stereotypical boffins, are not seen by subordinates as transformational. The implication for senior management selection is that general intelligence, widely regarded as the best indicator of many categories of success in life and work, may not be sufficient where transformational leadership is concerned; whereas the reverse may not be true. Socially aware people who may not act as if they are, or be, highly intelligent may be accepted as transformational leaders. It is possible that a curvilinear relationship may exist here that was masked by the use here of a two category estimation of self-subordinate rating agreement. Further work with a more fine grained estimation may indicate if ratings of transformational leadership drop off at low and high intellectance and are maximised at moderate levels of intellectance.

Further inspection of Table 8.7 reveals that self subordinate rating agreement did appear to moderate the result for the whole regression model. For both the sub-samples the whole model explained substantially more variance than it did for the whole sample, viz., 11 percent for the whole sample and 16 and 15 percent respectively for the high and low self-subordinate rating agreement sub samples. This latter result suggests that self-subordinate rating agreement may be an important moderating variable. As already argued above the absolute difference score method of operationalisation used in this study may not have allowed fine enough distinction for moderating effects to be found. Further work is needed with a more fine-grained measure of self-subordinate rating agreement to assess this proposition.

Results for the other six HPI components showed no clear levels of moderation. Adjustment, sociability, likeability and school success were not expected to predict charisma and did not significantly predict charisma in the whole sample or
either self-subordinate rating agreement category. For adjustment, sociability and likeability arguments were put above about the potential impact of experience, in particular interpersonal skill learning, on the hypothesised relationship. It is argued that, if life experience and learning has masked potential underlying predictions, there is no reason to suspect that it has not done in both the high and low self-subordinate rating agreement categories.

Ambition strongly predicted charisma with similar results in all three samples. Prudence strongly negatively predicted charisma with almost identical results in all three categories. It is again possible that the two category measure of self-subordinate rating agreement was not fine grained enough to allow detection of moderation. Further work with a different measure of self subordinate rating agreement is required.

The above findings give potentially new and important early indications of some predictors of senior transformational behaviour that are different from previous findings. It remains to complete more work in this area to extend findings. In this way new guidelines for the vital challenge of selection and development of senior leaders may emerge.

8.3.3 Limitations of this study

There are a number of potential issues that may influence the interpretation of the findings of this study. Readers should keep these issues in mind when considering the results of this study.

Systematic bias may have been introduced by the means of sampling both leaders and subordinates. Transformational leadership behaviour was measured as the mean of subordinate ratings on the five transformational scales of the MLQ. Several biases may have been introduced by this method. First, leaders selected the
subordinates who would complete the questionnaires on them. While it has been argued that this is a superior method of data gathering (Brutus et al., 2005), leaders may have, consciously or unconsciously, selected subordinates whose ratings were biased. Secondly, subordinates were aware that their ratings would be fed back to those leaders as an averaged result only if three or more subordinates completed the ratings. This promise of subordinate anonymity, which was designed to promote honesty, may have promoted other rating behaviours such as to reward or penalise the leader. Thirdly, because the subjects of this study were senior leaders, subject leaders’ subordinate raters would likely have been senior middle managers with their own well developed implicit models of leadership and management behaviour. Subordinates’ implicit leadership theories may have impacted on their ratings. Finally, not all subordinates selected by leaders to complete questionnaires provided ratings. Those who did may represent a biased sample of the rating group selected by the leader. From the leader selection point of view, data for this study was gathered from leaders who attended leadership development programs or seminars. It may be that senior leaders who were motivated to attend such seminars represented a biased sample of all senior leaders. None of these potential biases were controlled for in this thesis.

8.3.4 Recommendations for Further Research

The findings above give preliminary indications of new personality guidelines for the selection of senior transformational leaders. The results obtained here can be regarded as indicative only. This study should be extended with other samples of senior leaders. Extension should include tests of personality disorder variables as indicators of the poles of the five factor components scales. Self-subordinate rating agreement offers promise as a moderator but further work with senior executives
using a more fine grained measure of that construct may reveal more than was found in this present study. Once a basic model of predictive and moderating variables has been built based on empirical findings it should then be tested in a major, perhaps national, leadership survey where the biases mentioned above are controlled for.

8.4 Chapter Conclusion

This study has investigated prediction of transformational leadership behaviour by HPI generated Five Factor Model components. The chapter also reported on investigation of hypothesised moderation effects of the prediction of transformational leadership behaviour by the above Five Factor Model components. The hypothesised moderator was self-subordinate rating agreement. Regression analysis was employed for the investigations.

Of six hypotheses investigated in this study three generated predicted results. Results indicated that ambition and prudence significantly predicted transformational leadership behaviour, whereas adjustment, sociability, likeability and school success did not in line with expectations. Self-subordinate rating agreement moderated prediction of transformational leadership behaviour by intellectance, but not as expected for prudence and ambition. The results are discussed further in Chapter 10 of this thesis.

Key questions arising from this research concern the impact of the more extreme manifestations of personality variables on the prediction of charisma and the possibility that a finer grained measure of self-subordinate rating agreement may reveal moderation that the absolute difference score two category measure did not. These questions are investigated in study two of this thesis which is reported in the next chapter.
CHAPTER 9

STUDY 2:
PREDICTING SUBORDINATE RATED CHARISMA USING PERSONALITY DISORDERS AND ASSESSING MODERATION BY SELF-SUBORDINATE RATING AGREEMENT

Literature already summarised in Chapter Eight will be summarised briefly here again before moving on to the summary of personality disorder literature.

National surveys and leadership research have shown that leadership is an important contributor to organisational effectiveness and national economic well-being (Berger, Dertouzos, Lester, Solow, & Thurow, 1989; Karpin, 1995). Day and Lord (1986) in a meta-study of executive leadership and organisational performance found that up to 45% of an organisation’s performance is a function of top management leadership. Leadership, therefore, an important subject and a popular focus of investigation in the applied psychology literature (Hogan, Curphy, & Hogan, 1994).

In the last 20 years one theoretical perspective has come to dominate the leadership research literature. The importance of the transformational leadership model is that it appears to describe a set of leader behaviours that can increase the impact of leadership on followers and on organisational outcomes. Inspired by Burns’ (1978) work, Bernard Bass (1985) developed a transformational leadership model he called the full range of leadership theory. Components of the full range of leadership model were measured using the MLQ (Avolio, Bass, & Jung, 1995). Research using the MLQ has shown that transformational leadership behaviour is related to improved leadership outcomes across a wide range of organisational contexts and cultures. The full range of leadership model measured by the MLQ was selected for use in this
thesis. Transformational leadership was measured using subordinate MLQ ratings. Previous studies have found that the five transformational components of the MLQ are closely related and can be aggregated into a single measure of transformational leadership for hypothesis testing (Judge & Bono, 2000).

Some authors state that transformational leadership is a behavioural process capable of being taught, learned and managed (Barling, Weber, & Kelloway, 1996; Tichy & Devanna, 1986). Senior managers can learn the behaviours required to be transformational with the attendant increase in the probability of positive outcomes (Bass, 1998). But, not all studies have found a consistent relationship between transformational leadership behaviour and performance measures (Ross & Offermann, 1997). Moreover, not all leaders behave transformationally in all situations (Lewis, 1996). It is argued that it is important to better understand predictors of transformational behaviour in order to facilitate its wider and more effective application.

Leadership literature provides clues to the answer to the important question of predictors. Some researchers have acknowledged that differences in transformational leadership behavioural capability can be traced to personal attributes or characteristics (Avolio & Gibbons, 1988). Bass (1990) commented on the resurgence in interest in personal factors of leaders. He noted that there is widespread folk belief that leader personalities are important in leadership but commented that, as yet, there seems little strong empirical support linking personal attributes to transformational behaviour, highlighting the need for research in this area. Kuhnert and Lewis (1987) suggested that leader personal attributes may lead to the formation of transformational leadership style. Some researchers have advocated the use of personality to provide a more broadly applicable base for leadership theory (Bycio, Hackett, & Allen, 1995;
Hogan et al., 1994). Lord et al. (1986) reanalysed previous leadership and personality
trait research by Mann (1959) in an extensive meta-analysis. The authors found that
leadership perceptions were associated consistently and to a high degree with leader
personality. Lord et al. (1986) concluded that the study of personality with respect to
leadership should be resurrected. It is argued in this thesis that personality may
predict transformational leadership. This thesis therefore reviewed three different
conceptions of personality, viz., Chapter Four the Five Factor Model, Chapter Five
personality disorders, and Chapter Six self-subordinate rating agreement.

In Chapter Five personality disorders were defined as aspects of personality
that were not necessarily measured by measures of normal personality such as the
Five Factor Model investigated in Chapter Eight. It was suggested that personality
disorders may be strengths under certain circumstances; strengths in the case of senior
leaders that may contribute to an individual succeeding under conditions of senior
pressure. It was argued that this may be a common phenomena but one which,
possibly for social acceptability reasons, has so far received little focus in research
literature. It was further argued that, while there is no suggestion made here that all
senior leaders have personality disorders, the DSM model of personality disorders
may be an appropriate theoretical taxonomy to guide thinking about the impact of
dark side or extreme personality characteristics on transformational leadership
behaviour.

Chapter Five argued that personality disorders could be either positively or
negatively related to transformational leadership behaviour. Only indirect evidence
was found in support of the proposition that a personality disorder could be the source
of strength that allowed a certain individual to be successful in a given senior
leadership circumstance. This evidence related to work by the US Navy on suitability
for service in the submarine corps (Hall, Bodenhamer, Bolstad, & Hamblett, 2001) and to a study revealing the prevalence of personality disorders amongst 39 British senior executives (Board & Fritzon, 2005). On the other hand, extensive evidence indicating that personality disorders could be the basis of leadership failure was cited in Chapter Five from the management derailment literature.

In summary, Chapter Five of this thesis argued that the strength necessary to be a successful senior leader may originate from a dark side or extreme personality characteristic. It was further argued that dark side characteristics may be described in terms of the DSM taxonomy of personality disorders, even though such characteristics may be better described as personality extremes or tendencies not personality disorders. For this reason it was argued that an appropriate, non-clinical, measuring device should be employed to gather the required data in this study; an instrument that was commonly used in corporate environments. A device that met these criteria was the Hogan Development Survey (HDS) (Hogan & Hogan, 1997). The psychometric properties of the HDS are discussed in section 9.1.3.1.

Work in study one of this thesis, reported in Chapter Eight, suggested that the more extreme manifestations of personality, e.g., represented by the poles of the Five Factor Model components, may reveal predictions beyond those found for normal, so called bright side, personality variation measured by the Five Factor Model. Additionally the previous study pointed to the possibility that a more fine grained measure of self-subordinate rating agreement may demonstrate the moderation hypothesised where the two category absolute difference score method used in that study did not.

This chapter reports on the second study that investigated prediction of transformational leadership behaviour by personal attributes of senior Australian
organisational leaders. This present study was designed to extend the previous study in this thesis and previous reported work that investigated the relationship between personality attributes (independent variables) and transformational leadership behaviour (dependent variable). In this second study personality was operationalised as personality disorders and as self-subordinate rating agreement. Personality disorders were discussed in Chapter Five of this thesis. Self-subordinate rating agreement was discussed in Chapter Six. In line with the recommendations from study one of this thesis the approach of Atwater and Yammarino (1992), a three category relative difference score model of self subordinate rating agreement, will be tested. This model was discussed in Chapter Five and will be covered in more detail later in this chapter under methodology.

This study replicated and then extended previous work in five ways. Firstly, an exploratory investigation was made of the role of personality disorders in predicting senior transformational leadership behaviour. Secondly, this study focused on a specific cohort of managers, namely, senior organisational managers. Thirdly the study focused on Australian senior managers. Fourthly, it was proposed to employ the HDS (Hogan & Hogan, 1997) as the measure of personality disorders. Finally, the intervening nature of a three category version of self-subordinate rating agreement on the prediction of transformational leadership behaviour by personality will be assessed.

In Chapter two HDS components were identified as both similar to derailment characteristics described in relevant literature and potentially dysfunctional characteristics negatively predicting charisma. They were sceptical and cautious. Based on these proposals two negative prediction hypotheses were created in Chapter Five (summarised in Table 7.2). In Chapter Six three HDS components were related
positively to transformational leadership behaviour. Positive prediction hypotheses were created as a result. The components were: mischievous, imaginative and colourful. It was argued that six HDS characteristics would not be related to senior transformational leadership. The six components were: reserved, excitable, bold, dutiful, diligent, and leisurely.

Atwater and Yammarino (1992) found that correlations between leadership behaviour and performance were highest for managers with high self-subordinate rating agreement ability operationalised as congruence between self and direct reports' behavioural ratings (Atwater & Yammarino, 1992). A study of high versus average performing managers showed that the high performers, i.e., those rated more highly by their managers, had higher levels of self-subordinate rating agreement, operationalised as managerial self-awareness, viz., congruence between self and direct reports' behavioural ratings (Church, 1997). In a study of relationships between emotional intelligence, personality and transformational leadership of managers, it was found that the size of the relationship varied as a function of the self-subordinate rating agreement of the focal manager, defined as agreement between self and other leadership ratings (Sosik & Megerian, 1999). In a study of middle level staff officers in a public agency managerial self-subordinate rating agreement, operationalised as congruence in self-peer ratings, was found to contribute significantly to relationship management aspects of individual effectiveness (Church & Waclawski, 1999). This thesis has therefore argued in Chapter Six that the personality characteristic self-subordinate rating agreement, operationalised as congruence between self behaviour ratings and ratings of leader behaviour by subordinates, may moderate the prediction of transformational leadership behaviour by personality disorder components.
In study one of this thesis moderation was expected for at least three components but was found for one component. It was argued there that this may be because the absolute difference score measure used did not differentiate in a relevant way between categories of raters. In particular, after Atwater and Yammarino (1992), it may be important to distinguish accurate raters from over estimator inaccurate raters and under-estimator inaccurate raters. Over estimators are those leaders who over-rate themselves compared to what their subordinates would say; under estimators are the opposite group. In this study self- subordinate rating agreement was measured as the relative interaction between self ratings and subordinate ratings. See the methodology section of this chapter for the calculation method. Hypotheses 9(X), where X varies from 4 to 8 in this study were developed in Chapter Six of this thesis in order to test the above propositions (summarised in Table 7.2).

