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An Exploration of Occupational Personality Traits and Communicative Competence in New Zealand Leaders and Non-Leaders

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Caroline E. Schischka

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Abstract

The thesis reports New Zealand empirical research on leadership and its antecedents in terms of occupation-relevant personality traits and communicative competence. Objectives of the project were to: (i) explore the demographic differences in personality traits and communicative competence; (ii) investigate the difference between leaders and non-leaders in terms of personality and communicative competence; (iii) examine whether patterns of relationships among personality and communicative competence variables differ between leaders and non-leaders. These objectives govern research that aims at alleviating the current scarceness in New Zealand organisational psychology literature regarding personality traits and communicative competence of leaders. In a cross-sectional, correlational design, the Business Attitudes Questionnaire was used as a personality inventory, and the Political Skill Inventory as a measure of particular segments of communicative competence. Findings showed that males scored higher on Openness than females; age and work experience were both significantly positively related with Extraversion. When comparing leaders versus non-leaders, leaders scored higher on Emotional Stability, Extraversion, Professionalism and Networking Ability than non-leaders. The personality traits Extraversion, Altruism and Conscientiousness were significantly positively related to the four aspects of Ferris' "political skill" as an aspect of communicative competence. There were systematic differences found between leaders and non-leaders regarding the correlational pattern between personality and communicative competence. Relationships between Altruism, Conscientiousness, and Openness, on one hand, and all four aspects of "political skill", on the other, were stronger for leaders than non-leaders. A few relationships – such as those between Extraversion, Emotional Stability and Professionalism, on one hand, and some aspects of "political skill" – were higher among non-leaders. These findings are discussed in
terms of their convergence with and divergence from the existing literature. Limitations of the present study are critically scrutinised, followed by extrapolations for future research. Overall, the research identified a clear need for further examination into psychological predictors and concomitants of leadership such as personality and communicative competence in the New Zealand working environment.
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Ethical approval to conduct this research, using low-risk questionnaire, was granted by the Massey University Human Ethics Committee.
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Chapter 1: Introduction

The topic of leadership attracts much attention from scholars and practitioners alike. An abundance of literature is dedicated to exploring the concept of leadership, providing useful overviews that link individual traits, leadership style, and evaluations of leadership potential and performance (Bono & Judge, 2004; Ilies, Gerhardt, & Le, 2004; Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Ilies, & Colbert, 2004; Lord, DeVader, & Alliger, 1986). This interest is underpinned by the notion that leadership is thought to have numerous impacts on organisational outcomes, and thus is of great importance to the success or failure of organisations (Hogan & Kaiser, 2005).

Not only can leadership determine organisational performance and effectiveness, good leadership has been connected to both job satisfaction (Harter, Schmidt, & Hayes, 2002; Lok & Crawford, 2004) and work engagement and satisfaction (Giallonardo, Wong & Iwasiw, 2010), whereas poor leadership has been linked to a lower turn-over, industrial sabotage, and malingering (Hogan, Curphy & Hogan, 1994). Day and Lord (1988) state that the results of research into the impact of changes in top-level leaders shows a consistent effect for leadership, explaining 20% to 45% of the variance in organisational outcomes.

Many recognise that leadership is a complex phenomenon that operates in a dynamic and ever-changing context. While there have been great strides in the study of leadership, there is still much that needs to be done to gain further insight into the nature of leadership and its effects in organisations (House & Aditya, 1997). This need stems from a salient point that is apparent amongst the leadership research community; as Hackman and Wageman (2007, p. 43) note 'there are no generally accepted definitions
of what leadership is, no dominant paradigms for studying it, and little agreement about the best strategies for developing and exercising it'.

The nominalistic fallacy points out that simply naming something does not mean that we understand it (Lussier, 2012, Cliff, 1983). Despite the study of leadership being one of the oldest in the science of organisations, dating back nearly a century, and that many have attempted to understand and explain it, the notion of leadership is still unfocused. This is reflected in the fact that there is still no agreed upon definition of leadership. In fact, Bass & Stogdill (1990) suggests that there are as many definitions of leadership as there are individuals who have attempted to define the concept.

Definitions of organisational leadership include the simple, for example 'leadership is the influencing process of leaders and followers to achieve organizational objectives through change' (Lussier & Achua, 2012), and range through to the more complex, such as Yukl’s (1999) definition of leadership: 'influence processes affecting the interpretation of events for followers, the choice of objectives for the group or organization, the organization of work activities to accomplish the objectives, the motivation of followers to achieve the objectives, the maintenance of cooperative relationships and teamwork, and the enlistment of support and cooperation from people outside the group or organization'.

Many have attempted to understand and explain leadership, yet despite an extended history of debate and research, psychologists are still noncommittal about a shared paradigm of organisational leadership. By examining the leadership literature, it becomes clear that there have been many approaches to the field. The focus has shifted
over the course of study and has examined the leader (e.g. Blake & Mouton, 1964; Terman, 1904; Zaccaro, Kemp, & Bader, 2004), the situation (e.g. Fiedler, 1967), and a combination of both (e.g. Dansereau et al. 1975; Graen & Cashman, 1975; Graen 1976). Relationships between the leader and follower have also been investigated (Graen & Uhl-Bien, 1995; Avolio, 2007; Bennis, 2007), as have neo-trait theories such as transformational leadership (Bass, 1985). Each approach has its proponents and opponents.

Recently, it has been suggested that leadership researchers need to start addressing the style that leaders use to express their behaviours (House & Aditya, 1997), with the argument that communication style is an important factor of leadership success, as leaders organise collective effort (Hogan & Kaiser, 2005). As Hackman & Johnson (2013) note, 'leaders spend much of their time shaping messages that are then presented to a variety of follower, constituent, and stakeholder groups'. Good leadership is enacted through these messages as a leader works to engage followers, gain commitment, and create a bond of trust between leader and follower (Baldoni, 2004). In turn, the organisational vision is affirmed, transformational change is driven, and an environment is created where motivation can flourish. Thus, leadership effectiveness depends on the leader’s willingness to interact with others and on developing effective communicative skills. Those who engage in skilful communication are more likely to influence others.

With such ample theorising about leadership, it can be seen that studying leadership is a practical venture; scholars in the area seek to understand it in the hope of improving training and development, identifying alternative selection and assessment procedures for assessing leaders’ strengths and weaknesses, and increasing the understanding of
how executive decisions shape the behaviour of organisations as a whole (Mumford, Zaccaro, Connelly & Marks, 2000). Practitioners have been left unimpressed however, as the discipline of organisational leadership has not reached the level of sophistication necessary to create applications in the real world (Hogan, Curphy, & Hogan, 1994). This is not to disregard the importance of leadership theory though, as leadership is an intricate phenomenon and investigations need to be guided by theory.

This Study

The paucity in the organisational psychology literature regarding the communicative competence (hereinafter CC) and personality of leaders, as well as a lack of specific research in New Zealand, prompted the current study. The research presented in it seeks to contribute to the organisational leadership literature by examining the personality traits and CC of leaders and non-leaders in a respondent group obtained from the general working population in New Zealand. It is this population that the results are intended for. The insights gleaned may be valuable to practitioners wishing to use personality and CC assessments in professional practice, for example, in training and development exercises.

In spite of the extensive research on leadership, researchers need to expand their focus to include the CC of leaders. Fairhurst (2008) clearly states that leadership psychology has a secondary interest in the social and communicative arenas, relative to its interest in individual cognitive operations. Undeniably, the literature insinuates that communication matters only to the degree that individuals can influence one another’s cognitive operations (Cronen, 1995). Accordingly, this study takes the view that
leadership is enacted through communication so that one can exercise influence in ways that lead to success.

The personality traits of leaders are also considered in this study, through the use of the Five-Factor Model or "Big Five" Model (hereinafter FFM). FFM trait conceptualisation is a well-researched framework empirically. It provides operational indicators for traits that are deemed useful for relating to leadership qualities (Digman, 1990; Goldberg, 1990). Additionally, the interest in the personality traits of leaders has increased, with a resurgence of research linking personality to work outcomes (Bryman, 1993; Den Hartog & Koopman, 2001). The correlations between leader personality and CC will also be examined.
Chapter 2: Literature Review

This review begins by providing a summary of the leadership literature. Prominent models and views of leadership are explored. The chapter then examines psychological predictors of leadership, with a focus on the personality of leaders, followed by a discussion of CC and its importance to effective leadership. Lastly, a practical view of leadership is taken, discussing how CC and personality factors are captured in the context of the workplace.

2.1 Psychology of leadership: models and views

As Bass & Stogdill note, 'the study of leadership rivals in age the emergence of civilization, which shaped its leaders as much as it was shaped by them. From its infancy, the study of history has been the study of leaders – what they did and why they did it' (1990). However, the concept of leadership remains vague and ill-defined. In 1985, Bennis & Nanus revealed that over 350 definitions of leadership had been proposed in the 20 years before their article was published. This has not since improved, with 850 different classifications of leadership recently identified (Bennis, 2003).

One reason for this is that leadership can be seen in many ways: as a trait, a process, a situational attribute, a personal construct, a multidimensional construct, a global construct, a local construct, and a construct in the eye of the beholder. An assortment of leadership approaches and views is summarised in this chapter, but this list is in no way exhaustive or fully illustrative of the literature. Additionally, no single approach provides a universal explanation of leadership behaviour, but each provides useful insights. The approaches may overlap and sometimes even contradict one another, but a singular approach has not yet dominated the research community.
2.1.1 Approaches to studying leadership

2.1.1.1 Trait approach to leadership

Leadership trait theorists believe attitudes and actions originate from within a person. Underlying dispositions should be powerful predictors of behaviour, attitudes and personality (Staw & Ross, 1985), so essentially leaders are born. It is theorised that nature plays a key role in determining leadership potential, as leaders should have particular qualities that distinguish them from non-leaders.

The first empirical study of leadership by Terman (1904) examined the differentiating qualities of leaders and non-leaders in school children. Leaders possessed the following attributes: verbal fluency, intelligence, low emotionality, goodness, liveliness, and congeniality. Around this time, Thomas Carlyle stated, 'the history of the world was the biography of great men' (Carlyle, 1907). Terman’s study and Carlyle’s view gave rise to the traits approach to leadership.

Original trait theories of leadership began in the 1930s. It was widely believed that leaders possessed unique physical and psychological characteristics that predisposed them to positions of power (Bernard, 1926; Bingham, 1927; Tead, 1929; Page, 1935; Kilbourne, 1935; Smith & Krueger, 1933; Jenkins, 1947). Leadership studies between this time and approximately 1950 focused predominantly on factors such as height, weight, appearance, intelligence, status, social skill, and popularity. Influential reviews revealed traits were associated with leadership effectiveness; correlations were as high as .50 (Gibb, 1947; Jenkins, 1947; Stogdill, 1948; Mann, 1959).
These findings were rarely replicated. Stogdill’s (1948) review of 124 leadership trait studies revealed inconsistencies, interpreted as meaning traits being irrelevant to leadership (Lord, de Vader & Alliger, 1986; Zaccaro, Kemp, & Bader, 2004). Stogdill concluded that 'a person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics, activities and goals of the followers' (Stogdill, 1948). The trait theory fell out of favour with scholars and alternative views of leadership were adopted; some of these are discussed in this paper.

Stogdill published another review of 163 studies in 1974. Inconsistencies were again revealed; Stogdill concluded that both traits and situational factors influenced leadership (Stogdill, 1974). An interactional approach to leadership was advocated, and resultantly there has been renewed interest in dispositional explanations of behaviours (Judge, Bono, Ilies & Gerhardt, 2002; Kenny & Zaccaro, 1983) alongside context-driven approaches. Progress in the development of personality theory has also spurred renewed interest; early trait studies were limited by a lack of empirically substantiated personality theory and poorly developed measurement instruments (House & Aditya, 1997; Bass & Stogdill, 1990; Zacarro et al, 2004).

Four theoretical trait perspectives with empirical support that have stemmed from the leadership trait approach revival are mentioned here; further information regarding these are noted in parentheses: Achievement Motivation Theory (McClelland, Atkinson, Clark & Lowell, 1955; Spangler, 1992; House, Delbecq & Taris, 1997); Leader Motive Profile (McClelland, 1985; Winter, 1991; McClelland & Boyatzis, 1982; McClelland &

There are caveats to the leadership trait approach, as leadership can appear as a matter of passive status. Critics warn that traits must be stable and able to predict behaviour over substantial periods of time and across varying situations (Davis-Blake & Pfeffer, 1989; Schneider, 1987); further research is required to explore this. Critics also posit that too much research is being conducted in the trait realm of leadership (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011), asking whether new traits are being disentangled from established traits and if new findings are indeed making a contribution in predicting leadership.

Despite criticisms, updated trait studies reviews have concluded that personal characteristics do influence leadership behaviour (Hackman & Johnson, 2013). Contemporary research offers renewed potential for trait research; this is evident in the emergence of emotional intelligence and social intelligence approaches that lend much to new leadership paradigms. This thesis addresses the trait approach to leadership again, with relevance to psychological predictors of leadership and a focus on personality.

2.1.1.2 Behavioural approach to leadership

When the trait approach fell out of favour within the research community following Stogdill’s 1948 review, attention turned to examining leadership behaviour within
laboratory and field settings, the guiding assumption being there are universally effective leadership behaviours that can be observed when the leader is in action (House & Aditya, 1997). This paradigm offered major empirical contributions as it identified broad categories of leadership behaviours. Researchers into management styles particularly favoured this approach.

Behavioural theories of leadership overlap considerably (DeRue, Nahrgang, Wellman & Humphrey, 2011) and can be classified into two main paradigms: task- and relationship-oriented behaviours, and transformational–transactional behaviours. Transactional leader behaviours are associated with task-oriented behaviours, while transformational leader behaviours overlap with relationship-oriented leader behaviours (Derue et al., 2011, Judge et al., 2004, Yukl, 2010), but task and relationship-oriented behaviours are viewed as a more general classification. Transformational–transactional leader behaviours will be explored at a later stage.

Task-oriented behaviour

Task-oriented behaviour is concerned with accomplishing tasks in an efficient and reliable way to establish structure and routine (Fiedler, 1967; Derue et al., 2011). This behaviour clarifies task-role expectations, shapes and directs follower goal-focused behaviour, and takes corrective action, and includes planning work activities, explaining rules, coordinating activities, and solving work-related problems (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). Task-oriented leaders are likely to keep their distance psychologically from their subordinates and can appear cold and detached (Blau & Scott, 1962). This behaviour set may be linked to instrumental and directive
leadership (see Tannenbaum & Schmidt, 1958; Berlew & Heller, 1983; Sargent & Miller, 1971).

Relationship-oriented behaviour

Relationship-oriented behaviour is concerned with increasing mutual trust, cooperation, and organisational commitment to build and maintain relationships with followers (Katz, Maccoby & Morse, 1950; Derue et al., 2011). This behaviour ensures followers are respected and that smooth interpersonal dealings are carried out in the work group. This includes showing concern for the needs of followers, providing support and encouragement to subordinates, and providing coaching and assistance when needed (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). Relationship-oriented leaders tend to be expressive and establish social and emotional ties (Bales, 1958). This behaviour is connected to supportive leadership and employee-oriented leadership.

Two further behavioural categorisations of leadership are described as follows.

Participative leadership

Participative leaders empower followers and involve others in decision-making for which the leader has formal responsibility (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). In contrast, leaders who seldom empower followers are termed autocratic or directive. Directive leaders are mentioned when task-orientation behaviours are explored; in fact, it is suggested that direction and participation are two ends of a continuum (Tannenbaum & Schmidt, 1958; Berlew & Heller, 1983; Sargent & Miller, 1971; Bass & Stogdill, 1990). Reference can be made to the works of the
aforementioned scholars for more information about directive versus participative leadership.

*Contingent reward behaviour*

Contingent reward behaviour is characterised by a leader’s use of formal and informal rewards to influence follower motivation and satisfaction; for example, providing tangible rewards for effective performance and providing recognition for effective behaviour (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). These behaviours are linked to positive reinforcement, and are included in transactional leadership. Meta-analyses show the importance of contingent rewards in determining leadership effectiveness (Lowe, Kroeck & Sivasubramaniam, 1996; Judge & Piccolo, 2004; Podsakoff, Bommer, Podsakoff & MacKenzie, 2006).

A considerable body of empirical research into behavioural theories of leadership has established that behaviours (such as initiating structure and having consideration for followers) are linked to leader and work-group effectiveness and subordinate job satisfaction and commitment (Bass, 2008, Judge et al., 2004, Mumford, Campion & Morgeson, 2007 and Yukl, 2010). Task- and relationship-oriented leader behaviours have validity with a range of leadership criteria (see Derue et al., 2011, for meta-analytic validity coefficients). The behavioural approach is further explored in Blake and Mouton's (1964) Managerial Grid studies – a theory based on the assumption that leadership effectiveness is due to concern for production and people (see Blake & Mouton, 1966; 1968). Behavioural approaches are also connected to Fiedler's contingency model (Fiedler, 1967), and transformational and transactional leadership behaviours (Bass, 2008), which this thesis addresses.
2.1.1.3 Functional approach to leadership

The functional approach to leadership looks at the way leaders behave. Leadership is viewed as an ongoing process (Lord, 1977; Hollander & Julian 1969; Cartwright & Zander, 1968). The underlying assumption is that leaders perform certain functions allowing a group or organisation to operate effectively; thus leadership is viewed as social problem solving and the leader’s job ‘is to do, or get done, whatever is not being adequately handled for group needs’ (McGrath, 1962). In this sense, the leader is effective to the degree that they ensure all functions critical to task maintenance are completed. This approach, like the behavioural paradigm, was popular among researchers of management styles.

Three theories are briefly presented here, but additional work looking at the functional behaviour of leaders can be sought by consulting the work of Pigors (1936), Cattell & Stice (1954), Bales (1955), Hemphill (1949), Roby (1961), Schutz (1961), Levine (1949), Getzels & Guba (1957), Selznick (1957), and Mahoney, Jerdee & Carroll (1965).

Chester Barnard’s theory

The earliest contribution to the functional approach was Chester Barnard’s The Functions of the Executive (1938). Barnard noted that leadership is the key factor in cooperation and that it must go beyond deciding the right thing to do, to the job of getting it done. This involves guiding others, so leaders must effectively convey meanings and intentions and create meaning for followers in a manner that facilitates their commitment. Barnard’s work isolated communication as the central function of
organisational leadership, emphasising that common organisational purpose can only be achieved if it is known, and therefore it must be communicated effectively in language – oral and written (Hackman & Johnson, 2013). The impact of Barnard’s work can be explored further by referring to Scott (1987) and Williamson (1995).

**Benne & Sheats’ theory**

Benne and Sheats (1948) were pioneers in the classification of functional roles within groups. According to these authors, the leadership role should be viewed in terms of functions performed within a group that enable the group to work productively (Benne & Sheats, 1948). Three types of group roles are identified:

a) group task roles – contribute to the completion of group tasks;

b) group building/group maintenance roles – contribute to the functioning of the group as a group, and;

c) individual roles – not related to the group task or group functioning, are possibly disruptive through minimising group effectiveness (Benne & Sheats, 1948; Bass & Stogdill, 1990).

Roles associated with successful task completion and the development and maintenance of group member interaction to enable goal achievement and the satisfaction of group needs can be considered as serving a leadership function (Hackman & Johnson, 2013). Some researchers believe this work is worthy of re-reading today due to the flattening of organisational structures and the growing importance of effective communication (Manley, 2008).
Transactional leadership

First described by Max Weber and further explored by Bass (1985), transactional leadership is an exchange system of rewards and punishments. It may be seen as a management theory as it focuses on the role of supervision, organisation and group performance. It has been categorised under functional approaches in this thesis, as it is concerned with leaders performing certain functions that allow a group or organisation to operate effectively; specifically, by rewarding employees when they are successful, and by reprimanding employees when they fail (Burns, 1978).

Transactional leadership is leadership through reciprocal exchange, leading to the achievement of goals for both leader and followers. Bass (1985) identified higher-order factors of transactional leadership:

- contingent reward behaviour (leader recognises good performance and provides rewards for effort);
- passive management-by-exception (leader maintains the status quo and intervenes when followers do not meet acceptable performance levels), and;
- active management-by-exception (similar to passive management, but the leader’s monitoring pattern is continual to ensure agreed upon standards of performance are met) (Bass & Avolio, 1993; Bass & Bass, 2009; Antonakis, Avolio & Sivsubramaniam, 2003).

Research has found that transactional leadership tends to be most effective in situations where problems are simple and clearly defined (Bass & Avolio, 1993; Vera & Crossan, 2004). While transactional leadership can be effective in some situations, it is generally considered inadequate and may prevent both leaders and followers from achieving their

Group performance for most tasks requires problem solving processes, the maintenance of the group and the avoidance of interpersonal friction (Lord, 1977). Hence, leadership behaviours under the functional approach can be further classified into two categories: those dealing with task accomplishment (task-focused), and those that facilitate team interaction and development (relationship-focused). The functional perspective is important to communication scholars, as it attempts to identify the specific communication behaviours associated with leadership (Hackman & Johnson, 2013).

Whilst frequently cited, questions remain unexplored with regards to functional leadership, including: whether relationships exist between roles; whether individual differences can predict the emergence of role behaviours, and; if there are consequences for particular roles that individuals adopt (Mudrack & Farrell, 1995). Critics have noted that functional theories of leadership face the same issue as trait approaches, as both lack a theoretical orientation and well-developed measurement tools. Context, which is discussed in the next set of theories, has also been largely too.

2.1.1.4 Contingency approach to leadership

According to the contingency approach, the traits, skills and behaviours necessary for effective leadership vary from situation to situation. This approach is referred to as a contingency approach, as leadership behaviour is contingent on variations of the situation. As mentioned previously, the trait approach to leadership fell out of favour
due to inconsistent results (Stogdill, 1948), and eventually, 'situation-specific analyses took over, in fact, dominating the field' (Bass & Stogdill, 1990). As a result, researchers began to incorporate situational factors into their leadership behaviour studies.

Well-known contingency theories of leadership include path-goal theory (House, 1971; House & Mitchell, 1975); situational leadership theory (Hersey, Blanchard & Natemeyer, 1979); the least preferred co-workers (LPC) contingency model (Fiedler, 1967, 1971); leader substitutes theory (Kerr & Jermier, 1978); the normative decision model (Vroom & Jago, 1988; Vroom & Yetton, 1973); cognitive resources theory (Fiedler & Garcia, 1987), and the multiple linkage model (Yukl, 1981; 1989). This section addresses the first three of these contingency models, as they have received significant empirical attention; references are provided for those theories that cannot be covered in this thesis.

**Situational leadership model**

Hersey and Blanchard’s situational leadership model came to prominence in the 1960s, when it was termed the life-cycle theory of leadership. According to this theory, different situations call for different styles of leadership behaviour, defined by the terms directive and supportive leadership (Hersey & Blanchard, 1982; Hersey & Blanchard, 1988). Directive leadership behaviour is task-oriented; supportive leadership behaviour is relationship-oriented. The theory recognises that a leader needs to be flexible in terms of their behaviour (Yukl, 1981).

The primary situational determinant of leader behaviour is the task-relevant maturity of the subordinate, made up of job maturity (skills, knowledge, experience) and
psychological maturity (confidence, motivation) (Hersey & Blanchard, 1982). Follower maturity can fluctuate across tasks and situations, and so the follower is the most important situational determinant of appropriate leader behaviour (Campbell & Pritchard, 1976; Lawler, 1966; Porter & Lawler, 1968; Viteles, 1953; Vroom, 1966).

Path-goal theory
Path-goal theory (House, 1971; House & Dessler, 1974) looks at how leader behaviour influences follower satisfaction and performance, and in turn follower motivation and abilities. Leader behaviour is acceptable and satisfying to the extent that followers see this behaviour as either an immediate source of satisfaction or integral to future satisfaction (House & Mitchell, 1975). This theory concerns the work group rather than the entire organisation. A detailed review is provided by Podsakoff, MacKenzie, Ahearne, & Bommer, (1995).

Path-goal theory emerged from a theory of organisational motivation called expectancy theory (Vroom, 1964; Van Eerde and Thierry, 1996), where followers are more motivated to be productive when they believe they can achieve things they want from their position, and that successful task completion will provide a path to a valuable goal (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). Leaders play an important role in influencing follower perceptions of task paths and goal desirability, by making rewards to the follower more dependent on their performance, and by guiding this reward attainment by providing support and coaching (Bass & Stogdill, 1990). In this sense, path-goal theory is an exchange theory of leadership.
**Least preferred co-workers model**

Fiedler’s contingency model of leadership has emerged as one of the most commonly studied approaches to leadership (Fiedler, 1967; Fiedler & Garcia, 1987). It describes how the situation moderates effects on group performance of a leader trait called the least preferred co-worker (LPC) score. Fiedler claimed that an individual’s rating of others whom they do not like to work with provides valuable information about that individual’s leadership behaviour, and that a leader’s style should be matched to the right situation (Armandi, Oppedisano & Sherman, 2003).

Fiedler’s theory is empirically supported (Northouse, 1997), and has interesting implications for leader management in organisations as favourable situations can be identified for leaders (Dunham, 1984). However, criticism exists, especially as the interpretation of LPC scores has changed several times over the years. What the measure actually means is still being debated also (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). Additionally, individual leadership styles may change over time, which the LPC approach does not account for. For a review of relevant research, see Peters, Hartke, & Pohlmann, (1985).

Weaknesses in contingency theories of leadership exist. For instance, models tend to overemphasise behaviour meta-categories such as participative leadership, which can limit their value in understanding how aspects of the situation moderate the effects of leader behaviour on outcomes. Moreover, there are inadequate explanations of the underlying reasons for the relationships that the theories note, a lack of attention to behaviour patterns, and complex interactions are ignored. Other limitations include a
lack of attention to joint effects of situational variables, and a failure to distinguish moderators from mediators.

2.1.1.5 Relational approach to leadership

Following the trait, behavioural, and contingency models of leadership, more recent researchers have contested these approaches, regarding them as greatly influenced by assumptions of individuality and advocating a top-down influence where followers and processes are ancillary (Fairhurst, 2009; Marion & Uhl-Bien, 2002; Osborn, Hunt, & Jauch, 2002). It is acknowledged that leaders and subordinates are “relational beings” who establish a dynamic relation context with each other, and that “relationality” needs to be closely considered in leadership research (Bradbury & Lichtenstein, 2000).

Initially explored by Hosking (1988) and Hosking and Morley (1988), the relational approach focuses on the relationships between leader and followers. Leadership is recognised not as a trait or behaviour, but a phenomenon constructed through social interaction processes (Day, 2001). The unique interactions that leaders have with their followers are critical in developing relationships, which has an impact on employee effectiveness, and consequently leadership effectiveness (Day, 2001; Drath, 2001; Hosking & Morley, 1988; Ospina & Foldy, 2010). Communication is recognised as a key component of relational leadership (Shamir, 2007).

Relational leadership has evolved to become 'human social constructions that emanate from the rich connections and interdependencies of organizations and their members' (Uhl-Bien, 2006) meaning that a relational orientation begins with processes, not individuals. Three relational models of leadership are explored succinctly here, but
further literature is available from the following authors: Graen & Uhl-Bien, (1995); Hosking, (1988); Katz & Kahn, (1978); Rost, (1991); Yukl, (2013).

*Vertical dyadic linkage model (VDL)*

In its early incarnations, the relational approach focused on the vertical dyadic linkage model developed by Graen (1976). In this model, the vertical dyad of leader and subordinate is an interaction linkage of mutual influence, emphasising the relationship between the leader and each follower, rather than the relationship between the leader and the group as a whole. Up until this point in the literature, scholars believed that leaders used the same leadership style with every member of the organisational group.

Graen posited that leaders treat individual followers differently and that these differences give rise to in-groups and out-groups (Dansereau, Graen & Haga, 1975; Graen & Cashman, 1975). Some subordinates are given favoured treatment by the leader and are chosen due to their competence and skill, the extent to which they can be trusted, and their desire to assume greater responsibility (Liden & Graen, 1980). In-group members perform better and are more satisfied with their job than out-group members who perform the more mundane tasks of the group and experience a more formal exchange with the leader (Liden & Graen, 1980).

*Leader-member exchange theory (LMX)*

As the focus of VDL shifted to the quality of dyadic relationships, Leader Member Exchange Theory was shaped (Graen & Uhl-Bien, 1995). LMX theory states that leaders can vary their interactions across followers, and in doing so, determine the relationship between followers and themselves. It is based on both social exchange
theory and role theory (Gernster & Day; 1997 Graen 1976; Graen & Scandrua 1987; Blau, 1964). LMX is described as one of the 'most durable theories for describing supervisory behaviour and understanding its consequences' (Hackman & Johnson, 2013).

LMX focuses on the quality of the relationships between a leader and followers, rather than categorising followers as either a member of the in-group or out-group as described in the VDL model. Researchers report a link between relational quality and personal and organisational effectiveness, with followers who have a high LMX relationship with their leader being more productive, more satisfied with their job, more committed to the organisation, and more successful in their career (Major, Kozlowski, & Chao, 1995; Duarte, Goodson, & Klich, 1994; Wayne & Green, 1993).

LMX has been widely studied, as is evident in the number of reviews and meta-analyses conducted over the last two decades (Gerstner & Day, 1997; Ilies, Nahrgang, Morgeson, 2007; Liden, Sparrowe & Wayne, 1997; Schriesheim, Castro & Cogliser, 1999). A major criticism however is that the theory provides little practical advice to leaders. Research indicates that both the leader and the follower need to be examined, not just the quality of their relationship (Graen & Uhl-Bien, 1995), as does the style in which leaders express their behaviours (House & Aditya, 1997).

Implicit leadership theory

First introduced by Eden & Leviatan (1975) and progressed by Lord and colleagues (Lord, Binning, Rush & Thomas, 1978; Lord, DeVader, & Alliger, 1986; Lord, Foti & DeVader, 1984; Lord & Maher, 1991), implicit leadership theory is concerned with the
evaluations people make about leaders and the cognitive processes that underlie these perceptions; thus leadership is individually and socially determined (Schyns, Kiefer, Kerschreiter & Tymon, 2011). In other words, specific leadership behaviours do not make an individual a leader unless that individual is also perceived as leader.

Leaders and followers hold expectations about the kind of leadership behaviour that should be exhibited in given contexts (Eden & Leviatan, 1975). Implicit theories highlight the importance of social context, however, it is an approach that is scarcely known within organisations. Schyns, Kiefer, Kerschreiter & Tymon (2011) state that the implications of socially shaped perceptions of leaders should be shared widely as it can affect how leaders and subordinates are trained, assessed and developed. For instance, implicit leadership theories can be linked to the romanticising of leaders, where individuals over-attribute organisational performance to leaders (Meindl, Ehrlich, & Dukerich, 1985).

2.1.1.6 Contemporary approaches to leadership

Recent theories of leadership have focused on inspirational styles of leadership, which appeal to emotions and values rather than reason; transformational leadership theories fall into this category. These theories have been dominant in the leadership field since the late 1980s, with greater attention being paid to “higher impact” theories of leadership (Avolio, Reichard, Hannah, Walumbwa & Chan, 2009). It is as a positive approach, as its focus is on the positive capabilities of leaders that influence followers, make events meaningful for them, and achieve more than was initially believed possible (Yukl, 1998) – qualities that lead to improvements in performance (Luthans & Church, 2002).
Transformational leadership

Burns brought transformational leadership to prominence in his 1978 book Leadership, where he made the distinction between transactional leadership and transformational leadership. Transactional leadership (discussed earlier in this chapter) is characterised by reciprocal exchange, leading to satisfaction of both leader and followers’ goals. In contrast, transformational leadership is characterised by the engagement of followers to not only achieve goals, but to also "morally uplift” them (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011). The relationship between leader and follower is mutual, where both parties influence each other so as 'to rise to higher levels of motivation and morality' (Burns, 1978). Transformational leadership is viewed as a more complex and potent leadership style, and is currently the most widely accepted model of leadership (Tejeda, Scandura & Pillai, 2001).

Bass (1985) built upon Burns’ work and expanded on the transactional and transformational leadership distinctions. Transactional leadership factors include contingent reward behaviour, passive management-by-exception, active management-by-exception, and laissez-faire leadership (leaders abdicates responsibility). Transformational leadership factors include idealised influence (leader inspires, provides vision), individualised consideration (leader coaches, advises, supports), inspirational motivation (leader communicates high expectations), and intellectual stimulation (leader stimulates intelligent problem solving). The non-leadership dimension laissez-faire leadership is also included.
Results suggest transformational leadership is more effective than transactional leadership (Bass & Bass, 2009; Waldman, Bass, & Yammarino, 1990), as it is a more active and effective form of leadership (Bass & Avolio, 1993) providing followers with a sense of purpose and a vision that inspires them towards a common goal (Lowe et al., 1996). It has also been linked to an increase in follower task performance, innovation, and extra-role behaviours (Kirkpatrick & Locke, 1996; Keller, 2006; Wang, Law, Hackett, Wang & Chen, 2005). Additionally, Lowe and colleagues, in their meta-analysis (1996), report that transformational leadership reliably predicts work unit effectiveness, both for follower perceptions (.80) and for organisational measures of effectiveness (.35).

Burns (1978) proposed transactional-transformational leadership as a continuum model; nonetheless, scholars argue that although transactional and transformational leadership are separate constructs, the same leader can display both styles (Bass, 1985; Waldman et al., 1990). Bass (1985) suggests that the leader behaviour exhibited may depend on different situations or different times; Waldman et al (1990) hypothesise that effective leaders are those that utilise both styles. The situational distinction between transactional and transformational leadership has been revisited (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011), with the conclusion that transformational leadership is the leadership style required during times of “environmental turbulence”, while transactional leadership is best suited for stable environments.

There is still much to learn about the antecedents of transformational and transactional leadership (Bass, 2008). Unfortunately, much of the literature has focused on outcomes meaning that an understanding of the underlying basis of behaviour has been neglected.
Some research has been conducted using the FFM of personality, but findings have been speckled. Judge and Bono (2000) found that the factors of Extraversion, Agreeableness and Openness to Experience were positively related to transformational leadership, with Agreeableness being a strong and consistent predictor of transformational leadership. Ployhart, Lim & Chan (2001) found a strong relationship between Extraversion and transformational leadership behaviour, Agreeableness to be positively related to transformational leadership, Neuroticism negatively related to transformational leadership, but established no significant relationship with Extraversion (Lim and Ployhart, 2004). A meta-analytic study by Bono & Judge (2004) revealed that there were only small correlation effects between FFM personality traits and transformational leadership components. However a strong relationship was discovered between Extraversion and transformational leadership behaviour. In these studies, and in Judge and colleagues’ work (2002), Conscientiousness has not appeared to be predictive of transformational leadership.

These findings suggest the presence of stable trait influences on transformational leadership behaviours, though further research into its antecedents is encouraged. The suggestion that Extraversion and Agreeableness as traits linked to transformational leadership was expected, given that these traits enable a leader to engage with others and allows others to engage with them. This is salient to transformational leadership, as its components require a leader to communicate values and ideas in social interactions in order to motivate and inspire followers to get on board with the organisational vision.

There is a clear indication that 'transformational leadership has a significant relational component to it' (Judge & Bono, 2000), especially as transformational leadership
communication means not only sharing the vision, but also restructuring communication so the vision can be articulated in a way that inspires followers in an organisation (Flauto, 1999). Exploring relational effectiveness concepts linked to transformational leadership behaviour appears warranted in future studies. Emotional intelligence could be explored further in relation to transformational, as using strong emotional attachment is critical to a leader’s capacity to build relationships (Caruso, Mayer & Salovey, 2002).

The transformational leadership model does come with concerns. Apprehensions have arisen regarding whether it suffices as an explanation of leadership in a dynamic, changing world environment, particularly as it is leader-centric in its approach and followers and context are excluded. It may also be seen to ignore the negative side of leadership, a relevant point as transformational leaders are considered to have a considerable influence on organisations, regardless of whether the consequences are beneficial or not. Moreover, a negative effect of transformational leadership for followers could occur as increased dependency on leaders, as followers may develop a great attachment to and trust in the leader. This raises the question of whether transformational leaders are also ethical leaders. Another limitation of the theory is the limited number of tools available to measure transformational leadership, the most common tool being the MLQ. Researchers have been unable to make generalisations and have been left with vague impressions of what a transformational leader really does.

2.1.1.7 Additional approaches to leadership

New leadership paradigms have emerged in the literature, building on the work of previous leadership theories and stemming from a positive psychology perspective.
Although it is beyond the scope of this thesis to examine each theory in detail, the prominent approaches are acknowledged and further references are provided for the captivated reader: ethical leadership (Brown & Trevino, 2006; Mayer, Kuenzi, & Greenbaum, 2010); moral leadership (Sergiovanni, 1992; Weick, 1976); building on ethics and morality, the authentic leadership model (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008); servant leadership (Linden, Wayne, Zhao & Henderson, 2008; Northouse, 2012); collective/collaborative leadership (Block, 2003; Walker & Marr, 2001); and, challenging the traditional approach to science, spiritual leadership (Cacioppe, 2000; Fry, 2003; Crossman, 2010).

2.1.2 Psychological predictors of good leadership

2.1.2.1 Intelligence

The study of human intelligence has an extensive history of debate and research. There are as many definitions of intelligence as there are experts asked to define it (Miller, Myers, Prinzi & Mittenberg, 2009; Wang & Kaufman, 1993). From an organisational psychology view, there is controversy concerning definitions of intelligence within psychometric testing, which include factors relevant to employed work and considered central in intelligence models (Brebner & Stough, 1995; Cattell, 1987; Dixon, 2003; Lowman, 1991; Stankov, 2003; Sternberg, Lautry & Lubart, 2003; Wagner & Sternberg, 1985; Weinert & Hany, 2003); examples include social and emotional intelligence. However definitions of intelligence in standard psychometric tests seek to measure an individual’s capacity for information processing, problem solving, and abstract reasoning – considered key components for most definitions of intelligence.

Researchers suggest a link between intelligence and effective leadership. Intelligence defined as general factor of cognitive abilities is viewed as central to predicting job performance (Schmidt & Hunter, 2004, p. 162) and is considered the single best predictor of work success (Bryman, Collinson, Grint, Jackson & Uhl-Bien, 2011; Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Colbert, & Ilies, 2004; Lord, De Vader, & Alliger, 1986). In leadership research, the importance of intelligence has long been acknowledged (e.g. Stogdill, 1948). In Smith & Kreuger’s literature survey (1933), it was discovered that the 'general trend of the findings was that leadership status was more often than not associated with superiority in intelligence'. More recently, Zaccaro et al. (2004) provided support that leaders tend to have higher levels of intelligence than non-leaders.

Intelligence plays an essential role in good leadership because of the high cognitive demands of a leadership position, for example, gathering, integrating and interpreting information (Kirkpatrick & Locke, 1991), planning and organising, problem solving, and decision-making (Yukl, Wall, & Lepsinger, 1990). Leaders need sufficient levels of cognitive ability to perform their job well. Several leadership models view intelligence as a foundation for leadership capability (Li, Arvey, & Song, 2011, see Mintzberg, 1973; Mumford, Campion, & Morgeson, 2007; Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000; Zaccaro, 2001).
The adaptive performance required of good leaders (Pulakos, Schmitt, Dorsey, Arad, Borman & Hedge, 2002; Sternberg, 1997) means that creative thinking is essential. Individuals with high levels of intelligence are likely to be more able when faced with problem identification, identification of relevant information, generation of new ideas, and the evaluation of these ideas (Reiter-Palmon & Illies, 2004). Divergent thinking is important for leadership as producing novel ideas, and successfully implementing creative ideas in an organisation is necessary for it to compete and grow.

Some researchers have cautioned against the highly intelligent leader, suggesting that when there is too great a difference between the intelligence of the leader and the followers, this could have a counterproductive impact on the effectiveness of the leadership (Smith & Kreuger, 1933). Leaders who possess advanced cognitive abilities may have difficulty communicating with their followers, either because they are engrossed in their own thinking or because their ideas are too advanced for followers to perceive.

2.1.2.2 Social/ interpersonal skills

While it is important for leaders to develop solutions that will work in organisational situations, they must also be able to get subordinates to work towards these solutions. This requires social skill. Leadership involves developing and maintaining social relations within the organisational context; social skills are necessary for a leader to adapt to followers and assist in creating a commitment to the organisation’s mission (Zaccaro, Gilbert, Thor & Mumford, 1992). Social skills, lato sensu, encompass the ability of leaders to understand the feelings and behaviours of others in situations and respond effectively based on that knowledge.
Thorndike’s (1920) social intelligence concept provided a foundation for research examining social skill within organisations. The recent Multiple Intelligences Model of Gardner re-emphasises interpersonal and intrapersonal intelligence as components. Building on those concepts, social skill reflects the leader’s knowledge of both what to do and when to display certain behaviours (Meichenbaum, Butler, and Gruson, 1981). Social skill has a main as well as (statistical) interaction effect on job performance (Ferris et al., 2001; Witt & Ferris, 2003). It has been identified as a focal personal quality needed for success in leading (Ferris, Perrewè, & Douglas, 2002; Riggio, 1986; Riggio, Riggio, Salinas, & Cole, 2003; Witt & Ferris, 2003).

Mirroring the personalist versus situationalist perspectives, two considerations of social skill are evident in literature. Social skill has been theorised as: a stable personality characteristic (Friedman & Miller-Herringer, 1991; Segrin, 1998); and as situation-dependent (Bandura, 1999; Topping, Bremer, & Holmes, 2000). The trait approach has been supported by links discovered between social skill and personality characteristics such as Empathy (Nezlek, Feist, Wilson, & Plesko, 2001) and Extraversion (Lieberman & Rosenthal, 2001). Evidence for a situational approach stems from examining situational pressure, and is aligned with the understanding that social skill is partly learned (Cherniss, 2000; Segrin & Givertz, 2003). Contextual factors play an important role in manifesting the skill (Spitzberg, 2003). Burgoon and Dunbar (2000) argue that social skill is best understood when individual and environment are concurrently studied.
Social skills can be linked to House & Aditya’s (1997) mention of two sources of motivation for effective leaders: social influence and power. The desire to influence is suggested to be predictive of leader effectiveness, particularly as leadership relies on social influence processes; this has been supported a number of times (see Miner & Dachler, 1973; Spangler & House, 1991). Power motivation is defined as ‘a non-conscious concern for acquiring status and having an impact on others’ (House & Aditya, 1997). Leaders require power motivation as it spurs them to engage in social influence behaviours that are needed for effective leadership. Individuals who are highly motivated by power are likely to gain more satisfaction from exercising influence over others (McClelland, 1985). In situations where leaders are motivated to exercise social influence, social skills are required to make social judgements and to assist in decision-making while persuading and negotiating with followers and stakeholders. Argyle (1969) suggested that social skill is reflected in the 'effective exercise of persuasion, explanation, and other influence mechanisms, which reveal the ability to control others'.

Studies in the early 20th century revealed that communication and social skills were important predictors of leadership effectiveness (Bass & Stogdill, 1990; Stogdill, 1974). The connection between social skills and communication is clear when observing the social process between a leader and followers, a relationship sanctioned through communication. Communicative action can 'modify and elaborate existing connections among colleagues, actions, meanings, and contexts, or create new ones' (Barge & Fairhurst, 2008). CC will be addressed in detail (Section 2.1.3).
2.1.2.3 Emotional intelligence

Emotional intelligence (hereinafter EI) has garnered attention in I/O psychology as an antecedent of successful leadership. A suitable theoretical grounding for EI is the distinction between task-oriented and relationship-oriented leadership styles (Likert, 1961; Stogdill & Coons, 1957). Modelled by Salovey & Mayer (1989) EI is a heterogeneous, aggregate construct including:

1. Identifying emotions – involves the ability to recognise emotions in oneself and others, as well as the ability to express emotions.
2. Using emotions to facilitate thinking - involves using emotions to improve thinking processes and harness the power of positive moods.
3. Understanding emotions - includes the complexities and subtleties of emotions as well as their interrelationships.
4. Managing emotions - involves skills in regulating and controlling felt emotions in a positive fashion.

As the term suggests, EI has to do with emotions (affective domain) and thinking (cognitive domain), and the interplay between the two ((Caruso et al., 2002; Mayer, Salovey & Caruso, 2000; Mayer, Salovey & Caruso, 2004).

Given that EI is not assessed in the current study, a full review of conceptualisation and operationalisation is beyond the scope. Goleman, Boyatzis & McKee (2002) claim that EI is a critical component of leadership effectiveness. Goleman (1998) states that EI is the 'sine qua non of leadership'.
Describing the emotionally intelligent leader, George’s (2000) standard of abilities to motivate team members is useful:

- The ability to accurately appraise others’ emotions, and to effectively portray personal emotion.
- Having a thorough knowledge of emotions, so the leader is able to predict emotional reactions in a range of situations.
- The ability to recognise that emotions are useful in influencing the behaviour and cognition of others.
- The ability to manage emotions so as to direct one’s own and others; interaction processes and emotional processes.

EI is a promising research target, particularly in absence of relevant models focused on emotional skills guiding development (Day, 2001; Day & O'Connor, 2003). A critical appraisal of claims advocating EI is also warranted, e.g. that the concept of EI is too easily shaped to explain leadership effectiveness (Riggio & Lee, 2007). Evidence is scarce regarding the necessity of EI for leadership performance or effectiveness (Antonakis, 2003; Antonakis, 2004; Zeidner, Roberts & Matthews, 2002; Zaccaro & Horn, 2003; Zeidner, Matthews, & Roberts, 2004).

2.1.2.4 Knowledge and expertise

Mumford, Marks, Connelly, Zaccaro, & Reiter-Palmon, (2000) state that leaders enter into organisations as novices – regardless of how many years experience they may have – but this is buffered by the skills that they have usually developed over time. This expertise can manifest itself in information, knowledge, and/or wisdom. Leaders who are knowledgeable and skilled tend to be more effective at intellectualising the
behavioural requirements of their subordinates' tasks than leaders who do not have such skills or experience.

Leader knowledge and expertise shapes their ability to solve vague organisational problems, affects the quality of their responses, and the kinds of information they seek and the concepts they apply (Mumford, Whetzel, & Reiter-Palmon, 1997). Models in the literature tend to view problem solving as relating to creativity, because the two share many processes (Reiter-Palmon & Illies, 2004). Scholars suggest it may take up to 20 years before leaders attain all the skills they need to solve different organisational problems (Mumford, Marks, Connelly, Zaccaro, & Reiter-Palmon, 2000).

The perception of leaders as experts is important for effective leadership, as they are more likely to gain follower compliance and less likely to provoke opposition (Bass & Stogdill, 1990). Several early studies posit that expertise is positively related to subordinate performance (Bachman, 1968; Bachman, Bowers, & Marcus, 1968; Bachman, Smith, & Slesinger, 1966; Ivancevich & Donnelly, 1970; Student, 1968). Followers often defer to and take the advice of those who seem to possess superior power and skills. In this sense, leaders transform their special knowledge into expert power but a leader also needs to be perceived by others as an expert. Research has demonstrated the impact of this perceived expertise on influence; individuals who thought their partners were experts accepted their recommendations 68% of the time (Foschi, Warriner & Hart, 1985).

The research on leadership expertise and knowledge is sparse. However, there is a caveat in this area of leadership; because of the technological revolution and the
dissemination of knowledge and information, identifying who the expert is can be influenced as knowledge and expertise can be more easily acquired.

2.1.2.5 Personality

The study of the personality traits and characteristics of leaders has endured a controversial history. Recently though, there has been revived interest in the personality traits of leaders, likely linked to the progress made in transformational leadership theories, and to the emerging consensus around a framework of personality that integrates empirical findings (De Hoogh, Den Hartog & Koopman, 2005). It appears personality trait views are once again achieving status in the leadership literature as a means for predicting leadership effectiveness (Antonakis, Day & Schyns, 2012; Zaccaro, 2012).

The concept of personality in psychology has been largely based on individual, unique, personal attributes (McAdams, 2006; Pervin, Cervone, & John, 2005) and behavioural consistency, iterated by such definitions of personality as, '…represents those characteristics of the person or of people generally that account for consistent patterns of response to situations' (Pervin, 1980); 'a system of relatively enduring dispositions' (Bronfenbrenner, 1951); 'the total sum of all of the relatively enduring dimensions of individual differences' (Byrne & Kelly, 1981). This consistency in individual thoughts and behaviours is across both time and situations (Roberts & DelVecchio, 2000). Thus, at the core of personality research is the study of the person as a whole (Funder, 1999; Mischel, Shoda & Ayduk, 2008; Murray, 1938).
Personality traits influence how we habitually think, feel, and act (Saucier, 2003). Personality is partially heritable and relatively stable during adulthood (Roberts & DelVecchio, 2000). Therefore, work in this realm has appeared fruitful for showing that leaders’ traits are an important element in explaining their behaviours and outcomes (Eagly, 2007; Judge et al., 2002). Moreover, leadership represents complex patterns of behaviour that can likely be explained by several leader attributes; therefore, trait approaches to studying leadership are required to reflect this veracity (Yukl, 2006; Zaccaro et al., 2004).

The role of personality in organisational behaviours has received renewed interest over the past three decades (Barrick & Mount, 1991; Salgado, 1997; Tett, Jackson, Rothstein, & Reddon, 1994; Judge, Klinger, Simon, and Yang, 2008). The trait approach to personality is the most widely recognised approach in organisational psychology, attributed to the fact that it is the best researched empirically, and traits can be operationalised and provide predictive indicators for behaviours that are useful for relating to leadership qualities (Judge, Bono, Ilies, & Gerhardt, 2002; Peterson, Smith, Martorana, & Owens, 2003; Zaccaro et al, 2004).

The rise of transformational leadership theories has created interest in the exploration of traits, as they point to the stable, personal qualities of individuals as determinants of their effectiveness (House, 1977; 1988). The trait approach renewal has also been spurred on by progress in the development of personality theory; early trait studies were limited by a lack of empirically demonstrated personality theory, and poorly developed measurement instruments (House & Aditya, 1997; Bass & Stogdill, 1990; Zaccarro et al, 2004). Hence, these advancements have supported a resurfaced interest in leadership
traits. For personality trait theorists, this represents a dramatic turnaround following a widespread and long-lasting rejection from the industrial and organisational psychology literature.

The roots of the personality trait model can be traced back to Gordon Allport (1937). According to Allport, individuals develop traits that are unique to them because of differential experience; thus, even if a common trait is shared amongst people, they may differ in the degree to which that trait is expressed in behaviour. The trait model, also referred to as the dispositional model, focuses on empirical, quantitative, and nomothetic approaches in observations that validate the existence of its hypothetical entities (Piekkola, 2011). Here, traits are described as concrete aspects of personality in descriptive terms (e.g. 'assertive', 'sociable', 'aggressive'). So a trait can be defined as any distinguishable, relatively lasting way in which an individual differs from others (Guilford, 1959).

Allport (1937) notes that there are an almost unlimited number of possible traits that could be used to describe an individual’s personality. As this was deemed by others to not be of practical value for distinguishing individual differences in people’s behaviours (John, 1989), subsequent trait theorists considered personality differences sufficiently consistent to enable an identification of a relatively small number of broadly applicable descriptive traits (Cattell, 1943; 1945). From this analysis stemmed Raymond Cattell’s 16 Personality Factors (16PF), where more than 99% of the terms Allport identified were eliminated. This stimulated other researchers to examine the dimensional structure of personality traits, and led to the development of personality trait models such as the FFM which is the most commonly engaged contemporary model of personality.
**Personality in organisational psychology**

Since the 1980s, consensus has emerged that a five-factor conception of personality can be used to describe the most salient aspects of personality. The Costa/McCrae FFM is currently the most widely used framework for studying human personality. The authors credited with founding the Big Five model are Tupes & Christal (1961), who developed the contemporary foundation for the FFM (the researchers born the model from a reanalysis of Cattell’s early data collection). Under this model, it is assumed that the structure of human personality is reflected in five overall personality factors, often labelled Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience (Costa & McCrae, 1992, Digman, 1990, Goldberg, 1990).

FFM personality dimensions are detailed below:

- **Neuroticism** represents poor emotional adjustment and negative affects such as anxiety, stress, and insecurity. Can also be represented by its opposite, Emotional Stability.

- **Extraversion** represents sociability, gregariousness, assertiveness and positive affects such as energy and zeal.

- **Openness to Experience** represents a disposition to be imaginative, unconventional, and creative.

- **Agreeableness** represents the tendency to be kind, trusting, caring, and altruistic.

- **Conscientiousness** represents achievement (reflected in the capacity to work hard and meet challenges) and dependability (reflected in being thorough, responsible, and organised).
The emergence of FFM is often linked to the NEO Personality Inventory (NEO-PI) – which is comprised of Neuroticism, Extraversion, and Openness-to-Experience – with the addition of the Conscientiousness and Agreeableness factor by McCrae & Costa (1985). FFM factors are found consistently in different research methods (Costa, Herbst, & McCrae, 2002; Digman, 1990; Hough & Schneider, 1996; McCrae & Costa, 1985; 1987; 1997; McCrae & John, 1992) and appear to be cross-culturally valid, demonstrated across genders, and relatively stable across adulthood (Costa & McCrae, 1988; Digman & Shmelyov, 1996; McCrae & Costa, 1997; Costa, Terracciano, & McCrae, 2001; McCrae & Costa, 1999; McCrae, Costa & Del Pilar, 1998; McCrae, Costa, Terracciano, Parker, Mills, De Fruyt & Mervielde, 2002; Ones & Anderson, 2002; Vassend & Skrondal, 2011).

McCrae & Costa (1997) comment that many psychologists now accept FFM as the best representation of human personality. Consequently, it has provided a valuable taxonomy for the study of job performance, as it provides a comprehensive framework for the organisation of occupationally relevant personality traits. Utilising the well-known Five-Factor model as a framework for examining personality and organisational behaviour, such as leadership, has assisted in reducing inconsistent findings (Hughes, Ginnet, & Curphy, 1996; House & Aditya, 1997) and there exists an extensive body of literature that links the FFM to job performance (Hurtz & Donovan, 2000; Kroeck & Brown, 2004; Tett, Jackson & Rothstein, 1991; Ones, Dilchert, Viswesvaran, & Judge, 2007).
Meta-analyses further support FFM dimensions and its relationship to job performance, including thousands of research studies, the most popular being Barrick & Mount’s (1991) which examined 117 studies that showed correlations between personality dimension assessments and measures of job performance. Conscientiousness emerged as being consistently correlated with measures of job performance, with the authors demonstrating this validity across different job types and performance measures. Subsequent studies have supported the robustness of Conscientiousness as a predictor of performance (Warr, Bartram, & Martin, 2005; Schmidt & Hunter, 1998; Barrick, Mount & Judge, 2001).

Reviews also show that Neuroticism is a valid predictor of job performance (Barrick et al, 2001; Moscoso & Salgado, 2004; Salgado, 1997; Ones et al., 2007), buttressed by suggestions that Neuroticism can account for as much as 10-25% of variance in job satisfaction (Connolly & Viswesvaran, 2000). Extraversion has also been shown to be a valid predictor of performance, with validities presented from Mount & Barrick’s (1995) analysis ranging between .13 and .51, while more recent yields reveal validity coefficients of .12 (Salgado, 1997) and .09 (Hurtz & Donovan, 2000) respectively. Nonetheless, there are inconsistencies in these results so the predictive validity of Extraversion remains unclear. With regards to Agreeableness and Openness to Experience, these dimensions have usually been found to be weak predictors of job performance (Barrick & Mount, 1991).

As can be seen, evidence suggests that the five-factor taxonomy of personality is highly robust (Murphy & Davidshofer, 2005). Agreeably, there is a now a 'universal consensus that the most parsimonious model of basic personality structure includes five
fundamental dimensions' (Schinka, Kinder & Kremer, 1997). Nonetheless, criticisms of the Five-Factor personality model do exist. It has been argued that the FFM provides too coarse of a description of personality with personality theorists argue that there are too few traits to adequately measure personality (Boyle, Stankov & Cattell, 1995; Warr, Bartram, & Martin, 2005). Research suggests that the sub-facets of FFM traits are better predictors of human behaviour than the higher-level global dimensions (Ashton, Jackson, Paunonen, Helmes & Rothstein, 1995). Block (1995) notes that 'For an adequate understanding of personality, it is necessary to think and measure more specifically than at this global level if behaviours and their mediating variables are to be sufficiently, incisively represented'.

Some organisational psychologists, therefore, support alternative models of personality that have either fewer or more dimensions than the FFM. Only a few of these will be covered here briefly, given the constraints of this thesis; the interested reader is advised to consult the authors in parentheses for further reading. For example, personality attributes have been proposed in terms of Type A/Type B behaviour patterns. These personality types supposedly define how people will react when confronted with stressful threats and challenges in daily life; for instance, an individual with a Type A behaviour pattern will react in an aggressive and impatient manner, while an individual with Type B behaviour pattern will react in an easy-going and leisurely manner (Ivancevich & Matteson, 1984; Spector & O’Connell, 1994; Friedman & Rosenman, 1974). Organisational personality has also been arranged into “types” according to Jung’s (1971) psychoanalytical conceptualisation of personality, which provides the basis for the Myers-Briggs Type Indicator (MBTI). Based on classic theory, the Jungian personality type concept suggests that individuals differ in how they acquire
information from the world around them and therefore how they make judgements using this information (Jung, 1923; Lyons, 1985; Henderson & Nutt, 1980).

Authors have also created models based on FFM personality traits. Hogan and colleagues focus on a reworked version of FFM, which has seven factors: adjustment (linked to Neuroticism), ambition and sociability (both linked to Extraversion), likeability (linked to Agreeableness), prudence (linked to Conscientiousness), intellectance (linked to Openness to Experience), and school success (linked to intelligence) (Hogan & Holland, 2003). Hogan posits that these explanations of individual differences in job performance stem from socioanalytic theory, which specifies that people are generally motivated to get along and get ahead (Hogan & Holland, 2003; Hogan & Shelton, 1998).

The HEXACO model of personality has also recently surfaced, which was developed using the same research strategies that led to the discovery of FFM. The HEXACO personality model is posited as consisting of six dimensions: Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) (Ashton & Lee, 2001; 2007; 2008; Lee & Ashton, 2005; 2006). The HEXACO model is based on that of the FFM, with the Honesty-Humility dimension being its additional, defining trait that encompasses sincerity, fairness, greed, and modesty facets.

Some researchers have argued for more traits that offer more specific descriptions than the FFM, reiterated by Ones & Viswesvaran (1996) who state, 'broader and richer personality traits will have higher predictive validity than narrower traits'. This
potentially poses issues in current leadership research, as FFM traits may be too broad to predict leadership criteria. Nonetheless, in Judge et al.’s (2002) review of the leadership personality literature, relatively strong multiple correlations ($r = .39-.53$) were discovered between FFM traits and the leadership criteria, suggesting that FFM of personality is a ‘fruitful basis for examining the dispositional predictors of leadership’, substantiating optimism in the trait theory of leadership.

Despite contesting taxonomies of personality, the FFM is acknowledged by many researchers as the best illustration of the human personality trait structure (McCrae & Costa, 1997; Mount & Barrick, 1995). As there has been a resurgence of research linking personality to work outcomes, with personality trait studies normally focused on the relationships between leadership and assorted models of personality, the FFM has provided a solid structure for leadership personality studies; prior to this, descriptions of personality were somewhat fragmented. Due to the popularity of the FFM, sorting personality traits into these five broad categories has advantages in that it allows results to be easily compared across different studies. For this reason, the current study explores personality at the FFM level.

**Personality traits as predictors of leadership**

Bass (2008) note that early conceptualisations of leadership viewed leaders as those who held 'the greatest number of desirable traits of personality', but a rich history of research now shows that particular individual differences predict leadership (Antonakis et al., 2012; Bono & Judge, 2004, Judge et al., 2002; Zaccaro, 2012). Furnham & Stringfield (1993) note that two early reviews by Ghiselli and Barthol (1953) and Ghiselli (1966) found that across a variety of occupational groups, mean predictive
validities of personality measures ranged from $r=0.14$ to 0.36 and $r=0.21$ to 0.46, respectively, when the measured traits were judged to be relevant for the job in question. In an important early study, Barrick & Mount (1991) examined the relationship between personality and job criteria across five occupational groups and discovered that measures of conscientiousness reliably predicted supervisors’ ratings of job proficiency and training proficiency (.23).

Following this, Tett, Jackson, & Rothstein (1991) unveiled larger validity coefficients, with the validities for dimensions of intellect and agreeableness equalling those for cognitive ability measures in predicting job performance. Furthermore, ‘in the largest meta-analysis of personality measures ever conducted’, Ones, Viswesvaran, and Schmidt (1993) found that integrity tests – composed of facets of the FFM dimensions of Conscientiousness and Emotional Stability – significantly predict supervisors' ratings of job performance in a variety of settings (.41). Other researchers who have also classified personality measures by using the FFM have found corrected mean validities for at least two dimensions that were large enough to suggest they are significant predictors of overall job performance. These include Conscientiousness ($p=.22$) and Extraversion ($p=.13$), (Hogan & Holland, 2003).

Judge et al (2002) revealed that personality, as measured by the FFM, had a multiple correlation of 0.39 with leader effectiveness, prompting Judge and colleagues to state that (FFM) ‘typology is a fruitful basis for examining the dispositional predictors of leadership’.
Bass & Stogdill (1990) stated that almost all studies on the relationship of low Neuroticism (indicated by self confidence) to leadership were 'uniform in the positive direction of their findings'. Evidence from Hogan, Curphy & Hogan (1994) indicates that neurotic individuals are less likely to be perceived as leaders. In Judge & colleagues’ (2002) meta-analysis, neuroticism is revealed to be negatively related to leadership emergence. They state that neurotic leaders are less likely to be seen as role models by their followers, as they appear anxious, stressed and moody (McCrae & Costa, 1987; Bono & Judge, 2004). Furthermore, individuals who are highly neurotic are likely to have low self-esteem and self-efficacy, and thus will have low confidence in their abilities, which will impact on their appearance as a leader (Judge et al., 2002).

Hogan, Curphy & Hogan (1994) state that Extraversion is related to one being perceived as a leader. Extraverts are characterised as active, assertive, and energetic, and as Kirkpatrick & Locke (1991) point out, such individuals are likely to be viewed as leaders: 'Leaders are more likely than non-leaders to have a high level of energy and stamina and be generally active, lively, and often restless'. Extraversion should then be positively related to leadership. Judge et al (2002) state that Extraversion is the most important trait of leaders, essential to effective leadership. The Extraversion trait has been repeatedly correlated with leadership behaviour (Judge & Bono, 2000; Judge et al., 2002; Lim & Ployhart, 2004), and is strongly related to social leadership (Costa & McCrae, 1988).

Openness, (listed as originality), was viewed by Bass & Stogdill (1990) as the top correlate with leadership. Openness is linked to creativity and divergent thinking (McCrae & Costa, 1997; Feist, 1998), necessary for novel problem solving within
organisations – an important skill for leaders. The assumption is that Openness will be positively correlated with leadership (Yukl, 1998). Openness remains one of the least understood personality traits, but despite this, Judge et al (2002) found that in a business setting it was one of the strongest dispositional correlates of leadership.

Agreeableness (framed as cooperativeness) tends to be related to leadership, however this link remains ambiguous (Bass & Stogdill, 1990). Some studies vouch for the altruistic and sensitive (in other words, agreeable) leader, but others argue that agreeable individuals tend to be modest, and leaders have been shown not to be overly modest (Bass & Stogdill, 1990; Goldberg, 1990). Others see Agreeableness as a necessary trait for leaders as they deal with maintaining social relations and being sensitive to the needs of others (Jensen-Campbell & Graziano, 2001). Agreeable leaders are most likely to treat followers in a fair and respectful manner. However, Judge et al (2002) found that Agreeableness was the least relevant of the traits to leadership.

Kirkpatrick & Locke (1991) suggest that, 'leaders must be tirelessly persistent in their activities and follow through with their programs', indicating that we can expect conscientiousness to be positively related to leadership. Conscientiousness is related to job performance (Barrick & Mount, 1991) and as Bass & Stogdill (1990) state 'task competence results in attempts to lead that are more likely to result in success for the leader, effectiveness for the group'. Highly conscientious leaders are likely to think carefully before acting, to adhere to their responsibilities (Costa & McCrae, 1992), behave consistently and to set their followers clear guidelines for expected behaviour (Brown, Trevino & Harrison, 2005; De Hoogh & Den Hartog, 2008), while following the rules and working transparently (Costa, McCrae & Dye, 1991). Moreover, these
individuals will take personal responsibility (Witt & Ferris, 2003). Judge et al (2002) discovered that Conscientiousness had the second strongest correlation to leadership, following Extraversion. Additionally, the authors found that Conscientiousness was the strongest predictor of leadership in two out of three of the regressions in the multivariate analysis.

While findings appear positive, studies that relate personality traits to leadership have been criticised, largely for appearing inconsistent and often disappointing. This is because little is known about how personality affects leadership (De Hoogh, Den Hartog & Koopman, 2005) despite several studies linking the two together, as they have returned results that differ. This can be linked back to Stogdill’s (1948) review where, 'the findings suggest that leadership is not a matter of passive status or of the mere possession of some combination of states', despite Stogdill uncovering some consistent relations. Some scholars agree 'trait explanations of leader emergence are generally regarded with little esteem by leadership theorists' (Zaccaro, Foti & Kenny, 1991). A further criticism from theorists is that traits must be stable and predict behaviour over substantial periods of time and across varying situations. Schneider (1983) found that traits are predictive of an individual’s behaviour only in select situations, versus across all situations. Additionally, House, Shane & Herold (1996) noted that individual dispositions might be stable for extended periods of time, but not across the lifespan.

Though it appears easy to criticise leadership personality trait research, limitations associated with early investigation of the concepts are linked to problems with early trait research where there was little empirically substantiated personality theory to guide the search for leadership traits. Constraints on meta-analysing personality and job
performance stem from the data as firstly, none were based on an explicit model of personality as few personality theories designed early in the research could understand organisational performance; and secondly, it is difficult to classify scales of various inventories into FFM categories as many of the inventories were not developed with FFM in mind. A further criticism, already touched on, is that the FFM approach is “too simplistic” (Conger & Kanungo, 1998). Thus some theorists (e.g. House & Aditya, 1997), claim that since few traits associated with leadership have been found, the quest for universal traits is futile.

2.1.3 Communication: The key to effective leadership

Hackman & Johnson (2013) view leadership primarily as a communication-based activity: 'Leaders spend much of their time shaping messages that are then presented to a variety of follower, constituent, and stakeholder groups'. Verbal communication skills – including oral, written, and electronically mediated – are key to organisational leadership (Hackman, 2003; Topping, 2002; Kotter, 2003). Although the genesis of performance, effectiveness, and career success are multidimensional, partly determined by intelligence, aptitudes, and hard work, communication is a robust predictor, particularly as most present-day leadership roles rely on social interaction – to varying extents. The more leadership responsibility one has, the more one’s job focuses on communication.

Leadership is enacted through communicating with others (Barge, 1994). Communication is the principal means leaders use to achieve goals; ways of communicating – and therefore, leadership – depend on the CC of the leader. As Hattersley and McJannet (2005) express, 'the best idea in the world can fail if it’s not
communicated effectively' (p.3). Communication abilities and skills are important to leaders in every arena in which they perform, as they can aid in conveying the organisational vision and strategy, support workplace morale, improve job satisfaction, resolve or prevent conflict.

2.1.3.1 Organisational psychology on the ways leaders communicate

Within organisational psychology proper, there is a marked shortage of communication studies in the realm of leadership communication. Although psychology has dominated the study of leadership for decades (Fairhurst & Connaughton, 2014), its focus has been predominantly on the inner "motor" of leader traits, styles, approaches (Collinson and Hearn, 1996; Fairhurst, 2007; Grint, 2000). Despite a lack of psychological theories about the role of communication in leaders, earlier empirical research reaching back to 1900 pointed to communication and social skills being predictors of leadership emergence and effectiveness (Bass & Stogdill, 1990; Stogdill, 1974).

Organisational psychology is ready to acknowledge that communication is central to leadership (Awamleh and Gardner 1999; de Vries, Bakker-Pieper, & Oostenveld, 2010; Den Hartog and Verburg 1998; Kirkpatrick and Locke 1996; Riggio et al. 2003; Shamir, Arthur & House, 1994; Spangler and House 1991; Towler 2003). However, few studies attained an acceptably precise operationalisation of communication styles leaders use in their daily transactions; and most studies disregard CC as modelled in applied linguistics (cf. Section 2.1.3.4 below). Even less authors have attempted to find out how leadership communication styles are linked to general leadership styles and outcome variables.
A possible theoretical grounding for CC of leaders may be found in well-known distinctions between task-oriented and relationship-oriented leadership styles and associated behaviours (Likert, 1961; Stogdill & Coons, 1957). Fleishman (1953) led a focus on enhancing the relationship-oriented aspects of leader behaviour, which in turn led to programmes aimed at developing the interpersonal and relationship skills of leaders. Boyatzis (1982) also emphasised the importance of communication skills in developing competent leaders.

One psychological model where a few links between leadership and communication are traced is transformational leadership. Using this framework, Eden (1993) suggests that the communication of positive leader expectancies may be but a special case of transformational leadership. A leader cannot be truly transformational without being able to create self-fulfilling prophecies in their followers, as the communication of expectancies is inherent in transformational leadership (Avolio et al, 2009).

On this point, Flauto (1999) notes that transformational leadership as a style requires leaders to use communication skills to establish a common vision, reiterating that the three factors that constitute transformational leadership - charisma, individual consideration, and intellectual stimulation - are communication-based. Hence, transformational leadership is of a high quality when the leader exhibits high communicative competency, in contrast to transactional leadership that requires a level of communication competence that allows the leader to negotiate the leader-member explicit or implicit contract and to monitor the resulting transactions; a level of CC is lower than that of transformational leadership. Nonetheless, there has been no cohesive theoretical framework in organisational psychology to guide the leadership
communication agenda in practice. In a recent literature review of leadership, House and Aditya (1997) suggest that scholars working on leadership need to address the style(s) with which leaders express and communicate behaviours.

2.1.3.2 Social skills and communication

Leadership is a social process. It involves creating and maintaining a relationship between individuals. A social skills approach to leadership is comprised of the ability of leaders to recognise the feelings and behaviours of others in social situations and to respond effectively based on that knowledge. This trait has been thought of as essential to effective leadership (Zaccaro, 1999, 2001, 2002; Zaccaro, Gilbert, Thor, & Mumford, 1992), especially given that the vast majority of jobs rely on social interactions. Social skills have been identified by researchers as one of the most important personal qualities needed for success (Ferris, Perrewé’, & Douglas, 2002; Riggio, 1986; Riggio, Riggio, Salinas, & Cole, 2003; Witt & Ferris, 2003), as well as being essential for managerial effectiveness (Wayne, Liden, Graf, & Ferris, 1997).

The social process between a leader and followers - and their relationship - is "sanctioned" through communication. Thus, leaders require social skills and CC in order to effectively send and receive information within the organisation. This is pertinent for building and maintaining effective social networks – particularly as leadership is concerned with constructing cohesive and goal-oriented teams - as communicative action can modify and elaborate on existing connections among colleagues, actions, meanings, and contexts, or create new ones (Barge & Fairhurst, 2008).
Hogan, Curphy, & Hogan (1994) state that the key to a leader’s effectiveness is his/her ability to build a team, through possessing task-related and team maintenance factors that are linked to social skills and communication. Successful leaders communicate a clear mission or sense of purpose; minimise and resolve conflicts among group members, and ensure that team members understand the team’s goals, resources, constraints, and problems. The importance of communication in terms of social interaction is reflected in the ‘effective exercise of persuasion, explanation, and other influence mechanisms, which reveal the ability to control others’ (Argyle, 1969).

2.1.3.3 Leadership models in organisational communication research

Until recently, the field of organisational and business communication has remained isolated from the mainstream I/O community. While alluding to psychological notions, organisational communication retains a disciplinary identity. Organisational psychology has dominated leadership research (Bass, 1981; House & Aditya, 1997), occasionally prompting writers in the communication sciences to study leadership language and interaction (Fairhurst, 2008; for linguistic pragmatics and applied linguistics, cf. Section 2.1.3.4). Organisational communication tends to view leadership within a relational context; leaders and followers live in a relational world, ‘a world in which leadership is co-created in systems of interconnected relationships and richly interactive contexts’ (IBM Global CEO Study, 2010, in Fairhurst & Uhl-Bien, 2012).

Communication researchers acknowledge that leaders and followers are “relational beings” who represent each other as such in a dynamic interpersonal context (Ospina & Uhl-Bien, 2012). Leadership is depicted as a phenomenon generated via interactions among people acting in context, as opposed to a mere individual trait or pattern of
behaviour. From the 1990s, some communication approaches benefited from social constructionism. Central to such a model is assuming that leadership is “co-constructed” in social interaction processes (Fairhurst & Uhl-Bien, 2012), with interactants co-constructing meaning of action. Groups of people are then supported to work together in meaningful ways to produce leadership outcomes (Day, 2001; Drath, 2001; Hosking & Morley, 1988; Ospina & Foldy, 2010).

Communication science helps viewing leadership as genuinely interactional; essentially, instead of a property of any one person, it is viewed as distributed with collective challenges (Clifton, 2012). It can be a Wittgensteinian “language game”, where individuals have the right to evaluate and to define the organisational landscape by negotiation. The person who has the most influence in this process emerges as the leader (Clifton 2012). From this perspective, “leaders” are persons with access to more influential discursive resources with which they sway the negotiation. Since 2000, organisational communication paid growing attention to some facets of leadership discourse and relational stances (Alvesson & Sveningsson, 2003; Barge, 2004; Collinson, 2005; Cunliffe, 2001; Fairhurst, 2008; Gronn, 2002; Hosking, 1988; Kelly, White, Martin, & Rouncefield, 2006; Taylor & Robichaud, 2007; Tourish & Vatcha, 2005; Uhl-Bien, 2006).