We now move to a discussion of the method, procedure and results of the research done to test these hypotheses.

9.1 Method

9.1.1 Subjects

Focal leaders for this study were senior executives drawn from both public and private enterprise. Subject responses were gathered in the context of in-organisation leadership, strategy or planning seminars conducted by the author, with the agreement of the sponsoring organisation. A final sample of 183 useable responses was obtained. 250 questionnaires were printed; 207 were issued; 185 were completed and returned, and 183 of these were useable in that they met the following criteria: informed consent signed, questionnaire booklets completed sufficient for valid HDS and MLQ leader self rating results, and MLQ subordinate rater questionnaire data completed by 682 subordinates. The response rate was thus 88.4% of those issued
and 98.9% of those returned. It is argued that the response rate was primarily due to the data collection method.

Subject demographic data was collected on a brief demographic questionnaire form designed for the purpose (Appendix 2). Date, name, organisation and telephone number data were collected for administrative purposes only. Age, gender, highest education level reached, and job classification level data were sought for validation of the sample in this study.

9.1.2 Dependent Variable Measure

The dependent variable measure used in this study is the same as that used in the previous study. That variable was described in detail in section 8.2.4.1 above.

9.1.3 Independent Variable Measures

A basic proposition of this thesis was that leader personality components predicted transformational leadership behaviour. Two separate constructs of personality were investigated in this study: Personality as evaluated by personality disorder components and personality as self-subordinate rating agreement as a moderator.

9.1.3.1 Personality Disorders

It was argued in Chapter Five of this thesis that the DSM taxonomy of personality disorders offered a well researched model of dark side personality characteristics.

The HDS (Hogan & Hogan, 1997) is a pencil and paper device, which yielded scores on 11 personality edge factors. The factors are directly comparable with 11 DSM personality disorders (American Psychiatric Association, 1994). HDS factor definitions differ slightly from those of the DSM-IV personality disorders. Table 5.1 contrasts the HDS components and the DSM personality disorder definitions.
The HDS is a 168 item scale. Items are statements. Respondents are asked to agree or disagree with each statement. There are 11 scales, each of 14 items and each measuring one personality disorder factor. There is no item overlap between scales. Items have been screened to remove items that may be construed to have sexual, religious, illegal behaviour, racial/ethnic, or disability connotations and were designed for corporate application. Scale inter-correlations are shown in Table 9.3. Scale reliabilities vary from a low of .50 for dutiful to a high of .78 for excitable. Construct validity has been established by correlating HDS results with those from other measures including the Hogan Personality Inventory, and the MMPI Standard and Personality Disorder scales (Hogan & Hogan, 1997, Ch. 3). Based on comparison of the two sets of factors in Table 5.1., and the psychometric and validity results summarised above, it is argued that the HDS offered an effective method for operationalising the measurement of personality disorders in this research packaged in a corporately acceptable form.

9.1.3.2 Self-subordinate rating agreement

In Chapter Six of this thesis the construct self-subordinate rating agreement was shown to be a similar construct to the more recently developed constructs: self awareness (Atwater & Yammarino, 1992), managerial self awareness (Church, 1994, 1997), and socio-political intelligence (Hogan & Hogan, 2002). Difference scores compare leaders’ self ratings with those of others on the same scales (Nunnally & Bernstein, 1994). Difference scores are also known as distance measures and profile similarity indices (Nunnally & Bernstein, 1994).

The method of measuring self-subordinate rating agreement used in study one of this thesis and reported in Chapter Eight was absolute difference score. Church (1997) argued that the absolute difference score $D_a$, calculated by the formula above,
is preferable because it has superior sensitivity to differences in profile level, dispersion, and shape (Nunnally & Bernstein, 1994; Tisak & Smith, 1994). He pointed out that relative difference scores are ultimately measuring the general rating tendency of an individual, i.e., an under-rater, accurate rater or over-rater, and not the cumulative degree of congruence across a specific series of comparisons (Church, 1997). Absolute difference scores are calculated as: \[ Da = \sqrt{\frac{\sum (m_{self} - m_{other})^2}{N}}. \] This difference score facilitated a two category division of the sample into accurate and inaccurate raters. Results in study one indicated that this division may not be fine grained enough to detect the moderating characteristic proposed for this variable.

A recommended alternative is the relative difference score calculated as: \[ Dr = \left(\frac{\sum (m_{self} - m_{other})}{N}\right) \] (Atwater & Yammarino, 1992). In the formula \( m_{self} \) and \( m_{other} \) are the self completed scale measure and the scale measure completed by the other person(s) respectively. Relative difference scores offer the opportunity of three categories of raters: accurate, over estimators, and under estimators as detailed above in this chapter (Atwater & Yammarino, 1992). The sample was divided into three Dr categories according to the method recommend by Atwater and Yammarino (1992). Accurate raters are those cases whose relative difference scores are within the range .5 standards deviations above and below the mean of the difference scores for all cases in the sample. Over estimator cases are those where the difference score is more than .5 standard deviations above the mean difference score for all cases. Under estimator cases are those more than .5 standard deviations below the mean for all cases if the sample. In the three categories case, for a near normal distribution of relative difference scores, such a method divides the sample into three approximately equal categories.
Difference scores have problematic status as continuous variable statistics (Johns, 1981). That is why they have been employed in published research as categorical variables. In past published research samples were divided into categories based on difference scores and then statistics were calculated within each category (Atwater & Yammarino, 1992). Differences between the statistics of different categories were then used to argue the efficacy of the construct the difference score was used to estimate, e.g., self awareness. Arguments have been raised in support of this use difference scores (Tisak & Smith, 1994). Edwards (1994) has criticised difference scores as being inferior to polynomial multiple regression response surface methodology (see Chapter Seven for a discussion of this method). The polynomial regression method was not used in this thesis because of the extremely low power offered by three way interaction regressions (Aguinis & Stone-Romero, 1997). This was discussed in detail in Chapter Seven of this thesis. Accordingly moderation effects will be assessed in this study by evaluating multiple regressions in each of the three Dr categories mentioned above and contrasting the results obtained.

9.1.4 Procedure

Data were gathered from subjects in an identical way to the data gathering for study one reported Chapter Eight. Please refer to that description in section 8.1.4 for details.

9.2 Results

The analysis of this study was done in the same was as the analysis for study one reported in Chapter Eight. For completeness, and because of numeric and construct differences in results, the analysis of study two is reported in full below.

The data set was inspected for obvious data integrity issues. None were found. SPSS Frequencies was used to calculate maximum and minimum values for each
variable. These were inspected for data entry errors and validity. No issues were found. The data set was therefore accepted for further analysis.

9.2.1 Sample Demographics

The sample consisted of 183 subjects, 116 males and 67 females (36.6%). The overall sample average for 114 subjects who provided age data was 44.7 years, with a standard deviation of 6.8, a maximum of 60 and a minimum of 27. For 36 females who reported age the average age was 44.9, with a standard deviation of 6.7, a maximum of 57, and a minimum of 27. For 78 males who reported age the average age was 44.6 with a standard deviation of 6.9, a maximum of 60, and a minimum of 27.

173 subjects reported the highest formal education level they had attained. Reported achievement and frequencies varied across: high school 4 (3 females), technical school 2 (0 females), diploma 12 (4 females), bachelor’s degree 100 (32 females), masters degree 45 (13 females), and doctorate 10 (8 females). Females were marginally better educated than the males in the sample.

Three categories were provided for subjects to identify the level of their organisational job role. The levels and frequencies of response for the 114 subjects who supplied this information were: CEO 4 (0 females), Executive/CEO direct report 79 (24 females), and Executive non CEO direct report 90 (36 females). The latter category includes person between two and four levels below the CEO in large organisations. It is argued that the subjects in this sample can be validly considered as senior managers.

9.2.2 Scale Reliability

Scale reliability was evaluated by calculating coefficient alpha (Cronbach, 1951) within SPSS 11.0. Scale reliability was evaluated by calculating coefficient
alpha (Cronbach, 1951) with SPSS 11.0. MLQ reliability was calculated for the two scale components used to calculate the dependent variable. For the subordinate data the two factor scale yielded an acceptable scale reliability of alpha = .67. For the three scale components used to calculate the self and subordinate variables reliabilities were calculated using the self rating and subordinate rating MLQ data respectively. Reliabilities found were an acceptable .76 and .87 respectively. Factor analysis revealed that the overall HDS scale was multidimensional having four main factors. Reliability of the factor containing excitable, sceptical, cautious, reserved and leisurely was an acceptable .73. The factor containing bold, mischievous, colourful and imaginative produced an acceptable Cronbach alpha of .68. Diligent and dutiful analysed as separate factors and were not able to be individually analysed since no item level data is available from HDS output. Based on the acceptable reliabilities for the other nine scales the reliability for the whole HDS scales was considered acceptable.

9.2.3 MLQ Scale Inter-Correlations

The MLQ measures 12 factors. More explanation of these components is provided in Chapter Two of this thesis. Pearson correlations between the MLQ factors were calculated using SPSS 11.00 (Table 9.1). The high positive correlation between the first six factors was as expected from the MLQ technical manual (Avolio et al., 1995).

9.2.4 HDS Scale Inter-Correlations

Bi-variate correlations between the seven primary scale variables of the HDS were computed using SPSS 11.0. The results are presented in Table 9.2. By inspection the pattern of correlations was similar to that expected from the validation data presented in the HDS manual (Hogan & Hogan, 1997, p. 11).
### Table 9.1

Intercorrelations of study two MLQ subordinate scale components.

<table>
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<th>M</th>
<th>SD</th>
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<th>6</th>
<th>7</th>
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<th>10</th>
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<td>1</td>
<td>idealised attributes</td>
<td>183</td>
<td>2.99</td>
<td>0.44</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>idealised behaviour</td>
<td>183</td>
<td>2.93</td>
<td>0.38</td>
<td>0.43**</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>inspirational motivation</td>
<td>183</td>
<td>3.05</td>
<td>0.44</td>
<td>0.60**</td>
<td>0.60**</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>intellectual stimulation</td>
<td>183</td>
<td>2.92</td>
<td>0.42</td>
<td>0.60**</td>
<td>0.33**</td>
<td>0.43**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>individualised consideration</td>
<td>183</td>
<td>2.82</td>
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<td>0.48**</td>
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<td>0.47</td>
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<td>0.36**</td>
<td>0.48**</td>
<td>0.60**</td>
<td>0.71**</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>MBE*** - active</td>
<td>183</td>
<td>1.67</td>
<td>0.58</td>
<td>-0.12</td>
<td>-0.06</td>
<td>-0.18*</td>
<td>-0.10</td>
<td>-0.15*</td>
<td>-0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>MBE*** - passive</td>
<td>183</td>
<td>0.97</td>
<td>0.44</td>
<td>-0.29**</td>
<td>-0.09</td>
<td>-0.10</td>
<td>-0.28**</td>
<td>-0.25**</td>
<td>-0.32**</td>
<td>0.12</td>
<td></td>
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<td>laissez faire</td>
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<td>-0.09</td>
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<td>-0.38**</td>
<td>-0.34**</td>
<td>-0.40**</td>
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<td>0.60**</td>
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<td>0.56**</td>
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<td>0.48**</td>
<td>0.45**</td>
<td>0.54**</td>
<td>0.49**</td>
<td>-0.14</td>
<td>-0.27*</td>
<td>-0.33**</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Effectiveness</td>
<td>183</td>
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<td>0.34</td>
<td>0.60**</td>
<td>0.27**</td>
<td>0.42**</td>
<td>0.49**</td>
<td>0.54**</td>
<td>0.51**</td>
<td>-0.10</td>
<td>-0.41**</td>
<td>-0.51**</td>
<td>0.65**</td>
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<td>Satisfaction</td>
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<td>3.22</td>
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<td>0.36**</td>
<td>0.44**</td>
<td>0.52**</td>
<td>0.61**</td>
<td>0.48**</td>
<td>-0.24**</td>
<td>-0.31**</td>
<td>-0.44**</td>
<td>0.58**</td>
<td>0.75**</td>
</tr>
</tbody>
</table>

*** MBE = Management By Exception

** Significant at the 0.01 level (2 tailed)

* Significant at the 0.05 level (2 tailed)
Table 9.2:

Present study two HDS component scale inter-correlations

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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<td>2.72</td>
<td>0.35**</td>
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<td>0.23**</td>
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<td>reserved</td>
<td>183</td>
<td>5.96</td>
<td>2.69</td>
<td>0.40**</td>
<td>0.25**</td>
<td>0.45**</td>
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<td></td>
<td></td>
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<td>leisurely</td>
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<td>6.29</td>
<td>2.43</td>
<td>0.20**</td>
<td>0.32**</td>
<td>0.42**</td>
<td>0.28**</td>
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<td>-0.12</td>
<td>0.29**</td>
<td>-0.29**</td>
<td>-0.12</td>
<td>0.11</td>
<td></td>
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</tr>
<tr>
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<td>183</td>
<td>6.32</td>
<td>2.19</td>
<td>0.00</td>
<td>0.30**</td>
<td>0.10</td>
<td>0.01</td>
<td>0.15*</td>
<td>0.26**</td>
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<td></td>
</tr>
<tr>
<td>8</td>
<td>colourful</td>
<td>183</td>
<td>7.21</td>
<td>2.86</td>
<td>-0.14</td>
<td>0.00</td>
<td>-0.38**</td>
<td>-0.29**</td>
<td>0.07</td>
<td>0.40**</td>
<td>0.35**</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>imaginative</td>
<td>183</td>
<td>6.35</td>
<td>2.44</td>
<td>0.11</td>
<td>0.28**</td>
<td>0.03</td>
<td>0.07</td>
<td>0.26**</td>
<td>0.28**</td>
<td>0.53**</td>
<td>0.31**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>diligent</td>
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<td>7.51</td>
<td>3.05</td>
<td>-0.15*</td>
<td>-0.02</td>
<td>-0.15*</td>
<td>-0.02</td>
<td>0.07</td>
<td>0.13</td>
<td>-0.26**</td>
<td>-0.22**</td>
<td>-0.19*</td>
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<tr>
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<td>dutiful</td>
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<td>1.94</td>
<td>0.16*</td>
<td>0.03</td>
<td>0.30**</td>
<td>-0.03</td>
<td>0.09</td>
<td>-0.10</td>
<td>-0.15*</td>
<td>-0.13</td>
<td>-0.11</td>
<td>0.06</td>
</tr>
</tbody>
</table>

** Significant at the 0.01 level (2 tailed)

* Significant at the 0.05 level (2 tailed)
9.2.5 Variable Construction from MLQ Components

In this study MLQ data was put to two separate uses: calculation of the transformational behaviour dependent variable, transformational leadership behaviour, and calculation of a self-subordinate agreement moderating variable. These two different uses of MLQ data are discussed separately below.

9.2.5.1 Dependent Variable Charisma

Subordinate ratings of transformational behaviour were used as the dependent variable transformational leadership behaviour. Following Bono and Judge (2004), the variable charisma was calculated as the mean of the MLQ subordinate scale components idealised behaviour and inspirational motivation. These two components were factor analysed to investigate whether they could be aggregated for use as a single dependent variable in further analysis.

Table 9.3
Component matrix of principal components analysis of idealised behaviour and inspirational motivation transformational variables of the subordinate rated MLQ scale.

<table>
<thead>
<tr>
<th>Component 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>idealised behaviour</td>
<td>0.89</td>
</tr>
<tr>
<td>inspirational motivation</td>
<td>0.89</td>
</tr>
</tbody>
</table>

A principal components analysis of the two subordinate MLQ transformational components idealised behaviour and inspirational motivation was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity (Table 9.3). The factor, Eigenvalue = 1.60, consisted of MLQ components 2 and 3 with component loadings equalling .89. This factor explained 79.8 percent of the variance.
This analysis confirmed that the two transformational factors could be productively combined into one aggregate transformational leadership behaviour factor. That factor is called (subordinate rated) charisma, which henceforth in this chapter is synonymous with transformational leadership behaviour.

9.2.5.2 Self-Subordinate Rating Agreement Variable

Ten MLQ components remained unused when the components for the dependent variable were put aside. Argument for the selection of the three components, designated as outcome factors in full range of leadership theory, to be aggregated to create the self-subordinate agreement variables was presented in Chapter Seven.

A principal components analysis of the three self rated MLQ outcome components was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity. The factor, Eigenvalue = 2.01, consisted of the three MLQ self rated outcome components with component loadings varying from .78 to .87 (Table 9.4). This factor explained 67.1 percent of the variance. This analysis confirmed that the three outcome factors could be productively combined into one agreement variable.

A further principal components analysis of the three subordinate MLQ outcome components was conducted using no rotation. One factor was extracted with an Eigenvalue greater than unity. The factor, Eigenvalue = 2.32, consisted of all three MLQ outcome components, with component loadings varying from .84 to .91 (Table 9.4). This factor explained 77.2 percent of the variance. This analysis confirmed that the three subordinate outcome factors could be productively combined into one agreement variable.

The remaining MLQ components were not used.
Table 9.4

Component matrix of principal components analysis of the three outcome variables of the self and subordinate rated MLQ scales

<table>
<thead>
<tr>
<th>Component</th>
<th>Single</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self</td>
<td>Subordinate</td>
</tr>
<tr>
<td>extra effort</td>
<td>0.80</td>
<td>0.84</td>
</tr>
<tr>
<td>effectiveness</td>
<td>0.87</td>
<td>0.91</td>
</tr>
<tr>
<td>satisfaction</td>
<td>0.78</td>
<td>0.89</td>
</tr>
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</table>

9.2.6 Requirements for Simple and Multiple Regressions

The same considerations were applied here as were detailed in section 7.2.5.1 of Chapter Seven. Distributions of the variables are presented below with calculation of the variables.

9.2.7 Variable Calculations

Variable calculations are presented in narrative form below.

Transformational leadership behaviour, the dependent variable was estimated as the mean of the averaged subordinate scores on the MLQ factors idealised behaviour and inspirational motivation. This statistic was calculated in SPSS 11.0. The mean of this variable was 2.99 with a median of 3.00 and a standard deviation of .37. Skewness was -.12 with a standard error of .18. Kurtosis was -.84 with a standard error of .36. It is argued here that the dependent variable was adequate for the regression analyses to be performed in this study.

Five HDS components were hypothesised to predict charisma in Chapter Five. Statistics for each of these five components are presented below.
The mean of the sceptical personality variable was 5.00 with a median of 5.00 and a standard deviation of 2.72. Skewness was .42 with a standard error of .18. Kurtosis was -.04 with a standard error of .36. It is argued here that the sceptical variable was adequate for the regression analyses to be performed in this study.

Cautious statistics were: mean 5.79 with a median of 5.00 and a standard deviation of 3.06. Skewness was .40 with a standard error of .18. Kurtosis was -.51 with a standard error of .36. It is argued here that the cautious variable was adequate for the regression analyses to be performed in this study.

Mischievous statistics were: mean 6.32 with a median of 6.00 and a standard deviation of 2.19. Skewness was -.11 with a standard error of .18. Kurtosis was -.41 with a standard error of .36. It is argued here that the mischievous variable was adequate for the regression analyses to be performed in this study.

Colourful statistics were: mean 7.21 with a median of 7.00 and a standard deviation of 2.86. Skewness was -.07 with a standard error of .18. Kurtosis was -.63 with a standard error of .36. It is argued here that the colourful variable was adequate for the regression analyses to be performed in this study.

The mean of the imaginative personality variable was 6.35 with a median of 6.00 and a standard deviation of 2.44. Skewness was .15 with a standard error of .18. Kurtosis was -.43 with a standard error of .36. It is argued here that the imaginative variable was adequate for the regression analyses to be performed in this study.

A relative difference score (Dr) was calculated as Dr = (Σ(m_{self} - m_{other}) / N), where m_{self} and m_{other} are the self completed scale measure and the scale measure completed by subordinate respectively. The mean of Dr was -.01 with a median of - .03 and a standard deviation of .50. Skewness was -.08 with a standard error of .18. Kurtosis was -.36 with a standard error of .36. The minimum was -1.31 and the
maximum was 1.06. It is argued here that the relative difference score variable was adequate for the regression analyses to be performed in this study.

9.2.7.1 Prevalence of Personality Disorder

Hogan and Hogan (1997) propose that disorder is indicated by a HDS score if the score is at or above the 90th percentile against the HDS norm sample. The authors offer a table of the norms from which the 90th percentile can be estimated (Hogan & Hogan, 1997, p. 59). Table 9.5 roughly estimates the 90th percentile and calculates the equivalent Z score. The resulting percentage of cases in the present sample who may have indicated the presence of a disorder (%>Z) was found by inspection of Z score tables.

Table 9.5

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
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<th>90</th>
<th>Z</th>
<th>%&gt;Z</th>
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<td>7.0</td>
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<td>sceptical</td>
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<td>8.0</td>
<td>1.10</td>
<td>14%</td>
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<td>7.0</td>
<td>0.40</td>
<td>34%</td>
</tr>
<tr>
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</tr>
<tr>
<td>leisurely</td>
<td>6.29</td>
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<td>11.0</td>
<td>1.57</td>
<td>6%</td>
</tr>
<tr>
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<td>7.21</td>
<td>2.86</td>
<td>11.0</td>
<td>1.33</td>
<td>9%</td>
</tr>
<tr>
<td>imaginative</td>
<td>6.35</td>
<td>2.44</td>
<td>8.5</td>
<td>0.88</td>
<td>19%</td>
</tr>
<tr>
<td>diligent</td>
<td>7.51</td>
<td>3.05</td>
<td>11.5</td>
<td>1.31</td>
<td>10%</td>
</tr>
<tr>
<td>dutiful</td>
<td>7.38</td>
<td>1.94</td>
<td>10.0</td>
<td>1.35</td>
<td>9%</td>
</tr>
</tbody>
</table>

Where: 90 = estimated 90th percentile from norms in Hogan and Hogan (1997, p. 59); Z = calculated Z score; %>Z = estimated percentage of sample cases above the 90th percentile from Z tables (Tilley, 1996, p. 332).

Results indicate prevalence rates that vary from a low of 5.82 percent of the sample for bold (DSM, narcissistic) to a high of 34.83 percent for reserved (DSM, schizoid). These results will be considered further in the discussion section of this chapter.
9.2.8 Testing Direct Relationship Hypotheses

Prediction of transformational leadership behaviour by the HDS components was posited by hypotheses 4 to 8. In line with the procedure developed in study one of this thesis hypotheses were evaluated by multiple regression with charisma as the dependent variable and 11 HDS components as independent variables. Results are presented below.

The dependent variable charisma was regressed on the 11 HDS personality variables. No univariate outliers were found. With 11 variables entered the maximum Mahalanobis distance was defined by $\text{Chi Squared}$ value at $df = 11$, which equalled 31.26. The maximum achieved in this calculation was 28.31. There were therefore no multivariate outliers. No obvious pattern appeared in the scatterplot of standardised residuals against standardised predicted values indicating that assumptions of linearity and homogeneity of variance had been met. ANOVA analysis indicated that a significant linear relationship was present ($F (11,171) = 3.51, p < .001$). There were 9 significant Pearson correlation coefficients between charisma and HDS components for the sample. One, cautious, would remain significant after Bonferroni correction. Results were: excitable ($r = -.14, p = .032$), sceptical ($r = -.18, p = .007$), cautious ($r = -.32, p = .000$), reserved ($r = -.15, p = .021$), leisurely ($r = -.17, p = .013$), bold ($r = .12, p = .061$), mischievous ($r = .07, p = .167$), colourful ($r = .13, p = .037$), imaginative ($r = .19, p = .006$), diligent ($r = .05, p = .273$), and dutiful ($r = -.18, p = .008$). Results are presented in Table 9.6.

Inspection of table 9.6 reveals that sceptical ($\beta = -.215, p = .013$) and cautious ($\beta = -.258, p = .019$) negatively predicted charisma. This is in line with the propositions in hypotheses four and five. After Bonferroni correction the required significance level was .004. Neither of these results was significant against that test.
Hypotheses four and five cannot therefore be accepted. Imaginative ($\beta = .251, p = .004$) significantly predicted charisma after Bonferroni correction suggesting that hypothesis six should be accepted. There were no other significant coefficients betas. Hypotheses seven and eight are therefore rejected contrary to expectations. No predictions were found for excitable, bold, reserved, dutiful diligent leisurely as predicted in Chapter Six. These results are discussed later in this chapter.

Since this is exploratory research indications of prediction, i.e., for sceptical and cautious, will be used as a basis for later discussion. It is argued that Bonferroni introduced a level of rigour that may be inadvisable given the exploratory nature of this work with personality disorders. Prediction indications found will therefore be discussed whether or not they met the Bonferroni standard.

9.2.9 Testing the Moderating Variable Hypotheses

Hypotheses 9(X), where X varies from 5 to 8 (Table 7.2), posit a self-subordinate rating agreement moderation effect. They proposed that self-subordinate rating agreement moderated the prediction of charisma by HDS components. To test hypotheses 9(X) multiple regressions were conducted in each of three Dr categories. Inspection of results for the whole sample and each of the three categories was then used as evidence for drawing conclusions regarding hypotheses 9(X). Dr categories were created as follows: accurate raters were those cases whose Dr scores was within .5 standard deviations above and below the Dr mean, i.e., only cases with Dr $\geq -.2598$ and Dr $\leq .2356$; over raters were cases whose Dr score was $>.2356$; under raters were those cases whose Dr scores were $<-.2598$.

The accurate raters sub-sample consisted of $n = 64$ cases. There were no univariate outliers. No obvious pattern appeared in the scatterplot of standardised residuals against standardised predicted values indicating that assumptions of linearity
and homogeneity of variance had been met. The maximum Mahalanobis distance recorded in the regression calculation was 19.2, which was below the limit of Chi Squared = 31.3 for 11 regression variables meaning there were no multivariate outliers. With the sample reduced in this process statistical power of the test becomes a consideration. With a sample size of 64, a medium effect size, a beta to alpha ratio of one, and two predictors the power of this test was .91, which was considered adequate for this exploratory analysis. ANOVA analysis indicated that a significant linear relationship was present ($F(11,52) = 3.06, p < .003$). After Bonferroni correction the required significance level for hypothesis acceptance was .004.