Organisational communication is also developing interest in the study of followers as key components of the leadership process, with acknowledgement of followership largely missing in earlier leadership literature (Uhl-Bien, Riggio, Lowe, Carsten, 2014). This is especially so in the organisational psychology literature, where studies are leader-focused and individualistic. Followers are an important part of the leadership
process that is “co-created” in social and relational interactions between people (Fairhurst & Uhl-Bien, 2012). Follower behaviours are a vital constituent of the leadership process. For further material about relatively more discourse-oriented approaches, see Grant, Hardy, Oswick, & Putnam, 2004; Grant, Putnam, & Hardy, 2011; Phillips & Oswick, 2012; Putnam & Fairhurst, 2001.

2.1.3.4 Communicative competence

As shown in Sections 2.1.3.1, 2.1.3.3, communicative practices of leaders enjoyed intermittent attention in organisational psychology proper, as well as areas like business/organisational communication (Hackman & Johnson, 2009). Communicative behaviours and underlying potentialities of communication are distinct research targets. In this thesis research, 'potentiality' will be used as an umbrella term to include generic constructs such as ability, skill, aptitude, and intelligence. Each of these generic constructs is instantiated, or made concrete, in measurable constructs such as 'spoken ability in a second language'. Potentialities fit the theoretical framework of differential psychology (Anastasi, 1958).

So far, there is little sign that I/O psychology would embark on defining and modelling constructs that describe and explain inter-individual difference in communication process and the success of communication. Regarding leadership, a differential psychology (cf. Tyler, 1965, 1978) of such dimensions does not yet exist. Specifically, communicative ability or competence is not modelled in organisational psychology in ways that can be used to explain individual differences in leadership communication.
In order to find full-fledged models of person characteristics that correspond to traditional, measureable hypothetical constructs (MacCorquodale & Meehl, 1948), one needs to search literature in disciplines currently considered remote to organisational psychology, such as theoretical/ applied linguistics, in particular linguistic pragmatics.

A salient construct is communicative competence (CC). A mentalistic view seeks to introduce explanatory entities residing in the mind -- mostly, hypothetical constructs -- to explain why observable manifestations in leaders differ. CC is one of the widely investigated potentialities of communicating by linguistic means (Paulston, 1992; Leung, 2005).

An acceptable working definition of CC is 'the ability to use language appropriately in social situations' (Trask, 1999). Another is possession of knowledge of language together with an ability to use that knowledge for purposes of communication.

It is sound to describe CC (Hymes, 1967a/1970) as one of the remarkably useful notions of recent decades in applied linguistics as well as the psychology of language. CC has played a visible role characterising inter-individual differences in communicating agents; specifically, differences in underlying, covert potentialities enabling communicative use of a natural language in a real-life context such as leading in organisations.

CC has served well to guide applications in sub-fields such as

- language acquisition;
- language teaching;
• disorders of language use; language disability and assistance for the disabled;
• communication studies, including predominantly 'applied' areas such as professional communication.

While many research projects on CC targeted second language learning (e.g. Brighton, 2013; Walcott, 2007; Young, 2011), the concept and associated models proved useful in advancing our understanding of how first language users acquire patterns of language use.

The proliferation of CC research between Hymes' proposals in the late 1960s, and the present day also led to heterogeneity (Wiemann & Backlund, 1980; Gumperz, 1981, 1982, 1984; Palmer, Groot, & Trosper, 1981; McCroskey, 1982; Savignon, 1983; Brown, 1984; Krasnick, 1984; North, 1997; Leung, 2005; Walcott, 2007). The overabundance of models prompted various critical perspectives.

The recent fashion wave of competency modelling in human resources led to frequent use of 'Communication' as a named competency, without paying any attention to detailed, empirically verified models of CC in applied-linguistic research.

Competency modelling is used to predict superior performance within organisations (Lucia & Lepsinger, 1999; Schippmann, 1999) despite relatively scarce evidence to either validate the approach (Pearlman, 1997; Lievens, Sanchez & De Corte, 2004; Markus, Cooper-Thomas, & Allpress, 2005), or show its advantages over preceding techniques of job analysis and derivation of predictors. The use of the term competency in organisations is attributed to Boyatzis (1982) and his book 'The Competent Manager'.

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Boyatzis defines competency as ‘an underlying characteristic of a person which results in effective and/or superior performance in a job’ (1982, p. 21). With a focus on management, competencies have been outlined by Page and Wilson as ‘the skills, abilities, and personal characteristics required by an 'effective' or 'good' manager’ (1994, p.12).

Including competencies related to interpersonal "skill", social "skill", and communication per se, appear widespread in today's competency modelling. Local research indicates that 'Communication' is a preferred competency when looking at customised competency models for New Zealand organisations (Markus, Cooper-Thomas & Allpress, 2005). The same report refers to models that include managerial performance indicators like communication and interpersonal behaviour, with several levels of mastery acknowledged. However, without digesting the applied-linguistic theorising on CC, 'Communication' as a title in HR competency modelling tends to remain atheoretical, ill-defined, with serious issues in operationalising and mapping to psychological constructs to be used in assessment.

Sub-sections 2.1.3.4.1/2.1.3.4.5 offer a summary of a few notions in CC research proper. Given the focus of thesis, a grand tour of such models would be unviable and unnecessary. After a review of inspiring thoughts from applied linguistics, section 2.3.1.5 will specify the element of leaders' CC that is captured by Ferris' model, guiding assessments done in the current project.
2.1.3.4.1 Theoretical antecedents

*Linguistic potentialities*

Language is a shared medium of a community, but situated language use varies from person to person (Fillmore, Kempler, & Wang, 1979). Findings in applied linguistics and the psychology of language demonstrate theoretically and practically weighty individual differences in the use of natural language. Variation is systematic rather than random, and not entirely idiolect-based (Oksaar, 1987). Inter-individual differences are manifested in using one's native language(s) in areas such as language comprehension, production, and acquisition.

A differential-psychological view seeks to introduce covert explanatory entities to explain why manifestations differ. The evolution of the concept of CC is difficult to understand without preceding models of linguistic competence/grammatical competence against which the CC proposal argued. Appendix A04 briefly summarises publications providing a background for the linguistic competence/communicative competence distinction.

2.1.3.4.3 Hymes' theory of communicative competence: The four sectors

Hymes (1970) presents a view of CC as 'competence for use' by suggesting that a language user needs to be able to manage four areas. Originally termed 'parameters' of CC, they came to be discussed as 'the four sectors':

1. to what degree something is formally possible in a language;
2. to what degree something is feasible to implement in a cognitive system;
3. to what degree something is appropriate in a context;
4. to what degree something is observed being performed, and what the performing
   of that behaviour entails (p. 281).

The first sector corresponds to grammatical competence (Appendix A04). Hymes' view
differs from Chomsky's regarding the rules that allow us to represent what is permitted.
For Hymes, the rules in this sector of CC include grammatical rules such as in a formal
grammar (e.g. generative grammar) as well as rules of meaningful linguistic behaviour
in social contexts.

The second sector provides a new look at some of the factors mentioned above, under
Chomskyan 'performance'. Users are seen as possessing knowledge relevant to whether
cognitive resources and mechanisms permit realisation of an aspect of language use. An
example is the ceiling on the number of centre-embedded clauses a user can
comprehend without error.

The third sector of CC theory builds a bridge between language as a system, on one
hand, and situations, settings, contexts, of use on the other. It can also be seen as a sub-
theory linking a formal model of a language to real-time interaction among persons.
Users have knowledge about relative levels of appropriateness for any element of
language use in an interpersonal, social situation, or in a situated interaction. Obviously,
elements that are formally possible as well as cognitively feasible may still be
contextually inappropriate.

Hymes' fourth sector is based on the observation that many of us have an idea what
options are used, or frequently used, in a speech community. Some possible, feasible,
and appropriate utterances are frequent while others rarely occur. Corpus linguistics is capable of providing evidence for Hymes' claim. Knowing about probabilities of occurrence, communicators select options from a repertoire depending on these probabilities (Hymes, 1984, 1987).

2.1.3.4.4 Canale/Swain model

Years after Hymes' original proposal, Canale and Swain revisited competence theory, reviewing linkages between communication studies and competence. They considered implications of modelling for fields of praxis such as language teaching and assessment (Canale & Swain, 1979, 1980, 1981). They outlined what is hailed as the empirically most influential model of CC (Canale, 1981).

A concise statement on the concept of CC according to these authors describes CC as 'a synthesis of knowledge of basic grammatical principles, knowledge of how language is used in social contexts to perform communicative functions, and knowledge of how utterances and communicative functions can be combined according to the principles of discourse' (Canale & Swain, 1980).

The Canale/Swain model draws on Hymes' proposals, specifically the four sectors of CC. It re-formulates knowledge of formal possibility but continues to see CC as including a module of grammatical competence. The model marginalises cognitive feasibility. The strength of the Canale/Swain model is a more precise conception of what may constitute knowledge of appropriateness, using ideas from linguistic pragmatics and social psychology. Knowledge of 'what is actually done', the fourth sector of Hymes' theory, is seen as weighty but not as a separate constituent.
A point where the Canale/Swain model diverges from Hymes', offering improvement, is related to strategies. While Canale and Swain (1979) claims that 'very little' work was known on strategies in communication by that time, postulating a Strategic Competence may have been inspired by growing research regarding learning strategies as well as cognitive strategies (McCormick, Miller, & Pressley, 1989).

Reflecting these modifications, the Canale/Swain model can be represented as a three-component model. The three main components are Grammatical, Socio-linguistic, and Strategic Competence.

Socio-linguistic competence is broken down to the sub-components labelled Socio-cultural and Discourse Competence. Each of the components and sub-components is assumed to include knowledge of probabilities for the use of linguistic means in a community.

Canale and Swain's CC, if interpreted as a construct explaining inter-individual variance, covers a wider range of potentialities than either Chomsky's grammatical competence or Hymes' CC. A valuable contribution is the elaboration of competence elements including pragmatic patterns. Specifically, socio-cultural competence (cf. Brighton, 2013; Byram, 2013; Byram & Feng, 2005) is portrayed as the user's knowledge of patterns of language use as a function of the extralinguistic (non-linguistic) context. This can be translated to linkages between linguistic options (e.g. registers, politeness routines, syntactic patterns, or even lexical choices such as
lexicalised honorifics) on one hand, and particular context parameters (Goodwin & Duranti, 1992), on the other.

Discourse competence is a module that reflects developments of the relevant historical era in text-level syntax and text semantics as much as of discourse-analytic inquiry. The theme of cohesion as well as coherence is central to modelling discourse competence. It appears that the authors' focus in Discourse Competence was originally on micro-level devices of coherence (such as anaphoric reference connecting two utterances).

Canale and Swain (1980) postulate Strategic Competence as a self-contained aspect of CC. It consists of 'verbal and non-verbal communication strategies that may be called into action to compensate for the breakdowns in communication due to performance variables or to insufficient competence' (p. 30). Strategic competence includes two types of strategies. One relates to grammar. An example is the L2 learner's strategy to avoid grammatical forms that the learner realises she/he has not yet mastered (Canale & Swain, 1980, p.42). Another type is interaction strategies.

Canale (1983) proposed an improved version of the model. He revises the subordination of components, making Discourse Competence one of the first-order units of the taxonomy. This leads to a CC model with four, rather than three, components. A more important revision concerns conceptualising Strategic Competence. The new characterisation relies on the notion of effective communication.
2.1.3.4.5 Verhoeven/Vermeer model

With more fine-grained components, Verhoeven and Vermeer's CC model is admittedly a generalisation from findings backed by psychometric evidence (Verhoeven & Vermeer, 1992; cf. Verhoeven & Vermeer, 1985, 1986). They agree with Canale (1981) claiming that beyond postulating components of CC, any independence, or the relationships among components, is an issue to be decided via empirical study. They tend to use a battery of psychometric instruments relying on previous models (including Canale/Swain model, or Bachman, 1990). Analysing correlations of composite scores representing sets of test items, they arrive at empirical conclusions to refine the CC model.

The resultant model resembles Canale and Swain in that:

- it includes a Grammatical Competence component;
- Socio-cultural Competence, with a slightly modified view, is a central component;
- Strategic Competence plays a major role.

However, Verhoeven and Vermeer's taxonomy differs in that there are five primary components: Grammatical Competence, Discourse Fluency, Socio-linguistic Competence, Illocutionary Force, and Strategic Competence. Three of those are broken down to sub-components (see Figure 2-01).
A striking feature is the elevation of managing Illocutionary Force as a top-level component of the taxonomy. It reflects the influence of classic Speech Act Theory (Austin, 1962; Searle, 1969; Searle, Kiefer, & Bierwisch, 1980) in explaining how conversers perform acts of interpersonal significance by using linguistic forms (e.g. performative verbs). The ability of language users to identify the illocutionary force (Bach & Harnish, 1979; Geis, 1995) of an utterance is a major facet of utterance interpretation and a sine qua non of successful spoken interaction in naturalistic settings.

In contrast to the Canale/Swain model, Socio-linguistic competence is divided to Cultural Rules and Expressiveness sub-components. Cultural Rules relate to the interface between linguistic and non-linguistic communication (kinesics/proxemics) as well as conversation management. Expressiveness is a sub-component described as the speaker's ability to express personal emotions, feelings and communicative needs, and use options such as invented stories and jokes (Verhoeven & Vermeer, 2002).

Verhoeven and Vermeer (1992) document factor-analytic findings showing that Discourse Fluency is relatively closely related to Grammatical Competence. The authors invoke commitment of finite cognitive resources to explain why a composite
measure of Grammatical Competence (as a context-reduced notion) correlates with Fluency that is context-embedded. Illocutionary competence and Strategic Competence have moderate but statistically significant relationship with Grammatical Competence.

New Zealand applied linguistics and sociolinguistics achieved an international breakthrough when studies of linguistic microstructure of leaders' communicative patterns were published (Holmes, Marra, & Vine, 2011). The Victoria University 'Language of the Workplace' programme is a globally visible, pioneering attempt to inform the analysis of organisational communication (including leadership) by relevant linguistic concepts, via scrutiny of authentic transcripts. More information can be sought by referring to Holmes (2005), Holmes (2008), Holmes (2010) and Holmes (2012). However, much research needs to be done until full-fledged conceptual models of CC will dovetail with psychological theories of leadership.

2.1.3.5 Gerald Ferris’s “political skill”

The present project does not intend to cover the entire gamut of a CC model. It focuses on a sub-set of CC components relevant to leadership in New Zealand, adopting Ferris' model of "political skill". This segment relates to a leader's competence in managing social interaction within the organisation, including verbal interaction, and shaping value orientations that govern action. When leaders communicate, they need to convince followers, motivate them for action, influence their decisions, and create relative consensus in groups.

House and Aditya (1997) assert that, while extensive research has been done on power and influence in social psychology, application of that work to leadership is not yet
mature. It is claimed that organisations are arenas of "political" behaviour; influence and persuasion are necessary in order to achieve tangible objectives (Ammeter, Douglas, Gardner, Hochwarter, & Ferris, 2002). Additionally, success within the workplace is not the result of task performance alone.

Leaders need to be effective in the way they influence followers via communicating. Zaccaro (2002) suggests that '(…) successful social influence by the leader requires the mastery of a range of skills and the ability to select and apply them to the appropriate situation' (p. 45).

This is aligned with definitions of CC offered earlier in this thesis (cf. 'the ability to use language appropriately in social situations'). Once Ferrisian definitions of "political skill" are revisited (cf. 'the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one’s personal and/or organizational objectives'; Ferris, Treadway et al., 2005), the conceptual resemblance of "political skill" and CC becomes evident. Through greater "political skill", effective leaders can communicate and thereby construct shared meaning amongst employees.

Even within CC elements clearly enabling leadership practice, the concept of "political skill" delimits a narrower zone, manageable in our research.

The project adopts Ferris' notion of 'political skill' (Ammeter et al., 2002; Ferris, Blickle et al., 2008; Ferris & Judge, 1991), with its model and operationalisation. Use of the model has become prevalent, primarily in North America (Ferris, Russ, & Fandt, 1989; Ferris, Davidson, & Perrewé, 2005; Ferris & Treadway, 2012). Its utility has been
proven in describing and explaining CC in leaders (Ferris, Treadway, Perrewê et al., 2007). Examples of work-relevant "political" skills conceptualised in alternative ways also exist, mostly outside psychology (Byrd, Costello et al., 2012; Skytt, Carlsson et al., 2008).

In the present thesis, the label 'political' is printed with skepticism; the usefulness of a terminology of 'political skill' is questioned. The noun 'politics' and adjective 'political' are multiply ambiguous and vague. While studies on so-called 'organisational politics' were published (Ferris & Treadway, 2012; Sederberg, 1984; Vigoda-Gadot & Drory, 2008) these terms have lost practically all meaning due to unqualified, indiscriminate, blatantly unserious usage throughout several disciplines, as well as media discourse. It seems that the attribute 'political', by its own semantic features, fails to demarcate any skill. 'Political' cannot serve as the differentia specifica in delimiting a skill.

It is helpful to add that the aims of the thesis project bear no relationship with influential paradigms in political science or government studies.

Terminology aside, the construct of "political skill" as promoted by Ferris has brought positive dividends in 200+ studies worldwide. As long as a concept is operationalised, and a validated psychometric tool exists to quantify, pasting any label will carry less risk. In this thesis, Ferris' notion will be explicated in the framework of CC. It is considered as a notion describing differences in the ways leaders are able to communicate and thereby exert influence in a social setting. The vignettes of sub-constructs (Ferris & Treadway, 2012) fit this interpretation, also reflected in the working definition proposed in Ferris, Treadway et al. (2005; quoted above).
A form of "political skill" was proposed by Mintzberg (1983, 1985) and Pfeffer (1981) but serious empirical study waited until Ferris' re-conceptualisation. In Ferris' perspective, "political skill" is viewed as neither fundamentally good nor bad. Instead of a stigma of individual behaviour that is unendorsed by the organisation (e.g. troublesome, self-serving), research came to consider "political skill" as the sum total of processes by which people exercise influence through the – sometimes informal -- management of shared meaning (Ammeter et al., 2002; Sederberg, 1984).

"Political skill" has been described as a meta-theoretical framework, connected to cognition, affect and behaviour (Ferris et al, 2007). Those high in "political skill" are likely to read situations and people well and effectively adjust their behaviour to suit. They combine social astuteness and a capacity to adapt their behaviour to situational demands in ways perceived as sincere -- without ulterior motive -- by others. As a result, these interactants inspire trust (Ferris et al, 2007).

"Politically" skilled individuals are likely to have extensive networks they can leverage for social capital and resources (Blickle, Ferris, Munyon, Momm, Zettler, Schneider, & Buckley, 2011).

The Ferris model identifies and psychometrically operationalises four dimensions of "political skill":

- **Social Astuteness** - attuned to diverse social situations, astute observers of others, self-awareness
• **Interpersonal Influence** - subtle and convincing personal style that exerts powerful influence on others

• **Networking Ability** - adept at developing and using diverse networks of people

• **Apparent Sincerity** - possess high levels of integrity, authenticity, sincerity.

For leaders to be effective, they must engage in the social influence processes (McClelland, 1975). A constant in many modern definitions of leadership is influence. Ferris posits that leaders need "political will" (motivation) and "political skill" (style, savvy) (Ferris et al, 2007). "Political skill" allows an individual to vary their leadership style by defining and interpreting events for followers through communication. Aspects of communicating that help a leader to exert influence are: verbal rhetoric, to influence others; symbolic behaviour, to express shared understandings; and nonverbal communication, to assist with impression management (Pandey, 1978). Thus "political skill" is firmly anchored in CC; leadership can be modelled as a language game (Pandey, 1978).

So-called "political behaviours" can be used for the self-interest of the leader. However, many leaders with a high power motive and a high concern for morality will use influence in ways to increase organisational objectives, inspiring commitment of their followers (McClelland, 1975). Communicative leaders also execute behaviours to clear away the uncertainty of organisational phenomena (Ammeter et al., 2002), to interpret organisational events in order to create and maintain a shared reality for their followers (Fairhurst & Sarr, 1996; Ferris, Fedor, & King, 1994).
Given that "political skill" is conceptualised as the combination of the ability to exert influence in social situations and the capacity to cultivate one’s social network, some authors assume that performance is determined less by intelligence and more by "political skill" (DeLuca, 1999; Luthans, 2002). "Political skill" is conceptualised as independent from general mental ability (GMA). Schmidt and Hunter (1998) established that GMA tends to be a highly valid predictor of job performance across numerous roles. Scholars initially implied that "political skill" would reflect a large correlation with GMA, or "political skill" be subsumed under GMA (Gottfredson, 1997). However, Ferris' team reported a non-significant or near-zero relationship between "political skill" and GMA (Ferris et al., 1999, 2005).

Personality traits received much research attention in leadership (see Section 2.1.2.5) but little of this focuses on social effectiveness measures. Ferris et al. (2005) conceptualise "political skill" as overlapping to a certain degree with selected personality traits (Ferris, Perrewé, & Douglas, 2002). Findings suggest "political skill" is related to Conscientiousness and Self-monitoring. The authors suggest that this linkage is not too high to indicate construct redundancy. EI can be seen to partly overlap with "political skill" in terms of conceptual features. However, discussions of EI are – in spite of the robust Mayer/ Salovey/Caruso model – broad, and more work is required to establish construct validity (Hedlund & Sternberg, 2000). Ferris et al (2005) acknowledge that emotional intelligence and "political skill" are correlated, but the authors see "political skill" as incorporating skills that go beyond emotion recognition and regulation (with a correlation between the two constructs r= .53; Ferris et al., 2005).
Ferris and colleagues (2005) reported evidence of criterion-related validity of "political skill", predicting job performance and effectiveness ratings in two samples made up of school administrators and financial managers. Semadar et al. (2006) found that "political skill" was a stronger predictor of a manager’s job performance than self-monitoring, leadership self-efficacy, or emotional intelligence. Another study of leader "political skill" suggested that it relates positively to team performance and organisational commitment (Ahearn, 2004; Douglas & Ammeter, 2004; Treadway, Hochwarter, Kacmar & Ferris, 2005). Research demonstrates negative correlations between "political skill" and cognitive anxiety and somatic anxiety (Perrewè, Zellars, Rossi, Ferris, Kacmar, Liu, & Hochwarter, 2005). Research also has found that "political skill" moderates the relationships between role conflict and psychological anxiety, somatic complaints, and blood pressure (Perrewè et al., 2005), and that it moderates the relationships between role overload and job tension, job satisfaction, and anxiety (Perrewè et al., 2005).

2.2 Measurement of personality and communicative competence

2.2.1 Assessing personality in occupational settings

Personality tools are used to assess suitability to a role and predict job performance, often combined with other selection tools (Farr & Tippins, 2010; Schmidt, Ones, & Hunter, 1992). With regards to leadership, Kenny & Zaccaro (1983) revealed that 48-82% of the variance in leadership emergence rankings could be accounted for by personality variables.
Personality scores and profiles are used to predict a range of other variables, such as job satisfaction (Furnham, Crump & Whelan, 1997), counterproductive behaviour (Cullen & Sackett, 2003), and staff turn-over (Jenkins, 1993). The usefulness of such tools is amplified by a possibility to do proper norm-referencing of scores, and develop specific local norms for interpretation.

Standardised measures of cognitive ability and personality, structured interviews, assessment centres are all exploited to forecast leadership success (Bass, 1990). Interviews, personal history, and references are ubiquitous selection tools for organisations, despite low validity estimates (Gill, 1980; Robertson & Makin, 1986; Patrickson & Haydon, 1988; Vaughan & McLean, 1989). In this armamentarium, "objective" personality inventories have played an increasingly prominent role worldwide (Murphy, 1996; Salgado, 1999), with an increase in New Zealand use.

Practitioners using personality tests for leadership should focus on job-relevant personality traits, guided by job analysis and/or competency modelling. A synopsis of the history of personality measures in organisational psychology is found in Kanfer, Ackerman, Murtha, & Goff (1995), Hogan & Roberts (2001).

This section lists the purpose and properties of personality tests used in organisational psychology, all featuring in leadership studies.

Tools fall into two categories:

(i) For decades, well-validated personality inventories were used in the human resources arena as adaptable tools. The tests had not been originally developed for selection or person development. They often were of semi-clinical nature, with
items appearing irrelevant to job applicants and resultant poor face validity. However, quantitative studies proved their utility; several of them remain in use in New Zealand today.

(ii) Starting with SHL's innovations (1984) personality tools purposefully designed for the world of work were introduced, spreading rapidly.

2.2.1.1 Personality tools adapted to the “world of work”

Regardless of their development history and original purpose, several personality inventories have been commonly used in organisational contexts since the 1950s. The utility of these tools in selection and development often rests on their multi-dimensional nature and the capacity to build holistic profiles. A full review of tests is beyond the scope of the thesis.

Several major tools follow a mainstream continuum assumption, namely, score variables quantifying dispositions are assumed to be infinitely divisible (e.g. Sixteen Personality-Factor questionnaire (16PF; Raymond Cattell); California Psychological Inventory (CPI; Harrison Gough); the NEO test family, including NEO-PI, NEO-PI-R, NEO-PI-3, NEO-4, NEO-FFI (Paul Costa). Others are based on a typology assumption, such as the Myers-Briggs Type Indicator (MBTI; Isabel Briggs Myers & Katharine Briggs). Appendix A05 offers summaries of the measurement properties of these tests, together with brief evaluation in the context of leadership study.

2.2.1.2 Occupational personality tests

Criticism against personality tools that are not purposefully built for areas such as personnel selection and leadership development eventually led to the opening of a new
The advent of specialised occupational personality tools is marked by introducing the Occupational Personality Questionnaire by SHL. Further examples are the Hogan Personality Inventory and the Fifteen-Factor Questionnaire Plus. Appendix A06 summarises properties of these tests, together with evaluation.

2.2.2 Assessing interpersonal communication and communicative competence in occupational settings

In response to the flattening of organisational structures, companies now are working to recruit, develop, and train leaders who connect with employees and have excellent verbal communication skills (Bass, 1999). Still, there is a paucity of assessment tools available to measure CC in the organisational context, with few thorough studies of CC in leaders (Payne, 2005).

The assessment of CC is inherently difficult; multi-componenental models have been operationalised mostly in language teaching. Skills of communicating in an authentic organisational context are hard to assess through disembodied means such as a regular standardised test. Organisation-specific CC should involve, among others, knowledge of the organisation, the ability to carry out skilled behaviours, and the motivation to perform competently (Payne, 2005).

Apart from Ferris' work (2.2.3 below), there is a lack of adequate measurement tools operationalising the CC construct in the world of work. Monge, Bachman, Dillard, and Eisenberg (1982) proposed an instrument titled the Communication Competence Questionnaire (CCQ) probing two "macro-level skills": encoding and decoding. The CCQ focuses primarily on the skills necessary to accomplish work tasks. It neglects
relational forms of communication. It foregrounds content rather than process. There have been calls for greater reliance on the relational communication model proposed by Spitzberg & Cupach (1984), encompassing the criteria of appropriateness and effectiveness.

Specifically, psychometric research that focuses on the assessment of the CC of leaders could not be found by comprehensive database searches of literature. Bambacas & Patrickson (2009) revealed that though communication skills played an important role in leader selection, these skills were not accurately measured. Analyses of organisational communication are often embedded in skills development as opposed to producing tools to assess the construct (Jablin & Putman, 2001).

2.2.3 Assessing Ferris’ “political skill”

A laudable exception from those trends of psychometric test design is the Political Skill Inventory (PSI) authored by Ferris and colleagues (2005). The PSI is an 18-item standardised questionnaire intended to yield a full-test score indicating level of "political skill". In Ferris' model, "political skill" is the combination of four dimensions: Social Astuteness, Interpersonal Influence, Networking Ability, and Apparent Sincerity. PSI features scales and sub-scores for each sub-construct.

The psychometric properties of the PSI toll will be described in Chapter 3.

The social astuteness and interpersonal influence variables from PSI quantify individuals' ability to understand social situations, and select the most appropriate and influential behavioural strategies to suit those situations. The networking ability and
apparent sincerity dimensions assess how the abilities described are utilised to achieve positive outcomes for the individual and/or the organisation. Politically skilled individuals are accomplished in the arts of negotiation, coalition building, and conflict resolution (Ferris et al., 2005). Such individuals will be able to develop powerful allies, strategically position themselves within the communication network, and build rapport with individuals who have access to resources (Pfeffer, 1992).

The four-factor composition of "political skill" has been substantiated by empirical projects and replicated (Ferris et al., 2005). The developers of PSI also assessed convergent and discriminant validity for construct validation. "Political skill" was linked to other social effectiveness measures (convergent validity). It was found that "political skill" was moderately related to emotional intelligence, conscientiousness, political savvy, and self-monitoring. To date, most research has framed "political skill" work at the composite level (Semadar et al., 2006) rather than utilising sub-dimensions of "political skill".

The use of the PSI is impressively wide, but these studies have all been conducted outside New Zealand. PSI was developed for and validated on U.S. American samples (Ferris et al., 2005); with adaptations in several other countries and language communities. There are not yet any "political skill" investigations in a New Zealand context. There is a need for the examination of possible cross-cultural differences in the dimensions, predictors, and outcomes of "political skill".
2.3 Aims and hypotheses

The previous sections have examined the available literature with regards to leadership, personality, and CC theory, particularly within the occupational setting. As noted, the paucity in the organisational psychology literature regarding the CC and personality of leaders, as well as the lack of specific research in New Zealand, prompted the current study. The present study seeks to contribute to the organisational leadership literature by examining the personality traits and CC of leaders and non-leaders in a respondent group obtained from the general working population in New Zealand. The results are intended for this population.

The aims of this research are a) to explore the demographic differences in work-related personality traits and CC in New Zealand; b) to explore the patterns of difference between leaders and non-leaders in terms of work-related personality traits and CC; c) to explore patterns of relationships among work-related personality traits and CC in employees in general, and d) to explore whether these patterns of relationships are different between leaders and non-leaders.

Specifically, the following hypotheses have been proposed and tested in this study of leadership:

**Hypothesis 1:** Gender, age, and ethnicity have no systematic relationship with occupation-relevant personality traits.

**Hypothesis 2:** Educational status is unrelated to occupation-relevant personality traits.
**Hypothesis 3:** Work experience and tenure on current job are unrelated to occupation-relevant personality traits.

**Hypothesis 4:** Gender, age, and ethnicity have no effect on aspects of communicative competence in a workplace setting.

**Hypothesis 5:** Higher educational status co-occurs with higher levels of communicative competence in a workplace setting.

**Hypothesis 6:** More work experience and longer tenure on current job co-occur with higher levels of communicative competence in a workplace setting.

**Hypothesis 7:** Leaders differ systematically from non-leaders regarding their occupation-relevant personality traits.
7a. Leaders will show higher levels of Emotional Stability than non-leaders.
7b. Leaders will show higher levels of Extraversion than non-leaders.
7c. Leaders will show higher levels of Openness to Experience than non-leaders.
7d. Leaders will show higher levels of Altruism than non-leaders.
7e. Leaders will show higher levels of Conscientiousness than non-leaders.
7f. Leaders will show higher levels of Professionalism than non-leaders.

**Hypothesis 8:** Leaders differ systematically from non-leaders regarding factors of communicative competence in a workplace setting.
8a. Leaders will show higher levels of Apparent Sincerity than non-leaders.
8b. Leaders will show higher levels of Interpersonal Influence than non-leaders.
8c. Leaders will show higher levels of Networking Ability than non-leaders.
8d. Leaders will show higher levels of Social Astuteness than non-leaders.

**Hypothesis 9:** There will be a systematic and interpretable pattern of relationship between occupational personality traits and aspects of communicative competence in a workplace setting.

9a. Extraversion will be correlated with all four aspects of communicative competence.
9b. Altruism will be correlated with all four aspects of communicative competence.
9c. Conscientiousness will be correlated with Interpersonal Influence, Networking Ability and Social Astuteness.

**Hypothesis 10:** Relationships between/among occupational personality traits and aspects of communicative competence will show dissimilar patterns among leaders versus non-leaders.

10a. Correlations between Extraversion and the four aspects of communicative competence will be consequently higher in leaders than non-leaders.
10b. Correlations between Altruism and the four aspects of communicative competence will be consequently higher in leaders than non-leaders.
10c. Correlations between Conscientiousness and the four aspects of communicative competence will be consequently higher in leaders than non-leaders.
10d. There will be significant correlations between Openness of Experience and the four aspects of communicative competence in the leader group that are not detected in non-leader group.
10e. There will be significant correlations between Emotional Stability and the four aspects of communicative competence in the leader group that are not detected in non-leader group.

10f. There will be significant correlations between Professionalism and the four aspects of communicative competence in the leader group that are not detected in the non-leader group.

**Hypothesis 11:** Relationships between level of leadership experience and tenure on current job, on the one hand, and occupation-relevant personality traits on the other, will be moderated by aspects of communicative competence.

11a. The relationship between Extraversion and leadership experience (also tenure as leader) will be higher among persons with higher communicative competence.

11b. The relationship between Altruism and leadership experience (also tenure as leader) will be higher among persons with higher communicative competence.

11c. The relationship between Conscientiousness and leadership experience (also tenure as leader) will be higher among persons with higher communicative competence.

These hypotheses have been formulated on the basis of expectations gained from prior research. The hypotheses above cannot cover all of the relationships that may be expected in the actual empirical findings on New Zealand working adults. Instead, they are in line with the goals and logistics of the present investigation.
Chapter 3: Method

3.1 Study design

This study utilises a cross-sectional, correlational design. Correlational research involves no attempt to experimentally manipulate variables (Bordens & Abbott, 2011). It is not possible, nor ethically admissible, to manipulate participants' personality traits to determine effects on leadership. The aim in testing hypotheses, as well as associated quantitative analyses, was to describe patterns in data structures, and verify any relationships that exist between or among specified variables.

Correlational designs are commonplace in organisational psychology when persons in organisations are studied out in the field. Further, the use of a correlational design is appropriate and consistent with the objectives of this study. The statistical techniques themselves included bivariate correlation but also inter-group comparisons and multiple regression.

A cross-sectional design does not require random assignment of participants to groups (Frankfort-Nachmias & Nachmias, 1996), which was unviable in this masterate. Building a longitudinal project with several waves of measurement was also unfeasible, and hypotheses regarding change over time were not formulated.

The appropriateness of correlational designs to the study becomes apparent when considering the growth of knowledge on leadership practices – it allows testing hypothetical relationships in a real-world setting (Bordens & Abbott, 2011). A simple correlational research can be performed in a natural, authentic organisational setting, increasing environmental relevance and "external validity". A correlational approach
often avoids the major drawbacks of 'context stripping' that met criticism in more precise, yet less ecologically valid approaches with controlled experimental designs (Guba & Lincoln, 1994). It is viewed as maximising the “realism of context” (Scandura & Williams, 2000).

The project permitted analyses over a multivariate data set although true multivariate designs were only occasionally used. Causes of human behaviour are complex and multifarious; explaining or predicting behaviour is best done with information in multivariate data systems (Meyers, Gamst & Guarino, 2013). Use of multivariate rather than bivariate approaches to examining personality and/or CC variables and leadership is widespread (de Vries, Bakker-Pieper, & Oostenveld, 2010; Blickle, Meurs, Zettler, Solga, Noethen, Kramer & Ferris, 2008; Penley & Hawkins, 1985; Madlock, 2008; Benson & Campbell, 2007; Hautala, 2005; McCormack & Mellor, 2002; Brouer, Duke, Treadway & Ferris, 2009; Ng, Ang & Chan, 2008).

The correlational approach obviously serves to detect co-occurrence rather than potential causality in a relationship (Bordens & Abbott, 2011). The outcomes of hypothesis testing in the current project will signal opportunities for future researchers to disentangle deeper causes of the relations confirmed.

3.2 Participants

Data were collected from persons in New Zealand organisations serving in leader and non-leader roles. There were two formal inclusion criteria for individuals to participate. Aims of the project required participants to be currently employed in an occupation, either in a leadership or non-leadership position. Second, participants had to be living
and working in New Zealand. 128 individuals expressed interest. 102 individuals completed the surveys in this study and provided usable data. The response rate for the present study was 79.7%.

The participant group used in this study – in strict methodological sense – does not constitute a sample. It may be viewed as a 'convenience sample'. Selection of participants occurred through intention to participate and screening by criteria, rather than through a formal definition of a population and/or probabilistic sampling from that population (Hansen, Hurwitz & Madow, 1953). There is no direct way of estimating the representativeness of such a participant group (Frankfort-Nachmias & Nachmias, 1996). The reason for not delimiting a target population was the logistic difficulty – indeed, near-impossibility – of drawing up a master list of all New Zealanders employed in leadership roles, or non-leader roles. Sampling was desirable but unviable because of time-line and budget constraints. Similar considerations prevent sampling in much I/O research both at master's level and academic research teams.

Due to lack of proper sampling, relationship of our participant group and any relevant population remains technically unclear, and generalisation is prevented (cf. more thorough discussion in Section 5.2.1). There is no assurance that every unit of a relevant population (e.g. New Zealand leaders) had some chance of being included (Frankfort-Nachmias & Nachmias, 1996).