Pearson correlation coefficients between the personality components and charisma were: excitable ($r = -.21, p = .049$), sceptical ($r = -.17, p = .090$), cautious ($r = -.45, p = .000$), reserved ($r = -.00, p = .487$), leisurely ($r = -.03, p = .411$), bold ($r = -.04, p = .383$), mischievous ($r = .07, p = .287$), colourful ($r = .31, p = .006$), imaginative ($r = .30, p = .008$), diligent ($r = .20, p = .054$), and dutiful ($r = -.27, p = .015$).

Coefficient betas were: excitable ($\beta = .03, p = .809$), sceptical ($\beta = -.13, p = .341$), cautious ($\beta = -.42, p = .011$), reserved ($\beta = .12, p = .370$), leisurely ($\beta = .08, p = .595$), bold ($\beta = -.19, p = .176$), mischievous ($\beta = -.07, p = .593$), colourful ($\beta = .21, p = .153$), imaginative ($\beta = .28, p = .038$), diligent ($\beta = .17, p = .1684$), and dutiful ($\beta = -.03, p = .844$). The $R^2$ change for the whole model was significant. Results are presented in Table 9.6.

The above analysis was repeated for the under rating category, i.e., sample sorted such that only cases with Dr < -.2598 were included. No univariate outliers were found. No multivariate outliers were found. With a sample size of 60, a medium effect size, a beta to alpha ratio of one, and two predictors the power of this test was .90, which was considered adequate for this exploratory analysis. The
ANOVA result indicated that a significant linear relationship existed before Bonferroni correction \((F(11,48) = 1.79, p < .083)\). Pearson correlation coefficients between the personality components and charisma were: excitable \((r = -.16, p = .107)\), sceptical \((r = -.17, p = .101)\), cautious \((r = -.24, p = .031)\), reserved \((r = -.22, p = .048)\), leisurely \((r = -.25, p = .026)\), bold \((r = .23, p = .040)\), mischievous \((r = .12, p = .187)\), colourful \((r = .07, p = .292)\), imaginative \((r = .23, p = .040)\), diligent \((r = -.17, p = .096)\), and dutiful \((r = -.07, p = .286)\).

Coefficient betas were: excitable \((\beta = .02, p = .922)\), sceptical \((\beta = -.24, p = .166)\), cautious \((\beta = .07, p = .786)\), reserved \((\beta = -.24, p = .147)\), leisurely \((\beta = -.24, p = .111)\), bold \((\beta = .35, p = .044)\), mischievous \((\beta = -.07, p = .652)\), colourful \((\beta = -.28, p = .106)\), imaginative \((\beta = .46, p = .018)\), diligent \((\beta = -.06, p = .730)\), and dutiful \((\beta = .08, p = .554)\). The \(R^2\) change for the whole model was not significant. Results are presented in Table 9.6.

The above analysis was repeated a third time for the over rating category, i.e., sample sorted such that only cases with Dr > .2356 were included. No univariate outliers were found. No multivariate outliers were found. With a sample size of 59, a medium effect size, a beta to alpha ratio of one, and two predictors the power of this test was .90, which was considered adequate for this exploratory analysis. The ANOVA result indicated that no significant linear relationship existed \((F(11,47) = 1.56, p < .133)\). Pearson correlation coefficients between the personality components and charisma were: excitable \((r = -.06, p = .316)\), sceptical \((r = -.26, p = .023)\), cautious \((r = -.32, p = .007)\), reserved \((r = -.26, p = .022)\), leisurely \((r = -.23, p = .043)\), bold \((r = .18, p = .088)\), mischievous \((r = -.01, p = .471)\), colourful \((r = .02, p = .436)\), imaginative \((r = .02, p = .441)\), diligent \((r = .12, p = .180)\), and dutiful \((r = -.14, p = .145)\).
Table 9.6

Intercorrelations and regressions of transformational leadership behaviour on personality disorder components

<table>
<thead>
<tr>
<th></th>
<th>Whole Sample</th>
<th>Accurate Raters Dr &gt;= -.2598 &amp; Dr &lt;= .2356</th>
<th>Under Raters Dr &lt; -.2598</th>
<th>Over Raters Dr &gt; .2356</th>
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<tr>
<td>N</td>
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<td>64</td>
<td>60</td>
<td>59</td>
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**Pearson r**

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<th>Under Raters Dr &lt; -.2598</th>
<th>Over Raters Dr &gt; .2356</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 excitability</td>
<td>-0.14*</td>
<td>-0.21*</td>
<td>-0.16</td>
<td>-0.06</td>
</tr>
<tr>
<td>2 sceptical</td>
<td>-0.18**</td>
<td>-0.17</td>
<td>-0.17</td>
<td>-0.26*</td>
</tr>
<tr>
<td>3 cautious</td>
<td>-0.32***</td>
<td>-0.45***</td>
<td>-0.24*</td>
<td>-0.32**</td>
</tr>
<tr>
<td>4 reserved</td>
<td>-0.15*</td>
<td>0.00</td>
<td>-0.22*</td>
<td>-0.26*</td>
</tr>
<tr>
<td>5 leisurely</td>
<td>-0.16**</td>
<td>-0.03</td>
<td>-0.25*</td>
<td>-0.23*</td>
</tr>
<tr>
<td>6 bold</td>
<td>0.11</td>
<td>-0.04</td>
<td>0.23*</td>
<td>0.18</td>
</tr>
<tr>
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<td>0.07</td>
<td>0.07</td>
<td>0.12</td>
<td>-0.01</td>
</tr>
<tr>
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<td>0.13*</td>
<td>0.31**</td>
<td>0.07</td>
<td>0.02</td>
</tr>
<tr>
<td>9 imaginative</td>
<td>0.18**</td>
<td>0.30**</td>
<td>0.23*</td>
<td>0.02</td>
</tr>
<tr>
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<td>0.05</td>
<td>0.20*</td>
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</tr>
<tr>
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**Beta**

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<td>-0.24</td>
</tr>
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</tr>
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<td>0.34*</td>
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<td>-0.28</td>
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</tr>
<tr>
<td>9 imaginative</td>
<td>0.25**</td>
<td>0.28*</td>
<td>0.45**</td>
<td>0.01</td>
</tr>
<tr>
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<td>0.04</td>
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<td>-0.08</td>
</tr>
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<td>-0.07</td>
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**Variance**

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<th>$R^2$</th>
<th>$F$</th>
<th>$F$</th>
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<tbody>
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<td>3.51***</td>
<td>.39</td>
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<tr>
<td>Accurate Raters Dr &gt;= -.2598 &amp; Dr &lt;= .2356</td>
<td>.63</td>
<td>.39</td>
<td>3.06**</td>
<td>.39</td>
</tr>
<tr>
<td>Under Raters Dr &lt; -.2598</td>
<td>.54</td>
<td>.29</td>
<td>1.79</td>
<td>.29</td>
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<tr>
<td>Over Raters Dr &gt; .2356</td>
<td>.52</td>
<td>.27</td>
<td>1.56</td>
<td>.27</td>
</tr>
</tbody>
</table>

* $p < .05$, ** $p < .01$, *** $p < .001$ (1-tailed).

Coefficient betas were: excitabile ($\beta = .32, p = .066$), sceptical ($\beta = -.29, p = .077$), cautious ($\beta = -.16, p = .404$), reserved ($\beta = -.24, p = .144$), leisurely ($\beta = -.19, p =$ .077).
= .245), bold (β = .34, p = .052), mischievous (β = .08, p = .621), colourful (β = -.22, 
p = .185), imaginative (β = .01, p = .953), diligent (β = -.08, p = .637), and dutiful (β = 
.07, p = .614). The $R^2$ change for the model was not significant. Results are
presented in Table 9.6.

Table 9.6 contrasts regression results for the whole sample with those for three
Dr categories. Before Bonferroni correction self-subordinate rating agreement
appears to have had a moderating effect on the inter-correlations between 10 of the 11
personality disorder variables and charisma, i.e., all variables except mischievous;
self-subordinate rating agreement also moderated the explained variance for the whole
model; and the prediction of transformational leadership behaviour by personality
disorder components was moderated by self-subordinate rating agreement for the
HDS components sceptical, cautious, bold, and imaginative. These results indicate
that after Bonferroni correction hypotheses 9(4 to 8) should be rejected. Since this is
exploratory research the four indications of predictions found that did not reach
Bonferroni significance will be discussed in turn as argued above.

In the whole sample the prediction of charisma by sceptical was significant
and negative at the .05 level but the prediction was not significant at any level in any
of the categories. Cautious negatively predicted charisma at the .05 level in the whole
sample, at the .01 level in the accurate rater sample and not at all in the other two
categories. As expected bold did not predict charisma in the whole sample but
unexpectedly did so positively at the .05 level in both the over- and under-rater
categories. Charisma was positively predicted by imaginative at the .01 level in the
whole and under rater samples, at the .05 level in the accurate raters sample, and not
at all in the over rater category. Contrary to expectations neither colourful nor
imaginative predicted charisma. In line with those findings, no moderating effect was
found. As expected all other predictors were non-significant in the whole sample and each of the three category sub-samples. These results will be discussed in the next section.

9.3 Discussion

Transformational leadership behaviour has been suggested as a means of increasing organisational effectiveness (Bass, 1998). Yukl and Van Fleet (1992) have called for more research on the selection of transformational leaders. It has been shown that leaders can learn to behave transformationally (Barling, Weber, & Kelloway, 1996). But few studies have cast light on the personal attributes a leader may require to successfully become a senior transformational leader (Lim and Ployhart, 2004).

9.3.1 Personality Disorders as Predictors of Transformational Leadership Behaviour

This first purpose of this study was to explore the proposition that personality disorder components predict transformational leadership behaviour, operationalised as charisma. Since this research is considered exploratory the very rigorous test of the Bonferroni correction will be relaxed so that general tendencies that have appeared in the data can be highlighted and discussed.

Eleven HDS personality disorder component predictors were explored. The eleven predictors generated two hypotheses that posited a negative prediction, i.e., for cautious and sceptical; and three hypothesis that asserted a positive prediction, i.e., mischievous, imaginative and colourful. No prediction was expected for the remaining six HDS components, i.e., excitable, bold, reserved, dutiful, diligent, and leisurely. The 11 component predictors will each be discussed in more detail below.
9.3.1.1 Non-predictors

Starting with the latter group above, excitable (DSM, borderline), bold (DSM, narcissistic), reserved (DSM, schizoid), dutiful (DSM, dependent), diligent (DSM, obsessive-compulsive), and leisurely (DSM, passive-aggressive) did not predict charisma. These results were anticipated. The subject cohort investigated in this research was senior organisational leaders. All of the subjects were successful in their roles in that they had been nominated by their respective organisations to attend a non-remedial leadership development workshop.

Excitable was negatively correlated with charisma at the .05 level but did not predict charisma significantly. The prevalence of the HDS component excitable in this sample was estimated at a surprisingly high 23 percent (Table 9.5). The prevalence indicates that people with borderline personality disorder tendencies do populate senior management ranks. The existence of these tendencies could be expected to derail an affected leader and negatively impact on subordinate ratings of transformational behaviour as argued in Chapter Five. But despite the small negative relationship found between excitable and charisma ($r = -.14, p < .05$), excitable did not predict charisma. It is argued that current job market situational factors may contribute to this finding. Unemployment is currently low in Australia and many skilled occupational groups are undersupplied. This may be the case for senior leadership talent. In such circumstances even non-ideal candidates, i.e., candidates who exhibit some emotional fragility but who are themselves very empathetic, may survive in jobs where such characteristics, while not ideal, are nevertheless able to be tolerated. When incumbent these people may well develop close relationships with subordinates. For this reason excitable tendencies may not have predicted subordinate ratings of charisma.
The prevalence of bold personality (DSM, narcissistic) is very low at six percent. As expected in Chapter Five bold was found to have no relationship with and did not predict charisma. Previous work has highlighted the upsides and downsides of narcissistic leaders (e.g., Macoby, 2000). Whether narcissism is upside or downside may depend on characteristics of the situation. For instance, in desperate times a leader with a fierce belief in their ultimate success and the correctness of their course of action may be exactly what is required. In such situations narcissism may predict transformational leadership success. In other situations it may be the reverse. As was argued in Chapter Five narcissism by itself may not be a good predictor of success in transformational leadership unless a lot is known about the characteristics of the situation and a match can be made to the leader.

Reserved was found to have a prevalence of 35 percent in this sample (Table 9.5). Reserved (DSM, schizoid) was negatively related to charisma \( (r = -.15, p < .05) \) and did not predict charisma. The lack of prediction despite the high comparative prevalence suggests, as was argued in Chapter Five, that reserved may not be a good personality variable upon which senior executives could be selected. Both negative and positive characteristics of this personality component (Table 5.2) revolve around toughness and independence both of which can be seen as good or bad depending upon a host of other factors. It is speculated that factors that may make the biggest difference are other personality components that have a more significant predictive impact than reserved. If this is so reserved has little importance in determining subordinate evaluations of charisma. It is also speculated that reserved may not empirically reflect a latent personality extreme (Costa, 1994; Lenzenweger, 1996). Reserved may have not predictive capability for this reason.
The prevalence of dutiful in the sample was estimated at nine percent (Table 9.5). It is argued that a low prevalence rate should have been expected for this disorder since the characteristics of persons with the disorder are inconsistent with leadership in general and transformational leadership in particular. It is further argued that a low prevalence of this disorder amongst leaders is consistent with the forecast made in Chapter Seven of no prediction of charisma by dutiful. The Hogan and Hogan (2001) positive descriptors of dutiful were: demonstrates service, loyalty, politeness, cordiality, conforming, eager to please, and makes few enemies (Table 5.2). It was argued that these appear to convey the impression of a follower rather than a leader. The finding here of no prediction lends support to the proposition that dependent senior leaders will not be seen as transformational by subordinates and is consistent with the low prevalence rate found in this sample for senior leaders.