Borden & Abbott (2011) concede that non-probabilistic samples may be acceptable for some research interests in psychology. For the purposes of explorative research, the author considers the set of participants reasonably diverse.
Demographic attributes considered useful were covered by data collection. Distributions are characterised in Table 3-01 (found in Appendix A07). The group of 102 respondents included 31 males (30.4%) and 71 females (69.6%). Ages ranged from 22 to 59, with the mean age of the participant group being 34.23 years, $SD=9.70$. The most prominent ethnic group endorsed was 'New Zealand European/Pakeha' ($n=70$, 68.6%), followed by 'New Zealand European/Pakeha and Pacific Island/Māori' ($n=12$, 11.8%), and 'Other European' ($n=11$, 10.8%). For education level, 10 respondents indicated that they held a Master’s degree or higher (9.8%). The most common level was a Bachelor's degree ($n=50$, 49.0%), the second most common was a lower tertiary qualification ($n=20$, 19.6%).

The work experience of the respondents ranged from one year to 38 years ($M=14.28$, $SD=8.80$). For leadership experience, categories ranged from no experience ($n=42$, 41.2%) to 30 years, with the mean number of years of leadership experience being 3.46 ($SD=5.07$).

Of the participants, 47 reported being currently in a position of leadership (46.1%) and 55 reported being currently in a non-leadership position (53.9%). Participants worked for a variety of organisations, including human resources and recruitment (17.6%), marketing (11.8%), education (8.8%), administration and support (8.8%), retail and sales (7.8%), accounting and finance (7.8%), trade services (5.9%), public services (3.9%), IT (3.9%), healthcare (3.9%), hospitality (2.9%), insurance (2.0%), and other (2.9%). Others reported working in specialist roles (7.8%), executive roles (2.0%), and being self-employed (2.0%).
Tenure in the current organisation varied from one week to 16 years ($M=4.04, SD=3.76$).

Data collection and analysis are authorised by a permission granted by the Massey University Human Ethics Committee (2013). A procedure via low-risk notification was followed.

3.3 Materials
An integrated data collection tool including two standardised tests was constructed. Tests used in this research were the Business Attitudes Questionnaire (BAQ), assessing respondents’ personality traits (cf. Section 2.2.1.1) and the Political Skill Inventory (PSI; cf. Section 2.2.3). The survey also contained standard demographic questions compiled by researcher.

3.3.1 Business Attitudes Questionnaire (BAQ)
Designed for use within a professional context, the BAQ is a 300-item standardised psychometric tests intended to differentiate people according to occupation-relevant personality traits (Bogaert, Trbovic, & Van Keer, 2006; Hudson, 2015). Conveniently titled for worldwide distribution, it is not an attitude survey. The constructs assessed have nothing to do with attitudes as investigated in 70+ years of social psychology; they are not attitudinal in nature, not modelled as liking/disliking toward an attitude target, and are not theoretically based on widely accepted 3-prong model of social attitude (Fishbein & Ajzen, 1975; Fazio, 1989).
The BAQ has been developed by Hudson Research and Development. It is used worldwide (a claim on Hudson, 2015, indicates 60,000+ testees). The use of BAQ is encouraged by designers for selection, assessment and development, training and development, and coaching. The BAQ can be administered on-line, or with pencil and paper. It is not a timed test. Most testees complete it in 30-45 minutes.

Based on Hudson's conceptual model of occupational personality dimensions, and repeated factor-analytic work, the BAQ has a two-tier structure of constructs measured. The levels are similar to those seen in NEO-PI-R/ NEO-PI-3, with higher-order (domain) and lower-order (facet) constructs identified. Each construct is measured by a scale inside BAQ and yields a separate score. 25 facets belong to 6 factors: Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness, and Professionalism.

The first five factors of the BAQ (Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness) are the same as domains in FFM of personality. The sixth factor (Professionalism) is defined by the test developer to increase utility in a professional context (Bogaert et al., 2006).

Table 3-02 aligns the BAQ’s top-tier personality traits with FFM. Summaries of domain-level traits ubiquitous in FFM literature (e.g. NEO) are supplied.
Table 3-02

*BAQ factors aligned to the Big Five Model as measured by the NEO-PI*

<table>
<thead>
<tr>
<th>BAQ Factor</th>
<th>Big Five Factor</th>
<th>Descriptive Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>Neuroticism</td>
<td>Susceptibility to experience, symptoms of psychological distress, vulnerability under stress</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Extraversion</td>
<td>Tendency to enjoy people, demonstrates assertiveness, enjoys excitement and stimulation</td>
</tr>
<tr>
<td>Openness</td>
<td>Openness to experience</td>
<td>Tendency to demonstrate an active imagination, intellectual curiosity, attentiveness to inner feelings</td>
</tr>
<tr>
<td>Altruism</td>
<td>Agreeableness</td>
<td>Tendency to be sympathetic to others, cooperative, a team player</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Conscientiousness</td>
<td>Tendency to be purposeful, dependable, determined, self-controlled, well-organised</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Not applicable</td>
<td>Occupational facets that do not constitute a factor and must be considered as isolated facets</td>
</tr>
</tbody>
</table>

Four facets make up each of the FFM factors; and five facets make the Professionalism factor. (Table 3-03).
Table 3-03

*BAQ factors and underlying facets*

<table>
<thead>
<tr>
<th>BAQ Factor</th>
<th>BAQ Facets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>Relaxed, Optimistic, Stress-resistance, Decisive</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Leading, Communicative, Persuasive, Motivating</td>
</tr>
<tr>
<td>Openness</td>
<td>Abstract, Innovative, Change-oriented, Open-minded</td>
</tr>
<tr>
<td>Altruism</td>
<td>People-oriented, Cooperating, Helpful, Socially Confident</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Organised, Meticulous, Rational, Persevering</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Ambitious, Critical, Result-oriented, Strategic, Autonomous</td>
</tr>
</tbody>
</table>

*Note.* Derived from information in the BAQ technical manual (Bogaert et al., 2006).

Characterisations of typical patterns on extreme positive and extreme negative end of each of the 25 BAQ facets can be found in Table 3-04 (see Appendix A08).

Examples of the items associated with each facet are presented in Table 3-05 (see Appendix A09).

The BAQ does not include administration or lie scales monitoring response distortion, or signalling how a respondent approached answering the questionnaire.

Response to each item is marked using a five-point Likert scale (with scale points completely disagree, disagree, neutral, agree, completely agree). The freedom respondents have to answer as they like carries disadvantages. Distortions may occur, and testees are more inclined to give socially desirable answers. To counteract this, an ipsative version of BAQ was designed (not used in the current project).
Psychometric properties

The reliability of an instrument assesses the extent to which variation in measurement is due to true differences in people or to measurement error (Kline, 2013). Internal consistency is one way of estimating test reliability. Tabachnick and Fidell (2001) state that estimates through internal consistency (mostly, Cronbach’s alpha) of $\alpha \geq 0.65$ reflect an acceptable tool. In Table 3-06 (see Appendix A10), Cronbach's alpha coefficients are shown for the reliability of each domain- and facet-level score in BAQ. Internal consistency is high, as coefficients range from 0.89 to 0.97.

The test developer also estimated BAQ’s reliability through split-half formula (Bogaert et al., 2006). Split-half correlations are shown in Table 3-07 (see Appendix A11). Coefficients range from 0.73 to 0.92.

Construct-related validity relates to whether the test actually measures what it purports to measure (Kline, 2013). Convergent validation is a widely used method where a score variable from a test is related to an external variable, from an already validated test measuring the same construct. The BAQ developers compared the scores (on each scale) of 170 respondents in the BAQ with their relevant scores in the NEO PI-R (Costa & McCrae, 1992; Hoekstra, Ormel & de Fruyt, 1996). Table 3-08 (Appendix A12) shows the correlations between the BAQ score variables and the corresponding NEO PI-R variables.

The BAQ features six factors with associated scale scores. A distinction is drawn between FFM factors (Emotional Stability, Extraversion, Openness, Altruism,
Conscientiousness) and the Professionalism factor, a group of facets relevant in a professional context, not fitting directly with FFM. To check whether the facet-level variables load on FFM factors as predicted by conceptual model, the test provider performed factor analyses, excluding Professionalism. Results are given in Table 3-09 (see Appendix A13), where factor 1 can be defined as Emotional Stability, factor 2 as Extraversion, factor 3 as Openness, factor 4 as Altruism and factor 5 as Conscientiousness. The analysis substantiated the model in terms of facets categorised in FFM domains.

The BAQ is Hudson’s proprietary personality instrument. As a result, no critical reviews are currently available in the published literature. Test development and validation research is reported in the BAQ technical manual obtainable from Hudson Global Resources.

3.3.2 Political Skill Inventory (PSI)

The Political Skill Inventory (PSI) is a unique psychometric test operationalising Ferris' model of "political skill" (see Section 2.1.3.5). Test development has been conducted by Ferris' research team, and the tool is the only instrument guided by Ferris' conceptual model.

The PSI is an 18-item questionnaire yielding a total score indicating an individual’s general level of “political skill”. The inventory was born from the perceived need for a multidimensional test that also assesses the four dimensions reflected in pre-existing theorising on skill (Ferris et al., 2005). The 4 sub-scales produce separate sub-scores (Table 3-10).
Table 3-10

*PSI dimensions and definitions*

<table>
<thead>
<tr>
<th>PSI Dimension</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social astuteness</td>
<td>Individuals possessing political skill are sharp observers. They can read and understand people’s emotions, needs and motivations in diverse social situations.</td>
</tr>
<tr>
<td>Interpersonal influence</td>
<td>Politically skilled individuals possess a subtle and persuasive personal style. They are capable of appropriately adapting it to each situation.</td>
</tr>
<tr>
<td>Networking ability</td>
<td>Individuals with strong political skill are exceptionally good at establishing and using relationships with people, both key organisational members and outsiders.</td>
</tr>
<tr>
<td>Apparent sincerity</td>
<td>Politically skilled individuals come across as possessing high levels of integrity, authenticity, and sincerity. They are, or appear to be, honest, open, and genuine.</td>
</tr>
</tbody>
</table>

Apart from pure research, use of PSI is suggested for development, as its score can reveal both how much “political skill” a subject has and what aspects require further development (Ferris, Davidson, & Perrewé, 2005).

The PSI can be administered on-line or using pen and paper. It has no time limit for completion. Most testees complete in 5 minutes.
The 18 items of the instrument contribute to assessing the 4 dimensions of “political skill” (examples provided in Table 3-11; Appendix A14). The PSI does not include administration or lie scales.

Respondents indicate the extent to which they agree with each item, using a seven-point Likert scale. Just as with BAQ, a procedural advantage is that respondents tend not to have aversion to answering. However, the freedom offered by Likert item format has the disadvantage of possibly encouraging socially desirable, or otherwise distorted, answers.

**Psychometric properties**

The PSI was developed and validated in North America (Ferris et al., 2005). Ferris reports the following descriptives and alpha coefficients for each scale score variable:

- Social astuteness ($M=5.77$, $\sigma=.69$, $\alpha=.71$);
- Interpersonal influence ($M=5.51$, $\sigma=.77$, $\alpha=.73$);
- Networking ability ($M=5.82$, $\sigma=.68$, $\alpha=.76$);
- Apparent sincerity ($M=5.52$, $\sigma=.95$, $\alpha=.66$).

Alpha coefficients are Cronbach's alpha estimates for reliability. While scale reliabilities are paramount, the overall test is also reliable ($\alpha=.86$, $M=3.89$, $\sigma=.38$).

Validation included construct validity work using multivariate analyses. Ferris and colleagues (2005) verified sub-construct/ scale structure via factor analysis employing oblique rotation (deemed appropriate when the a priori theory indicates dimensions may be intercorrelated). A 4-factor solution emerged that satisfied the Kaiser-Guttman criterion of retaining factors (eigenvalues >1.0). Fabrigar, Wegener, MacCallum, and Strahan (1999) also conducted analyses and produced similar factors of acceptable
eigenvalue, with 63% of the total item variance explained. The factor that explained most of the variance was Networking ability, with 39% of the variance explained. So far, the PSI is unreviewed in the Mental Measurement Yearbook series.

3.4 Procedure

Pilot testing to check viability of tools for New Zealand respondents was carried out using a small number of participants. The researcher requested feedback regarding instructions and tests. A few points to be changed were identified and tool adjusted, before the final version was distributed.

A letter detailing the outline of the study and an invitation to participate (see Appendix A15) was sent to members of Hudson Global Resources New Zealand, via electronic mail, with permission of the Executive General Manager. The cover letter and accompanying information emphasised that completion of surveys was completely voluntary; any results obtained would remain anonymous. It also included a request to individuals that the invitation be forwarded to others, e.g. colleagues.

Once a prospective testee expressed interest, a personalised letter was sent containing detailed instructions on how to proceed. It included the website links to the two surveys to be completed (Appendix A16). Data collection proceeded entirely through on-line responding and automated data recording.

3.5 Quantitative analysis

Editing of data sets and all analyses were conducted using Statistical Package for Social Sciences (SPSS) version 21.0. Proportion of missing data was extremely small due to
the technology in on-line administration. One case had missing datum for one variable (case retained). Prior to analysis, distribution of each variable was checked for assumptions of normality. BAQ and PSI scale score variables were symmetrically distributed, displayed linearity (Cohen, Cohen, West & Aiken, 2003; Leong & Austin, 1996). A range of statistical analyses was carried out to test hypotheses. Particular statistical techniques are identified in Chapter 4.
Chapter 4: Results

This chapter outlines the results of the analyses undertaken to achieve research objectives. Key objectives were to explore:

- demographically based differences in work-related personality traits and communicative competence (CC);
- patterns of relationships among personality traits and CC in employees in general;
- patterns of difference between leaders and non-leaders in terms of personality traits and CC.

Prior to addressing these, analyses were carried out to check properties of psychometric tests used in this study.

4.1 Examining the appropriateness of psychometric tools

The BAQ and PSI qualify as "imported" tests used in New Zealand. So far, little has been reported on local psychometric adaptation, such as re-norming, re-estimation of reliability, or re-validation. It was necessary to examine the appropriateness of tools in this research. While practitioners commonly assume that measurement properties of these tests are unchanged when used in New Zealand, this assumption is not automatically correct in spite of common English medium.

An approach governed by basic principles of test adaptation (Hambleton & Patsula, 1998; Hambleton, 2001) is that whenever a test is brought to a new environment (e.g. a different country, culture, or type of organisation) its properties need to be re-examined. This may involve new item analysis, reliability estimation, or validation (Hambleton,
Merenda & Spielberger, 2004). Given logistic and budgetary constraints, a master's project cannot embark on a complete adaptation, and a full adaptation of BAQ/PSI to New Zealand context will require many years of research effort by a larger team (cf. Section 5.2.2).

4.1.1 BAQ

A limited task within construct validation of a multi-scale test is checking whether factor structure over the domain/facet score correlation matrix reproduces the structure originally claimed by developers. A Principal Axis Factor Analysis of BAQ item variables was conducted on data ($N=102$). Table 4-01 (Appendix A17) lists the factors, with eigenvalues associated with each linear component before extraction. Twenty-five linear components were identified in total, consistent with original BAQ design. Six factors with eigenvalues greater than 1.0 were found. Initial eigenvalues show that Factor 1 explains 33.83% of total variance, Factor 2 10.99% of the variance, Factor 3 8.70% of the variance, Factor 4 7.42% of the variance, Factor 5 6.59% of the variance, and Factor 6 4.52% of the variance.

This 6-factor solution was then examined using a Varimax (orthogonal) rotation. The six-factor solution, explaining 72.05% of the variance, was preferred given the levelling off of the eigenvalues on the scree plot after these factors. Rotated factor outcome is shown in Table 4-02 (Appendix A18). Item loadings less than 0.30 were excluded.

This factor structure supplies modest but positive evidence that on a New Zealand group, BAQ is able to measure the personality traits implied by the theoretical foundation of the BAQ. The factor structure is highly similar to the findings from the
provider. With sub-sets of specific items loading on factors, the structure also reflects the well-known factorial pattern in FFM literature (Costa & McCrae, 1992, Goldberg, 1990, Costa, Herbst, & McCrae, 2002; Hough & Schneider, 1996; McCrae & Costa, 1997; McCrae & John, 1992). However, this factor analysis can at best considered preliminary (cf. Section 5.2.1). Recommendations for minimum N in factor analysis are dependent on the ratio of the number of original variables to the number of factors, and commonality among factors extracted (Thompson, 2004). A low estimate is $N$ to be 4-5 times the number of variables in the matrix factored. $N=102$ cannot meet this minimum requirement (Mundfrom, Shaw, & Tian, 2005), even if only facet and domain-level score variables, rather than item variables, are counted.

### 4.1.2 PSI

Again as a partial approach to construct validation, the factor structure of PSI was examined based on current New Zealand data. A Principal Axis Factor Analysis of item-item space of the PSI was conducted. The outcome is summarised in Table 4-03 (Appendix A19) with eigenvalues associated with each linear component before extraction. The analysis identified 18 linear components, consistent with the number of PSI variables. Three factors with eigenvalues greater than 1 were located. Initial eigenvalues show that Factor 1 explains 41.19% of total variance, Factor 2 13.41% of the variance, and Factor 3 8.49% of the variance.

The 3-factor solution was further examined using a Varimax (orthogonal) rotation. The factor solution is shown in Table 4-04 (Appendix A20). Item loadings less than 0.30 are ignored.
This structure does not accurately match findings by Ferris and colleagues (2005), who identified a 4-factor model of “political skill”. The new factor structure provides some quantitative evidence for a 3-factor version of PSI when used with professional adults in New Zealand. Again, not all circumstances met usual requirements for performing this factor analysis (cf. Section 5.2.3), and the finding cannot be considered a disconfirmation of a 4-factor conceptual model.

4.2 Preliminary analyses

Descriptive statistics for the BAQ and PSI scores were generated and mean levels contrasted. A demographical profile of participants, and relationships among the demographic variables, were also checked. These quantitative analyses are meant as a foundation of later hypothesis testing.

4.2.1 BAQ

Table 4-05 provides the descriptive statistics for BAQ domain-level variables (scale scores). For the purposes of this thesis, only the FFM trait means are compared. FFM means ranged from 173.73 to 187.01, with SD between 19.73 and 27.67. The highest average score of the participant group on the FFM traits was for Altruism, then Conscientiousness, Extraversion, Openness; the lowest was Emotional Stability. Extraversion showed greatest variance. The scores are raw scores without the chance to produce norm-based derived scores.
Table 4-05

*Descriptive statistics for BAQ domain variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>48</td>
<td>102</td>
<td>122</td>
<td>234</td>
<td>173.73</td>
<td>22.27</td>
</tr>
<tr>
<td>Extraversion</td>
<td>48</td>
<td>102</td>
<td>112</td>
<td>238</td>
<td>176.85</td>
<td>27.67</td>
</tr>
<tr>
<td>Openness</td>
<td>48</td>
<td>102</td>
<td>105</td>
<td>237</td>
<td>175.32</td>
<td>25.45</td>
</tr>
<tr>
<td>Altruism</td>
<td>48</td>
<td>102</td>
<td>110</td>
<td>233</td>
<td>187.01</td>
<td>21.54</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>48</td>
<td>102</td>
<td>134</td>
<td>234</td>
<td>182.53</td>
<td>19.73</td>
</tr>
<tr>
<td>Professionalism</td>
<td>60</td>
<td>102</td>
<td>161</td>
<td>291</td>
<td>232.75</td>
<td>23.91</td>
</tr>
</tbody>
</table>

4.2.2 PSI

Table 4-06 presents descriptive statistics for scale scores from PSI. Numbers of items assigned to scales differ; a simple percentage score was calculated to allow comparability. Mean scores ranged from 71.13 to 89.87, with $SD$ between 10.20 and 14.79. The highest average score in the group was on Apparent Sincerity, followed by Interpersonal Influence, Social Astuteness, then Networking Ability. Networking Ability had greatest variance out of the four scales.
Table 4-06

*Descriptive statistics for PSI domain variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>N</th>
<th>Minimum (%)</th>
<th>Maximum (%)</th>
<th>Mean (%)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ability</td>
<td>6</td>
<td>102</td>
<td>33.33</td>
<td>100</td>
<td>71.13</td>
<td>14.79</td>
</tr>
<tr>
<td>Interpersonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>influence</td>
<td>4</td>
<td>102</td>
<td>32.14</td>
<td>100</td>
<td>80.53</td>
<td>13.50</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>astuteness</td>
<td>5</td>
<td>102</td>
<td>48.57</td>
<td>100</td>
<td>75.27</td>
<td>11.30</td>
</tr>
<tr>
<td>Apparent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sincerity</td>
<td>3</td>
<td>102</td>
<td>57.14</td>
<td>100</td>
<td>89.87</td>
<td>10.20</td>
</tr>
</tbody>
</table>

4.2.3 Demographics

Bivariate relationships among the "demographic" variables (in broad sense, including employment) were examined by correlational analysis. Table 4-07 summarises results. Coefficients reported are Pearson product-moment correlation coefficients. Descriptive statistics of each variable were presented in Chapter 3. Where variables shared a significant relationship, a two-tailed, independent-samples $t$ test was conducted as a follow-up (Table 4-08). Cohen’s $d$ statistic was also calculated for significant main effect, to provide an estimation of effect size on the differences.

With levels of significance, the widely accepted ‘asterisk’ symbols will be used after $r$ values (Table 4-07); the same symbolism used for $t$ values from $t$ tests (Tables 4-08 to
4-10). Statistical indicators marked _*_ were significant at $p<.05$; those marked _**_ were significant at $p<.01$. 
Table 4-07

*Relationships between respondent demographic variables (Pearson’s r)*

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Age</th>
<th>Leadership status</th>
<th>Years of leader exp</th>
<th>Education level</th>
<th>Years of work exp</th>
<th>Years at current org</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership status</td>
<td>.20**</td>
<td>-.38**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of leader exp</td>
<td>-.18</td>
<td>.59**</td>
<td>-.57**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td>.26**</td>
<td>-.13</td>
<td>-.14</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of work exp</td>
<td>-.11</td>
<td>.92**</td>
<td>-.37**</td>
<td>.62**</td>
<td>-.23*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years at current org</td>
<td>-.05</td>
<td>.41**</td>
<td>-.21*</td>
<td>.18</td>
<td>-.13</td>
<td>.46**</td>
<td></td>
</tr>
<tr>
<td>Area of occupation</td>
<td>-.09</td>
<td>-.03</td>
<td>-.23*</td>
<td>.14</td>
<td>-.10</td>
<td>-.01</td>
<td>-.02</td>
</tr>
</tbody>
</table>
Gender indicated significant relationships with education level ($r=.26, p<.01$) and leadership status ($r=.20, p<.05$). No significant relationships were found between gender and age, years of leadership, years of work experience, years at current organisation, and area of occupation.

Table 4-08

*Male/female differences in educational level and leadership status (t tests)*

<table>
<thead>
<tr>
<th></th>
<th>Males ($n=31$)</th>
<th>Females ($n=71$)</th>
<th>t test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Educational level</td>
<td>3.58</td>
<td>1.50</td>
<td>4.35</td>
<td>1.25</td>
</tr>
<tr>
<td>Leadership status</td>
<td>1.39</td>
<td>0.50</td>
<td>1.61</td>
<td>.49</td>
</tr>
</tbody>
</table>

When followed up by inter-group comparison ($t$ test), significant difference was confirmed between males and females on reported educational levels (male, $M=3.58$; female, $M=4.35$); $t(100)=-2.69$, $p<.01$. Cohen’s $d$ ($d=-.56$) estimated a reasonably medium effect size. This suggests that females are more likely to have a higher educational level than males.

There was a significant difference in the leadership status between males ($M=1.39$) and females ($M=1.61$); $t(100)=-2.06$, $p<.05$. Cohen’s $d$ ($d=-.44$) estimated medium effect size. The analysis suggests that females are more likely to be in a leadership position than males.
Predictable relationships were confirmed between age and years of work experience ($r=.92, p<.01$), years of leadership ($r=.59, p<.01$), years at current organisation ($r=.41, p<.01$), and leadership status ($r=.38, p<.01$). No significant relationships were discovered between age and either education level or area of occupation.

Leadership status had significant relationships with years of leadership ($r=-.57, p<.01$), years of work experience ($r=-.37, p<.01$), area of occupation ($r=.23, p<.05$), and years at current organisation ($r=.21, p<.05$). No relationships were found between leadership status and either ethnicity or education level.

Table 4-09

*Leader versus non leader differences in area of occupation and years in organisation (t tests)*

<table>
<thead>
<tr>
<th></th>
<th>Leaders ($n=47$)</th>
<th>Non-leaders ($n=55$)</th>
<th>t test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Area of occupation</td>
<td>6.72</td>
<td>4.50</td>
<td>4.84</td>
<td>3.63</td>
</tr>
<tr>
<td>Years at current organisation</td>
<td>4.89</td>
<td>4.14</td>
<td>3.31</td>
<td>3.27</td>
</tr>
</tbody>
</table>

When following up analyses regarding leader versus non-leader differences, *t* values from two-tailed *t* tests proved significant in the occupational area responses for leaders
A significant difference was found in the self-reported tenure responses of leaders ($M=4.89, SD=4.14$) versus non-leaders ($M=3.31, SD=3.27$); $t(100)=2.15, p<.05$. Cohen’s $d (d=.42)$ estimated a medium effect size. This result suggests that leaders are more likely to have a greater tenure in their current organisation than non-leaders.

A significant relationship was found between years of leadership experience and years of work experience ($r=.62, p<.01$). No significant relationships were revealed between years of leadership experience and ethnicity, education level, years at current organisation and area of occupation.

Independent-samples $t$ tests were not conducted to compare years of leadership experience between years of work experience; these relationships were as expected.

A significant relationship was discovered between ethnicity and area of occupation ($r=-.21, p<.05$). No significant relationships were found between ethnicity and education level, years of work experience, and years at current organisation.

An independent-samples $t$ test was conducted to compare areas of occupation between ethnicity-groups. No statistically significant differences existed between these subgroups, suggesting that the differences in means was likely due to chance and not likely due to ethnic grouping.
A significant relationship was found between education level and years of work experience ($r = -0.23, p < 0.05$). No significant relationships were discovered between education level and either years at current organisation, or area of occupation.

Table 4-10

*Differences in years of work experience according to education level (t test)*

<table>
<thead>
<tr>
<th></th>
<th>Lower tertiary qualification or lower (n=38)</th>
<th>Bachelor’s degree or higher (n=64)</th>
<th>t test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of work experience</td>
<td>17.28, 8.34</td>
<td>12.52, 8.65</td>
<td>-2.72**</td>
<td>.56</td>
</tr>
</tbody>
</table>

As a follow-up, inter-group comparisons were checked by t test, after dichotomising education level. There was a significant difference in the years of work experience for respondents with a lower tertiary qualification, secondary only, or no secondary education ($M=17.28$) and respondents with a Bachelor’s degree or higher ($M=12.52$). Cohen’s $d$ ($d=.56$) estimated a reasonably large effect size. Education level did have an effect on years of work experience; specifically, the predictable result suggests that individuals with a Bachelor’s degree or higher tend to have fewer years of work experience.
Years of work experience shared a significant relationship with years at current organisation ($r=.46, p<.01$). There was no relationship between years of work experience and area of occupation.

Years at current organisation and years of work experience are also related; this relationship is self-evident. No significant relationship was discovered between years at current organisation and area of occupation.

4.3 Hypothesis Testing
This section details findings from quantitative analysis to test the study’s hypotheses (listing in Chapter 2). H-1, H-2, …, designate hypotheses. First, analyses explored the demographic antecedents of work-related personality factors and CC in an occupational setting. Secondly, analyses were conducted to determine the differences between leaders and non-leaders in terms of work-related personality factors and CC. Thirdly, the relationships among work-related personality factors and CC were examined across all respondents. The pattern of relationships between personality and CC was then revisited to locate differences between leaders and non-leaders. The possible moderating effect of CC on the relationship between personality traits and leadership experience was checked.

Serialised statistical analyses targeted personality (e.g. in terms of a series of demographics). When interpreting the findings, the level for statistical significance was adjusted according to standard Bonferroni correction (in order to control for the likelihood of obtaining statistically significant results by chance, as multiple hypothesis tests were run). Under conditions of non-independent hypothesis testing, a Bonferroni
significance level was computed with adjusted alpha calculated by dividing the desired alpha (.05) by the number of significance tests in a series of tests (Bonferroni, 1935, 1936; Miller, 1991; Abdi, 2007; Dunn, 1961; Perneger, 1998; Shaffer, 1995; Strassberger & Bretz, 2008). Thus, rejection of the null hypothesis was reserved to $p<.008$ when testing personality traits, and a $p$-value of $<.0125$ when testing PSI components.

4.3.1 Personality

When looking for possible demographic precursors, six occupation-relevant personality traits are assessed as dependent variables: Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness, and Professionalism. Preliminary assumptions regarding data structure and distributions were checked. The data set was deemed suitable for analysis.

**Hypothesis 1: Gender, age, and ethnicity have no systematic relationship with occupation-relevant personality traits.**

*Gender*

First, a one-way multivariate analysis of variance (MANOVA) was conducted to explore the possible “effect” of gender on occupation-relevant personality traits. It was established that the effect of gender on the combined dependent variables was statistically significant, $F(6, 95)=2.93, p<.01$; Wilks’ $\lambda=.84$; partial $\eta^2=.16$.

Gender differences in the BAQ variables were assessed via two-way analysis of variance (ANOVA). Males scored higher than females on Emotional Stability ($M=180.13, SD=20.21$), Extraversion ($M=182.71, SD=28.46$), Openness ($M=185.45$, ...
SD = 25.93) and Professionalism (M = 237.65, SD = 25.82). Female means were 170.93, 174.30, 170.90, and 230.61, respectively. Males scored lower than females on Altruism (M = 185.45, SD = 25.67) and Conscientiousness (M = 179.32, SD = 19.58). Female means were M = 187.69, and M = 183.93. However, only the effect on Openness produces a significant F (Table 4-11) (F(1, 100) = 7.51, p < .01; partial η² = .07).

Table 4-11

Analysis of variance for personality; gender as independent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Stability</td>
<td>1826.18</td>
<td>1</td>
<td>1826.18</td>
<td>3.78</td>
</tr>
<tr>
<td>Extraversion</td>
<td>1527.62</td>
<td>1</td>
<td>1527.62</td>
<td>2.02</td>
</tr>
<tr>
<td>Openness</td>
<td>4568.34</td>
<td>1</td>
<td>4568.34</td>
<td>7.51**</td>
</tr>
<tr>
<td>Altruism</td>
<td>108.13</td>
<td>1</td>
<td>108.13</td>
<td>.23</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>457.99</td>
<td>1</td>
<td>457.99</td>
<td>1.18</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1069.32</td>
<td>1</td>
<td>1069.32</td>
<td>1.89</td>
</tr>
</tbody>
</table>

This result suggests that males are more likely to have higher levels of Openness than females; this provides some evidence to suggest H-1 is incorrect, as gender has an “effect” on some FFM traits.

Age

Pearson product-moment correlation coefficients were calculated to assess the relationship between age and occupation-related personality traits. When testing Hypotheses H-3 to H-11, the terms 'correlation' or 'correlation coefficient' will be used to denote a Pearson correlation coefficient (r).
To denote levels of significance, the common 'asterisk' symbols will be used throughout Tables 4-12 to 4-28, as introduced before.

Table 4-12

*Relationship between age and BAQ variables*

<table>
<thead>
<tr>
<th></th>
<th>Emotional Stability</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Altruism</th>
<th>Conscientiousness</th>
<th>Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.11</td>
<td>.21*</td>
<td>.15</td>
<td>-.00</td>
<td>-.08</td>
<td>-.11</td>
</tr>
</tbody>
</table>

There was a small, positive, statistically significant correlation between Age and Extraversion ($r=.21, p<.05$), with age explaining 4.41% of the variance in this particular FFM trait. Some evidence is supplied to suggest H-1 is incorrect, as age is associated with some work-related personality traits.

**Ethnicity**

A one-way multivariate analysis of variance (MANOVA) was conducted to explore the possible “effect” of ethnicity on occupation-relevant personality traits. The nominal variable Ethnicity was the independent variable. The MANOVA established that the differences between ethnicities on the combined dependent variables were not statistically significant, $F(24, 322)=.73, p=.82$; Wilks’ $\lambda=.83$; partial $\eta^2=15.32$.

This suggests that ethnicity does not have an impact on FFM traits. It serves as modest evidence to suggest H-1 is true, with reported ethnic belongingness showing no “effect” on work-related personality traits.
Hypothesis 2: Educational status is unrelated to occupation-relevant personality traits.

A MANOVA was conducted to determine whether and how educational status relates to occupational personality traits. The MANOVA established that the differences between educational status on the combined dependent variables were not statistically significant, $F(30, 366)=.81$, $p=.75$; Wilks’ $\lambda=.77$; partial $\eta^2=.50$. Educational status does not seem to relate to FFM traits, providing evidence to suggest H-2 is true.

Hypothesis 3: Work experience and tenure on current job are unrelated to occupation-relevant personality traits.

Correlation coefficients were calculated to detect relationships between work experience and tenure, on one hand, and occupational personality traits.

Table 4-13

<table>
<thead>
<tr>
<th></th>
<th>Emotional Stability</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Altruism</th>
<th>Conscientiousness</th>
<th>Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of work experience</td>
<td>.14</td>
<td>.26**</td>
<td>.17</td>
<td>.03</td>
<td>-.03</td>
<td>-.03</td>
</tr>
<tr>
<td>Tenure on current job</td>
<td>.16</td>
<td>.05</td>
<td>-.00</td>
<td>.08</td>
<td>-.02</td>
<td>-.09</td>
</tr>
</tbody>
</table>
There was a positive statistically significant correlation between years of work experience and Extraversion ($r = .26, p < .01$), with work experience explaining 6.76% of the variance in the FFM trait. This provides some evidence to suggest H-3 is incorrect, as years of work experience is associated with at least one work-related trait. The direction of this link will be discussed later (Chapter 5).

No significant associations were ascertained between tenure on current job and work-related personality traits, suggesting that H-3 is true.

4.3.2 Communicative competence

Where a multivariate analysis of variance is conducted to test hypotheses in section 4.3.2, CC is confined to "political skill", with 4 components assessed as scale score variables ex PSI. These variables were managed as dependent variables: Networking Ability, Interpersonal Influence, Social Astuteness, and Apparent Sincerity. Preliminary assumptions regarding data structure and distributions were checked; the data set was deemed suitable for analysis.

Hypothesis 4: Gender, age, and ethnicity have no effect on aspects of CC in a workplace setting.

Gender

A one-way MANOVA was conducted to determine the effect of gender on CC. The MANOVA established that the impact of gender on the combined dependent variables was not statistically significant, $F(4, 97)=1.40, p=.24$; Wilks’ $\lambda=.95$; partial $\eta^2=.05$. This result suggests that gender has no effect on PSI components. Evidence has been produced to suggest H-4 is true.
Age

Correlational analysis was used to assess the relationship between age and facets of CC.

Table 4-14

<table>
<thead>
<tr>
<th>Networking Ability</th>
<th>Interpersonal Influence</th>
<th>Social Astuteness</th>
<th>Apparent Sincerity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.09</td>
<td>.03</td>
<td>-.07</td>
</tr>
</tbody>
</table>

No significant associations were found, suggesting that H-4 is true, as age is unrelated to CC.

Ethnicity

A one-way MANOVA was conducted to determine the effect of ethnicity on CC components. The MANOVA established that the effect of any difference between ethnicities on the combined dependent variables was not statistically significant, $F(16, 288)=.59, p=.89$; Wilks’ $\lambda=.91$; partial $\eta^2=.02$. This result suggests that ethnicity has no effect on CC. Thereby, evidence is presented to suggest H-4 is true.

Hypothesis 5: Higher educational status co-occurs with higher levels of CC in a workplace setting

A MANOVA was conducted to determine the effect of educational status on facets of CC. The MANOVA established that the effect of any differences between educational status on the combined dependent variables was not statistically significant, $F(20,
309) = 1.07, p = .38; Wilks’ λ = .80; partial η² = .05. This result suggests the counter-intuitive situation that educational status has no impact on CC components. This supplies evidence to suggest H-5 is incorrect.

**Hypothesis 6: More work experience and longer tenure on current job co-occur with higher levels of CC in a workplace setting.**

Correlation coefficients were obtained to assess the relationships between work experience and tenure on current job, respectively, and facets of CC.

Table 4-15

*Relationships between work experience and job tenure, and "political skill" variables*

<table>
<thead>
<tr>
<th></th>
<th>Networking Ability</th>
<th>Interpersonal Influence</th>
<th>Social Astuteness</th>
<th>Apparent Sincerity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of work</td>
<td>.10</td>
<td>- .01</td>
<td>-.02</td>
<td>.06</td>
</tr>
<tr>
<td>experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure on current job</td>
<td>.09</td>
<td>.03</td>
<td>-.07</td>
<td>-.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No significant associations were identified, suggesting that H-6 is incorrect, as neither the number of years of work experience, nor tenure on current job, are related to CC components.

**4.3.3 Differences between leaders and non-leaders among personality and CC factors**
Hypothesis 7: Leaders differ systematically from non-leaders regarding their occupation-relevant personality traits.

Two-tailed, independent-samples $t$ tests were run to determine if there were differences in the occupation-relevant personality traits between leaders and non-leaders. Criterion variables are the FFM traits Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness, as well as Professionalism, ex BAQ. Cohen’s $d$ was calculated for significant main effects to provide an estimation of effect size on the differences (Table 4-16). To control for the likelihood of obtaining statistically significant results by chance in serialised tests, the level for statistical significance was adjusted by Bonferroni correction (see explanation and references above). Rejection of the null hypothesis was reserved to $p<.008$.

Table 4-16

Occupation-relevant personality traits: Differences between leaders and non-leaders ($t$ tests)

<table>
<thead>
<tr>
<th></th>
<th>Leaders ($n=47$)</th>
<th>Non-leaders ($n=55$)</th>
<th>$t$ value</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>179.38</td>
<td>22.13</td>
<td>168.89</td>
<td>21.42</td>
</tr>
<tr>
<td>Extraversion</td>
<td>191.02</td>
<td>22.42</td>
<td>164.75</td>
<td>26.08</td>
</tr>
<tr>
<td>Openness</td>
<td>180.53</td>
<td>26.99</td>
<td>170.87</td>
<td>23.39</td>
</tr>
<tr>
<td>Altruism</td>
<td>190.45</td>
<td>21.58</td>
<td>184.07</td>
<td>21.25</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>182.77</td>
<td>22.05</td>
<td>182.33</td>
<td>17.71</td>
</tr>
<tr>
<td>Professionalism</td>
<td>238.19</td>
<td>24.84</td>
<td>228.09</td>
<td>22.26</td>
</tr>
</tbody>
</table>
7a. Leaders will show higher levels of Emotional Stability than non-leaders.

There was a significant difference in Emotional Stability between the sub-groups of leaders ($M=179.38$, $SD=22.13$) and non-leaders ($M=168.89$, $SD=21.42$); $t(100)=2.43$, $p<.05$. Cohen’s $d$ ($d=.48$) estimated medium effect size. This result suggests that leadership status did relate to Emotional Stability; specifically, leaders are more likely to have higher levels of Emotional Stability than non-leaders. Evidence is supplied that H-7a is true.

7b. Leaders will show higher levels of Extraversion than non-leaders.

There was a significant difference in Extraversion between the sub-groups of leaders ($M=191.02$, $SD=22.42$) and non-leaders ($M=164.75$, $SD=26.08$); $t(100)=5.41$, $p<.01$. Cohen’s $d$ ($d=1.08$) estimated a reasonably large effect size. This result indicates that leadership status did relate to Extraversion; leaders are more likely to have higher levels of Extraversion than non-leaders. This suggests that H-7b is true.

7c. Leaders will show higher levels of Openness than non-leaders.

No significant difference between the sub-groups of leaders and non-leaders was discovered, indicating H-7c is incorrect.

7d. Leaders will show higher levels of Altruism than non-leaders.

No significant difference between leaders and non-leaders was detected. This suggests that H-7d is incorrect.

7e. Leaders will show higher levels of Conscientiousness than non-leaders.
No significant difference between leaders and non-leaders was noted, suggesting H-7e is incorrect.

7f. Leaders will show higher levels of Professionalism than non-leaders.

There was a significant difference in Professionalism between leaders ($M=238.19$, $SD=24.84$) and non-leaders ($M=228.09$, $SD=22.26$); $t(100)=2.17$, $p<.05$. Cohen’s $d$ ($d=.43$) estimated a medium effect size. This result suggests that leadership status relates to Professionalism. Specifically, it suggests that leaders are more likely to have higher levels of Professionalism than non-leaders, supplying proof for H-7f being correct.

Hypothesis 8: Leaders differ systematically from non-leaders regarding factors of CC in a workplace setting.

Independent-samples $t$ tests were run to determine if there were differences in the "political skill" factors Apparent Sincerity, Interpersonal Influence, Networking Ability and Social Astuteness, between leaders and non-leaders. Cohen’s $d$ statistic was calculated for significant main effects, to give estimates of effect size on differences (Table 4-17). With some likelihood of obtaining statistically significant results by chance in serialised tests, significance criterion was adjusted according to Bonferroni correction. Rejection of null hypothesis was reserved to $p<.0125$. 
Table 4-17

"Political skill" components: Differences between leaders and non-leaders (t tests)

<table>
<thead>
<tr>
<th></th>
<th>Leaders (n=47)</th>
<th>Non-leaders (n=55)</th>
<th>t test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Apparent Sincerity</td>
<td>18.64</td>
<td>2.29</td>
<td>19.07</td>
<td>2.01</td>
</tr>
<tr>
<td>Interpersonal Influence</td>
<td>23.11</td>
<td>4.01</td>
<td>22.07</td>
<td>3.54</td>
</tr>
<tr>
<td>Networking Ability</td>
<td>32.19</td>
<td>5.72</td>
<td>27.89</td>
<td>5.97</td>
</tr>
<tr>
<td>Social Astuteness</td>
<td>26.26</td>
<td>4.44</td>
<td>26.42</td>
<td>3.53</td>
</tr>
</tbody>
</table>

8a. Leaders will show higher levels of Apparent Sincerity than non-leaders.
No significant difference in Apparent Sincerity between leaders and non-leaders was discovered. This suggests H-8a is incorrect.

8b. Leaders will show higher levels of Interpersonal Influence than non-leaders.
No significant difference in Interpersonal Influence between leaders and non-leaders was detected, suggesting H-8b is incorrect.

8c. Leaders will show higher levels of Networking Ability than non-leaders.
There was a significant difference in Networking Ability between leaders (M=32.19, SD=5.72) and non-leaders (M=27.89, SD=5.97); t(100)=3.70, p<.01. Cohen’s d (d=.74)
estimated a reasonably large effect size. This result suggests that leadership status did relate to Networking Ability; that leaders are more likely to have higher levels of Networking Ability than non-leaders, or they may have become leaders because they have Networking Ability. The finding signals that H-8c is true.

8d. Leaders will show higher levels of Social Astuteness than non-leaders.

No significant difference in Social Astuteness was found between leaders and non-leaders, suggesting H-8d is incorrect.

4.3.4 Relationships between/among personality and CC factors over all respondents

The following analyses relate to patterns of relationships that connect factors of occupational personality traits with "political skill" components. The analyses temporarily disregard leadership (N=102).

As a preliminary step, correlation matrices "internal" to the two types of constructs were generated. Correlation coefficients were computed to assess the relationships among the six work-relevant personality traits: Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness, and Professionalism. A summary of results is shown in Table 4-18 (Appendix A21).

Correlation was further used to assess the relationships among the four components of CC: Apparent Sincerity, Interpersonal Influence, Networking Ability, and Social Astuteness (results in Table 4-19; Appendix A22).
Hypothesis 9: There will be a systematic and interpretable pattern of relationship between occupational personality traits and aspects of CC in a workplace setting. Correlational analysis served to assess the relationships between the FFM traits, on one hand, and the four dimensions of "political skill", on the other.

9a. Extraversion will be correlated with all four aspects of CC

Statistically significant correlations were produced between Extraversion and all four aspects of "political skill", although the magnitude of coefficients varies widely (Table 4-20). Significant relationships were discovered between Extraversion and Apparent Sincerity ($r=.27, p<.01$), Interpersonal Influence ($r=.62, p<.01$), Networking Ability ($r=.65, p<.01$), and Social Astuteness ($r=.51, p<.01$), respectively. This evidence suggests H-9a is true, as Extraversion is associated with all PSI components.

Table 4-20

*Relationships between extraversion and altruism and the communicative competence variables*

<table>
<thead>
<tr>
<th></th>
<th>Apparent Sincerity</th>
<th>Interpersonal Influence</th>
<th>Networking Ability</th>
<th>Social Astuteness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.27**</td>
<td>.62**</td>
<td>.65**</td>
<td>.51**</td>
</tr>
<tr>
<td>Altruism</td>
<td>.43**</td>
<td>.63**</td>
<td>.59**</td>
<td>.36**</td>
</tr>
</tbody>
</table>

9b. Altruism will be correlated with all four aspects of CC

Significant correlations were found between Altruism and the four dimensions of CC. Significant relationships were discovered between Altruism and Apparent Sincerity ($r=.43, p<.01$), Interpersonal Influence ($r=.63, p<.01$), Networking Ability ($r=.59,$
and Social Astuteness (r=.36, p<.01), respectively. This brings evidence to suggest H-9b is true. Altruism is associated with all PSI components.

**9c. Conscientiousness will be correlated with Interpersonal Influence, Networking Ability and Social Astuteness**

A correlation coefficient was calculated to assess the relationships between the FFM trait Conscientiousness, and three elements of "political skill": Interpersonal Influence, Networking Ability, and Social Astuteness.

Table 4-21

*Relationships between conscientiousness and interpersonal influence, networking ability, and social astuteness variables*

<table>
<thead>
<tr>
<th></th>
<th>Interpersonal Influence</th>
<th>Networking Ability</th>
<th>Social Astuteness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conscientiousness</td>
<td>.20*</td>
<td>.20*</td>
<td>.34**</td>
</tr>
</tbody>
</table>

Significant correlations were obtained between Conscientiousness and three elements of CC. Significant relationships were discovered between Conscientiousness and Social Astuteness (r=.34, p<.01), Interpersonal Influence (r=.20, p<.05) and Networking Ability (r=.20, p<.05), respectively. This provides evidence to suggest H-9c is true, as Conscientiousness is associated with these three facets of "political skill".

**4.3.5 Does the pattern of relationships between personality and CC differ when leaders are compared to non-leaders?**
Table 4-22 (Appendix A23) offers descriptive statistics for domain-level FFM variables ex BAQ, over the respondents now split into leader and non-leader groups.

Table 4-23 (Appendix A24) provides the descriptive statistics for the domain-level variables of "political skill" ex PSI, for leader and non-leader groups separately.

Tables 4-22/4-23 include mean and standard deviation for each variable.

**Hypothesis 10: Relationships between/among occupational personality traits and aspects of CC will show dissimilar patterns among leaders versus non-leaders.**

Correlational analysis was used to assess relationships between the six work-related personality traits, on one hand, and the four "political skill" components, on the other. The analysis in Table 4-24 reflects leader sub-group only.

Table 4-24

*Relationships between the dimensions of work-related personality and the dimensions of communicative competence for leaders*

<table>
<thead>
<tr>
<th></th>
<th>Apparent Sincerity</th>
<th>Interpersonal Influence</th>
<th>Networking Ability</th>
<th>Social Astuteness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.50**</td>
<td>.60**</td>
<td>.67**</td>
<td>.74**</td>
</tr>
<tr>
<td>Altruism</td>
<td>.60**</td>
<td>.76**</td>
<td>.73**</td>
<td>.56**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.31*</td>
<td>.24</td>
<td>.27</td>
<td>.38**</td>
</tr>
<tr>
<td>Openness</td>
<td>.40**</td>
<td>.53**</td>
<td>.34*</td>
<td>.42**</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.27</td>
<td>.42**</td>
<td>.41**</td>
<td>.50**</td>
</tr>
</tbody>
</table>
Again, correlations were computed to assess the relationships between the six work-related personality traits, and the four dimensions of "political skill", for the non-leader sub-group. Findings in Table 4-25 only include the non-leader sub-group.

Table 4-25

*Relationships between the dimensions of work-related personality and the dimensions of communicative competence for non-leaders*

<table>
<thead>
<tr>
<th></th>
<th>Apparent Sincerity</th>
<th>Interpersonal Influence</th>
<th>Networking Ability</th>
<th>Social Astuteness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.26</td>
<td>.69**</td>
<td>.52**</td>
<td>.48**</td>
</tr>
<tr>
<td>Altruism</td>
<td>.32*</td>
<td>.49**</td>
<td>.46**</td>
<td>.16</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.28*</td>
<td>.15</td>
<td>.15</td>
<td>.27*</td>
</tr>
<tr>
<td>Openness</td>
<td>.10</td>
<td>.16</td>
<td>-.01</td>
<td>.33*</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>.30*</td>
<td>.31*</td>
<td>.24</td>
<td>.30*</td>
</tr>
<tr>
<td>Professionalism</td>
<td>.40**</td>
<td>.34*</td>
<td>.18</td>
<td>.53**</td>
</tr>
</tbody>
</table>

10a. Correlations between Extraversion and the four aspects of CC will be consequently higher in leaders than non-leaders.

Statistically significant correlations were discovered between Extraversion and all four CC dimensions, viz. Apparent Sincerity ($r=.50$, $p<.01$), Interpersonal Influence ($r=.60$, $p<.01$), Networking Ability ($r=.52$, $p<.01$), and Social Astuteness ($r=.48$, $p<.01$).
Significant correlations were discovered between Extraversion and Interpersonal Influence \( (r=.69, p<.01) \), Networking Ability \( (r=.52, p<.01) \), and Social Astuteness \( (r=.48, p<.01) \), respectively, for non-leaders.

Correlations between Extraversion and Apparent Sincerity, Networking Ability, and Social Astuteness were higher for leaders than non-leaders. The correlation between Extraversion and Interpersonal Influence was higher for non-leaders than leaders. This only supplies partial evidence to corroborate H-10a.

10b. Correlations between Altruism and the four aspects of CC will be consequently higher in leaders than non-leaders.

Statistically significant correlations were discovered between Altruism, and all four dimensions measured by the PSI, viz. Apparent Sincerity \( (r=.60, p<.01) \), Interpersonal Influence \( (r=.76, p<.01) \), Networking Ability \( (r=.73, p<.01) \), and Social Astuteness \( (r=.56, p<.01) \), respectively, for leaders.

Significant correlations were noted between Altruism, on one hand, and Apparent Sincerity \( (r=.32, p<.05) \), Interpersonal Influence \( (r=.49, p<.01) \), and Networking Ability \( (r=.46, p<.01) \), respectively, for non-leaders.
Correlations between Altruism and Apparent Sincerity, Interpersonal Influence, Networking Ability and Social Astuteness were higher for leaders than non-leaders. This evidence suggests H-10b is correct.

10c. Correlations between Conscientiousness and the four aspects of CC will be consequently higher in leaders than non-leaders.

Statistically significant correlations were found between Conscientiousness, on the one hand, and Apparent Sincerity ($r=.31$, $p<.05$) and Social Astuteness ($r=.38$, $p<.01$), respectively, for leaders.

Significant correlations were discovered between Conscientiousness, on the one hand, and Apparent Sincerity ($r=.28$, $p<.05$) and Social Astuteness ($r=.27$, $p<.05$), respectively, for non-leaders.

Correlations between Conscientiousness and Apparent Sincerity, Interpersonal Influence, Networking Ability and Social Astuteness were higher for leaders than non-leaders. Findings corroborate H-10c.

10d. There will be significant correlations between Openness of Experience and the four aspects of CC in the leader group that are not detected in non-leader group.

Significant correlations were discovered between Openness, on the one hand, and Apparent Sincerity ($r=.40$, $p<.01$), Interpersonal Influence ($r=.53$, $p<.01$), Networking Ability ($r=.34$, $p<.05$), and Social Astuteness ($r=.42$, $p<.01$), respectively, for leaders.
A significant correlation was found between Openness and Social Astuteness \((r=.33, p<.05)\) for non-leaders.

Correlations between Openness, on the one hand, and Apparent Sincerity, Interpersonal Influence, Networking Ability and Social Astuteness were significant for leaders, with three of these relationships significant at \(p<.01\) and one relationship significant at \(p<.05\). One statistically significant correlation was detected between Openness and the four dimensions of CC in the non-leader sub-group (Social Astuteness, respectively); this was at \(p<.05\) compared to the same relationship found in the leader group which was significant at \(p<.01\). Although a significant relationship between Openness and Social Astuteness was detected in both groups, the findings provide tentative, incomplete evidence to suggest H-10d is mostly correct.

**10e. There will be significant correlations between Emotional Stability and the four aspects of CC in the leader group that are not detected in non-leader group.**

Statistically significant correlations were ascertained between Emotional Stability and Interpersonal Influence \((r=.42, p<.01)\), Networking Ability \((r=.41, p<.01)\), and Social Astuteness \((r=.50, p<.01)\), respectively, among leaders.

Significant correlations were discovered between Emotional Stability and Apparent Sincerity \((r=.30, p<.05)\), Interpersonal Influence \((r=.31, p<.05)\), and Social Astuteness \((r=.30, p<.05)\), respectively, among non-leaders.

Correlations between Emotional Stability, on one hand, and Interpersonal Influence, Networking Ability, and Social Astuteness were significant for leaders, with all of these
relationships reaching $p<.01$. Correlations between Emotional Stability and Apparent Sincerity, Interpersonal Influence, and Social Astuteness were statistically significant for non-leaders, all significant at $p<.01$. Significant relationships between Emotional Stability and Interpersonal Influence and Social Astuteness were noted in both groups, and a significant relationship was found in the non-leader group between Emotional Stability and Apparent Sincerity that was not detected in the leader group. Collectively, these findings indicate that H-10c is false.

10f. There will be significant correlations between Professionalism and the four aspects of CC in the leader group that are not detected in non-leader group.

Statistically significant correlations were found between Professionalism, on the one hand, and Apparent Sincerity ($r=.35, p<.05$), Interpersonal Influence ($r=.37, p<.01$), Networking Ability ($r=.49, p<.01$), and Social Astuteness ($r=.58, p<.01$), respectively, for leaders.

Significant correlations were produced between Professionalism, on one hand, and Apparent Sincerity ($r=.40, p<.01$), Interpersonal Influence ($r=.34, p<.05$), and Social Astuteness ($r=.53, p<.01$), respectively, for non-leaders.

Correlations between Professionalism and Apparent Sincerity, Interpersonal Influence, Networking Ability and Social Astuteness were significant among leaders, with three of these relationships significant at $p<.01$ and one relationship significant at $p<.05$. Three significant correlations were found between Professionalism and three of the PSI components in the non-leader group, with two of these relationships significant at $p<.01$ and one relationship significant at $p<.05$. Significant relationships between
Professionalism and Apparent Sincerity, Interpersonal Influence and Social Astuteness were detected in both the leader and non-leader groups. A significant relationship was found in the leader group between Professionalism and Networking Ability that was not detected in the non-leader group. Collectively, these findings point to H-10f being incorrect.

**Hypothesis 11: Relationships between level of leadership experience and tenure on current job, on one hand, and occupation-relevant personality traits, on the other, will be moderated by aspects of CC.**

As an attempt to investigate the pattern of interrelationships among work-related personality traits and CC in the current respondent group in a more integrated model, multiple regression was estimated.

Multiple regressions allow a calculation of the percentage of variance in a factor explainable by a single predictor or a collection of predictors (Brace, Kemp, & Snelgar, 2006). Leadership tenure was used as the criterion variable, and Extraversion, Altruism and Conscientiousness as well as the CC total scores were used as predictor variables. Predictor combinations that were regressed included Extraversion and CC, Altruism and CC, and Conscientiousness and CC. Before testing for interaction effects, the scores on the independent and moderator variables were centred by subtracting their respective sample means from all individuals’ scores, thus producing revised sample means of zero. This procedure suggested by Aiken was invoked to reduce the possible effect of multicollinearity between main independent variables and the interaction term (Aiken & West, 1991).
The rationale for regression analysis lies in the additional information such analyses can provide about interrelationships among predictors and leadership. Of particular interest were differences in how much combination(s) of work-related personality traits and CC contributed to predicting someone assuming a leadership role, in form of tenure. Multiple regressions were performed because the information provided concerned the combined variance explained by a group of predictors rather than the mostly bivariate relationships previously scrutinised.

11a. The relationship between Extraversion and leadership experience (also tenure as leader) will be higher among persons with higher CC.

Table 4-26

\textit{β values, multiple regression coefficients of extraversion and communicative competence predicting leadership tenure}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Leadership tenure $β$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.38**</td>
</tr>
<tr>
<td>Communicative competence</td>
<td>-.08</td>
</tr>
<tr>
<td>Extraversion x communicative competence</td>
<td>.01</td>
</tr>
<tr>
<td>Regression model 1</td>
<td>$F(3, 97) = 5.80$</td>
</tr>
<tr>
<td>$R$</td>
<td>.39</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.15</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>.13</td>
</tr>
</tbody>
</table>

A multiple regression model was tested to investigate whether the association between Extraversion and leadership tenure is affected by level of CC. After centering
Extraversion and CC and computing the Extraversion-by-CC term (Aiken & West, 1991), the two predictors and the interaction were entered into a simultaneous regression model. This combination was able to account for 12% of the variance in leadership tenure scores.

Results indicated that a significant predictor of greater tenure in a leadership role was Extraversion ($b=.07$, $SEb=.02$, $\beta=.38$, $p<.01$). There is 95% confidence that the squared multiple correlation is between .03 and .10. No statistically significant association was discovered between CC and greater tenure in a leadership role. The interaction between Extraversion and CC was also non-significant, suggesting that the effect of Extraversion on leadership tenure does not depend on one’s level of CC. As this interaction was non-significant, simple slopes for the association between Extraversion and leadership tenure were not tested for different levels of CC. This analysis provides evidence to suggest that H-11a is incorrect.
11b. The relationship between Altruism and leadership experience (also tenure as leader) will be higher among persons with higher CC.

Table 4-27

<table>
<thead>
<tr>
<th>Variable</th>
<th>Leadership tenure β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altruism</td>
<td>-.13</td>
</tr>
<tr>
<td>Communicative competence</td>
<td>.09</td>
</tr>
<tr>
<td>Altruism x communicative competence</td>
<td>.05</td>
</tr>
<tr>
<td>Regression model 2</td>
<td>F(3, 97) = .69</td>
</tr>
<tr>
<td>R</td>
<td>.14</td>
</tr>
<tr>
<td>R²</td>
<td>.02</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>-.01</td>
</tr>
</tbody>
</table>

A multiple regression model was tested to investigate whether the association between Altruism and leadership tenure is affected by the level of CC. After centering Altruism and CC and computing the Altruism-by-CC term (Aiken & West, 1991), the two predictors and the interaction were entered into a simultaneous regression model. This combination did not contribute to any of the variance in leadership tenure scores.

Results indicated no evidence of significant predictors of tenure in a leadership role, including the interaction between Altruism and CC, suggesting that the effect of Altruism on leadership tenure does not depend on one’s level of CC. As this interaction was non-significant, simple slopes for the association between Altruism and leadership
tenure were not tested for different levels of CC. This analysis seems to supply evidence to suggest that H-11b is incorrect.

11c. The relationship between Conscientiousness and leadership experience (also tenure as leader) will be higher among persons with higher CC.

Table 4-28

$\beta$ values, multiple regression coefficients of conscientiousness and communicative competence predicting leadership tenure

<table>
<thead>
<tr>
<th>Variable</th>
<th>Leadership tenure $\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conscientiousness</td>
<td>-.13</td>
</tr>
<tr>
<td>Communicative competence</td>
<td>.08</td>
</tr>
<tr>
<td>Conscientiousness x communicative competence</td>
<td>.02</td>
</tr>
<tr>
<td>Regression model 3</td>
<td>$F(3, 97) = .69$</td>
</tr>
<tr>
<td>$R$</td>
<td>.14</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>-.01</td>
</tr>
</tbody>
</table>

A multiple regression model was tested to investigate whether the association between Conscientiousness and leadership tenure is affected by the level of CC. After centering Conscientiousness and CC and computing the Conscientiousness-by-CC term (Aiken & West, 1991), the two predictors and the interaction were entered into a simultaneous regression model. This combination did not contribute to any of the variance in leadership tenure scores.
Findings indicated no evidence of significant predictors of leadership tenure in a leadership role, including the interaction between Conscientiousness and CC, suggesting that the effect of Conscientiousness on leadership does not depend on one’s level of CC. As this interaction was non-significant, simple slopes for the association between Conscientiousness and leadership tenure were left unexamined for different levels of CC. Thus, evidence is conferred to suggest that H-11c is also incorrect.
Chapter 5: Discussion

The key aims were to explore:

a) demographic differences in work-related personality traits and communicative competence (CC) among New Zealanders;
b) patterns of relationships among work-related personality traits and CC in employees in general;
c) patterns of difference between leaders and non-leaders in terms of personality traits and CC.

Occupational personality constructs examined in this study included: Emotional Stability, Extraversion, Openness, Altruism, Conscientiousness, and Professionalism. CC constructs examined were confined to factors of Ferris' "political skill": Apparent Sincerity, Interpersonal Influence, Networking Ability, and Social Astuteness. Demographic information was also collected (on-line survey).

This chapter situates the results of the present project vis-à-vis the aims and hypotheses detailed in Chapters 1/2.

Interpreting numerical findings from the project, Section 5.1.1 examines patterns of demographic statistics of the respondent group. Section 5.1.2 revisits outcomes of hypothesis testing. The findings from hypotheses are scrutinised in terms of convergence with, or divergence from, results known from technical literature. Conjectures are presented regarding the reasons why these local findings may have occurred.
Section 5.2 adopts a critical vantage point on the present research, opening a broader perspective. Section 5.2.1 explores limitations caused by lack of sampling, and implications for generalising findings. Section 5.2.2 examines constraints associated with psychometric tools. Section 5.2.3 re-assesses operationalisation. Finally, Section 5.2.4 outlines avenues of extended research in the future.

5.1 Interpreting the findings

5.1.1 Relationships among demographic variables

Before testing hypotheses, relationships among demographic indicators were examined. The term 'demographic' is used in an extended sense, including education, tenure, gender, and leadership status.

A finding revealed in the present study was a significant difference between males and females in terms of educational level, with female respondents having a higher level of education than males. Research suggests that, reversing the past trend, more women today have invested in upgrading their careers by undertaking higher education. The proportion of women in university is now equal to or greater than that of men (Davidson & Burke, 2011). The proportion of women entering higher education continues to rise in most countries. Figures in both the US and New Zealand remain stable, with women still comprising a higher percentage of university students than men.

A significant difference between males and females in terms of leadership status was evidenced. Female respondents emerge as more likely to be in a leadership position than
male respondents. This is in contrast to what is commonly assumed (males predominantly occupying leadership positions). It has been proposed (Javidan, Dorfman, de Luque & House, 2006; Yukl, 2002) that there is a social expectation for men to become leaders in task-oriented work, as opposed to women.

Gender Role Theory argues there is a difference in socially expected roles for men and women. Men are expected to demonstrate task-oriented and managing behaviours whereas women are expected to show collective and social qualities (Eagly, 1987; Eagly & Wood, 1982). Males are encouraged to become task leaders and women to become social organisers (Kent & Moss, 1994), with individuals who emerge with a greater task contribution in the group, posited as more likely to emerge as a leader in a task-focused, leaderless group (Sapp, Harrod & Zhao, 1996). These assertions suggest men are more likely to emerge as leaders and be viewed as effective in this role.

Nevertheless, female leaders are more common in organisations in culturally “individualist” countries compared to “collectivist” countries (Wright, Baxter, and Birkelund, 1995). In “collectivist” cultures, both men and women have a similar possibility of being a leader. In “individualist” cultures, such as that found in North America or New Zealand, the gender role expectation about leadership appears to be similar for both males and females (Javidan et al., 2006). Moreover, gender egalitarianism in the workplace is emphasised more strongly in individualistic than "collectivist" cultures (Chang, 1999). In such a setting, both genders are expected to be financially independent, career-focused, and driven to obtain recognition from their colleagues (Fiorentine, 1988). This is in contrast to a "collectivist" culture, where there
is a social expectation that a man should be a leader rather than a woman. Therefore men are more likely to emerge as the leaders of work teams.

Significant demographic findings regarding leadership emerged that, while fairly obvious, require comment. Firstly, it was discovered that respondents who are in leadership positions are likely to have a greater tenure at their current organisation. Holding a more senior, leadership position has been linked to having more work experience. As Gordon & Johnson (1982) and Mills (1985) report, seniority has a positive relationship to promotion and leadership. Work experience is essential in acquiring and developing one’s knowledge or skills necessary for effective performance and in turn, promotion into a leadership role. Secondly, the project revealed that respondents who hold a Bachelor's degree or higher are likely to have fewer years of work experience. This is unsurprising, given that tertiary study of this calibre requires at least 3 years' commitment, entailing less years of work experience, compared to others who stopped studying after finishing high school.

5.1.2 Outcomes of hypothesis testing

**Hypothesis 1: Gender, age, and ethnicity have no systematic relationship with occupation-relevant personality traits.**

The hypothesis was not fully supported. The study found a significant difference between genders for the trait Openness, with male participants being higher than female participants.
Today, little is known about the demographically based differences in work-relevant personality dispositions in the New Zealand working population. Overseas studies also mostly relied on student samples. McCrae & Terracciano (2005) compared the FFM personality scores of undergraduate students from 51 cultures. They report that New Zealand undergraduates were among the most extraverted. In general, the personality pattern of New Zealand undergraduates was similar to Australian, North American, English and Irish counterparts. Studying personality differences in the New Zealand general population (Guenole & Chernyshenko, 2005; Packman, Brown, Englert, Sisarich & Bauer, 2005; Roberts, Caspi & Moffitt, 2001; Wilson & Sibley, 2011), findings remain fragmented. Minimal data are available against which to compare the current pattern of findings.

Local findings are also comparable to a study reliant on self-report responses to the NEO-PI-R across 36 cultures (Costa et al., 2001; McCrae, 2002). It was revealed that men scored higher on Openness to ideas, whereas women scored higher in other traits, like Neuroticism, Agreeableness, and Openness to feelings (Costa et al., 2001; McCrae, 2002).

In another cross-cultural project, high school students from 50 cultures were asked to identify an adult or a university-aged man or woman whom they knew well, then rate that person’s personality traits on NEO-PI-R (McCrae & Terracciano, 2005). Men were rated by observers as being higher than women in Openness to ideas. Women were rated as being higher in other traits like Anxiety, Feelings, Tender-Mindedness (McCrae & Terracciano, 2005). This suggests that gender differences in at least some FFM traits are somewhat robust. Gender differences in personality traits do appear wider and more
robust than such differences in other domains such as cognitive ability (Else-Quest, Hyde, Goldsmith & Van Hulle, 2006; Hyde, 2005).

The present study also found that older participants scored higher on the trait Extraversion. This result conflicts with recent studies that have suggested older individuals are less extraverted than younger individuals, with sizes of such differences varying across studies. For instance, some reported noteworthy cross-age differences in Extraversion (Donnellan & Lucas, 2008; Lucas & Donnellan, 2009; Terracciano, Abdel-Khalek, Adam, Adamovova, Ahn, Ahn, & Mescheriakiv, 2005), whereas others noted slight differences (Allemand, Zimprich, & Hendriks, 2008; Srivastava, John, Gosling, & Potter, 2003). Soto, John, Gosling & Potter (2011) reported that Extraversion showed one of the smallest age differences through adulthood. Other studies have found either lower levels of Extraversion at older ages (McCrae, 1999; McCrae, Costa, Ostendorf, Angleitner, Hřebíčková, Avia & Smith, 2000), or "flat" age trends (Roberts, Walton, & Viechtbauer, 2006; Srivastava et al., 2003).

Considering these points, the available empirical work detects only modest age differences in domain-level Extraversion during early adulthood and middle age. Costa and McCrae (1988) have argued, agreeing with classic personality theorists, that most personality changes occur before the age of 30, and that personality remains fairly stable afterwards (Srivastava, et al., 2003). In contrast to this statement, Scollon and Diener (2006) have reported similar-sized changes before and after age 30 in both Extraversion and Neuroticism.
Hypothesis 2: Educational status is unrelated to occupation-relevant personality traits.

The present study produced results that suggest this hypothesis is true in this local environment.

There is a wide-ranging quantitative literature on indices of socio-educational status (including levels and qualifications in formal schooling). The current study used a simple self-report item of educational status rather than a refined composite index. It is reasonable to assume that certain personality dispositions enable holders to achieve better in formal education, or at least make it easier to invest effort into succeeding with studies, e.g. Edwards identified Perseverance, Empathy, Dependability, and Consistency/Inconsistency as personality traits that predicted educational attainment in high school (Edwards, 1977). DeFruyt and Mervielde (1996) reported a study based on FFM of personality. Conscientiousness emerged as a significant predictor of school grades and longer-term academic career.

Such associations are unconfirmed by the New Zealand data collected here. However, comparing findings such as those of Edwards or DeFruyt to those in the thesis requires the assumption that personality of the respondents remained stable from early years of schooling to the time of data collection (as employees), and a more general assumption about the directionality of the potential effect. The literature has less trace of studies asking whether education, including formal schooling at earlier stages of life measurable as educational status, shapes the personality dispositions that were assessed in the present study.
Hypothesis 3: Work experience and tenure on current job are unrelated to occupation-relevant personality traits.

It was found that work experience in general was significantly related to higher levels of Extraversion in the participant group. This finding was not expected. Consistent empirical findings in worldwide literature have not yet been located.

Indirectly paralleling the finding is Barrick & Mount’s (1991) research of managers and sales staff, where Extraversion was a valid predictor for both occupations. In both jobs, interaction with others is a significant portion of the role, therefore possessing traits such as sociable, gregarious, talkative, and assertive leads to effective performance in such jobs. It is unclear however if these traits are enhanced by experience in these roles, or if originally more extraverted individuals are drawn to these roles. Further, job experience and job performance are conceptually distinct.

Hypothesis 4: Gender, age, and ethnicity have no effect on aspects of CC in a workplace setting.

The present study yielded results that corroborate this hypothesis, keeping in mind that Ferris' "political skill" was the only segment of CC empirically covered. It seems that dimensions of such skill are not sensitive to gender or age differences, and that various ethnic groups are non-contrasted.

Research has hardly begun to target the CC of leaders in the New Zealand professional environment. There is a paucity of data against which to compare the pattern of findings gained using Ferris’ instrument.
It has been argued that cultural beliefs and value orientations can shape constructs that are related to "political skill" such as emotional intelligence (Sharma, Deller, Biswal, & Mandal, 2009). As apparent, Ferris’ conceptualisation of "political skill" is grounded in Western culture. Not only did American scholars develop the concept, but also much of the "political skill" research has been conducted in the United States. It reflects values such as performance orientation and achievement drive. This is in contrast to some Eastern cultures where more value is placed on relational or interdependent processes, and social interaction with others (Baranik, Meade, Lakey, Lance, Hu, Hua, & Michalos, 2008). This brings into question the functionality, or even existence, of "political skill" in Ferris’ sense in cultures that do not share Western values.

The idea is relevant in New Zealand with constitutive Māori presence as well as many employees of Asian descent. In the present study, 4.9% of the respondent group identified as 'NZ European/Pakeha and Asian/Indian', and 11.8% of the respondent group identified as 'New Zealand European/Pakeha and Pacific Island/Māori' – cultural affiliations linked to a "collectivist" orientation. On this basis, one could expect ethnically based differences in skill components, which were not found in the project. Further research is required to examine Ferris’ model of "political skill" and its applicability in a non-Western, or Western-Eastern mixed, cultures.

Lvina, Johns, Treadway, Blickle, Liu, Liu, & Ferris (2012) examined the salience of PSI dimensions in cultural groups. German respondents scored as least "politically skilled" on the four dimensions. Respondents from China and Russia scored higher than those from Germany but lower than Americans. Latent means for the Turkey sample showed respondents evaluating their Networking Ability higher than Americans, and their
Interpersonal Influence to be equivalent to respondents from Russia. American respondents scored higher overall on the 4 dimensions.

Lvina et al (2012) posit that from a culture-specific view, the higher scores discovered might be due to the higher individualism (characterised by ‘self-sufficiency’, ‘personal fate’, ‘I orientation’; Riordan and Vandenberg, 1994) of Americans. The model governing the design of the PSI itself represents a rather individualistic take on this construct, stressing personal achievements. The construct of a “political skill” differs in its interpretation and importance across cultures, such as New Zealand. Methodological issues (Lvina et al, 2012) include that findings are affected by a self-report method, and a tendency for Americans to overemphasise their advantages during self-presentation.

**Hypothesis 5:** Higher educational status co-occurs with higher levels of CC in a workplace setting.

**Hypothesis 6:** More work experience and longer tenure on current job co-occur with higher levels of CC in a workplace setting.

The present study yielded results confirming these assumptions, under the constraint that "political skill" was the only segment of CC investigated.

**Hypothesis 7:** Leaders differ systematically from non-leaders regarding their occupation-relevant personality traits.

7a. Leaders will show higher levels of Emotional Stability than non-leaders.
Results suggest the hypothesis is true. Trait theories of leadership often presuppose that Emotional Stability is a focal trait, but it usually failed to predict leadership in empirical studies (Hiller & Hambrick, 2005; Judge & Bono, 2000). Nonetheless, the present study’s finding is consistent with extant findings demonstrating that the trait of Emotional Stability can be an important predictor of leader emergence (Emotional Stability: $\rho = .24$) and leader effectiveness (Emotional Stability: $\rho = .22$; Judge, et al., 2002). Specifically, leaders who are more emotionally stable are more likely to be transformational leaders.

Emotionally stable leaders are confident, resilient. They tend to view the world through a positive lens (cf. Hypothesis 10e, below), permitting them to form a compelling vision of the future, and to offer behavioural "models" to followers to act and substantiate the vision.