Diligent had an estimated sample prevalence of 10 percent (Table 9.5). It is argued that a low prevalence rate is consistent with the proposition that diligent would not predict charisma. Positive descriptors of diligent managers include: concerned with doing a good job, pleasing others, obeying authority, hard working, planful, meticulous, set high standards for self and others, reliable, conservative, detail oriented, good organisational citizens, good role models, and popular with bosses (Table 5.2). It was argued that the majority of these descriptors seem more consistent with transactional leadership than transformational leadership and more consistent with middle to lower level management roles than with senior leadership roles (Kotter, 1990). No prediction was therefore expected and no evidence for prediction of charisma by diligent was found here lending support to the proposition that diligent does not predict charisma.
The prevalence estimated for leisurely (DSM, passive-aggressive) was 31 percent. It is argued that with prevalence at that level there was an increased likelihood of prediction of charisma. Hogan and Hogan’s (2001) descriptors of those who score high on leisurely when they are at their best include: good social skills, clever at hiding their feelings, and confident about own skills and abilities (Table 5.2). Hogan and Hogan (2001) also suggest that even when at their best feelings of being mistreated and unappreciated are still keenly felt and reflect, most often covertly with high deniability, in their behaviour. It was argued that such a person would not be rated as transformational by subordinates. It is further argued that, because of the high deniability of resistant behaviour by passive-aggressive people, leisurely was also unlikely to negatively predict charisma. No prediction was found here lending weight to the general proposition that passive-aggressive personality would not predict transformational leadership.

9.3.1.2 Hypothesised positive predictors

Arguments were put in Chapter Five that mischievous (DSM, antisocial), colourful (DSM, histrionic) and imaginative (DSM, schizotypal) may each positively predict subordinate rated charisma.

Colourful did not predict charisma and hypothesis 9(7) was rejected. Board and Fritzon (2005) found that a sample of British senior executives demonstrated a higher mean level of this disorder than clinical and criminal populations. The presenting behaviour include over expressiveness and animation driven by a want to be the centre of attention. The prevalence of colourful for this sample was nine percent (Table 9.5). This appears that this may be a lower prevalence level than that found by Board and Fritzon (2005). Board and Fritzon (2005) make the point that
behaviours of a histrionic person in some ways coincide with those expected of a senior manager. Comparing and contrasting histrionic with narcissistic personality disorder in the workplace the authors comment that histrionic characteristics have “… greater utility in the workplace. Successful business leaders have been described as being aggressive, dominant, extrovert, enthusiastic, charming, sociable, self-confident, independent, self-centred, and influential, often seeking to exert authority and control over organisational resources” (p. 26). Histrionic tendencies, as measured by the HDS, were not prevalent in the present sample and colourful personality did not predict subordinate rated charisma. Board and Fritzon’s (2005) sample appears to have been drawn from one locality in the UK whereas the present sample was gathered in Brisbane, Sydney, and Melbourne, Australia. It is argued that cultural variation may account for the difference, i.e., the absence of the histrionic tendency in the Australian senior executives in the present sample. It may be speculated that Australian senior executives are inherently less demonstrative than their UK counterparts. It is also possible that the UK sample was drawn from smaller organisations that are likely to attract more demonstrative executives, e.g., those organisations where sales is the predominant skill set and as such is the skill set background of most of the senior executives. The present sample was drawn from very large corporate and government organisations where no such specialisation was evident. Further, Board and Fritzon (2005) do not say how they gathered their sample of 39 senior executives. If it was done by mail out to a larger sample then it may be that only those with higher histrionic tendencies found the motivation to respond to the survey. On the present results it is likely that colourful personality characteristics are not useful for identifying transformational leadership potential in the Australian corporate environment.
It was estimated that 19 percent of the present sample population had imaginative personality at disorder level. Imaginative did predict charisma as had been projected. So hypothesis 9(6) was accepted. In Chapter Seven, from the dimensional model of personality disorder perspective, imaginative was identified as potentially a high manifestation of intellectance. Intellectance was forecast as a predictor of charisma in that study. But intellectance was found to be a predictor of charisma only for the low self-subordinate rating agreement sub-sample in study one reported in Chapter Eight. Characteristics of imaginative personality can be likened to eccentric or creative behaviour. Best characteristics according to Hogan and Hogan (2000) are: have different perspectives on things, constantly alert for new ways of seeing things, enjoy entertaining others with new ideas, bright, colourful, insightful, imaginative, innovative, creative, and insightful about others’ motives. With the complex environment facing senior management it is speculated that novel approaches to organisational challenges may often be required. Kotter (1999) declared that creating a vision and establishing a great sense of urgency are critical steps for senior executive success. He also cautions that executives “under-communicate the vision by a factor of ten” (p. 82). It is argued that creative strategies may be required in order to cut through, engage, and continually re-engage, stakeholders in the work of an organisation. Turner and Crawford (1998) argue that engagement of stakeholders in actually doing what is necessary to implement a vision on an ongoing basis is perhaps the key challenge faced by leaders; and it is more difficult for managers than figuring out what to do or how to do it. It is argued that senior managers may need to demonstrate unusual and different behavioural strategies in order to attain and maintain engagement. This is a possible explanation for the
significant prediction found here. More is said about this and the relationship with the study one finding for intellectance in the final chapter of this thesis.

Mischievous (DSM, antisocial) personality disorder did not correlate with or predict charisma. The prevalence of this disorder in the present sample was 11 percent. Earlier research found that those with antisocial and psychopathic tendencies can be interpersonally very skilled, raising concern only after prolonged exposure (Babiak, 1995). The rapidity of change in modern workplaces reduces the frequency of prolonged exposure. This provides an environment where the antisocial can survive and prosper in the chaos (Babiak, 1995). It is argued that the low prevalence found here may have contributed to the present null result. There have been a number of highly publicised corporate collapses, e.g., HIH Insurance in Australia, Enron in the U.S., where subsequent investigation has revealed antisocial like behaviour on the part of senior executives. This behaviour has been roundly condemned and aggressively punished. It is argued that this publicity may well have discouraged tolerance of antisocial tendencies resulting in a decrease in the prevalence of antisocial persons in senior executive roles.

9.3.1.3 Hypothesised negative predictors

Based on comparisons with descriptors of derailment factors two HDS disorder components were proposed as negative predictors of charisma. They were sceptical and cautious.

Sceptical (DSM, paranoid) was negatively related to charisma ($r = -.18$, $p < .01$), and negatively predicted charisma ($\beta = -.21$, $p < .05$). Bonferroni correction nullified this result. Meaning that hypothesis 9(5) was rejected. The definite tendency was nevertheless found in the data. Moreover, the prevalence of sceptical
estimated in the sample was a comparatively low 14 percent. Combined, these two pieces of data can be interpreted to mean that sceptical personality should be avoided when selecting senior leaders because even at low prevalence a negative predictive tendency was found. This is sensible since sufferers of this condition expect things to go wrong and when things do they retaliate, which is not a recipe for sustained effective organisational performance under pressure. It is more like management by exception passive the negative transactional component in the full range of leadership model (Bass, 1985).

Cautious (DSM, avoidant) was found to have a prevalence of 34 percent in the present sample; was negatively related to charisma ($r = -.32, p < .001$) and negatively predicted charisma ($\beta = -.26, p < .05$). Again Bonferroni correction nullified this result. Meaning that hypothesis 9(4) was rejected. Again it is argued that the tendency for a predictive relationship was found in the data, albeit not significant after Bonferroni. It is argued that the likely behavioural characteristics of cautious personality are the opposite of transformational leadership behaviour. Cautious people avoid innovation, resist change, feel threatened by the new, and are very controlling of staff as a result. It is therefore not surprising that cautious would be negatively related to charisma and may be indicative, if not predictive, of failure in transformational leadership. It is argued that cautious can be seen as similar to a notional low pole of intellectance, the epitome of not being open. This matter is taken up further in the final chapter of this thesis.

9.3.2 Hypothesised Moderation of Prediction by HDS Components

The second major purpose of this research was to investigate if self-subordinate rating agreement moderated the prediction of transformational leadership behaviour by personality disorders. Three primary prediction indications were found
and discussed above but four indications of prediction moderation were found for
HDS components. Additionally, the variance explained by the whole HDS model
also appeared to be moderated. These findings are discussed based on results
summarised in Table 9.6.

For the whole sample explained variance was \( R^2 = .18, p < .001 \), for the
accurate raters sub sample it was \( R^2 = .39, p < .01 \). Explained variance was not
significant for either the under or over rater sub-samples. These results indicate that
only 18 percent of the variance was explained by the whole HDS model in the whole
sample but 39 percent of the variance was explained for the accurate rater sub-sample.
It is likely that the finding in the whole sample was a reflection of the much stronger
finding in the accurate rater category, diluted by the non findings in the other two
categories. This finding suggests that personality disorder components of persons
with a high self-subordinate rating agreement attribute explain much more about
subordinate ratings of charisma. It is argued that subordinates of leaders with high
self-subordinate rating agreement based disposition may be much more impacted by
leader personality attributes given the absence of an obvious tendency by the leader to
either ignore their perspectives or else fail to apprehend or comprehend them. It may
be that when a subordinate perceives that a leader does not understand or care about
their point of view then that leader personality attribute dominates the subordinate’s
view of and relationship with the leader relegating other personality attributes, such as
HDS components, to secondary importance. When understanding between leader and
subordinate is present those other leader personality attributes may become a focus of
attention for subordinates and influence subordinate ratings of leader charisma. This
is similar to the equivalent finding in study one of this thesis and will be discussed
further in the final chapter of this thesis.
While there was an indication that sceptical was negatively related to ($r = -.18, p < .01$) and negatively predicted charisma ($\beta = -.21, p < .05$) in the whole sample, these effects disappeared in the sub-samples. It seems possible from these results that the dispositional variable self-other rating agreement has a larger impact than sceptical. When self-other rating agreement is allowed for in the sub-sample categorisation the predictive impact of sceptical disappears. Sceptical managers are inclined to be cynical; see conspiracies against them; are distrustful; and are quick to retaliate against perceived mistreatment by others. It is therefore understandable that such characteristics could negatively predict subordinate rated charisma. It is also understandable that a high self-subordinate rating agreement sceptic may not impact as negatively on subordinates thereby explaining why the negative prediction may have disappeared for the accurate rater category. In the case of under raters, leaders who are not arrogant, who may put themselves down, or have low self esteem, or just put themselves second, it also conceivable that wariness and distrust may be understood by subordinates. For the over rater category it is less easy to understand. A correlation was found between charisma and sceptical in the over rater category but prediction was not significant. Given the prevalence of sceptical estimated at 14 percent for the present sample it may be that the number of high sceptical leaders in the sample was too low for the effect to reach significance. Above it was shown that the whole HDS model had significant explanatory power and this power was moderated by self-subordinate rating agreement. It is possible that the component sceptical is not scientifically representative of a latent dark side personality characteristic and therefore contributes little to the overall result. This is in line with the arguments of Costa (1994) and Lenzenweger (1996).
Results for cautious in the whole sample were \( r = -.32, p < .001 \) and \( \beta = -.26, p < .05 \), which changed for the accurate raters sample to \( r = -.45, p < .001 \) and \( \beta = -.42, p = .01 \). Cautious personality is characterised by high risk aversion. Being risk averse can be seen as antithetical to transformational leadership. It is argued that attitude to risk would be very evident to stakeholders around a leader because it would underlie every decision a leader made and therefore be hard to hide or mask with interpersonal skills. The negative prediction in the whole sample becomes much stronger for the accurate rater category. This again could be due to the influence of the self-subordinate rating agreement dispositional variable. Where a personality characteristic is of significance to a subordinate’s view of leader charisma, as was found here for cautious, the subordinate’s view of the leader is impacted by that characteristic. But the level of impact is moderated by what may be an even more important personality characteristic designated here as self-subordinate rating agreement. Remove that effect, i.e., in the accurate rating category, and the impact of the personality variable potentially becomes an area of greater focus and concern for the subordinate, influencing ratings of leader charisma. Amplify the problem by including only over or under raters and the effect of the personality variable ceases to be predictive because the lack of concern or understanding by the leader becomes the over -riding leader attribute.

Bold can be seen as an opposite of cautious because it indicates unusual self confidence, over evaluation of one’s ability, and feelings of grandiosity. Bold did not predict and was not related to charisma in the whole sample or the accurate rater category. A relationship and prediction was found in the under rater sample \( r = .23, p < .05 \) and \( \beta = .35 = .05 \) and a no relationship but a small prediction was found in the over rater category \( \beta = .34 = .05 \). Interestingly these sub-sample predictions were
positive. Narcissistic characteristics, at their best, are not unlike some characteristics of transformational leaders, e.g., taking the lead, exhibiting personal vision and self-confidence despite difficulties faced. It is possible that a narcissistic leader would seldom have high self-rating agreement since they are so bound up in their own perspectives they have little chance of truly appreciating the perspective of others. It is speculated that, especially in challenging circumstances, subordinates may see bold tendencies as somewhat charismatic, i.e., the leader’s vision and confidence transfer somewhat to the subordinates. When a leader has high self-subordinate rating awareness it is not only likely they would not behave in a narcissistic way, even if they were narcissistic, but it is also likely that such a leader would contextualise and democratise to give more ownership to subordinates and take less credit for themselves. While this latter situation would seem preferable from an overall organisation health and sustainability point of view it may reduce subordinate perceptions of leader charisma. This could explain the present findings.

Imaginative was related to and positively predicted charisma in the whole sample \( r = .18, p < .01 \) and \( \beta = .25 = .01 \). The relationship strengthened slightly in the accurate raters sub sample \( r = .30, p < .01 \) and \( \beta = .28 = .05 \); changed again in the under rater category \( r = .23, p = .04 \) and \( \beta = .45, p = .017 \). Imaginative personality characteristics include: having and seeking radically different perspectives, being extremely flexible to regular and major change and new ideas, being seen as bright and interesting, and being insightful about others motives. It is worth focusing first on the non result for the over raters. Leaders who are seen as out of touch because they are arrogant or self-absorbed may be unlikely to be valued by subordinates for their creativity since creativity may be seen to mostly revolve around the leader. In that case imaginative personality may not predict charisma as was the
case in the present sample. Under raters may be the opposite in that they are seen as self-effacing, under-confident, and or other-centric in their leadership approach. Such persons may be valued and seen as charismatic or visionary for creativity they bring to the table even if only in a sympathetic attempt at bolstering the leader. For accurate raters a similar argument may apply to that just put for under-raters.

For the remaining HDS components prediction was not moderated in this sample although correlation appeared to be moderated for excitable, reserved, leisurely, colourful, diligent, and dutiful. This left only mischievous with no apparent moderation effect whatever. With prevalence in this sample of 11 percent and the accompanying likelihood that mischievous individuals are very skilled manipulators of others it may be that self-other rating agreement does not discriminate mischievous leaders well.

Based on the above it is argued that self other rating agreement does moderate predictions of charisma by some HDS components. The implication of this finding is that self-other rating agreement taps a dispositional element, which is significant to subordinate ratings of charisma. Self-other rating agreement could therefore be used for both selection and development and transformational leaders. Self-other rating agreement may tap more than self-awareness (Atwater & Yammarino, 1992), managerial self awareness (Church, 1997), or self-monitoring (Snyder, 1974). It seems better described by the concepts of role-taking (Mead, 1934), social cognition (Selman, 1974), intraception (Edwards, 1959), and or socio-political intelligence (Hogan & Hogan, 2002). More work is required to elucidate the precise dispositional nature of this variable and its utility in selecting and developing transformational leaders.
9.3.3 Limitations of This Study

There are a number of potential issues that may influence the interpretation of the findings of this study. Readers should keep these issues in mind when considering the results of this study.

Systematic bias may have been introduced by the means of sampling both leaders and subordinates. Transformational leadership behaviour was measured as the mean of subordinate ratings on the five transformational scales of the MLQ. Several biases may have been introduced by this method. First, leaders selected the subordinates who would complete the questionnaires on them. While it has been argued that this is a superior method of data gathering (Brutus et al., 2005), leaders may have, consciously or unconsciously, selected subordinates whose ratings were biased. Secondly, subordinates were aware that their ratings would be fed back to those leaders as an averaged result only if three or more subordinates completed the ratings. This promise of subordinate anonymity, which was designed to promote honesty, may have promoted other rating behaviours such as to reward or penalise the leader. Thirdly, because the subjects of this study were senior leaders, subject leaders’ subordinate raters would likely have been senior middle managers with their own well developed implicit models of leadership and management behaviour. Subordinates’ implicit leadership theories may have impacted on their ratings. Finally, not all subordinates selected by leaders to complete questionnaires provided ratings. Those who did may represent a biased sample of the rating group selected by the leader. From the leader selection point of view, data for this study was gathered from leaders who attended leadership development programs or seminars. It may be that senior leaders who were motivated to attend such seminars represented a biased
sample of all senior leaders. None of these potential biases were controlled for in this thesis.

9.3.4 Recommendations for Further Research

The findings of this study were encouraging. Personality disorder conceptualised according to the categorical model has been shown to predict transformational leadership behaviour both positively and negatively. Not every HDS component was found to be a predictor. As argued above this may be a result of the clinically developed categorical model not being a scientifically robust model of dysfunctional personality (Costa, 1994; Lenzenweger, 1996). Its alternative, the dimensional model which sees personality dysfunction as extreme manifestations of normal personality, may offer better predictive ability (Widger, 1994). Research is required to develop a widely agreed and validated scientific measure of the dark side that may be used to replicate the present research. In this way the potential pluses and minuses of extreme personality, particularly as they relate to societies’ organisational leaders, can be better understood leading to better selection and development and ultimately to potentially huge socio-economic benefits.

9.4 Chapter Conclusion

This study investigated prediction of transformational leadership behaviour by HDS components and the moderating effect of self-subordinate rating agreement on those predictions. Regression analysis was employed for the investigations.

As expected from arguments in Chapter Five results indicated that three HDS components, sceptical, cautious and imaginative, predicted transformational leadership behaviour. Contrary to expectations the HDS components colourful and mischievous were not found to predict charisma as had been hypothesised. Six other components were expected to be non predictors based on argument put in Chapter
Five. No predictions were found for them. They were: excitable, bold, reserved, leisurely, diligent, and dutiful.

Self subordinate rating agreement was found to moderate predictions by four HDS components: sceptical, cautious, bold, and imaginative. Additionally self-subordinate rating agreement moderated correlations found for 10 of the 11 HDS components, and moderated the magnitude of the variance explained by the whole 11 component HDS predictive model tested here.

Findings were discussed and inferences made about reasons for the results found. These results are discussed further in Chapter 10 of this thesis.
CHAPTER 10: DISCUSSION

10.1 Contribution to Knowledge

The present research program has made eight important contributions to the theoretical and research literature. The contributions will each be discussed in turn before moving to a more general discussion of the findings, the limitations of this research, and recommendations for further research.

The first contribution is that ambition, a component of extraversion, was found to be positively related to and positively predict subordinate rated charisma of Australian senior organisational leaders. It was argued above that ambitious behaviour is consistent with transformational behaviour. It is further argued that ambition may be useable as a predictor to select leaders who have transformational potential. The second HPI component of extraversion, sociability, was found to have no predictive power. Previous findings for the broader Big Five construct extraversion have varied widely across studies as reported in Chapter Four above. It is argued that this may have been because of a mixture of constructs implicit within the overall extraversion construct. Previous attempts to overcome this by use of facet scale predictors failed to find improved levels of relationship and prediction (Judge & Bono, 2000). The Hogan (1995) conceptualisation of extraversion in two components may have tapped relevant middle ground.

A second original contribution of the present findings is that prudence is negatively related to and is a strong negative predictor of subordinate rated Australian senior leader charisma. Previous correlational findings for conscientiousness with transformational behaviour have varied from positive to negative. Moreover, conscientiousness has not been found to be a reliable predictor of transformational
leadership. The present findings add a second potential predictor of those leaders who have senior transformational leadership potential.

A third original contribution of this present work is that self-subordinate rating agreement, operationalised as an absolute difference score, moderates relationship between five factor model components and charisma; moderates prediction of charisma by some Five Factor Model components; and moderates the amount of variance explained by the whole Five Factor Model in predicting charisma for senior Australian organisational leaders.

The fourth original contribution of this work is that samples of Australian senior leaders demonstrate non-zero prevalence of personality disorder as measured using the category model. This builds on the one previous study that appears to have been published in this area (Board & Fritzon, 2005) where a sample of UK senior managers was found to demonstrate non-zero prevalence of personality disorder.

A fifth original contribution by this present work is that the personality disorder component sceptical is negatively related to subordinate rated charisma. A tendency for sceptical to negatively predict charisma was also found offering another potential indicator for the selection of senior leaders with transformational potential.

Sixthly, the personality disorder component cautious was found to be negatively related to charisma of senior Australian organisational leaders. A tendency for cautious to negatively predict subordinate rated charisma of senior Australian organisational leaders was also found offering another potential indicator to assist with selection of senior leaders with transformational leadership potential.

The seventh contribution made by this present thesis is that the personality disorder variable imaginative is related to and predicts subordinate rated charisma of senior Australian organisational leaders. This finding offers the potential of yet
another variable upon which senior leaders with transformational potential may be
able to be selected.

Finally self-subordinate rating agreement, operationalised as a relative
difference score, was found to moderate relationships between subordinate rated
charisma and personality disorder components; prediction of subordinate rated
charisma by personality disorder components; and the variance in subordinated rated
charisma predicted by the whole HDS model of personality disorders.

Theoretical implications of the eight findings are considered in more detail in
the following discussion, before the practical implications of the research, its
limitations, and directions for future research are considered.

10.2 Theoretical Implications

In this section we address the relevance of the above contributions to theory in
the area. The comments below build upon comments that have already been made in
the discussion sections of the two study chapters. Discussion section below deal with
Big Five personality, personality disorder, moderation by self-subordinate rating
agreement, and inferences from all the results combined.

10.2.1 Big Five Personality

Previous work has found varying levels and directions of relationships
between Five Factor components and transformational behaviour (Judge & Bono,
2000; Ployhart, Lim, & Chan, 2001; Judge, Bono, Ilies, & Gerhardt, 2002; Lim &
Ployhart, 2004; Bono & Judge, 2004). It is argued that those findings were based on
samples of mid level and junior managers. It was argued in Chapter Eight that the
present study was focused on senior leaders. Results here indicated that ambition
(positively) and prudence (negatively) both significantly predicted transformational
leadership for senior leaders. Predictions for likeability, intellectance, and school success were close to but below significance. Findings for sociability and adjustment revealed no predictive tendency whatever. These results will be discussed in turn.

Hogan and Hogan (1995), in their construction of the HPI construct of extraversion, generated a scale item pool based on socioanalytic theory (Hogan, 1983). The authors found that their item pool for surgency (extraversion) had two conceptually unrelated components they called sociability and ambition. Sociability concerned “impulsivity and the need for social interaction” (p. 9); ambition concerned “a desire for status, power, recognition and achievement” (p. 9). Hogan and Hogan (1995) argue that there are sociable people who are not ambitious and ambitious people who are not sociable. The present findings indicate that ambition is potentially an important predictor of senior transformational leadership but sociability is not. These findings held with little change across the two categories of self-subordinate rating agreement.

It is argued that these two findings together make intuitive sense. It is argued that to have the drive to get on in any organisation one needs a source of motivation and ambition is such a source. In order to get on one does not need to be gregarious or even to like social interaction. To get on a leader may have to learn the skills necessary to be good enough at interpersonal interaction to meet the needs of positions he or she occupies as she or he ascends the ranks in an organisation. Again, ambition could motivate a leader to learn those social skills, especially in organisational environments where there is often socially approved and sponsored access to skill training. The reverse argument is not as robust. Just because a person is dispositionally sociable does not mean that she or he will put in the effort to get on as a leader or to relate effectively to persons he or she may not like. On the contrary
becoming leader may actually prejudice interpersonal interaction by creating status barriers that otherwise may not exist. Moreover, it is argued that ambition is not commonly singled out as an area in which leaders need or should legitimately need training and development. In fact, being overly ambitious has been cited as leading to derailment (Leslie & Van Velsor, 1996). From the present results it is argued that moderately high ambition may be a must have personal attribute, a dispositional attribute that a person intent on a senior leadership career needs in order to get on. Whereas it argued that sociability is commonly regarded as a skill set people can learn and which increases as life progresses. Longitudinal research has shown that the extraversion trait (conceptualised as argued above mainly as gregariousness), while a stable personal attribute, increases with age (McCrae, 2002).

It is argued that the socioanalytic conceptualisation may have added a valuable perspective in the case of linking personality to senior transformational leadership. It is argued that the more global construct extraversion or surgency is largely focused on gregariousness. Research employing the global surgency construct as predictor, and research using facet scales as predictors have each shown inconclusive findings as detailed in Chapter Four above. In the case of the global construct that may have been because the sociability or gregariousness focus, which was found here to have no predictive power, diluted or eliminated the strength of relationships found. In the case of facet scales it may be because other conceptualisations of surgency have not separated out ambition in quite the same was as have Hogan and Hogan (1995). For instance in the OCEAN model of Costa and McCrae (1985) extraversion is made up of the facets: warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions (Costa & McCrae, 1985). It is argued that ambition is not captured adequately in this popular conceptualisation, which may have resulted in ambition
being missed in studies using Five Factor Model concepts that do not separate out ambition.