Emotionally stable persons who are neither prone to insecurity nor overly anxious or distracted from work are better performers in leadership roles. The breadth of task-related behaviours that Emotional Stability reflects explains why this trait was considered a “universal predictor” of performance (Barrick et al., 2001) pertinent to overall organisational effectiveness. Teams composed of more emotionally stable members are able to deal with conflict more effectively. They remain focused on the task (Barrick, Stewart, Neubert & Mount, 1998). Higher mean levels of Emotional Stability in teams have also been found to permit higher team performance at work.

Emotional Stability is a robust predictor of success in executive-level jobs. Because the job of leaders includes both enhancing organisational financial performance and
developing a committed workforce, higher Emotional Stability among leaders help them to achieve both of these goals. Effects on organisational performance and collective organisational commitment have been shown. Therefore, leader Emotional Stability is indirectly related to leadership effectiveness through its effect on success of leadership (Colbert, Barrick, Bradley, 2014). Findings such as these regarding the centrality of Emotional Stability for leadership performance suggest that a leader's Stability might be more relevant for achieving goals in such a context than historically accepted (Cavazotte, Moreno, Hickmann, 2012).

7b. Leaders will show higher levels of Extraversion than non-leaders.

The present study yielded results to suggest this hypothesis is true. Overseas findings on leaders show that Extraversion is the single best predictor of leadership among FFM traits (Judge, et al., 2002). Accordingly, leaders who exercise more social influence and have greater energy are expected to be more influential, which should lead to higher levels of both organisational performance and organisational commitment.

In a meta-analysis (Bono & Judge, 2004), it was revealed that the highest relationship between occupational personality traits and leadership at the individual level was with Extraversion. Leaders who are sociable and highly engaging with their followers are more likely to communicate a compelling vision and motivate others to work toward that vision. However, whilst Extraversion may help a leader to be perceived as appealing and charismatic by others in short-lived encounters, it may not be enough to inspire, motivate and care for skilled followers, especially given that work relations evolve over time – even more so when complex organisational goals are involved.
Because leaders are responsible for communicating a strategic direction for the organisation, and influencing their followers to coordinate their efforts in support of that direction, the communication and influence skills in teams with high levels of leader Extraversion may be linked to higher levels of effectiveness. Findings suggest that being predisposed to engaging in influencing others, being sociable, and being ambitious – in other words, being Extraverted – should increase a individual’s success as a leader.

Leaders who are higher on Extraversion are more outgoing, sociable, and talkative; in other words, they prefer to work with others in a team rather than work alone. Higher levels of Extraversion have also been linked to attraction to the team (Kristof-Brown, Barrick & Stevens, 2005), to backing up behaviours when others need it (Porter, Hollenbeck, Ilgen, Ellis, West, & Moon, 2003), and to the desire to engage with members of the team (Barrick et al., 1998). In line with this, meta-analyses by Bell (2007) and Mount, Barrick, & Stewart (1998) found that higher levels of leader Extraversion were associated with higher team performance.

7c. Leaders will show higher levels of Openness to Experience than non-leaders.

The results of this study showed that the hypothesis was false. This finding appears to diverge from what several leadership theories assume. Openness is linked to creativity and divergent thinking (McCrae & Costa, 1997; Feist, 1998), posited as necessary for novel problem solving within organisations; an important attribute of leaders and assumed to be positively correlated with leadership (Bass & Stogdill, 1990; Yukl, 1998). Judge & Bono (2000) discovered Openness was a significant correlate of transformational leadership.
Conceptually, the Openness domain of FFM has been variously interpreted as a form of intellect (Goldberg 1981; Hogan 1983; Digman & Inouye 1986), even intelligence (Borgatta 1964), in addition to Openness proper (Costa & McCrae 1985). This has led to claims that Openness was the least understood personality trait. In the context of this project, it is important to note that studies have revealed Openness as a weak predictor of performance (Barrick & Mount, 1991), despite leadership theories advocating its importance. Conflicting views on the concept of Openness relativise any empirical finding to which to compare local findings. Additionally, the current finding is non-decisive, given the small gap between means of the leader and non-leader group. Constraints on involving participants may have produced a local, non-representative hypothesis test (the idea will be discussed further in 5.2.2).

**7d. Leaders will show higher levels of Altruism than non-leaders.**

Results showed this hypothesis was false.

Altruism has prominent value connotations. It comprises the 'more human aspects of humanity' (Digman, 1990). Characteristics of Altruism include nurturance, caring, and emotional support. The primary dimension of Altruism has been debated however, with Guilford, Zimmerman, & Guilford (1949) positing Friendliness, and Fiske (1949) positing Conformity (to social norms). In the context of the present research, it is also important to note that studies have revealed Altruism to be a weak predictor of job performance (Barrick & Mount, 1991), despite leadership theories advocating its importance.
This local finding contradicts theories of leadership, such as transformational leadership. Judge and Bono (2000) found that the factor of Agreeableness (overlap with Altruism) was a strong and consistent predictor of transformational leadership. Ployhart, Lim & Chan (2001) also found Agreeableness to be positively related to transformational leadership. Altruism as a trait linked to transformational leadership is certainly intuitive; given that Altruism enables a leader to engage with others and allow others to engage with them (for further discussion, cf. Hypotheses 9b, 10b).

Numerous research groups link Altruism to leadership, but the connection has remained ambiguous (Bass & Stogdill, 1990). Studies indicate a vague preference for an altruistic leader, seeing this disposition as necessary as leaders maintain social relations, remaining sensitive to the needs of others (Jensen-Campbell & Graziano, 2001). However, Judge et al (2002) reported Altruism was the least relevant among FFM traits to leadership. Conflicting ideas on the precise nature of Altruism in personality thus relativise overseas findings and make comparisons difficult. The current finding is further questioned given the small gap between means of the leader and non-leader group (local, non-representative hypothesis test).

7e. Leaders will show higher levels of Conscientiousness than non-leaders.

Our findings disconfirm this hypothesis in the local environment. The result is viewed as inconsistent with research has identified Conscientiousness as the strongest predictor of overall job performance (Behling, 1998; Dunn, Mount, Barrick & Ones, 1995; Hogan, Rybicki, & Borman, 1998).
Higher Conscientiousness is associated with characteristics like dependability and thoroughness, in contrast to carelessness and negligence. Conscientiousness describes socially prescribed impulse control that facilitates task- and goal-directed behaviour, such as thinking before acting, delaying gratification, following norms and rules, and planning, organising and prioritising tasks (John & Srivastava, 1999, p. 121). This has led personality researchers to portray Conscientiousness 'will to achieve' (Digman & Takemoto-Chock, 1981). It is surprising that this trait has not emerged as a significant leadership differentiator in the present study.

7f. Leaders will show higher levels of Professionalism than non-leaders.

The findings corroborate the hypothesis. Exploring alignment with this result to psychology of leadership literature turned out to be problematical, given that Professionalism is a less recognised occupational personality trait than standard FFM traits. For the purposes of discussion, Professionalism was viewed as overlapping with 'work values' (Meglino, Ravlin & Adkins, 1989) with underlying facets of ambition, being results-oriented, critical, strategic, and autonomous.

Work-relevant personal value orientations (often termed 'work values'; Super, 1970, 1973; Super & Sverko, 1995) are characteristics that explain individual differences in behaviour in the workplace context. Work values can be considered as lasting tendencies to prefer job characteristics or outcomes, and thus directing/explaining vocational behaviour (Berings, De Fruyt & Bouwen, 2004). Professionalism is in line with the “work values as preferences” paradigm (Macnab & Fitzsimmons, 1987; Pryor, 1982). Appendix A25 includes discussion of five value orientations pertinent to Professionalism as a personality trait in leaders, with links to Hypothesis 7f.
Hypothesis 8: Leaders differ systematically from non-leaders regarding factors of CC in a workplace setting.

Using PSI scores, the study permitted testing these sub-hypotheses only regarding the sub-area of "political skill", rather than the breadth of CC factors.

8a. Leaders will show higher levels of Apparent Sincerity than non-leaders.

Results have showed this hypothesis is false. This local result diverges from what follows from Ferris’ interpretation in the “political skill” model. Apparent Sincerity encompasses integrity, authenticity, and sincerity. As individuals work to achieve positive outcomes for themselves and the organisation, leaders endeavour to appear sincere and genuine in their intentions. Apparent Sincerity is an avenue for leaders who need to develop a committed followership as it allows leaders to disguise ulterior motives.

Several publications in the current literature contradict the local finding. Kotter (1982) found that effective managers use a variety of influence tactics, and they do so with greater skill. Wrightsman (1964) noted that the effectiveness of leaders depended on followers trusting that the leader is acting in the followers’ best interests. Jones (1990) reported that influence attempts were successful only if "targets" perceived them as not grounded in ulterior motives. It is likely that Apparent Sincerity increases the level of trust colleagues have in their leader, seeing him/her as more genuine (Ferris et al., 2005). The current hypothesis test may be less decisive given the small gap between means of the leader and non-leader group (local, non-representative hypothesis test; cf. Section 5.2.2).
8b. Leaders will show higher levels of Interpersonal Influence than non-leaders.

Findings failed to corroborate the assumption. Given that proactive individuals like leaders utilise interpersonal influence when they seek to act in ways to enhance social capital behaviours, this result is counter-intuitive. Individuals with high levels of interpersonal influence are able to accomplish their goals and like to exercise influence to prompt specific responses (Ferris et al., 2005).

8c. Leaders will show higher levels of Networking Ability than non-leaders.

Local results suggest the hypothesis is true. Networking is a social process. “Political skill”, as postulated by Ferris, involves the ability to interpret -- and act on -- social cues (Ferris, Hochwarter & Douglas, 2002; Ferris, et al., 2005). Networking, while a critical skill for leaders, received limited attention in the New Zealand leadership literature yet. The local findings re-confirm a range of overseas results.

Potential leaders become more effective by working with and through others, using techniques such as networking (Brass, 2001; Luthans, Welsh, & Taylor, 1988). Forging friendships, building coalitions and useful alliances, creating new relationships, vest such individuals with a great deal of contacts, information, and social support. These can then be shared with followers (Ferris, et al., 2007).

Persons with higher Networking Ability thrive in social situations and increase the quality of interpersonal relationships (Perrewé, Ferris, Frink, & Anthony, 2000). This finding is aligned to ground-breaking research contrasting success and effectiveness, identifying precursors of each. It has been shown that the primary predictor of
leadership success is Networking Ability, described as 'a purposeful focus on how one is perceived through his or her relationships' (Luthans, et al, 1988). The authors defined success as the rate and frequency at which a leader gets promoted, and effectiveness in terms of quality and quantity of performance, subordinate satisfaction, and subordinate organisational commitment (Luthans, et al, 1988). The strongest indicator of leadership success was Networking Ability.

Individuals high on what Ferris described as “political skill” have the ability to develop vast networks. By working with and through others, leaders become more effective, by coalition building and creating social capital (Brass, 2001; House, 1988; Luthans, Hodgetts & Rosenkrantz, 1988). Social capital – with resources available through social or interpersonal ties – is then used to one’s benefit within an organisational setting (Coleman, 1988). Individuals with good social skills can build up extensive “stores” of social capital through their proficiency at "using" diverse networks of people (Baron & Markman, 2000).

A study of successful managers by Luthans, et al (1988) found that networking was a main activity on which managers spent time. It included interacting with outsiders and socialising, or the use of communication skill to “get ahead”.

House (1995) argued that networked, well-positioned leaders are able to acquire more resources for their units. Seibert, Kraimer, and Liden (2001) examined whether coalitions and alliances had a positive impact of resource acquisition, revealing that networks were positively related to resources. Having such resources may lead to more promotions and benefits that individuals perceive as a reward (Ferris, et al, 2005).
The accumulation of alliances allows individuals to leverage their social capital to facilitate change efforts, for increased leadership effectiveness. Additionally, social capital increases reputational "resources" which are believed to favourably influence co-worker reactions (Hall, Blass, Ferris & Massengale, 2004). Making a positive impression on others is one of the primary competencies of effective leadership (Zenger & Folkman, 2002).

From a social network perspective, the network to which an individual belongs can be a factor in an individual’s reputation as a “good performer” (Kilduff & Krackhardt, 1994). Others’ perceptions of an individual’s human capital, social capital, and past behaviour serve to form a collective expectation of future behaviour (Ferris, Blass, Douglas, Kolodinsky, & Treadway, 2003). This reputation then influences the expectations, choices, and actions of the individuals within a given social network. Through their reputation, leaders inspire commitment and personal obligation from those around them.

**8d. Leaders will show higher levels of Social Astuteness than non-leaders.**

The results disconfirmed the assumption. Social Astuteness as a construct first surfaces in Ferris and colleagues’ proposal of the componentiality of what he calls 'political skill' (2001). In his model, social skills, particularly Social Astuteness, are at the core of interpersonal skills relevant to seizing and maintaining leadership. A working definition of Astuteness appears in Ferris' later work:
'Individuals possessing political skill are astute observers of others. They understand social interactions well and accurately interpret their behavior and the behavior of others. They are keenly attuned to diverse social settings and have high self-awareness' (Ferris, et al., 2007; p. 292)

Ferris alludes to Pfeffer's hint to approach this attribute as being sensitive to others, possessing an ability to identify with others, often in the context of seeking to obtain benefits for oneself. Socially astute individuals are viewed as ingenious in dealing with others (Pfeffer, 1992). Ferris explains: 'people high in political skill not only know precisely what to do in different social situations at work, but exactly how to do it in a sincere, engaging manner that disguises any ulterior, self-serving motives' (Ferris, et al., 2002).

Ferris, Kolodinsky, Hochwarter, and Frink (2001) also position social perceptiveness and/or astuteness as core ingredients of so-called "political skill", enabling the agent to adjust her/his behaviour changing situational demands in an organisation, and do this in a manner that inspires trust in others. Behavioural flexibility is a key facet of being astute.

In view of these conceptual features of Astuteness, the original hypothesis is intuitive; the local finding counter-intuitive. One would expect that leaders, at least leaders successful on the longer term, manifest higher levels of Astuteness than non-leaders do. It is possible that the leadership sub-group in this study managed to compensate for less Astuteness by using other elements of CC. It is also possible that a psychometric artefact (tied to nature of the tool PSI) contributed to the finding.
Hypothesis 9: There will be a systematic pattern of relationship between/among occupational personality traits and aspects of CC in a workplace setting.

9a. Extraversion will be correlated with all 4 aspects of CC.

Local results suggest the hypothesis is correct. The finding is consistent with Ferris, et al. (2007), who found positive relationships between PSI components and the Extraversion score from NEO-FFI (McCrae & Costa, 1989). Both scales rely on items describing positive, outgoing interpersonal orientation. Individuals high on Extraversion can be described as sociable, gregarious, assertive, and energetic (Costa & McCrae, 1992b), and as someone generally in a good mood (Goldberg, 1992). Those with “political skill” have the astuteness to influence co-workers in ways that appear to others as pleasant, sincere, and trustworthy.

The concept of Extraversion reflects an affability/ sociability theme. It is an antecedent to dimensions of social communication in an organisation. Ferris’ definition of “political skill” adds to this action-oriented dispositional theme. Affability reflects outgoing, interpersonally pleasant orientation, and is pertinent to constructs like Extraversion. Indeed, significant positive correlations between Extraversion and Ferris’ “political skill” composite have been reported ($r = .58$; Liu, et al., 2007). Extraversion related most strongly with the interpersonal influence and Networking Ability aspects.

The relationships of Extraversion and "political skill” can also be explained through Hogan and Shelton’s (1998) “socioanalytic view” of reputation and job performance. The proposal suggests that people are motivated to 'get along' and 'get ahead'. In order
to get along, people need to cooperate with others in a friendly and positive way (Hogan & Holland, 2003). To get ahead, individuals are competitive and try to be recognised (Hogan & Holland, 2003).

The desire and ability of individuals to engage in these endeavours vary from person to person. Socioanalytic theory states that the motives to get ahead and get along are closely linked with occupation-relevant personality traits (Hogan, 1996). The motive to get ahead is "expressed" in Extraversion (Hogan & Holland, 2003). It could also be expressed through Ferris’ “political skill”, characterised as 'the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one’s personal and/or organizational objectives' (Ahearn, et al., 2004). Empirical findings support the interpretation of Extraversion explaining individuals’ desire to get ahead (Hogan & Holland, 2003), in accordance with the socioanalytic argument.

The interaction of “political skill” and Extraversion has been demonstrated when predicting sales performance. Mount, Barrick, & Stewart (1998) state that the interactive combination of Extraversion and “political skill” yields greater sales performance by providing the complementary motivation and skill. However, too much Extraversion accompanying low CC (“political skill”) can be detrimental to sales performance. Salespersons low in CC will not be as socially astute, and thus less able to read, assess, and adjust their behaviour in situations. They may behave too assertively, viewed as domineering, which is likely to provoke rejection by customers (Blickle, 2003). Additionally, salespersons with low “political skill” may seek too much sensation, interfering with their capacity for emotion regulation and suppression (e.g.,
the inability of suppressing the expression of getting bored by certain customers, thus conveying a contextually inappropriate emotion).

9b. **Altruism will be correlated with all 4 aspects of CC.**

Local results suggest this hypothesis is true. As mentioned previously, the affability disposition signals interpersonally pleasant orientation, and is linked to personality constructs like Altruism. This dispositional theme is expected to relate most strongly to the Interpersonal Influence, Networking Ability, and Apparent Sincerity in Ferris’ “political skill”.

Hogan and Shelton’s (1998) socioanalytic view (cf. Hypothesis 9a) distinguishes motives to get along versus get ahead. Higher Altruism motivates to get along with others (Hogan & Holland, 2003). People with high ratings on this personality trait or disposition appear sensitive to others and willing to cooperate with others in a friendly and positive way (Hogan & Holland, 2003). This drive to serve the needs of others (ie. Altruism) has been proposed as the primary factor in leadership behaviour (Avolio & Locke, 2002; Choi & Mai-Dalton, 1998; Drach-Zahavy, 2004; Peterson & Seligman, 2003; Podsakoff, MacKenzie, Moorman & Fetter, 1990).

Empirical data show leaders tending to act more altruistically toward others because they benefit from having a good reputation (Barclay, 2004; cf. Hypothesis 8c). Barclay (2004) reports that Altruism has a direct impact on leadership effectiveness. Serving others, putting their needs first and foregoing self-interest were all perceived by raters to lead to greater effectiveness, re-confirming previous research about 'other-orientation' boosting leadership effectiveness (Barbuto & Wheeler, 2006; Bass & Steidelmeier,
1999; Greenleaf, 1970; Luthans & Avolio, 2003). Another finding of this study is the significant relationship of Networking Ability with leader effectiveness.

9c. Conscientiousness will be correlated with Interpersonal Influence, Networking Ability and Social Astuteness

Local results corroborate the hypothesis for all 3 variables of CC, albeit coefficients were markedly lower than for Extraversion and Altruism. This is broadly consistent with Blickle & Schnitzler (2010), where “political skill” scores were positively associated with Conscientiousness. Ferris, et al. (2002) claim that “political skill” would be related positively with constructs such as Conscientiousness. Ferris, et al. (2005) report significant relationships between Conscientiousness and Social Astuteness (Study 1, $r=.31$, Study 2, $r=.27$). This was the strongest relationship Conscientiousness demonstrated with any of the facets of Ferris’ “political skill”.

Among PSI scales, Social Astuteness should be most strongly related to Conscientiousness, because it is reflective of the perceptiveness theme. The present study confirms this link. Perceptiveness points to an ability of individuals to monitor and regulate their own behaviour, and Social Astuteness seems to capture the very essence of this self-monitoring construct. Eager “self-monitors” tend to control the image(s) of the self they project in social interaction to a great extent (Snyder, 1987), whereas low “self-monitors” are much less concerned about monitoring their surroundings. Their behaviour tends to express how they genuinely feel. Similarly, people high in Social Astuteness are keen and intuitive observers of their surroundings; they have an accurate understanding of social situations and their own behaviour in these settings. Ferris, et al. (2005) reported significant relationships between Self-
monitoring and Social Astuteness in two studies \( (r=.37, r=.32) \). In that analysis, these were strongest correlations Self-monitoring demonstrated with any of the "political skill" dimensions. The attention to detail and, as Pfeffer (1992) stated, the 'almost clinical interest in the observation of behavior' (p. 173) suggests that Social Astuteness relates well to Conscientiousness.

Because individuals at the higher end of Ferris’ “political skill” are self-confident though not self-absorbed, they tend to maintain their focus outward toward others and the environment rather than inward. This allows such individuals to maintain proper balance and perspective, thus permitting them to keep a healthy gauge on their accountability to both self and others. This accountability perspective for "politically skilled" individuals suggests they tend to be conscientious.

**Hypothesis 10: Relationships between/among occupational personality traits and aspects of CC will show dissimilar patterns among leaders versus non-leaders.**

The analyses were about holistic comparisons between the leader and non-leader sub-group (in simple terms, between patterns in the leaders' matrix and the non-leaders' matrix of relationships among personality dispositions and CC).

**10a. Correlations between Extraversion and the 4 aspects of CC will be consequently higher in leaders than non-leaders.**

With 10a, results suggest that the hypothesis is partly true. Correlations between Extraversion and Apparent Sincerity, Networking Ability and Social Astuteness were higher for leaders than for non-leaders. The correlation between Extraversion and Interpersonal Influence was higher for non-leaders.
Whether in the world of work or other environments, persons who are more extraverted are supposed to communicate well with others (including persons not previously encountered or befriended). They build networks easier, and show more Social Astuteness (cf. additional treatment under Hypotheses 7b, 9a). These connections are normally thought to apply to persons irrespective of leadership status. Testing Hypothesis 7b already evidenced that in the current project, leaders were more extraverted than non-leaders; and 8c confirmed that leaders had better Networking Ability. Based on those analyses it is unsurprising that we find notable correlations between Extraversion and these two aspects of CC in the "leader" sub-group, and that these are greater than correlations for the same variables in "non-leader" sub-group.

A less intuitive result is the one regarding Extraversion and Interpersonal Influence. While the result may be idiosyncratic, pertaining to local factors in a constrained participant group (cf. 5.2.1 below), it is assumed that being more extraverted is a necessary but not sufficient condition to reaching higher Interpersonal Influence in a management setting. Blickle, et al. (2008) systematically examined correlations among FFM traits and aspects of Ferris' "political skill"; however, only reported results for Agreeableness and Conscientiousness (rather than Extraversion; cf. reference to Blickle & Schnitzler findings, under Hypothesis 9c). Moreover, the study does not probe into leadership issues, and most participants were not in leadership roles.

10b. Correlations between Altruism and the 4 aspects of CC will be consequently higher in leaders than non-leaders.
10c. Correlations between Conscientiousness and the 4 aspects of CC will be consequently higher in leaders than non-leaders.

10d. There will be significant correlations between Openness of Experience and the 4 aspects of CC in the leader group that are not detected in non-leader group.

Results from this project suggest confirmed each hypothesis. Correlations between Altruism and the PSI dimensions were higher for leaders. Same with correlations between Conscientiousness and PSI dimensions, or Openness and PSI dimensions.

Except for organisations of unusual nature, a successful leader does not need to be an extreme altruist (cf. interpretation under Hypotheses 7d, 9b). Similarly, extreme high levels of Conscientiousness or Openness are not a sine qua non. However, without showing concern and caring it is difficult to maintain or increase influence over followers on the long term. The same argument may be developed regarding a leader being conscientious.

Moss & Barbuto (2010) demonstrated a direct link between Altruism and leader effectiveness. In the same study Altruism plays the role of mediator in a model predicting leadership effectiveness from dimensions of Ferris' "political skill". Altruism was conceptually defined outside FFM, and assessed by a scale in an organisational citizenship test rather than a personality inventory. One of Moss et al.'s hypotheses was that 'Altruism will enhance the relationship between political skills and effectiveness' in leaders (p. 163). They reported that higher Altruism boosted the relationship between Social Astuteness and leader effectiveness. However, the study only included successful and less successful leaders, without a control group of non-leaders. There is no room for a direct comparison with the New Zealand results regarding leader/non-leader disparity.
Wei, Liu, Chen & Wu (2010) conducted another empirical study of Altruism -- as part of organisational citizenship -- and leadership, in the context of Chinese guan-xi (informal connection through shared experience, the exchange of favours and trust). Organisational citizenship as a composite, showed significant (albeit numerically low) correlation with Ferris' "political skill". Altruism contributed to this link. The authors did not report specific figures for the 4 aspects of "political skill". In Germany, Blickle, et al. (2008) reported low, non-significant correlation between Conscientiousness and the composite of Ferris' "political skill" on a mostly non-leader group. Inferring from the restricted New Zealand set of participants, it appears that persons who hold leadership roles simultaneously show higher levels of these FFM traits and the four aspects of Ferris' "political skill". Given this co-occurrence it makes sense that hypothesis testing results in higher correlations between personality and "political skill". The non-leaders are relatively lower on either some of the personality or the "political skill" variables resulting in lower correlations overall (although, as testing Hypotheses 7d, 8a, 8b signalled, it was not necessarily the case that non-leaders were lower on the particular variables to a significant extent).

10e. There will be significant correlations between Emotional Stability and the 4 aspects of CC in the leader group that are not detected in non-leader group.

Findings demonstrate the assumption is merely partly true. Correlations between Emotional Stability and Interpersonal Influence, Networking Ability and Social Astuteness were higher for leaders, but the correlation between Emotional Stability and Apparent Sincerity was higher for non-leaders.
In the current results, correlations between Emotional Stability, on one hand, and Interpersonal Influence, Networking Ability and Social Astuteness, on the other, proved higher for leaders than non-leaders. These correlations appear not only statistically significant among leaders but, in case of 3 out of 4 dimensions of PSI, strong. The coefficients for the same 3 relationships are markedly lower for non-leaders.

As discussed (Section 2.1.2.5) high Emotional Stability is characterised by calm, patient, relaxed demeanour, and even-tempered, less emotional reactions in interpersonal settings; while low stability (neuroticism end of scale) associated with temperamental swings, worrying, and feelings of insecurity. A common core of neurotic behaviour is the emphasis on experiencing negative affect (see also interpretation under Hypothesis 7a). It makes sense to interpret the findings as corroboration that calm, balanced leaders are able to exert and maintain better influence on colleagues and develop networks easier than neurotic leaders. It is assumed here that FFM traits of personality solidify earlier in the life span, and remain relatively more stable over time, than Ferris' skill dimensions.

Emotional Stability is shown by large-scale meta-analyses to impact on job performance across a range of roles (positive relationship inferred by Salgado, 1997; cf. Judge & Bono, 2001). Leadership roles are no exception (e.g. Bass & Stogdill, 1990). Perrewé, et al. (2005) demonstrated that elements of Ferris' "political skill" might alleviate stress reactions and help with stress management in conflictuous work situations. Leaders encounter such situations daily. So leaders in this group may have had their emotional balance reinforced by being able to mitigate stressful situations using successful communication practices (elements like Interpersonal Influence).
The correlation between Emotional Stability and Apparent Sincerity was higher for non-leaders. However, this may be a marginal result; while r does not reach level of significance in the leader sub-group, the numerical values of the two coefficients are only 0.03 apart.

Phipps & Prieto (2011) posit that emotionally stable leaders are confident in their abilities and therefore lack the nervousness that prevents individuals from building and managing relationships through effective negotiation, compromise, and conflict resolution, as well as leading through engagement. Thus, they link this quality to Ferris’ “political skill”, also deemed as necessary for relationship building, negotiating, and deal making, and hypothesise that “political skill” strengthens the relationship between Emotional Stability and leadership. This is supported to a certain extent by findings from McCrae & Costa (1989) where the PSI was moderately negatively associated with the anxiety trait from the neuroticism scale of the NEO-FFI, measuring the inverse of emotional stability. The results of the present study diverge slightly, due to the Apparent Sincerity correlation with leader Emotional Stability.

10f. There will be significant correlations between Professionalism and the 4 aspects of CC in the leader group that are not detected in non-leader group.

The present study produced results indicating this hypothesis is true. Correlations between Professionalism and the four political skill dimensions were higher for leaders.

As mentioned (interpretation under Hypothesis 7f, Appendix A25), exploring the construct of Professionalism in the available leadership literature is problematical, given
that Professionalism is a less recognised construct. Professionalism as operationalised in BAQ relates to drivers such as ambition, results-orientation, being critical, strategic, and autonomous. With this view, it makes practical sense that leaders require these qualities as they strive to influence, persuade, and control others within the organisational context. Testing of Hypothesis 7f corroborated that in the current project, leaders were higher in Professionalism than non-leaders; and 8c verified that leaders had better Networking Ability. It is then unsurprising to find notable correlations between Professionalism and the aspects of CC in the "leader" sub-group, and that these are greater than correlations for the same variables in "non-leader" sub-group.

Blickle, Frohlich, Ehlert, Pirner, Dietl, Hanes, & Ferris (2011) assessed the effect of “political skill” on the interaction of work values and positive work outcomes. Their data provided support for this investigation, revealing significant positive interactions between work values and “political skill” when studied as determinants of supervisors’ ratings of promotability. Findings on a constrained New Zealand set of participants show that individuals who hold leadership roles simultaneously display higher levels of Professionalism and the four aspects of Ferris' "political skill". Given this co-occurrence it makes sense that hypothesis testing results in higher correlations between personality and "political skill" in the leader sub-group. Beyond that study, there is no room for a direct comparison with the New Zealand results regarding leader disparity across the Professionalism and “political skill” link specifically.

**Hypothesis 11: Relationships between level of leadership experience and tenure on current job, on one hand, and occupation-relevant personality traits, on the other, will be moderated by aspects of CC.**
The results from testing these hypotheses mostly failed to confirm expectations. The multiple regression analyses carried out in the current study did not demonstrate the hypothesised statistically significant interaction effects between Extraversion, Altruism, and Conscientiousness and CC, respectively.

11a. The relationship between Extraversion and leadership experience (also tenure as leader) will be higher among persons with higher CC.

Extraversion emerged as a significant predictor of leadership tenure (cf. earlier findings for Hypotheses 3, 7b), but levels of CC do not seem to play into the nature of this relationship. When testing Hypothesis 7b, leaders emerged with higher levels of Extraversion. Overseas findings on leadership show Extraversion as a strong predictor of leadership, among FFM traits (Judge, et al., 2002). Leaders who exercise more social influence and have greater energy (extraverted and thus assertive, gregarious) are expected to be more influential, which should lead to higher levels of organisational performance.

There are few if any studies published on a possible statistical interaction effect of CC and Extraversion regarding impact on leader performance. Though not looking at leaders specifically, Blickle, Wendel & Ferris (2010) investigated car salesmen, testing the interaction effect with Extraversion X “political skill” (as independent variables) and job performance (dependent). The authors posited that combined Extraversion and “political skill” should generate greater sales performance; the hypothesis was supported. Extraversion without “political skill” can be detrimental to sales performance when salespersons lack Social Astuteness to "read" and assess their behaviour as appropriate for the situation. If perceived as assertive or domineering, they earn
rejection by customers. This proposition can be tentatively extrapolated to leader-follower relationship. With Extraversion deemed necessary for leadership, CC is also required to ensure that a leader has the ability to self-regulate, such as suppress the expression of emotions in sensitive situations and respond in a way to influence.

More broadly, the findings from hypothesis testing were against expectations. It was reasonable to assume that CC would strengthen the relationship between Extraversion and leadership experience, as with both Extraversion and CC a leader will be more successful at initiating and maintaining relationships with followers, due to their gregariousness and Networking Ability. They will also be more likely to use these relationships that they have built to influence and motivate their followers in order to ensure organisational and personal gains.

11b. The relationship between Altruism and leadership experience (also tenure as leader) will be higher among persons with higher CC.

Results indicate this hypothesis is false.

Individuals high on Altruism are kind, fair, and eager to help others. Altruism may partly stem from anger regulation and similar control abilities, depicting effective leaders as other-centred, caring, and well self-regulated. Testing Hypothesis 10b revealed correlations between Altruism and CC to be higher amongst leaders. However, the hypothesis was not corroborated.

A number of studies have found significant relationships between Altruism and various measures of employee performance, such as research conducted by Borman, Penner,
Allen & Motowidlo (2001). Moreover, Mount et al. (1998) found that Altruism was the best predictor out of the FFM traits of job performance in occupations that require team-based interaction. It can be seen that Altruism is concerned with the motive for maintaining positive relations with others and getting along in groups, thus, it can be held that CC interacts with Altruism in the prediction of job performance. Blickle et al. (2008) found support for the latter proposition. A similar result was expected in this project, that leaders with CC would have the social capacity to effectively portray their selflessness in a sincere way.

Though the result of this hypothesis test was not an anticipated finding, prior research could explain the results. Graziano, Jensen-Campbell, and Hair (1996) found that persons who were low on Altruism evaluated power assertion tactics as more effective than those who were high on Altruism. This could suggest that for those who are low on Altruism, possessing political skill is ineffective because of such persons’ inability to be compliant, fair, or helpful when interacting with others, and because of their preference for tactics involving the overt use of power.

Additionally, the notion of low CC coupled with high Altruism has been toted as ineffective within the work context. As Mount et al (1998) argue, too much unselfishness can be detrimental to leaders, particularly in service industries, as leaders who are too compliant to the demands of others will find it difficult to not only meet the goals of the organisation, but will have difficulty in gathering the necessary resources for their role.
11c. The relationship between Conscientiousness and leadership experience (also tenure as leader) will be higher among persons with higher CC.

The results of this study showed that this hypothesis was false. Considering that Conscientiousness has been labelled as the most important trait-based motivation variable in the field of industrial and organisational psychology (Schmidt & Hunter, 1992), it is surprising that this trait has not emerged with an interaction effect with CC to represent leadership effectiveness.

Goldstein, Zedeck & Goldstein (2002) suggest, “some predictors referred to as ‘noncognitive’ may contain a cognitive component”. CC is one such noncognitive predictor reflecting ability. Examining a Conscientiousness X CC interaction was thought to be an appropriate way to test the interaction hypothesis as relevant to criteria reflecting the interpersonal effectiveness of leadership. The notion that CC acts as a moderator is consistent with recent theoretical arguments that social skill constructs moderate the impact of the environment on work behaviour (Jordan, Ashkanasy & Hartel, 2002).

Recent theoretical and empirical work hints specifically of a Conscientiousness X Social Skill interaction. Goleman (1998) suggested that Conscientiousness without social skill could lead to problems. In other words, when highly conscientious people lack social skills, working with them may be particularly difficult. Conscientious individuals without social skill can be seen as unreasonably demanding, inflexible, and micromanaging. Thus, highly conscientious, yet socially unskilled workers likely pursue matters well beyond the point desired by others. They might be seen as not just
fighting the wrong battles but rather as fighting almost every battle, perhaps in their minds “for the good of the company” or “to do what is right”.

5.2 Limitations: A critical appraisal

It is important that limitations of the present study are noted so that the interpretation of local results be viewed with caution and critically scrutinised. Directions for future research are also suggested.

5.2.1 Sampling and generalisation

The goal of most empirical research in organisational psychology is to generalise from local findings. Ideally, a Master's project using quantitative analysis should aim to draw conclusions relevant to a larger environment, with broader, more diverse sets of persons.

The current research produced local findings. These may have relevance well beyond the environment in a single organisation, and possibly beyond New Zealand organisations as a whole. However, the participant group is not, strictly speaking, a sample. Without a sample, generalisation of findings is not possible (Lazerwitz, 1968; Frankfort-Nachmias & Nachmias, 1996).

In today's I/O research – including numerous papers in refereed journals – the original logic of sampling and generalisation is frequently sidelined or ignored. Sets of participants are described as 'convenience samples' or 'ad hoc samples'; techniques like snowball sampling are reported. These sets of respondents, strictly speaking, do not
constitute samples. In order to generalise, empirical work must be based on a genuine sample – preferably a representative sample.

The term 'sample' is associated with the requirement of sampling from a population, using a methodologically sound technique of sampling (preferably based on sampling strategy; Hansen et al., 1953; Sampath, 2001; Singh, 2003). There needs to be a clear distinction between population and sample. With the exception of demographic work such as a macrocensus, all members of a population cannot be assessed. In order to sample from a population, the population has to be tightly defined (e.g. 'female New Zealanders aged 35 to 55, employed full-time in January 2015'). In the current project, it was – for logistic reasons – impossible to start with a tight population definition. Further, it was not viable to obtain a master list for population, nor derive a sample by a systematic sampling procedure (Frankfort-Nachmias & Nachmias, 1996).

Our set of participants does not, in the strict sense, constitute a sample. A fortiori, a probabilistic sampling procedure yielding a representative sample was not used; there is no basis for claiming the participant group represents a pertinent population (e.g. all employed New Zealanders; or, for the leadership sub-set, New Zealanders who hold leadership roles).

Lack of sampling per se is fairly common in student research, and not necessarily reprehensible. Unrepresentative 'convenience samples' are witnessed in many psychology masterates and doctorates worldwide. It may be unfeasible, even self-defeating, in the current climate to aim at proper sampling. Even under the unrealistic assumption that one attempts a large-scale demographical or sociological study with
ample budget, a master list for sampling leaders would probably be impossible to obtain. Beyond this, systematic sampling procedures, even if used, have major procedural challenges for empirical researchers (Frankfort-Nachmias & Nachmias, 1996; Sampath, 2001; Singh, 2003). There are differences among a planned sample, a designed (drawn) sample (i.e. a list of persons to be contacted as potential participants), and an executed sample (persons supplying data).

All these considerations warn that generalising from results reported here would be premature, non-defensible. Regarding psychological antecedents of leadership, the diversity of leader-level jobs in New Zealand and the variance among hundreds of organisational environments indicate that generalisation from the findings to all New Zealand leaders is unwarranted. However, the results offer fruitful ideas for planning statistically representative work in future.

5.2.2 A critical view on psychometric tools used

The standardised tests used in the project, BAQ and PSI, enjoy worldwide distribution, with demonstrated psychometric properties. Both have gone through a best-practice test development process, then repeatedly reviewed and improved. The validation and reliability work on PSI are widely published (Ferris, et al., 2005; Semadar, et al., 2006). Evidence regarding validity and reliability of BAQ has also been proffered (Bogaert, et al, 2006).

These instruments, however, are imported into New Zealand. They are used with groups of testees whose characteristics may not overlap with the testees featuring in original test development projects. Validity, with all its aspects (content-, criterion-, and
construct-related) should be seen as a series of measurement development stages supplying incremental evidence, rather than a single act of estimation. Validity "levels" of a tool are not set in stone. Same applies to reliability. When a test is moved to a different environment, macro (e.g. South Pacific/New Zealand) or micro (particular sector of economy, or particular occupational group) it must be adapted.

Test adaptation is a multi-faceted, complex process involving, as a minimum, production of new local norms (if the test is norm-referenced); translation of instructions and items; item analysis; reliability estimation; re-validation; cultural checks (Hambleton, 1996, 2001; Hambleton & Patsula, 1998). In Section 4.1, further aspects of importation and adaptation of psychometric tests were outlined.

While it is unquestionable that one should examine the appropriateness of using both BAQ and PSI in New Zealand firms, a complete adaptation and re-examination of these tools is well beyond the logistics of a masterate. E.g. more precise item analyses, as well as construct validation, require an $N$ several times higher than $N=102$. Criterion-related validation of either BAQ or PSI would necessitate a separate project equal in size to what has been done, practically doubling the requirement for labour and time-line.

Instead, the current project undertook a few important, if incomplete, checks on how soundly the tests function in New Zealand. The ideal of 'measurement equivalence' or 'invariance' depends, among others, on the way item-level responses contribute to scale- or test-level scores, anchoring (sub-) constructs. A user should establish whether the local data reproduce FFM structure in BAQ responses. Similarly, one must check
whether local responses on PSI reproduce the original structure (sub-constructs) of PSI. Apart from these construct reviews, reliability was re-estimated for both tools.

It was expected that the FFM model would be replicated via BAQ data, given claims of BAQ developers, and the universality of FFM structures across many cultures (Hough & Ones, 2001). As a common procedure of construct validation, factor analysis was used to investigate the dimensionality of the BAQ, over the item-item matrix. A 6-factor model emerged, identifying a clear pattern. The 6-factor solution resembles the original conceptual model underlying the BAQ. It replicates scale structure and most of the item assignations. This outcome allows muted optimism that the theoretical foundation of the BAQ is applicable to New Zealand, and scales and scale scores will not require radical adaptation (Bogaert, et al., 2006). It confirms that FFM traits are probed by BAQ, and permits psychometric links to FFM-based tests outside BAQ, as well as results produced by them (Costa & McCrae, 1992a, Goldberg, 1990; Digman, 1990; Hough & Schneider, 1996; McCrae & Costa, 1985; 1987; 1997; McCrae & John, 1992).

While the results offer modest support towards the usefulness of the BAQ in occupational settings, there is further work required to validate the factor structure. The N in the study was well under the minimum recommended for the given type of factor analysis.

Acknowledging scientific support for the cross-cultural appropriateness of FFM-based instruments (Costa & McCrae, 1992b), McCrae & Terracciano (2006) noted that there was an absence of any New Zealand norms for any FFM-based personality test. These norms do exist today (e.g. with leading consultancy agencies) but remain unpublished.
In New Zealand work only partly relevant to leadership, Packman, Brown, Englert, Sisarich and Bauer (2005) suggested differences among ethnic groups. Other research using New Zealand respondents showed great similarity with United States findings based on FFM personality tests (Guenole & Chernyshenko, 2005). Mean levels of personality traits from 51 cultures were compared, with some similarity between North America and New Zealand (McCrae & Terracciano, 2005). The two nations have comparable mean levels of the FFM domain-level scores, and some facet-level scores.

The claimed 4-factor structure of the PSI was also re-examined over New Zealand data. Factor analysis investigated the dimensionality of the PSI measure. A 3-, rather than 4-factor model emerged, identifying a clear pattern of responses. The factor solution slightly diverges from the original model, as Interpersonal Influence did not emerge as a self-sufficient component. Most of the international validation studies of PSI provide robust evidence in support of the 4-way structure, anchoring the model of "political skill". Here, a New Zealand replication of factorial outcome from Ferris and colleagues (2005) was not yet reached.

It is premature to conclude that the 4 components of "political skill" fail to replicate in professional adults in New Zealand. Alternative procedures of multivariate analysis, including the use of confirmatory FA, or different rotation techniques, on appropriately sized representative samples will be needed before conclusion is drawn. The 3-factor outcome serves as a reminder that scale scores should be used in a new environment with caution.
5.2.3 Constraints imposed by conceptualisation and operationalisation

Chapter 2 makes the pluralism of leadership models in organisational psychology palpable. Similarly, there are competing models of personality, as well as CC. An empirical project such as this needs to opt for one conceptual model out of the many; then choose one data collection tool out of several that are built on the model adopted. These decisions entail caveats for interpreting any result, and highlight the fragility of generalisation just as sampling deficiencies do.

The use of the PSI as a measure of CC could be seen as a limitation. As mentioned (Chapter 2), there is a lack of validated measures of CC aside from the CCQ focusing on narrower content. The use of the PSI in this study served to measure what was deemed to be a central sub-area of leadership communication. Results in this study indicate relationships that certainly do not apply to a richer model of CC, due to the use of PSI. Further investigation is needed to establish how measures in PSI relate to the total communicative competence of a leader.

Adopting FFM may also be criticised as a limitation within the present study. It has been argued that when facet-level scores are excluded, FFM scales will render description of personality coarse, with too few traits to adequately map human personality (Warr, Bartram & Martin, 2005). Some facet-level variables of FFM model are better predictors of behaviour than global dimensions (Ashton, Jackson, Paunonen, Helmes & Rothstein, 1995), with suggestions to focus on facet scores particularly when the criterion variable for validation is narrowly defined (Murphy & Dziewczynski, 2005).
Before personality and CC models, a deeper limitation affecting results is the concept of leadership adopted. The comparisons between the leader and non-leader sub-set guiding our statistical analysis obscure the fact that leaders assessed include diverse leadership styles. The limited research on leadership success loosely operationalised leadership success as promotion (Jansen & Vinkenburg, 2006) and advancement (Collins, 2002; Vitek, 2003). Implicitly, such an operationalisation affects the study when respondents were classified as leaders versus non-leaders. Leadership emergence versus effectiveness are two distinct constructs, separately examined by some authors (Lord, De Vader & Alliger, 1986). Research on leadership emergence has looked at factors that are associated with whether an individual is perceived to have leadership qualities and is likely to emerge as a leader. In contrast, leadership effectiveness refers to a leaders’ ability to influence their followers. The two constructs also imply different planes of analysis, and the present study neglected this distinction. Future research would benefit from investigating leader personality and CC in terms of both leadership emergence and leadership effectiveness. FFM traits were found to explain 28% of variance for ratings of leader emergence, and 15% for leadership effectiveness (Bono & Judge, 2004).

5.2.4 A panorama of extended research

The findings of the current project inspire more extended research work; the limitations entail obvious modifications in design and execution of future investigations. The lack of sampling and small number of cases, imposed by reliance on volunteer respondents, should be overcome in a more appropriately conducted project. Even if systematic sampling from a master list, using a probabilistic regime, is not feasible, the likelihood that a respondent group is representative of the population of interest has to be increased (Leong & Austin, 1996). Small group size implied a low degree of freedom in analyses,
and could have impacted on the ability to identify significant relationships. Some multivariate analyses cannot be responsibly conducted in such a small $N$.

Any representation of particular sub-groups via demographic variables was not planfully pursued. A diversity among the participants was a matter of using a process of convenience. For example, the respondent group of the present study has too few Māori and Pasifika persons, and comprises employees mostly belonging to the private sector. Future studies in the current area of I/O would benefit from attempting to replicate analyses with a random stratified sample where diversity of the New Zealand working population, regarding pre-defined variables and values, is mapped.

In order to improve on adequacy and generalisability, the "instamatic", cross-sectional nature of the assessment has to be reviewed. Data collection on personality and CC was conducted within a short timeframe. In reality, traits and skill components change over time and enter complex relationships that themselves fluctuate over time. Whilst core personality is assumed to be relatively stable after early adulthood, narrow occupational personality traits do shift. Even more, elements of CC, and any possible interaction effects between these constructs, are subject to temporal change in the occupational environment. Our data may, at best, provide a snapshot of the variables included within this study at a particular point in time.

In an extended project, several waves of measurement of all variables would enable statistical tests of multivariate causal models (e.g. path analysis). As an ideal design, future research into leadership personality and CC would benefit from genuine
longitudinal studies to determine cause and effect. In the multi-dimensional space, mediation and moderation effects are also an important area for future research.

Given the use of self-report tools for data collection, for both personality and "political skill", responses then results of the study may have been influenced by simulation/dissimulation, by socially desirable answers. Ferris et al. (2005) provide validation evidence reporting a four-factor structure of the PSI; but admits that the exclusive use of self-report data prompts questions concerning how robust those findings are. Self-ratings are prone to several biases, despite the self often being in the best position to report on one’s own behaviour and perceptions (Spector & O’Connell, 1994). This could be problematic if the PSI is to be used for leadership selection and development purposes in the future. Alternative research may either scrutinise response distortion for BAQ and PSI in a separate methodological study, or conjoin these tools with tests which have safeguards against distortion (e.g. 'administration scales' in personality inventories).

The possibility that any associations discovered between occupation personality traits and CC traits are a function of common-method variance (Furnham, Petrides, Tsaousis, Pappas & Garrod, 2005) is also raised. Future studies in the area of leadership personality and CC would benefit from utilising multi-method approach. Apart from standardised tests, such efforts could include other- (rather than self-) ratings, behavioural observations, and (regarding leaders) follower or peer interviews.
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Background on linguistic competence argument

As part of summarising a few central tenets of Communicative Competence (CC) theory, Section 2.1.3.4.1 reviews theoretical antecedents of CC. The introduction of CC as a new concept in theoretical and applied linguistics can best be understood if contrasted to pre-existing models of 'linguistic competence' and 'grammatical competence'. This Appendix outlines conceptual proposals, such as Chomsky's competence/ performance distinction, that anchored and enriched such models before the advent of CC research.

(A)

Linguistic potentialities

Language is a shared medium of a community, but situated language use varies from person to person (Fillmore, Kempler, & Wang, 1979). Findings in applied linguistics and the psychology of language, from classical research into affective connotation in lexical meaning (Osgood, Suci, & Tannenbaum, 1957; Osgood, May, & Miron, 1975) to experimental projects (Daneman & Carpenter, 1980; Carpenter & Just, 1989; Carpenter, Miyake, & Just, 1994, 1995) demonstrate theoretically and practically weighty individual differences in the use of natural language. Variation is systematic rather than random, and not entirely idiolect-based (Oksaar, 1987).

Inter-individual differences are manifested in using one's native language(s) in areas such as language comprehension, production, and acquisition. It is a truism that such differences are noticeable in second language learning and use.
Theoretical linguistics predominantly focused on 'knowledge' of symbol systems shared by members of a community of users; in simplistic terms, on knowledge that does not vary from individual to individual. Sharing these systems is one condition enabling members to communicate. In case inter-individual differences in language use exist, these become a legitimate subject of inquiry. Therefore it is legitimate to look for constructs explaining and predicting the individual differences, rather than just manifestations of divergence (e.g. different ways in which Leader Ld1 versus Leader Ld2 communicate in a real-life context).

A differential-psychological view seeks to introduce covert explanatory entities to explain why manifestations differ. For example, the construct of verbal intelligence (Carroll, 1993) can be used to explain why Individual In1 is able to accurately follow complex sentences with multiple subordinate clauses while Individual In2 fails to comprehend them. Differential psychology has in many cases advanced 'in tandem' with psychometrics. Researchers in the tradition attempted to obey the law of parsimony when postulating new constructs, and sought defensible operationalisations of each construct as far as possible. Most operationalisations resulted in psychometric tools (such as language proficiency tests).

While the major issue for the differential psychologist is to signal that a test is 'construct valid' (capable of tapping a hypothetical construct) and reliable, a more recent cognitive approach to differences in language use investigates mental processing (e.g. the information processing sequences required for an output).
In practice, psychometric operationalisations of constructs may have some utility without a genuine cognitive inquiry. For instance, total scores of a test can accurately predict a future behaviour of practical importance (the 'criterion' of criterion-related validity). Applied linguistics and language testing (Bostrom, 1984; Rivera, 1984; Bachman & Palmer, 1981, 1982; Verhoeven & de Jong, 1992) made extensive use of this possibility. However, optimisation of measurement by psychometric tests requires insight into the processing occurring when test takers respond, or solve problems presented in tests.

Constructs of language comprehension were among the first for which a full cognitive de-composition of test tasks was attempted. The later work of John B. Carroll and his componential models (see Carroll, 1968, 1979, 1985, 1987, 1993; Carroll & Freedle, 1972) pioneered the study of information processing underlying responding to items of language tests (Curtis, 1986).

(B)

Grammatical competence and accounting for language use

It has become a literary commonplace to conceive of CC as a notion introduced in contradistinction to Noam Chomsky's grammatical competence. While some potentialities of users were investigated for a long time before the 1950s --mainly in educational research -- it was the competence/performance distinction (Chomsky, 1965) that made linguists aware of how necessary a precisely delimited concept of competence is. The distinction is rooted in de Saussure's langue/parole theory.

Chomsky described linguistic competence as a form of knowledge:
'We .... make a fundamental distinction between competence (the speaker-hearer's knowledge of the language), and performance, the actual use of language in concrete situations'

(Chomsky, 1965, p. 4).

This knowledge, possessed by an idealised language user, enables her/him to produce well-formed strings of symbols, and distinguish well-formed from ill-formed strings. Chomsky's linguistic competence was elaborated in concordance with his consecutive theories of grammar, such as versions of transformational generative grammar. It was further adjusted when 'generative semanticists' re-modelled grammar (cf. Maclay, 1971, for a critical summary), signalling the adequacy of the label 'grammatical competence'. Chomskyan grammatical competence has a phonological and syntactic, later a syntacto-semantic, emphasis. The main, syntactic, component of competence was outlined as an automaton represented as a sequence of rules generating well-formed sentences in abstracto. Further, competence was depicted as a human faculty that is mostly 'biological' - in other words, is inborn and pre-wired – or at least dependent on a genetically determined apparatus (Pinker, 2007, 2013).

Performance, in Chomsky's original competence/ performance distinction, is close to realistic language use. Chomsky (1965) equated performance with situated language use, although interpretation of the Chomskyan notion of a 'situation' is disputed. Performance includes factors manifested in real-life use that are thought to be external to grammatical competence. Examples point to psychological aspects of users such as memory resources (that may limit the number of clauses in sentences with multiple embedding), attention shifts, fluctuation of interest (Chomsky, 1964). From the
psycholinguist's point of view, both Chomskyan competence and performance proved to be fruitful. Rules in models of grammatical competence triggered the research programme of 'psychological reality' (Greene, 1972, 1986). The impact was especially notable in empirical analyses of syntactic and semantic mechanisms in human sentence processing (Carroll, 1986).

Researchers also examined non-linguistic cognitive factors that influence comprehension and production. Pioneers such as Charles E. Osgood attempted to build a 'performance grammar' in psychological terms.

It might first appear that the competence/performance distinction is in line with an older paradigm in empirical psychology: the correlational tradition. At first glance, the distinction follows the classical dichotomy of potentiality (constructs) and manifestation (observable behaviour). Chomsky's competence, further, is an example of a hypothetical construct in that it has 'added meaning' (as opposed to a 'bare' variable defined by a formula), assumes a mental entity, and is introduced as part of a multi-concept model inviting mutual clarification of constructs (MacCorquodale and Meehl, 1948).

In an insightful study to clarify Chomsky's, Hymes', Munby's and Corder's views on competence, Taylor denies the above parallelism. He claims that a 'source of difficulty is the ... interpretation of competence to include ability ... Chomsky's original definition of the term always excluded this idea' (Taylor, 1988, pp. 148-149).
Taylor distinguishes an 'absolute' and a 'relative' variant of linguistic competence, and claims Chomsky's notion is absolute. This distinction is supposed to be sharper than the so-called 'strong' versus 'weak' interpretation of competence (Campbell & Wales, 1970; Greene, 1972). By an 'absolute' linguistic competence Taylor means that the notion does not 'admit degrees'; therefore it does not, and is not intended to, account for inter-individual variability. So, while grammatical competence is a construct, and it can explain situated, real-time language use, it is not a differential or 'relative' construct, and is not meant to explain patterns of use that differ from individual to individual.

Chomsky (1980) states that the term 'competence' is misleading if it happens to suggest ability.

In Reflections on Language (1975) Chomsky considers 'mind .... as an innate capacity to form cognitive structures, not first-order capacities to act'. He asserts that 'knowledge' of a language -- the way he originally defined competence -- is not a 'capacity' or 'ability' to act, 'though it enters into the capacity or ability exercised in language use' (p. 23). He draws a taxonomy of mental constructs with two strata. Competence is placed at a more profound level (abstract cognitive structure) while capacity, ability, as well as 'dispositions', at a distinct, shallower level (Chomsky, 1975).

Locating the competence notion at a level more abstract than differential-psychological constructs, and restricting it to universally possessed architecture, makes us more aware of the necessity of introducing a construct such as CC that

- is meant to, and is fit to, account for inter-individual variance in language use;
- fulfils this expectation at the level of an underlying potentiality rather than relegating it to the level of observable manifestation (performance);
includes precisely stated rules outside phonology, syntax, and semantics (e.g. socio-cultural appropriateness rules).

(C)

Conceptualising communicative ability: the linguistic competence/CC antinomy

The original proposal of CC (Hymes, 1967a/1970; Jakobovits, 1970) recognises that Chomsky's grammatical competence does not cover sufficiently many aspects of an assumed construct required to explain individual variance in language use. This can appear unsurprising if grammatical competence is taken, as originally intended, as a model of a 'knowledge' most human minds possess (Widdowson, 1989). Intended goals of Chomsky's competence theory also discouraged inclusion of pragmatic aspects of competence as defined in linguistic pragmatics (Levinson, 1983; Mey, 1993). The theory focused on idealised functioning stripped of the factors operating in natural communication settings.

Introducing CC appeared useful, in the first instance, as:

- grammatical competence (as a 'non-ability', 'absolute' concept) did not attend to all internal preconditions for language use, especially not use in interpersonal or social context;
- as originally suggested (Chomsky, 1965), performance was a notion unsuited for developing a full-fledged theory of potentialities, such as those in situated language use.
The consequences of these observations were first drawn in the early work of Hymes (1967a/1970, 1967b/1974, 1967c, 1970) and Jakobovits (1970), leading to conceptual exploration of a notion of CC.

To be a successful user in a naturalistic situation, one needs grammatical competence (e.g. syntactic generator/parser and lexicon). However, there are further elements and mechanisms to be assumed in order that:

- one could describe how users mobilise a static 'knowledge of language';
- situated language use be explained and/or predicted;
- regular patterns of inter-individual difference in use are accounted for.

(Examples for the 'extended' mechanisms are provided by familiar notions of pragmatics such as computation of illocutionary force, or accommodation to relative statuses of speaker and hearer.)

The necessity to broaden grammatical competence entailed a shift from static, universal competence to genuine differential-psychological constructs. It motivated studies of a number of distinct aspects of language potentialities. They include pragmatic, social, sociolinguistic and discourse competence (even competence in using non-linguistic semiotic systems as part of conversation). There is no reason to exclude any of these as a legitimate target for modelling competence in communication, in a broader sense of 'communication'.

Within a short time, several alternative models of CC were suggested (Munby, 1968; Corder, 1973; Rivers, 1973; Paulston, 1974; Canale & Swain, 1979, 1980, 1981; see

Models of pragmatic (Bates, 1976; Kasper & Blum-Kulka, 1993; Ifantidou, 2014) conversational (Ochs Keenan, 1974; Ochs & Schieffelin, 1983; Dimitracopoulou, 1990; Geis, 1995), interpersonal (Wiemann & Kelly, 1981; Wiemann, Takai, Ota, & Wiemann, 1997) or dialogic competence (Weigand, 1997) were also developed, without adopting the terminology of CC.
Appendix A05

Personality tests: Tests adapted for occupational use

16PF

Cattell (1946) identified 16 primary level personality traits, which he viewed as the basic elements of personality. Using factor analysis, Cattell developed the Sixteen Personality Factor questionnaire (16PF) (Cattell, Eber, & Tatsuoka, 1970), which provides scores on the following factors: Warm vs. Reserved (A), Abstract-Reasoning vs. Concrete-Reasoning (B), Emotionally Stable vs. Reactive (C), Dominant vs. Deferential (E), Lively vs. Serious (F), Rule-Conscious vs. Expedient (G), Socially Bold vs. Shy (H), Sensitive vs. Utilitarian (I), Vigilant vs. Trusting (L), Abstracted vs. Grounded (M), Private vs. Forthright (N), Apprehensive vs. Self-Assured (O), Open to Change vs. Traditional (Q1), Self-Reliant vs. Group-Oriented (Q2), Perfectionistic vs. Tolerates Disorder (Q3), Tense vs. Relaxed (Q4). These factors are assessed through 185 questions in a three-choice format.

The 16PF is a widely used measure of personality characteristics; since its release in 1949 it has been applied in a range of settings, including industrial and organisational, clinical and counselling, and education (Cattell, et al., 1970; Conn & Rieke, 1994). There is a widespread body of research demonstrating the 16PF’s ability to predict a wide variety of occupational profiles (Cattell, et al., 1970; Conn & Rieke, 1994; Russell & Karol, 2002; Schuerger & Watterson, 1998; Walter, 2000), and it has also been deemed useful in predicting executive and leadership styles (Cattell, et al., 1970; Cattell, et al., 1999; Roy, 1995; Watterson, 2002).
The 16PF’s lower level trait approach to the study of personality is one aspect often used in criticisms of the Big Five model of personality, where personality is viewed at a global level and may not provide the same level of detail as lower level trait examinations (Boyle, Stankov, & Cattell, 1995; Kline, 2013; Warr, Bartram & Martin, 2005). The 16PF does project five global factor scores in addition to its primary level traits: Extraverted vs. Introverted (EX), High Anxiety vs. Low Anxiety (AX), Tough-Minded vs. Receptive (TM), Independent vs. Accommodating (IN), Self-Controlled vs. Unrestrained (SC).

Despite the positives of Cattell's 16PF, the most apparent criticism in the literature is that despite many later research attempts, his theory has never been entirely replicated (Eysenck & Eysenck, 1969, 1987; Sells, et al., 1970; Noller, Law, Comrey, 1987). This could have been due to errors in Cattell’s factor analysis computations, thus hindering the possibility of replication. Also, the use of the 16PF in an organisational context could be questioned as it is not designed specifically for use in the workplace; rather, it measures traits in a number of contexts.

CPI

The California Psychological Inventory (CPI) purports to measure 20 features of normal personality important for social living and interaction (Gough & Weinhart, 1975). The author conceptualised the 20 basic scales as dimensions of interpersonal behaviour that exist in all human societies, explaining the label “folk concepts” (Bolton, 1992). These 20 scales are: Dominance (Do), Capacity for Status (Cs), Sociability (Sy), Social Presence (Sp), Self-Acceptance (Sa), Independence (In), Empathy (Em), Responsibility (Re), Socialization (So), Self-Control (Sc), Good Impression (Gi), Communality (Cm),
Well-Being (Wb), Tolerance (To), Achievement via Conformance (Ac), Achievement via Independence (Ai), Intellectual Efficiency (Ie), Psychological-Mindedness (Py), Flexibility (Fx), Femininity/Masculinity (Fm). Assessments are made using 462 true/false items. Overall, the CPI is viewed as an excellent and reliable normal personality assessment (Bolton, 1992).

The CPI has been validated as a predictor of occupational performance in police officers by Pugh (1985) and Hogan (1971). A breakthrough meta-analysis by Aamodt (2004, Aamodt & Weiss, 2010) of police psychology selection data provided support for the predictive validity of the CPI. The developer of the CPI posits that as leadership is a mode of social conduct, the instrument is theoretically a relevant tool for the study of the phenomenon (Gough, 1969). Several studies are cited as providing evidence on the utility of the CPI when linked to leadership (Carson & Parker, 1966; Collins, 1967; Liddle, 1958; Elliott, 1960; Johnson & Frandsen, 1962), however these studies exploit students, college males and military programme attendees in their participant groups, thus the extrapolation of the findings to occupational incumbents could have been compromised.

An issue that organisational psychologists should be aware of when using the CPI is the inclusion of 194 items from the Minnesota Multiphasic Personality Inventory (MMPI) that refer to symptoms of pathology; this constitutes almost half of the assessment. Seventy of these items present themselves as explicit indicators of depression, paranoia, hysteria, hypochondriasis, and similar problems. The use of such psychiatric-focused items in an organisational context to assess variations in normal personality functioning is questionable.
*NEO-PI-R*

The purpose of conducting the NEO-PI-R (Costa & McCrae, 1992b) is to measure the five main dimensions of normal, individual adult personality, which accords with the Five Factor model of personality. The instrument is comprised of a 240-item questionnaire, measuring 30 facets across the five domains. Each domain is comprised of the following six facets: Neuroticism – anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability; Extraversion – warmth, gregariousness, assertiveness, activity, excitement-seeking, positive emotions; Openness – fantasy, aesthetics, feelings, actions, ideas, values; Agreeableness – trust, straightforwardness, altruism, compliance, modesty, tender-mindedness and Conscientiousness – competence, order, dutifulness, achievement striving, self-discipline, deliberation.

The NEO-PI-R has been adopted by a number of professionals in the organisational psychology field. Application of the NEO-PI-R can include developing strategies for selection and placement in order to find the optimal match between the person and position; rational strategies require that the organisational psychologist determine the optimal personality profile for a particular position and seeks candidates who have such a profile (McCrae, 1996).

McCrae (1996) suggests that based on many studies reviewed earlier, “it would be reasonable to look for high scores on Conscientiousness in candidates for almost any job”. Costa & McCrae (1995) looked at the correlation of the NEO-PI-R with occupational scales, and showed that desirable employees are well adjusted and conscientious - two facets that are linked to the Conscientiousness domain. Other
studies also support this trait as a predictor of desirable employees and accordingly, successful job performance (Barrick & Mount, 1991; Mount & Barrick, 1995; Salgado, 1997; Tett, Jackson, & Rothstein, 1991; Tokar & Subich, 1997). Though the explicit use of the NEO-PI-R in the examination of leaders is missing, the trait of Conscientiousness has been considered important to several components of leadership, such as motivating others, goal-setting, and task-orientation (Aronoff & Wilson, 1985; Barrick, Mount, & Strauss, 1993; Costa & McCrae, 1992a; Kirkpatrick & Locke, 1991).

The NEO-PI-R is only a starting point for personnel predictions because of its broad nature. Nonetheless, Boyle, Matthews, & Saklofske (2008) state that results from the NEO-PI-R have been used to predict real-life outcomes such as occupational change, life satisfaction, and coping with traumatic events. This suggests evidence of occupational related criterion-validity of the NEO-PI-R.

**MBTI**

The Myers-Briggs Type Indicator (MBTI) is one of the most widely used personality tools, with over three million people a year completing it (Center for Applications of Psychological Type, CAPT, 1992, in Gardner & Martinko, 1996), with major corporations administering the MBTI predominantly for team building and leadership development. Jung’s (1971) psychoanalytical conceptualisation of personality provided the basis of the MBTI. This inventory seeks to classify the personality traits of individuals along four continuums, and produces 16 subtypes of personality “types”. It is composed of 94 forced-choice items that constitute the four bipolar scales implied in Jung’s theory. The four dimensions of the MBTI include:

- Extraversion versus Introversion
Michael (2003) notes that the MBTI has become popular as a leadership development tool. Bass & Stogdill (1990) report that in a sample of 875 US managers who were tested between 1979 and 1983, individuals were concentrated in the following four subtypes: ISTJ; ES TJ; ENTJ; and, INTJ. It has been posited that such “leader” types gravitate toward leadership positions (Gardner & Martinko, 1996). However Myers & Myers (1980) note that because each type has certain strengths, no particular type is superior. In fact, no particular type has been linked to leadership, and the use of the MBTI on its own has been found to provide an incomplete picture of managerial behaviour (Walck, 1996; Michael, 2003). This is concerning, as the MBTI often appears as a stand-alone tool or as a lead-in to a leadership-training programme.

Criticism for the MBTI’s use in the leadership context exists, as it is being used in ways that it was not originally intended for. Moreover, the MBTI has been psychometrically criticised. Gardner & Martinko (1996) note that concerns exist about the MBTI’s psychometric properties and have led researchers to seek alternative measures. Critics have also noted that the MBTI does not give comprehensive information on all the scales (Furnham, 1996). Additionally, concerns exist regarding type theory and its operationalisation. McCrae & Costa (1989), in Furnham (1996), note that the MBTI is unusual among personality assessment tools as it is based on classic theory, and the original concepts posited by Jung are distorted with the MBTI attempting to
operationalise Jung’s theory in ways that are inconsistent. Studies using the MBTI have not always confirmed the theory or the validity of the measure.
Appendix A06

Personality tests: Tests for occupational use

**OPQ**

The Occupational Personality Questionnaire (OPQ) is a workplace specific personality assessment developed by SHL to predict how a person might behave in the work setting (Saville, Holdsworth, Nyfield, Cramp, & Mabey, 1984). It is widely used in the UK, where it was developed in the early 1980s, and has been translated into at least 15 different languages for use around the globe. Through 416 items, the OPQ provides scores on the following 30 scales that are grouped into 3 areas: Relationships with People (Persuasive, Controlling, Independent, Outgoing, Affiliative, Socially Confident, Modest, Democratic, Caring); Thinking Style (Practical, Data Rational, Artistic, Behavioral, Traditional, Change Oriented, Conceptual, Innovative, Forward Planning, Detail Conscious, Conscientious), and Feelings and Emotions (Relaxed, Worrying, Tough-Minded, Emotional Control, Optimistic, Critical, Active, Competitive, Achieving, Decisive).

The OPQ differs from the other personality measurements described in this thesis, at it was not developed to suit a single theory of personality; instead, an “eclectic approach” was used utilising personality traits and management style constructs proposed by theorists such as Cattell, Murray, Eysenck, and Hersey, as well as appraisal documentation and personality construct markers from the observation of a sample of people in work (Saville, Sik, Nyfield, Hakston & MacIver, 1996).

Evidence supporting the job-related validity of the OPQ instruments has been reported in a number of studies across a range of industry sectors and job types (e.g. Saville, Sik,
Nyfield, Hackston, & MacIver, 1996; Robertson & Kinder, 1993; SHL, 1989, 1995) though the OPQ manual provides some superficial discussions, and references unpublished validation studies, which is of concern. There is a scarcity of literature available that looks at the OPQ with regards to leadership. It seems that for practitioners, the attractiveness of the OPQ lies in its high face validity.

15FQ+

The 15FQ+ was developed as a workplace version of the 16PF (Cattell, et al., 1970). Through 200 items, the 15FQ+ measures 15 bipolar scales – Empathic, Emotionally stable, Dominant, Enthusiastic, Conscientious, Socially bold, Tender-minded, Suspicious, Abstract, Restrained, Apprehensive, Radical, Self-sufficient, Self-disciplined, and Tense-driven – which can be combined to calculate scores for the five global personality factors that reflect the Big Five personality traits. The five global scales of the 15FQ+ are: Extraversion, Neuroticism, Openness, Agreeableness, and Self-Control (Psychometrics International, 2002).

The 15FQ+ measures the 15 non-ability factors that the 16PF identified; the excluded 16th factor is the B factor that measures an ability source trait – intelligence (Cattell, et al., 1970). Factor B was excluded from the 15FQ as it is now commonly accepted that ability factors can only be reliably measured through the use of timed tests. As such, untimed personality tests are unable to assess intelligence with an acceptable degree of reliability and validity (Psychometrics International, 2002).

Published in 1949, the 15FQ+ remains one of the most commonly used personality inventories (Cattell & Krug, 1986), with its reliability and validity appearing to be
reasonably well supported. Strong correlations with the 16PF point to the strong construct validity of the 15FQ+ (Moyo & Theron, 2011). However, there is little criterion-related validity evidence for the instrument, but organisations throughout the world have used the 15FQ+ widely.

**HPI and HDS**

Developed in line with socioanalytic theory and modelled on the CPI, the Hogan Personality Inventory is designed for the assessment of normal personality and is used in personnel selection, individualised assessment, and career-related guidance (Hogan & Hogan, 1995). The focus for this tool is on practical use within a workplace context, as is apparent in its business-focused language and writing style; thus it presents with good face validity. The following scales, established through factor analysis, comprise the primary level traits: Intellectance, Adjustment, Ambition, Sociability, Likeability, Prudence, and School Success, and these scales can be aligned with the Big Five model. The instrument consists of 206 true/false items.

As noted, the HPI can be mapped onto the Big Five model. The authors (Hogan & Hogan 2007:15, 17) claim though that the HPI offers a more detailed description of personality, asserting for example that Extraversion and Openness to Experience should be subdivided in the following way – Extraversion into Ambition (dominance, ambitiousness) and Sociability (gregariousness, communicativeness) and Openness to Experience into Inquisitiveness (imagination, cognitive style, openness to the new) and Learning Approach (educational style, information processing).
With regards to leadership, Hogan, et al. (1994) emphasise the presence of social and interpersonal skills; these skills are reflected in the HPI’s personality traits such as adjustment (e.g., being self-confident and able to handle pressure), social impact (e.g., being outgoing and assertive), and agreeableness (e.g., being warm and friendly).

Rooted in the taxonomies of the personality disorders, the Hogan Development Survey (HDS) is designed to assess 11 common dysfunctional dispositions – these 11 scales are: Excitable, Skeptical, Cautious, Reserved, Leisurely, Bold, Mischievous, Colorful, Imaginative, Diligent and Dutiful (Hogan & Hogan, 1997). The HDS is used in occupational settings to assess the “dark side” of human personality. The instrument consists of 168 agree/disagree items. The authors’ rationale for the HDS’s development is the paucity of tools mapping dysfunctional interpersonal behaviour outside the clinical area.

The authors note that the Big Five model normally captures people when they are controlling themselves and trying to produce maximum performance (Hogan & Hogan 2007). There are situations, however, when a person stops controlling their public image, for example when stressed, bored, or exhausted. Research indicates that in these situations there are characteristics people display that go beyond the Big Five (Hogan & Hogan 2007: 4 – 8). Here the HDS can be utilised.