The second major finding here was that prudence was negatively related to and negatively predicted charisma. This finding held with little change across the two categories of self-subordinate rating agreement. Previous findings regarding the relationship of conscientiousness to transformational leadership have varied from positive to negative across a large range of studies summarised in a number of meta-studies (Judge & Bono, 2000; Ployhart, Lim, & Chan, 2001; Judge, Bono, Ilies, & Gerhardt, 2002; Lim & Ployhart, 2004; Bono & Judge, 2004). The conventional wisdom has been that high conscientiousness is consistent with the needs of careers like management (Barrick & Mount, 1991). It was argued in Chapter Four that the challenge of senior management may differ from the challenges of middle and junior management and reverse that conventional wisdom. The present finding supports that contention. Being highly conscientiousness may be a disadvantage when dealing with the potential ambiguity, chaos and complexity of a transformational leadership situation in a large organisation. Mintzberg (1973), in a study of practising senior managers in Canada, found that they spent their work time rapidly switching from issue to issue in three main roles: 1. Interpersonal- figurehead, leader, liaison; 2. Informational- monitor, disseminator, spokesperson; 3. Decisional- entrepreneur, disturbance handler, resource allocator, and negotiator. This was contrary to conventional wisdom and classical models of managerial work, which suggested that managers spent their time in planning, organising and controlling activities. It is argued that low prudence, typified in a positive sense as “flexible, venturesome, and open-minded” (Hogan & Hogan, 1995, p.42), may be a personal attribute that contributes to transformational leadership success. It is also argued that this may be
an attribute that is hard to learn and not socially validated. The conventional wisdom promotes the idea of the highly organised, cool, calm, and in control executive who is always totally on top of everything. For instance, it is argued that the media seems to expect senior executives to know and be on top of everything. A situation that, as Mintzberg’s (1973) and Kotter’s (1999) claims indicate, may be far from an accurate representation of the reality faced by senior executives in large organisations. As a result, much training and literature focused on how to get better organised may be off the mark. In fact training and literature of that nature may be leading senior managers 180 degrees in the wrong direction. The present finding suggests that helping senior managers deal with ambiguity and uncertainty may be a much more relevant place to put training and development dollars, albeit potentially a less socially acceptable one. This suggestion is supported by many findings in the literature (e.g., Levinson, 1988; Moses & Lyness, 1990; Jaques, 1991; Hambrick, Finkelstein, & Mooney, 2005).

In the current results adjustment and sociability demonstrated no tendency to predict charisma in the whole sample or either of the self-subordinate rating agreement categories. It was argued that these personality attributes are ones that can be substituted with learned skills. It has been demonstrated that transformational skills can be learned (Barling, Weber, & Kelloway, 1996) and that interpersonal skills and emotional intelligence skills can be learned (Goleman, 1995, 1998, 2002, Bar-On & Parker, 2000). Moreover, it is argued that the learning of the type of skills referred to here is socially accepted, widely available and organisationally endorsed. It is therefore likely that underlying personality attributes may not relate to subordinate perception of leader charisma since subordinate perception are likely to be influenced by their experience of the leader’s behaviour (Edwards, 1992; Halvorsen et al., 2002; Sala, 2002). It is argued that this may explain the current findings.
Likeability, intellectance, and school success each showed a non-significant tendency to predict charisma as hypothesised here. For likeability the tendency disappeared in both self-subordinate rating agreement categories. Earlier research has found small and variable findings varying from positive to nil to negative (Judge & Bono, 2000; Ployhart, Lim & Chan, 2001; Bono & Judge, 2004). It was argued in Chapter Four that, again contrary to conventional wisdom, high likeability may be disadvantageous for persons aspiring to be transformational leaders in large organisations. Hogan and Hogan (1995) suggest that: “persons with high scores on likeability and low scores on ambition may be unwilling to confront poorly performing subordinates” (p. 42). It may be that very low likeability is also problematic. Hogan and Hogan (1995) refer to such people as potentially: “critical, dominant, cold and hostile” (p. 42). The present result may therefore be explained by likeability being another personality attribute that can be substituted by interpersonal skills training. High likeability persons may learn to be more assertive, low likeability types may learn interpersonal sensitivity.

Hogan and Hogan (1995) have found that high scores on intellectance are associated with success in the professions including management. It was therefore expected that intellectance would positively predict charisma. The indication found here in the whole sample was that intellectance may negatively predict charisma. Looking further in the present results it was found that the prediction of charisma by intellectance was significant and negative in the low self-subordinate rating agreement category and not significant at all in the high self-subordinate rating agreement category. These results may be explained by looking at the negative aspects of high intellectance. Hogan and Hogan (2005) state that high scorers may be: “easily bored and inattentive to detail” (p. 40). Such people may be seen by subordinates to over-
rely on their intellect, to be too changeable, to be involved too little, or to act in an intellectually superior ways. When a low awareness leader is like this the characteristic may be seen extremely negatively by subordinates. For a high awareness leader the characteristic may be seen as strength or not noticed at all by subordinates. This would explain the current results.

The prediction found for school success almost reached significance ($p = .025$) after Bonferroni correction. No substantive reason for academic orientation predicting subordinate ratings of senior leader charisma was argued above. It was argued there could have been a positive prediction because of the coincidence of the education level of the type of people who move into senior leadership roles. Findings here support this general contention and did so consistently across the whole sample and the two self-subordinate rating agreement categories.

10.2.2 Personality Disorder

Prevalence estimates made here showed that in the sample of arguably successful leader a percentage, varying from 6% to 35% score as having a personality disorder (Table 9.5). It may be inferred from this, combined with the findings of Board and Fritzon (2005), that senior leader personality characteristics can be more comprehensively understood if this area, called the dark side earlier in this thesis, were more fully investigated. A theoretical implication of this finding is that description of personal attributes such as HDS components as disorders may be inappropriate. It may also be inappropriate to refer to the area as the dark side since the extremes may contain some strengths. It may be better, as suggested by Lewis (Hall, 2001), to see them as situational strengths or weaknesses. It was argued above that use of the dimensional model of personality for this research may have generated additional findings. The dimensional model conceptualises personality disorders as
extremes of normal personality not as separate categories in their own right. A Five Factor Model test that simply was able to investigate extremes as well as normal patterns would add greatly to the ease of doing research in this area. Current proposed methods using various combinations and weightings of facet scales may be too cumbersome for ease of research and cross comparability of results.

No studies of personality disorder and transformational leadership were found in the literature. For that reason this study was regarded as exploratory. Further, it was argued that the strict requirements of Bonferroni correction for statistical proof be set aside here to facilitate discussion of result indications that may not have quite reached the rigorous standard required by Bonferroni. The Bonferroni standard increased in stringency in the second study of this thesis by the use of 11 categories of personality disorder predictor in the multiple regression model.

Three personality disorder categories generated indications that the component may predict charisma. Arguments put in Chapter Five posited that two components would predict charisma negatively, three components would predict charisma positively, and six components would not predict charisma. Both of the components proposed as negative predictors did in fact demonstrate a tendency for negative prediction, i.e., did predict charisma negatively but at a significance level that did not meet that required after Bonferroni correction. They were: sceptical and cautious. One of the three proposed positive predictors, imaginative, did positively predict charisma by again at a lower than the required level of significance. The six components that were proposed as non-predictors all showed no indication of any prediction lending support to the arguments that they would not predict charisma. These results were discussed in isolation in Chapter Nine and those arguments will
not be repeated here. Implications of the findings looking further than just the individual results are presented below.

Given the correlation $r = -0.60, p < 0.01$ (one tailed) between sceptical and adjustment (Hogan & Hogan, 1997, p. 15), and descriptors of the HDS component sceptical (cynical, mistrustful, fault finding, defensive, sensitive to criticism) and of the low end of the HPI component adjustment (tense, moody, temperamental, unhappy and easily stressed) it is argued that one possible way to see sceptical is a manifestation of extremely low adjustment. Results for adjustment that are reported above from study one of this thesis indicated no prediction of charisma. It was argued there that interpersonal skills may mask adjustment issues at the normal levels measured by the HPI. It is further argued here that if the adjustment problems are extreme then it may be less likely that the personality attribute could be masked by interpersonal skills. The results here for sceptical would support that line of argument and presents further support for the call here for a Big Five measure that encompasses extremes.

Cautious gave an indication of a negative prediction of charisma in the present thesis. Cautious correlated $r = -0.70, p < 0.01$ (one tailed) with the HPI component ambition (Hogan & Hogan, 1997, p. 15). It is argued that descriptors of cautious individuals (unassertive, indecisive, conservative, fretful, indecisive, give up) have similarities with descriptors of low ambition individuals (quiet, unassertive, low energy, low aspirations, not interested in advancement, unwilling to be tested). Results of the present study are consistent with such a relationship in that ambition positively predicted charisma ($\beta = 0.27, p < 0.01$) and was positively related to charisma ($r = 0.28, p < 0.01$), whereas cautious was negatively related to charisma ($r = -0.32, p < 0.01$).
and negatively predicted charisma ($\beta = -0.26, p < .05$). This combination of results further supports the contention that ambition, including a low extreme of ambition, may be an important predictor of senior transformational leadership potential that could be used for selection of senior managers with transformational leadership potential. This finding adds additional weight to the argument above that a measure of Big Five characteristics that scientifically measures personality extremes as well as the normal range is needed.

The HDS component imaginative gave an indication of a positive prediction of charisma in study two of this thesis. Imaginative correlated $r = -0.37, p < .01$ (one tailed) with the HPI component prudence (Hogan & Hogan, 1997, p. 15). Descriptors of low prudence individuals (unconventional, impulsive, impatient with detail, careless about rules, flexible, venturesome, open minded) may be seen as somewhat similar to imaginative individuals (creative, innovative, unusual, unconventional, easily bored, may lack follow through). It is argued that the correlation and descriptor comparison are not as clearly related as in the previous two examples but it is argued that the similarities are clear. It is further argued that this may be because the clinically developed DSM categories do not scientifically reflect underlying symptomatology in the way that the Five Factor Model does for normal personality (Lenzenweger, 1996).

Colourful did not indicate any prediction of charisma in study two of this thesis. Colourful correlated $r = 0.67, p < .01$ (one tailed) with the HPI component sociability (Hogan & Hogan, 1997, p. 15). Descriptors of high sociability individuals (outgoing, gregarious, attention seeking, impulsive) may be seen as similar to descriptors for colourful individuals (flirtatious, talkative, self promoting, make intuitive rather than strategic decisions). It is argued that colourful may be seen as an
extreme manifestation of sociability. Neither colourful nor sociability were found in studies two and one respectively to predict charisma suggesting that skill substitution for personality limitations may carry over to some types of extreme personality characteristics. It is further argued that this would only be for individuals motivated to learn the skills, i.e., potentially the ambitious individuals.

Following the line of argument established in the paragraphs immediately above excitable correlates $r = -.76, p < .01$ (one tailed) with the HPI component adjustment; reserved correlates $r = -.67, p < .01$ (one tailed) with the HPI component likeability; and mischievous correlates $r = .48, p < .01$ (one tailed) with the HPI component sociability (Hogan & Hogan, 1997, p. 15). Excitable, reserved, and mischievous in study two, like adjustment, likeability, and sociability in study one, did not predict charisma. It was argued in Chapter Eight that substitution of learned intrapersonal and interpersonal skills may have reduced the chances of subordinates perceiving a personality related problem and altering ratings of charisma accordingly. Based on the above comparison and the present study two results it is argued further to the argument above for colourful that this substitution may extend to include extreme conditions as well, i.e., even extreme personality conditions that can be masked by learned skills may be so masked. Four HDS components do not fit well with the above argument. The HDS component bold does not correlate above $r = .34, p < .01$ (one tailed) with any of the HPI components. It is argued that it is also difficult to find descriptor similarities between bold and any HPI component. The three HDS components that were posited to have no predictive ability, i.e., leisurely, diligent, and dutiful, also fit into this category. Correlations and descriptor comparisons with HPI components are again respectively weak and inconclusive.
It is argued again that the findings discussed in the last paragraph may have results from the proposition that the clinical model of DSM personality disorders, and their HDS equivalents, does not scientifically reflect underlying personality components in the way that the empirically based Five Factor Model of personality does.

10.2.3 Moderation

It has been found that the level of leader being considered does moderate the types of relationships found by researchers (Hambrick & Mason, 1984; Lowe, Kroeck, & Sivasubramaniam, 1996). The present results refer to senior leaders and may not apply to other levels of leaders or leader in other than large organisational settings. The results further strengthen the argument that leadership should be studied using leader samples that can separate different levels of leaders. The finding also adds further evidence that senior leaders’ personal characteristics may differ systematically from junior and middle level leaders.

For the Five Factor Model study self-subordinate rating agreement did moderate the result for intellectance but not the other significant prediction findings. Whether strong predictions were found, viz., ambition and prudence, or nil or equivocal predictions were found, viz., adjustment, sociability, likeability, and school success, it was hard to infer moderation. It was argued in Chapter Eight that for intellectance and for the model as a whole the results clearly demonstrated moderation. An explanation for the moderation was provided in the discussion section of Chapter Eight and Chapter Nine. The null results in study one may be explained by the particular method used to operationalise self-subordinate rating agreement. Absolute difference scores were used because, after Church (1997), it was
argued that the difference between rating accuracy and inaccuracy was of primary concern. Because of the null result for six of the seven HPI components it was argued in Chapter Eight that a measure providing more discrimination may be superior in this application.

The relative difference score preferred by Atwater and Yammarino (1992) separates accurate from inaccurate and additionally separates inaccurate raters into two qualitatively different categories: those cases who over rate themselves and those cases who under rate themselves. This method was investigated in the second study of this thesis. It was argued in Chapter Nine that moderation was demonstrated for four of the 11 HDS components and for the model as a whole. These results were discussed in the discussion section of Chapter Nine.

It is argued that both versions of the dispositional variable self-subordinate rating agreement demonstrated moderation. It is further argued that neither operationalisation seems ideal but they both provide an indication that an important dispositional construct may be being tapped here. It is argued that many scholars have attempted to capture this important concept theoretically and psychometrically. Eight attempts to build a theory and/or psychometric device around what seems like a similar construct to self-subordinate rating agreement were summarised in Chapter Six of this thesis. These attempts have spanned the last 75 years and have each enjoyed a period of focus in the literature. It is argued that these repeated attempts are further evidence of the potential importance of this construct and the difficulty of conceptualising it adequately.

The construct may be complex. Accurately understanding another person and or a social situation and being able to adapt ones behaviour accordingly in real time may be a systemic mix of skill and dispositional variables as argued by Hogan and
Hogan (2002). Components of that mix could include: the sensory acuity to appprehend cues from the environment, the intrapersonal qualities to comprehend the cues, and the behavioural flexibility to iteratively and reflexively adapt behaviour in real time in response to that comprehension. There should also be consideration of cognitive capacity available to manage all this as well as deal with content issues simultaneously. It seems likely that a large proportion of this ability may have to be handled automatically since simultaneously managing the multiple parts of this complex variable may otherwise be beyond the cognitive capacity limitations for most people. An additional important consideration is the source and degree of motivation an individual requires to invest this ongoing effort at all.

The present findings present an opportunity to re-kindle research interest in what may be an important underlying dispositional variable that has wide influence across many areas of social and organisational functioning. More research is needed to elucidate this construct further.

10.3 Limitations of this research

There were a number of potential issues which could not be controlled in this research and which may influence interpretation of the findings. The alternative explanations detailed below should be kept in mind in the design of any future research. Indeed further progress in this area of research may depend upon studies being designed which control for all of these and potentially other limitations.

10.3.1 Method of Survey Participation

By collecting data in captive environments, i.e., seminars divorced from the work environment, response rates and completion accuracy increased. It is likely, however, that the sample was biased by whatever selection took place to sort out the cohort who attended the seminars from those who did not. It was mentioned above
that the nature of the seminars, including their length, contents, and purpose, may have eliminated from the sample leaders in current difficulties at work, such as experiencing output performance problems or receiving poor appraisals by superiors. It is possible that some effects of leader personal attributes on subordinate perceptions of transformational leadership behaviour may only be visible in difficult circumstances. This sampling technique may have eliminated cases that would have provided useful additional data in the context of the research focus of this thesis.

10.3.2 Sample Size

The size of the effects found was not as large as was anticipated. Sample sizes were calculated based the assumptions that a medium effect size was being sought. Both study one had adequate cases for all analyses with a power of more than .90 even in the sub samples for the components where significant results were found. For other non-significant components in both studies where effect sizes may have been much smaller caution should be applied to the interpretations of results given the likely lower power of the tests used.

10.3.3 Use of Regression to Assess Prediction

The basic aim of this thesis was to investigate prediction of transformational leadership behaviour. This and prior research have employed difference score based methods, which have been criticised (Johns, 1981; Edwards, 1994). Because difference scores have problematic status as statistics they were used merely as variables to categorise samples. Category statistics have then been compared to assess the impact of the difference variables. This research therefore employed multiple regression within categories as the method of choice for assessing hypothesised predictions. This method was employed because the response surface methodology suggested by Edwards (1994) would need to be used in a three way
polynomial interaction regression for testing the hypotheses in this thesis. The power of such three way interactions is low requiring much larger samples than were available here. Findings may therefore have been influenced by the choice of methodology and readers should take that into account in interpreting these results.

10.3.4 Transformational Leadership Behaviour Measure

Transformational leadership behaviour was measured here as the mean of the two transformational factors of the subordinate MLQ. It is possible that situational variables may have rendered this measure inappropriate for some subjects. Bass (1998) argued that transformational behaviours may be most applicable in fast changing environments and transactional leadership in more stable environments. That argument is similar to Weber’s (1947) comments about the cycle between charismatic and bureaucratic management (Eisenstadt, 1968). A general assumption of this thesis was that the Australian organisational environment is, in general, fast changing. There was a surfeit of anecdotal evidence offered by subjects during the course of the leadership program within which the data for this thesis were gathered to support that assumption. But the assumption was not systematically and objectively evaluated. It may be that some proportion of the subjects employed in this research were in fact operating in stable environments where transactional or bureaucratic leadership was more appropriate. Bennis (1989) argued that bureaucracy stifled transformational leadership. No attempt was made here to assess the predominant leadership style employed in the organisations from which subjects were drawn.

10.3.5 Generalisability

The external validity of the research reported in this thesis is underwritten by the internal statistical and theoretical validity of the research methodologies employed. This research was conducted in Australia, in particular in the large
governmental and corporate sector, with a cohort of senior executive leaders. Two samples of the size utilised here cannot claim to be a representative sample of the Australian organisational executive population. Moreover, an unknown number of potential moderators were not controlled for, e.g., specific business context, gender, public versus private enterprise leaders.

Versions of the psychometrics used in this study were designed in the United States for application in that cultural environment, specifically, the industrial, military and educational organisational sectors. It is argued that these instruments were suitable for use in an Australian corporate context because of the cultural similarity of Australia and the United States, e.g., on Hofstede’s (1993) cultural dimensions. It is argued that the findings of this thesis can be generalised with caution to similar cultural environments with similar subject cohorts. Based on the Hofstede’s (1993) work mentioned above this would include at least the United States and Canada.

Despite care in data gathering to limit participation to the top levels of organisations this may not have focused the sample enough. It may be that the person who is the most senior leader experiences different conditions to everyone else, even the other senior people in the organisation. Few CEOs were included in the sample here. Results can therefore be validly said to be indicative of senior executives but not necessarily of the most senior executive.

Findings of this research are useful additional evidence adding to the weight of already published evidence and extending that evidence in some areas as detailed above. The findings herein should be applied with caution to individuals, groups, or to the whole Australian and North American senior executive communities.
10.4 Future Research Directions

A number of opportunities for further research were identified by shortcomings of the present studies and as implications of the findings of the present studies. They are discussed in turn below. Each separate opportunity could be the basis for a future research project with potential for adding further to knowledge in this important area of prediction of transformational leadership behaviour.

It has been widely believed by scholars for some time that dispositional attributes play some role in transformational behaviour (Bass, 1990). This study replicated previous work (Judge & Bono, 2000), which suggested that some Five Factor Model components are predictors of transformational leadership behaviour. The breadth, massive research base, and broad applicability of the Five Factor Model have made it a popular inclusion in research. It is argued that the HPI seven component conceptualisation of the Five Factor model based on socio-analytic theory has provided additional insight above and beyond standard five factor conceptualisations. Future research could therefore concentrate on identifying other Five Factor Model variations, dispositional theories and associated constructs to test for prediction of transformational leadership behaviour.

Refining the construct self-other rating agreement, perhaps based more directly on Mead’s original (1934) conceptualisation, and developing a measure of it from first principles may be a place to start searching for additional dispositional variables. Building on research to date, development and testing of new theories of dispositional variables that predict transformational leadership behaviour will potentially be an important step toward better understanding predictors of transformational leadership. Such models may facilitate greater predictive capability than this thesis, or the studies mentioned herein, achieved.
Transformational leadership has been found to be more prevalent in public organisations (Lowe et al., 1996). In this study those from public organisations and those from private organisations were not separated. The most appropriate style mix for a given situation will, to some extent, vary with the situation, as is described in situational leadership theories and full range of leadership theory. No attempt was made in this thesis to assess the nature of the situation each individual subject led within. Because of the presence of the above situational variables, and others that may have existed, no assessment of the relevance or otherwise of transformational leadership, as opposed to transactional leadership, as the best measure of leadership behaviour in each individual subject’s situation could be made here. This study may therefore have incorporated measures of transformational leadership behaviour for leaders who were better evaluated by measures of transactional leadership behaviour. Such leaders, if they existed, should not have been included in the samples for this thesis which was focused on transformational not transactional leadership behaviour.

The exploratory evaluation of dark side characteristics using personality disorders in this thesis is only a start to a possibly fruitful line of research. There seems little doubt that ineffective leadership is prevalent; that dispositional flaws may not be evident until stress levels increase; and that senior executive jobs require unique individuals who can withstand senior pressure. There is also argument that senior executive roles may suit those with narcissistic (Macoby, 2000) or antisocial (Babiak, 1995a) tendencies. It has also been argued that personality disorders may be functional in certain demanding circumstances (Hall et al., 2001). The present results indicate that use of the DSM taxonomy of personality disorders may not necessarily be a fruitful line for future research to take. Instead building a compact Five Factor Model based psychometric that assesses both the normal and extreme ranges of
scientifically validated personality dimensions may spark new understanding and utility of personality theory in general. This may then be applied to important issues like the focus on this thesis, i.e., understanding dispositional predictors of transformational leadership behaviour. Research based on the moral and ethical dimensions of dark side or extreme personality may also prove to be revealing although it may be encompassed in the expanded Five Factor Model called for above.

Finally, the methodological debate between regression based and difference score category based analytical approaches requires further study. Supporters of regression argue that the difference score holds less information than do the individual self and other scores. As a result entering the individual self and other scores and their product into a regression equation will yield statistically more complete and robust results (Edwards, 1994). Difference score advocates argue for using difference scores as categorical variables. Various categorisation regimes are recommended (Atwater and Yammarino, 1991; Church, 1997; Atwater, Ostroff and Yammarino, 1998). It is argued that statistics calculated within the categories provide information not available using the regression methods (Atwater, Ostroff and Yammarino, 1998; Tisak and Smith, 1994). It is also argued that the regression techniques recommended, e.g., Edwards, 1994 and Aiken and Hill, 1991, require much larger sample sizes to deal with very low power than many of the studies published in this seem to have been able to gather.

10.5 Conclusion

This thesis documented an extensive program of research which added knowledge that contributes to better understanding predictors of transformational leadership behaviour for senior Australian organisational leaders. As with most research this program has engendered more questions than it has answered.
APPENDIX 1: INFORMED CONSENT LETTER

Griffith Uni Letter Head

SCHOOL OF APPLIED PSYCHOLOGY
Faculty of Health Sciences
12 Wilonda Street
Robertson
Qld 4109
0419 665 665

LEADERSHIP RESEARCH

Informed Consent

Dear Colleague

I am a doctoral candidate from Griffith University who was examining relationships between organisational leadership behaviour and personality. The total project, which consists of three studies, focuses on integrating leadership and personality theory to facilitate the development of new integrated leadership theory. This may allow better selection and development of leaders in Australia in the future.

You were invited to participate in the first of the three studies, which consists of a data gathering survey of practising senior executives and their subordinates. To participate you simply sign this letter at the bottom right, by which you give informed consent for totally confidential use of the data from your HPI and MLQ reports for research purposes, and complete the very brief questionnaire over the page. Only the researcher will access the data, which will be keyed directly into a statistical analysis program where it will be aggregated and statistically analysed.

Participation in this study was voluntary and you may withdraw from participation at any time. The study has received ethical clearance from Griffith University. You were welcome to ask the researcher any questions you may like. To participate please sign in the place provided for your signature below and complete the two questions over the page.

Signed by:
The Researcher:     Person giving consent:

Malcolm R. Davies
Doctoral Candidate – Organisational Psychology
Griffith University

Please Sign Here

PLASE PRINT NAME
Leadership Research Study
Demographic Survey

Please complete the brief details below.

Name: _______________________________________

Position: _______________________________________

Day Contact Telephone: _______________________________________

Age: _________years

Gender: female / male (please cross which was not applicable)

Formal Education

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<tr>
<th>High School</th>
<th>Technical School</th>
<th>Associates/Diploma</th>
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<td>Bachelors</td>
<td>Masters</td>
<td>Doctorate/Professional</td>
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Organisation Level (Please tick (√) one)

| Top – CEO, COO, DG, DDG | Executive – VP, Executive Director, Director, Board Level Professional Whole business responsibility | Upper Middle – Executive, Superintendent, Plant Manager, Senior Professional Staff Major Functional Responsibility |

Thank you,
Malcolm Davies
PhD Candidate
Griffith University
APPENDIX 3: PSYCHOMETRIC DEVICE COPYRIGHT PROTECTION

The three psychometric devices used in this thesis were: the Multifactor Leadership Questionnaire (Form 5X) (MLQ), the Hogan Personality Inventory (HPI), and the Hogan Development Survey (HDS). All three tests are copyright protected. Whilst a great deal of research has been conducted with these instruments all three of these devices are primarily commercial instruments marketed for use inside organisations. As such the test owners discourage publication of test details including test question lists and formats. For that reason question lists are not provided appended to this thesis. Scholars interested in obtaining copies of the relevant tests are advised to contact the test owners or their test libraries. Test owner contact details are:

**MLQ**

In Australia
MLQ Pty Ltd,
PO Box 199, Hawthorn, Vic 3122. Tel 03 9819 3689.

In the U.S.A.
Mind Garden, Inc.,
PO Box 60669, Palo Alto, CA 94306. Tel 415 424 8493

**HPI and HDS (U.S.A. only)**
Hogan Assessment Systems, Inc.,
PO Box 521176, Tulsa OK 74512 Tel 918 749 0635
REFERENCES


Atwater, L. E., & Yammarino, F. J. (1992). Does self other agreement on leadership perceptions moderate the validity of leadership and performance predictions?

*Personnel Psychology, 45*(1), 141-164.


*Human Relations, 46*(5), 645-669.


Bass, B. M. (1999). Two decades of research in transformational leadership.

*European Journal of Work and Organisational Psychology, 8*(1), 9-25.


Brearley, D., Harris, T., & White, A. (2003, April 17). Williams, Adler, Cooper face jail. *The Australian.*


Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower level factors of several five factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe*. (Vol. 7). Tilburg, the Netherlands: Tilburg University Press.


Conference on Leadership, Colorado Springs, CO.: Center for Creative Leadership.