Although previous research has examined “bright” and “dark” personality characteristics in the prediction of leadership effectiveness (Judge, Bono, Illies, & Gerhardt, 2002) there is little validation research supporting the use of the HPI and HDS in the occupational context.
## Appendix A07

### Table 3-01 Demographic statistics of respondent group

Table 3-01  
*Demographic statistics of respondent group*

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>30.4%</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
<td>69.6%</td>
</tr>
<tr>
<td>Currently in leadership position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>47</td>
<td>46.1%</td>
</tr>
<tr>
<td>No</td>
<td>55</td>
<td>53.9%</td>
</tr>
<tr>
<td>Years of leadership experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>42</td>
<td>41.2%</td>
</tr>
<tr>
<td>&lt;1 to 4 years</td>
<td>27</td>
<td>26.5%</td>
</tr>
<tr>
<td>5 to 9 years</td>
<td>23</td>
<td>22.5%</td>
</tr>
<tr>
<td>10 to 19 years</td>
<td>6</td>
<td>5.9%</td>
</tr>
<tr>
<td>20+ years</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Unusable result</td>
<td>1</td>
<td>1.0%</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 – 29</td>
<td>42</td>
<td>41.2%</td>
</tr>
<tr>
<td>30 – 39</td>
<td>33</td>
<td>32.4%</td>
</tr>
<tr>
<td>40 – 49</td>
<td>15</td>
<td>14.7%</td>
</tr>
<tr>
<td>50 – 59</td>
<td>12</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

Ethnicity
<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZ European/Pakeha</td>
<td>70</td>
<td>68.6%</td>
</tr>
<tr>
<td>NZ Euro/Pakeha &amp; Pacific</td>
<td>12</td>
<td>11.8%</td>
</tr>
<tr>
<td>Island/Māori</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other European</td>
<td>11</td>
<td>10.8%</td>
</tr>
<tr>
<td>NZ Euro/Pakeha &amp; Asian/Indian</td>
<td>5</td>
<td>4.9%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

**Education level**

<table>
<thead>
<tr>
<th>Level</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s or higher</td>
<td>10</td>
<td>9.8%</td>
</tr>
<tr>
<td>Bachelors degree</td>
<td>50</td>
<td>49.0%</td>
</tr>
<tr>
<td>Other degree</td>
<td>4</td>
<td>3.9%</td>
</tr>
<tr>
<td>Lower tertiary qualification</td>
<td>20</td>
<td>19.6%</td>
</tr>
<tr>
<td>Completed secondary school</td>
<td>16</td>
<td>15.7%</td>
</tr>
<tr>
<td>Did not complete secondary school</td>
<td>2</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

**Years of work experience**

<table>
<thead>
<tr>
<th>Experience</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 to 9 years</td>
<td>34</td>
<td>33.3%</td>
</tr>
<tr>
<td>10 to 19 years</td>
<td>41</td>
<td>40.2%</td>
</tr>
<tr>
<td>20 to 29 years</td>
<td>18</td>
<td>17.7%</td>
</tr>
<tr>
<td>30+ years</td>
<td>9</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

**Tenure at current organisation**

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>24</td>
<td>23.5%</td>
</tr>
<tr>
<td>1 year to &lt;5 years</td>
<td>37</td>
<td>36.3%</td>
</tr>
<tr>
<td>5 years to &lt;10 years</td>
<td>29</td>
<td>28.4%</td>
</tr>
<tr>
<td>10 years+</td>
<td>12</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

**Occupation**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR &amp; recruitment</td>
<td>18</td>
<td>17.6%</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Marketing</td>
<td>12</td>
<td>11.8%</td>
</tr>
<tr>
<td>Education</td>
<td>9</td>
<td>8.8%</td>
</tr>
<tr>
<td>Administration &amp; support</td>
<td>9</td>
<td>8.8%</td>
</tr>
<tr>
<td>Specialist</td>
<td>8</td>
<td>7.8%</td>
</tr>
<tr>
<td>Retail &amp; sales</td>
<td>8</td>
<td>7.8%</td>
</tr>
<tr>
<td>Accounting &amp; finance</td>
<td>8</td>
<td>7.8%</td>
</tr>
<tr>
<td>Trades</td>
<td>6</td>
<td>5.9%</td>
</tr>
<tr>
<td>Public services</td>
<td>4</td>
<td>3.9%</td>
</tr>
<tr>
<td>IT</td>
<td>4</td>
<td>3.9%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>4</td>
<td>3.9%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Hospitality</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Self employed</td>
<td>2</td>
<td>2.0%</td>
</tr>
<tr>
<td>Insurance</td>
<td>2</td>
<td>2.0%</td>
</tr>
<tr>
<td>Executive</td>
<td>2</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
### Appendix A08

Table 3-04 Summaries of facet-level constructs in BAQ, with high-end and low-end labels

<table>
<thead>
<tr>
<th>BAQ Factor</th>
<th>BAQ Facet</th>
<th>Negative Pole Descriptor</th>
<th>Positive Pole Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Stability</td>
<td>Relaxed</td>
<td>Feels anxious or guilty in the event of failure, worried, lacking calmness, nervous</td>
<td>Free from anxiety, maintains a calm attitude in the event of failure, calm and relaxed</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>Optimistic</td>
<td>Expects things to go wrong, worries about how things will turn out, pessimistic</td>
<td>Confident that things will turn out well, does not worry how things will turn out, remains cheerful</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>Stress-resistant</td>
<td>Susceptible to stress, difficulties to cope with tension and pressure, quickly affected by situations</td>
<td>Not subjected to stress, not particularly bothered by tension and pressure, not easily affected by situations</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>Decisive</td>
<td>Hesitates over decisions, needs time to reach conclusions</td>
<td>Takes decisions quickly, draws conclusions quickly</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Leading</td>
<td>Lets others take the lead, does not take initiative, does not like giving instructions</td>
<td>Likes to lead, takes initiative, gives others instructions</td>
</tr>
<tr>
<td>Personality Trait</td>
<td>Dimension</td>
<td>Negative Characteristics</td>
<td>Positive Characteristics</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Communicative</td>
<td>Does not like speaking, has difficulties to keep the conversation going, is inarticulate</td>
<td>Likes speaking, keeps conversation going, is articulate</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Persuasive</td>
<td>A poor salesperson, not at ease in negotiations, non convincing</td>
<td>Able to sell, at ease in negotiations, convincing</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Motivating</td>
<td>Uninspiring, lacks a motivating influence, does not motivate others for the task</td>
<td>Inspires others, has a motivating influence, fills others with enthusiasm for the task</td>
</tr>
<tr>
<td>Openness</td>
<td>Abstract</td>
<td>Concrete, both feet on the ground, practical-minded</td>
<td>Theoretical, intellectually curious, likes complex, abstract things</td>
</tr>
<tr>
<td>Openness</td>
<td>Innovative</td>
<td>Lacks inventiveness and creativity, rarely thinks of new ways of seeing things</td>
<td>Is creative, generates new ideas and thinks of original ways of seeing things</td>
</tr>
<tr>
<td>Openness</td>
<td>Change-oriented</td>
<td>Prefer routine, needs security, prefers regularity to variety</td>
<td>Likes change, tries out new things, prefers variety to regularity</td>
</tr>
<tr>
<td>Openness</td>
<td>Open-minded</td>
<td>Does not see many possibilities, has trouble thinking up alternatives and options</td>
<td>Sees various possibilities, thinks up alternatives and options</td>
</tr>
<tr>
<td>Altruism</td>
<td>People-oriented</td>
<td>Enjoys being alone, is not very fond of company, is focused on himself/herself, does not need company</td>
<td>Enjoys group situations, is fond of company, is focused on others, seeks out company</td>
</tr>
<tr>
<td>Altruism</td>
<td>Cooperating</td>
<td>Rarely consults, rarely involves others, does not seek out cooperation, places own interests above those of the group</td>
<td>Consults others, involves others, seeks out cooperation, places group’s interests above his/her own</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Altruism</td>
<td>Helpful</td>
<td>Self-involved, is not concerned about others, lacks considerateness, leaves others fend for themselves</td>
<td>Helps when others face problems, gives advice, is considerate</td>
</tr>
<tr>
<td>Altruism</td>
<td>Socially confident</td>
<td>Finds it hard to establish contacts, does not always get along with people, unfriendly, unpleasant</td>
<td>Establishes contacts easily, cheerful, gets along with people, friendly, pleasant, spontaneous</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Organised</td>
<td>Does not work to a plan, pays insufficient attention to time limits, pays little attention to routine tasks</td>
<td>Plans carefully in the light of priorities, sets time limits, pays attention to routine tasks</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Meticulous</td>
<td>Not very methodical or meticulous, has little eye for detail</td>
<td>Works methodically and meticulously, pays attention to details</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Rational</td>
<td>Pays little attention to facts, relies on intuition, tends not to quantify, speaks or acts first and thinks afterwards</td>
<td>Sticks to the facts, evaluates and measures, quantifies, thinks twice before speaking or acting</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Persevering</td>
<td>Loses heart quickly, gives up when facing opposition, drops things quickly, rarely sees tasks through to a</td>
<td>Does not give up when facing setbacks, keeps trying and perseveres, persists in the face of opposition, gets stuck</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Ambitious</td>
<td>successful conclusion into the task</td>
<td>Career-minded and ambitious, sets difficult objectives, wants to go far, wants to get ahead</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>-------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Critical</td>
<td>Not very critical in his/her approach, accepts information or ideas from others without questioning them</td>
<td>Examines information critically, identifies potential drawbacks and limitations</td>
<td></td>
</tr>
<tr>
<td>Result-oriented</td>
<td>Not very result-oriented, feels little need to achieve a great result, lacks competitiveness</td>
<td>Likes to achieve results, wants to stand out, is competitive-minded</td>
<td></td>
</tr>
<tr>
<td>Strategic</td>
<td>Sets short-term objectives, looks at things from an operational or short-term perspective</td>
<td>Sets long-term objectives, looks at things from a strategic or long-term perspective</td>
<td></td>
</tr>
<tr>
<td>Autonomous</td>
<td>Adapts to the situation, takes account of the circumstances, does not show own approach or opinion</td>
<td>Influences the situation, makes his/her own mark, has his/her own approach and opinion</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Derived from information within the BAQ technical manual (Bogaert, et al., 2006).
### Table 3-05 Examples of items from item groups assigned to each facet of the BAQ

<table>
<thead>
<tr>
<th>BAQ Facets</th>
<th>Example Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>I like working with ideas and concepts</td>
</tr>
<tr>
<td>Ambitious</td>
<td>I want to reach the highest possible level in my career</td>
</tr>
<tr>
<td>Autonomous</td>
<td>I decide my own way of working</td>
</tr>
<tr>
<td>Change Oriented</td>
<td>I regularly try out new things</td>
</tr>
<tr>
<td>Communicative</td>
<td>I like to actively contribute in a conversation</td>
</tr>
<tr>
<td>Cooperating</td>
<td>I think teamwork is very important</td>
</tr>
<tr>
<td>Critical</td>
<td>I critically evaluate information rather than blindly accepting what is said</td>
</tr>
<tr>
<td>Decisive</td>
<td>I make decisions quickly</td>
</tr>
<tr>
<td>Helpful</td>
<td>I take the time to help colleagues</td>
</tr>
<tr>
<td>Innovative</td>
<td>I offer original perspectives</td>
</tr>
<tr>
<td>Leading</td>
<td>I am a leader who delegates</td>
</tr>
<tr>
<td>Meticulous</td>
<td>I pay attention to detail</td>
</tr>
<tr>
<td>Motivating</td>
<td>I can motivate people to complete a task</td>
</tr>
<tr>
<td>Open Minded</td>
<td>I elaborate several alternatives</td>
</tr>
<tr>
<td>Optimistic</td>
<td>I look on the bright side</td>
</tr>
<tr>
<td>Organised</td>
<td>I plan completion times for activities</td>
</tr>
<tr>
<td>People Oriented</td>
<td>I seek out the company of other people</td>
</tr>
<tr>
<td>Persevering</td>
<td>I do not give up quickly</td>
</tr>
<tr>
<td>Trait</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Persuasive</td>
<td>I can persuade others to embrace my opinion</td>
</tr>
<tr>
<td>Rational</td>
<td>I prefer to rely on objective facts</td>
</tr>
<tr>
<td>Relaxed</td>
<td>I usually keep calm</td>
</tr>
<tr>
<td>Result Oriented</td>
<td>I am keen to stand out from the competition</td>
</tr>
<tr>
<td>Socially Confident</td>
<td>I find it easy to network with other people</td>
</tr>
<tr>
<td>Strategic</td>
<td>I mainly pay attention to the long-term</td>
</tr>
<tr>
<td>Stress Resistant</td>
<td>I remain calm when I am under pressure</td>
</tr>
</tbody>
</table>
Appendix A10

3-06 Reliability information for each factor and facet of the normative section of the BAQ

Table 3-06

*Internal consistency (alpha reliability coefficients) for each factor and facet of the normative section of the BAQ*

<table>
<thead>
<tr>
<th>BAQ Factors and Facets</th>
<th>Alpha Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>0.96</td>
</tr>
<tr>
<td>Relaxed</td>
<td>0.89</td>
</tr>
<tr>
<td>Optimistic</td>
<td>0.92</td>
</tr>
<tr>
<td>Stress-resistant</td>
<td>0.93</td>
</tr>
<tr>
<td>Decisive</td>
<td>0.92</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.97</td>
</tr>
<tr>
<td>Leading</td>
<td>0.96</td>
</tr>
<tr>
<td>Communicative</td>
<td>0.93</td>
</tr>
<tr>
<td>Persuasive</td>
<td>0.93</td>
</tr>
<tr>
<td>Motivating</td>
<td>0.92</td>
</tr>
<tr>
<td>Openness</td>
<td>0.96</td>
</tr>
<tr>
<td>Abstract</td>
<td>0.95</td>
</tr>
<tr>
<td>Innovative</td>
<td>0.94</td>
</tr>
<tr>
<td>Change-oriented</td>
<td>0.90</td>
</tr>
<tr>
<td>Open-minded</td>
<td>0.92</td>
</tr>
<tr>
<td>Altruism</td>
<td>0.96</td>
</tr>
</tbody>
</table>
People-oriented 0.95
Cooperating 0.91
Helpful 0.92
Socially confident 0.93

Conscientiousness 0.95
Organised 0.89
Meticulous 0.93
Rational 0.90
Persevering 0.91

Professionalism -
Ambitious 0.92
Critical 0.90
Result-oriented 0.90
Strategic 0.91
Autonomous 0.90

Sample: 4650 Dutch-speaking candidates (1557 women and 3093 men) (Bogaert, et al., 2006).
### Appendix A11

#### Table 3-07 Reliability of BAQ: Split-half correlations

**Table 3-07**

*Correlations between the first and second halves of the BAQ*

<table>
<thead>
<tr>
<th>BAQ Factors and Facets</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>0.79</td>
</tr>
<tr>
<td>Optimistic</td>
<td>0.79</td>
</tr>
<tr>
<td>Stress-resistant</td>
<td>0.81</td>
</tr>
<tr>
<td>Decisive</td>
<td>0.83</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.92</td>
</tr>
<tr>
<td>Leading</td>
<td>0.89</td>
</tr>
<tr>
<td>Communicative</td>
<td>0.83</td>
</tr>
<tr>
<td>Persuasive</td>
<td>0.84</td>
</tr>
<tr>
<td>Motivating</td>
<td>0.73</td>
</tr>
<tr>
<td>Openness</td>
<td>0.90</td>
</tr>
<tr>
<td>Abstract</td>
<td>0.87</td>
</tr>
<tr>
<td>Innovative</td>
<td>0.86</td>
</tr>
<tr>
<td>Change-oriented</td>
<td>0.80</td>
</tr>
<tr>
<td>Open-minded</td>
<td>0.81</td>
</tr>
<tr>
<td>Altruism</td>
<td>0.89</td>
</tr>
<tr>
<td>People-oriented</td>
<td>0.87</td>
</tr>
<tr>
<td>Cooperating</td>
<td>0.82</td>
</tr>
<tr>
<td>Helpful</td>
<td>0.79</td>
</tr>
<tr>
<td>Trait</td>
<td>Score</td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Socially confident</td>
<td>0.82</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.87</td>
</tr>
<tr>
<td>Organised</td>
<td>0.79</td>
</tr>
<tr>
<td>Meticulous</td>
<td>0.84</td>
</tr>
<tr>
<td>Rational</td>
<td>0.72</td>
</tr>
<tr>
<td>Persevering</td>
<td>0.80</td>
</tr>
<tr>
<td>Professionalism</td>
<td>-</td>
</tr>
<tr>
<td>Ambitious</td>
<td>0.75</td>
</tr>
<tr>
<td>Critical</td>
<td>0.77</td>
</tr>
<tr>
<td>Result-oriented</td>
<td>0.78</td>
</tr>
<tr>
<td>Strategic</td>
<td>0.80</td>
</tr>
<tr>
<td>Autonomous</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Sample: 4650 Dutch-speaking candidates (1557 women and 3093 men) (Bogaert, et al., 2006).
Appendix A12

Table 3-08 Construct validity of BAQ: Convergent validation findings

Table 3-08

*Correlations between factors of the BAQ and the NEO-PI-R*

<table>
<thead>
<tr>
<th>NEO-PI-R Factors</th>
<th>Emotional Stability</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Altruism</th>
<th>Conscientiousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>-0.42**</td>
<td>-0.25</td>
<td>-0.11</td>
<td>-0.15</td>
<td>-0.05</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.23</td>
<td>0.53**</td>
<td>0.30**</td>
<td>0.36**</td>
<td>0.07</td>
</tr>
<tr>
<td>Openness</td>
<td>0.07</td>
<td>0.23</td>
<td>0.44**</td>
<td>0.12</td>
<td>-0.02</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.03</td>
<td>-0.35**</td>
<td>-0.17</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.14</td>
<td>0.19</td>
<td>0.14</td>
<td>0.18</td>
<td>0.47**</td>
</tr>
</tbody>
</table>

*Note.* Correlations marked * are significant at $p<.05$, those marked ** are significant at $p<.01$. 
The factors in the BAQ show a significant link to the equivalent factors in the NEO PI-R. The test provider explains the negative correlation between Emotional Stability and Neuroticism as a result of the poles of the Emotional Stability factor being swapped around with the Neuroticism factor; this is because the term neuroticism has clinical significance.

The low correlation between the Altruism factor and the factor of Agreeableness in the NEO PI-R is explained in terms of the different orientation of these two facets. During the BAQ development, clinical aspects were removed from the Altruism factor and replaced by facets that reflect personality in a professional context; for example, the altruism and compliance presented in the NEO PI-R versus helpful and co-operative presented in the BAQ. The test provider further explains that facets of Altruism in the BAQ correspond more to facets of Extraversion in the NEO PI-R, hence the correlation result. Different factor analyses conducted on the BAQ confirm the relevance of the Altruism and Extraversion factors, as defined by the BAQ.

The test provider comments on the correlation between Openness in the BAQ and Extraversion in the NEO PI-R. Openness shows a significant correlation with the NEO-PI-R domain Extraversion. This relationship is explained in terms of Extraversion being also defined as an outwards orientation, suggesting an open attitude. This is in contrast with Introversion, which is defined as an inwards orientation (Jung, 1933).
## Appendix A13

### Table 3-09 Factor analysis of the BAQ facets (Varimax rotation)

<table>
<thead>
<tr>
<th>BAQ Facets</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relaxed</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimistic</td>
<td>0.65</td>
<td></td>
<td></td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Stress-resistant</td>
<td>0.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decisive</td>
<td>0.47</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leading</td>
<td></td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicative</td>
<td></td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persuasive</td>
<td></td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivating</td>
<td></td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td></td>
<td></td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative</td>
<td></td>
<td></td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change-oriented</td>
<td></td>
<td></td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-minded</td>
<td></td>
<td></td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People-oriented</td>
<td></td>
<td></td>
<td></td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Cooperating</td>
<td></td>
<td></td>
<td></td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td></td>
<td></td>
<td></td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>Socially confident</td>
<td></td>
<td></td>
<td></td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Organised</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.81</td>
</tr>
</tbody>
</table>
Sample: 4650 Dutch-speaking candidates (1557 women and 3093 men) (Bogaert, et al., 2006).

Factor 1 can be defined as Emotional Stability, factor 2 as Extraversion, factor 3 as Openness, factor 4 as Altruism and factor 5 as Conscientiousness, given that the selected facets in each case clearly load onto the factors concerned. The various facets’ loading on “their” factor is great enough to justify their place in their factor. Only the facets decisive and optimistic also have a loading onto other domains, Extraversion and Altruism respectively. The instrument developer explains these findings as follows:

“The higher loading of the “Optimistic” facet on the “Altruism” factor is because the “Altruism” facets also require a positive attitude. A similar trend can be found in the factor analysis of the NEO PI-R, where the “Irritation” scale has a negative loading on “Altruism”. The higher loading of the “Decisive” facet on the “Extraversion” factor can be explained in the same way by the tendency of people who describe themselves as extravert to come to decisions easier and quicker. Extravert people are dominant people who take initiatives and take the lead and who are often responsible for making decisions” (Bogaert, et al., 2006).
Appendix A14

Table 3-11 Items and scale assignations in PSI

Table 3-11

Political Skill Inventory (PSI) items

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>PSI Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I spend a lot of time and effort at work networking with others</td>
<td>Networking ability</td>
</tr>
<tr>
<td>2</td>
<td>I am able to make most people feel comfortable and at ease around me</td>
<td>Interpersonal influence</td>
</tr>
<tr>
<td>3</td>
<td>I am able to communicate easily and effectively with others</td>
<td>Interpersonal influence</td>
</tr>
<tr>
<td>4</td>
<td>It is easy for me to develop good rapport with most people</td>
<td>Interpersonal influence</td>
</tr>
<tr>
<td>5</td>
<td>I understand people very well</td>
<td>Social astuteness</td>
</tr>
<tr>
<td>6</td>
<td>I am good at building relationships with influential people at work</td>
<td>Networking ability</td>
</tr>
<tr>
<td>7</td>
<td>I am particularly good at sensing the motivations and hidden agendas of others</td>
<td>Social astuteness</td>
</tr>
<tr>
<td>8</td>
<td>When communicating with others, I try to be genuine in what I say and do</td>
<td>Apparent sincerity</td>
</tr>
<tr>
<td>9</td>
<td>I have developed a large network of colleagues and associates at work who I can call on for support when I really need to get things done</td>
<td>Networking ability</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Skill</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>10</td>
<td>At work, I know a lot of important people and am well connected</td>
<td>Networking ability</td>
</tr>
<tr>
<td>11</td>
<td>I spend a lot of time at work developing connections with others</td>
<td>Networking ability</td>
</tr>
<tr>
<td>12</td>
<td>I am good at getting people to like me</td>
<td>Interpersonal influence</td>
</tr>
<tr>
<td>13</td>
<td>It is important that people believe I am sincere in what I say and do</td>
<td>Apparent sincerity</td>
</tr>
<tr>
<td>14</td>
<td>I try to show a genuine interest in other people</td>
<td>Apparent sincerity</td>
</tr>
<tr>
<td>15</td>
<td>I am good at using my connections and network to make things happen at work</td>
<td>Networking ability</td>
</tr>
<tr>
<td>16</td>
<td>I have good intuition and am savvy about how to present myself to others</td>
<td>Social astuteness</td>
</tr>
<tr>
<td>17</td>
<td>I always seem to instinctively know the right things to say or do to influence others</td>
<td>Social astuteness</td>
</tr>
<tr>
<td>18</td>
<td>I pay close attention to people’s facial expressions</td>
<td>Social astuteness</td>
</tr>
</tbody>
</table>

Note. Table adapted from Ferris, Davidson & Perrewe (2005).
Appendix A15

Information sheet for participants

Leadership Personality and Communication in the Workplace Research

Information Sheet

My name is Caroline Schischka and I am currently at Massey University completing my Masters in workplace psychology. As a part of my degree I am completing a thesis.

The topic I am researching is leadership personality and communication in the workplace and I am keen for your involvement in this study.

I am looking for professional adults at various levels who are currently working in New Zealand to take part in my research. Participation in this study involves completing a personality questionnaire and another very short survey online. The questions you will be asked will examine your behaviours in a workplace context. They will take you approximately one hour to complete.

By taking part in this study, you will gain exposure to some of the types of questions that are commonly asked in a workplace personality questionnaire. Additionally, you will be contributing to leadership research in New Zealand. The findings from my study may help to improve communication in leadership in New Zealand.

Your name will remain anonymous, as you will be assigned an ID number. You will not be asked to name the organisation you work for. The data you provide will be
treated as confidential and will only be viewed by my thesis supervisor and myself. The results of the study will be used for scholarly purposes only.

At your request, I will be glad to provide you with feedback on your individual responses to the survey, as well as share with you the research findings at the study’s conclusion.

If you would like to take part in this research, or if you know of anyone else who would be interested in participating, please contact me on 021 252 3020, or email me at c.schischka@gmail.com. If you have any questions at all about the study, please do not hesitate to get in touch.

Thank you kindly in advance for your participation.

This research has been deemed as low risk by the Massey University Human Ethics Committee.
Dear <insert participant name>,

Thank you for taking part in my research. The time you are putting into participating is greatly appreciated. There are two surveys that I would like you to complete, and it is important that you complete the surveys in the order specified. All together, they should take you no longer than an hour to do. If you are able to complete both of these surveys by the end of the week, that would be extremely helpful.

The first survey you will be completing is called the Business Attitudes Questionnaire (BAQ). This survey is designed to measure your work related behavioural preferences. It should take you about 40 minutes to complete. In this survey, you will be required to describe yourself by means of a number of statements. You will be presented with blocks of five statements that you will be required to evaluate in two different ways:

- Your first task is to indicate the extent to which you agree with each statement, using a scale that ranges from completely agree to completely disagree.

- Your second task is to look again at each block and rank the five statements in terms of how applicable it is to you, using a scale that ranges from most applicable to least applicable.
You will receive more instructions on your screen when you proceed with this questionnaire.

The second survey should take you about 10 minutes to complete. It will contain some questions that are, again, designed to measure your behavioural preferences in the workplace. You will be presented with a statement, which you will need to evaluate in terms of how much you agree with it. You will indicate you much you agree with each statement using a scale that ranges from strongly disagree to strongly agree.

This survey will also contain a range of demographic questions so I can collect important data on the characteristics of the people that have chosen to take part in this research. This data will be used for statistical purposes only.

Although there are no time limits on either questionnaire, I advise that you go through both questionnaires quickly and not spend too long thinking about any statement. Your first answer is often the closest to reality.

By beginning the surveys, you acknowledge that you have read the relevant information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time.

Your link to survey one:
<insert hyperlink to survey one>
Your link to survey two:

<insert hyperlink to survey two>

Please remember to complete both surveys. All data you provide will be treated as strictly confidential. My thesis supervisor and myself only will view your data and the findings.

If you have any questions about this research at any stage, please do not hesitate to contact me. I will be happy to answer any queries that you may have.

Thank you very much again for your participation. I greatly appreciate your help with completing my thesis.

Kind regards,

Caroline.
## Appendix A17

### Table 4-01 Factor analysis of BAQ: Component loadings

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
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<td>25</td>
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</table>

Extraction method: Principal Component Analysis.
Footnote: Kaiser-Meyer-Olkin measure of sampling adequacy was .80, and Bartlett’s test of sphericity was significant ($\chi^2$ (300) = 1674.84, $p$<.05). Internal consistency was examined using Cronbach’s alpha, reporting an alpha coefficient of .91.
### Table 4-02 Rotated factor structure of BAQ

**Table 4-02**

*Obliquely rotated component loadings for BAQ variables*

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Innovative</td>
<td>.790</td>
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<tr>
<td>Abstract</td>
<td>.781</td>
</tr>
<tr>
<td>Open-minded</td>
<td>.775</td>
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<tr>
<td>Change-oriented</td>
<td>.591</td>
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<tr>
<td>Strategic</td>
<td>.388</td>
</tr>
<tr>
<td>Leading</td>
<td></td>
</tr>
<tr>
<td>Communicative</td>
<td></td>
</tr>
<tr>
<td>Persuasive</td>
<td></td>
</tr>
<tr>
<td>Motivating</td>
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</tr>
<tr>
<td>Decisive</td>
<td>.393</td>
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<tr>
<td>Co-operating</td>
<td></td>
</tr>
<tr>
<td>People-oriented</td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td></td>
</tr>
<tr>
<td>Social confident</td>
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<tr>
<td>Rational</td>
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<tr>
<td>Meticulous</td>
<td></td>
</tr>
<tr>
<td>Organised</td>
<td></td>
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<td>Critical</td>
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<td>Item</td>
<td>Factor 1</td>
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<tr>
<td>-----------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Result-oriented</td>
<td>.823</td>
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<tr>
<td>Ambitious</td>
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<tr>
<td>Persevering</td>
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<tr>
<td>Autonomous</td>
<td>.321</td>
</tr>
<tr>
<td>Relaxed</td>
<td></td>
</tr>
<tr>
<td>Stress-resistant</td>
<td>.311</td>
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<tr>
<td>Optimistic</td>
<td>.320</td>
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</tbody>
</table>

Nine items loaded onto Factor 1. It is clear that the four highest loading items relate to the Openness domain of the BAQ – the participant group’s reported ratings on the attributes named Innovative, Abstract, Open-minded and Change-oriented. Critical – which falls under the Professional domain of the BAQ - loaded highly onto this factor too.

Seven items loaded onto Factor 2. The four highest loading items relate to the Extraversion domain of the BAQ - the participant group’s reported ratings on the attributes named Leading, Communicative, Persuasive and Motivating. Decisive – which falls under Emotional Stability domain of the BAQ – also loaded highly onto this factor.

Six factors loaded onto Factor 3. It is apparent that the four highest loading items relate to the Altruism domain of the BAQ – the participants group’s reported ratings on the attributes named Co-operating, People-oriented, Helpful and Social Confident. Motivating – which falls under Extraversion domain of the BAQ – also loaded highly onto this factor.
Eight factors loaded onto Factor 4. The three highest loading items relate to the Conscientiousness domain of the BAQ – the participant group’s reported ratings on the attributes named Rational, Meticulous and Organised. Critical – which falls under the Professional domain of the BAQ - loaded highly onto this factor too. The next highest loading item was Persevering, which relates to the Conscientiousness domain.

Eight factors loaded onto Factor 5. The two highest loading items relate to the Professionalism domain of the BAQ – the participant group’s reported ratings on the attributes named Results-oriented and Ambitious. The next two highest loading items relate to the Conscientiousness domain – Persevering and Organised. Following this, Strategic and Autonomous were found to load onto the Professionalism domain.

Critical – which falls under the Professional domain of the BAQ – is assumed to have a loading of <.30 and thus did not contribute to Professionalism.

Seven factors loaded onto Factor 6. It is apparent that the four highest loading items relate to the Emotional Stability domain of the BAQ – the participant group’s reported ratings on the attributes named Relaxed, Stress-resistant, Optimistic and Decisive.
Appendix A19

Table 4-03 Factor analysis of PSI: Component loadings

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
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<tr>
<td>2</td>
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<tr>
<td>18</td>
<td>.12</td>
<td>.66</td>
<td>100.00</td>
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</tbody>
</table>

Extraction method: Principal Component Analysis.
Footnote: Kaiser-Meyer-Olkin measure of sampling adequacy was .85, and Bartlett’s

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test of sphericity was significant ($\chi^2 (153) = 1091.21, p < .05$). Internal consistency was examined using Cronbach’s alpha, reporting an alpha coefficient of .91.
### Appendix A20

#### Table 4-04 Rotated factor structure of PSI

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>Factors</th>
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</thead>
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<td>1</td>
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<td>Networking ability 5</td>
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<td>Networking ability 4</td>
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<td>Networking ability 6</td>
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<tr>
<td>Networking ability 3</td>
<td>.785</td>
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<td>Networking ability 1</td>
<td>.680</td>
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<td>Networking ability 2</td>
<td>.644</td>
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<tr>
<td>Interpersonal influence 1</td>
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<td>Social astuteness 3</td>
<td>.346</td>
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<tr>
<td>Social astuteness 5</td>
<td></td>
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<tr>
<td>Social astuteness 1</td>
<td></td>
</tr>
<tr>
<td>Social astuteness 4</td>
<td>.483</td>
</tr>
</tbody>
</table>
Twelve items loaded onto Factor 1. It is clear that the six highest-loading items relate to
the Networking Ability domain. All four items of the Interpersonal Influence domain
also loaded highly onto this factor, with items 1 and 4 loading the highest: “I am able to
make most people feel comfortable and at ease around me” and “I am good at getting
people to like me”. Two items of the Social Astuteness domain loaded onto Factor 1
also.

Ten items loaded onto Factor 2. The three highest-loading items relate to the Apparent
Sincerity domain of the PSI. All four items of the Interpersonal Influence domain also
loaded highly onto this factor, with items 2 and 3 loading the highest: “I am able to
communicate easily and effectively with others” and “It is easy for me to develop good
rapport with most people”. Two items of the Social Astuteness domain and one item of
the Networking Ability domain loaded onto Factor 2 also.

Six factors loaded onto Factor 3. The five highest-loading items relate to the Social
Astuteness domain of the PSI. One item from the Interpersonal Influence domain also
loaded onto Factor 3.
Table 4-18 Correlation matrix for relationships among BAQ score variables

Table 4-18

*Relationships between the BAQ variables*

<table>
<thead>
<tr>
<th></th>
<th>Emotional stability</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Altruism</th>
<th>Conscientiousness</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness</td>
<td>.42**</td>
<td>.44**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruism</td>
<td>.31**</td>
<td>.52**</td>
<td>.45**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.28**</td>
<td>.28**</td>
<td>.17</td>
<td>.30**</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>.45**</td>
<td>.61**</td>
<td>.44**</td>
<td>.34**</td>
<td>.64**</td>
</tr>
</tbody>
</table>

Note. Coefficients marked * are significant at \( p < .05 \), those marked ** are significant at \( p < .01 \).

Significant relationships were discovered between Emotional Stability on the one hand, and all the dimensions of Extraversion (\( r = .49, p = .01 \)), Openness (\( r = .42, p = .01 \)), Altruism (\( r = .31, p = .01 \)), Conscientiousness (\( r = .28, p = .01 \)), and Professionalism (\( r = .45, p = .01 \)).

Significant relationships were found between Extraversion on the one hand, and Openness (\( r = .44, p = .01 \)), Altruism (\( r = .52, p = .01 \)), Conscientiousness (\( r = .28, p = .01 \)), and Professionalism (\( r = .61, p = .01 \)).
Significant relationships were found between Openness and Altruism \( (r = .45, p < .01) \), as well as Openness and Professionalism \( (r = .44, p < .01) \). Openness and Conscientiousness were uncorrelated.

Significant relationships were found between Altruism and Conscientiousness \( (r = .30, p < .01) \), as well as Altruism and Professionalism \( (r = .34, p < .01) \).

A significant relationship was noted between Conscientiousness and Professionalism \( (r = .64, p < .01) \).
Table A22

Table 4-19 Correlation matrix for relationships among PSI score variables

Table 4-19

Relationships between the PSI variables

<table>
<thead>
<tr>
<th></th>
<th>Apparent Sincerity</th>
<th>Interpersonal Influence</th>
<th>Networking Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Influence</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Influence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Networking Ability</td>
<td>.30**</td>
<td>.66**</td>
<td></td>
</tr>
<tr>
<td>Social Astuteness</td>
<td>.45**</td>
<td>.56**</td>
<td>.38**</td>
</tr>
</tbody>
</table>

Note. Coefficients marked * are significant at $p<.05$, those marked ** are significant at $p<.01$.

All of these relationships appear statistically significant. Significant relationships were discovered between Apparent Sincerity and Interpersonal Influence ($r=.56$, $p<.01$), Networking Ability ($r=.30$, $p<.01$), and Social Astuteness ($r=.45$, $p<.01$).

Significant relationships were discovered between Interpersonal Influence and Networking Ability ($r=.66$, $p<.01$), and Social Astuteness ($r=.56$, $p<.01$).

A significant relationship was discovered between Networking Ability and Social Astuteness ($r=.38$, $p<.01$).
Table 4-22 Descriptive statistics for BAQ variables across leader and non-leader groups

Table 4-22

Descriptive statistics for BAQ variables across leader and non-leader groups

<table>
<thead>
<tr>
<th></th>
<th>Leaders (n=47)</th>
<th>Non-leaders (n=55)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>179.38</td>
<td>22.13</td>
</tr>
<tr>
<td>Extraversion</td>
<td>191.02</td>
<td>22.42</td>
</tr>
<tr>
<td>Openness</td>
<td>180.53</td>
<td>26.99</td>
</tr>
<tr>
<td>Altruism</td>
<td>190.45</td>
<td>21.58</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>182.77</td>
<td>22.05</td>
</tr>
<tr>
<td>Professionalism</td>
<td>238.19</td>
<td>24.84</td>
</tr>
</tbody>
</table>

For leaders, mean scores ranged from 179.38 to 238.19, with standard deviations of between 21.58 and 26.99. The highest average score of the “leader” participant group was on Professionalism, though this was most likely due to this domain containing the most items. The next highest average score of the leader participants was on Extraversion, then Altruism, then Conscientiousness, followed by Openness, and then Emotional Stability. In terms of variance, Openness showed the greatest variance, whereas Altruism showed the least of the six domains.

For non-leaders, mean scores ranged from 168.89 to 228.09, with standard deviations of between 17.71 and 26.08. The highest average score of the “non-leader” participant
group was on Professionalism, though this was most likely due to this domain containing the most items. The next highest average score of the non-leader participants was on Altruism, then Conscientiousness, then Openness, followed by Emotional Stability, and then Extraversion. In terms of variance, Extraversion showed the greatest variance, whereas Conscientiousness showed the least of the six domains.
Appendix A24

Table 4-23 Descriptive statistics for PSI variables across leader and non-leader groups

Table 4-23
Descriptive statistics for PSI variables across leader and non-leader groups

<table>
<thead>
<tr>
<th></th>
<th>Leaders (n=47)</th>
<th></th>
<th>Non-leaders (n=55)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Networking ability</td>
<td>32.19</td>
<td>5.72</td>
<td>27.89</td>
<td>5.97</td>
</tr>
<tr>
<td>Interpersonal influence</td>
<td>23.11</td>
<td>4.01</td>
<td>22.07</td>
<td>3.54</td>
</tr>
<tr>
<td>Social astuteness</td>
<td>26.26</td>
<td>4.44</td>
<td>26.42</td>
<td>3.53</td>
</tr>
<tr>
<td>Apparent sincerity</td>
<td>18.64</td>
<td>2.29</td>
<td>19.07</td>
<td>2.01</td>
</tr>
</tbody>
</table>

For leaders, mean scores ranged from 18.64 to 32.19, with standard deviations of between 2.29 and 5.72. The highest average score of the leader participant group was on Networking Ability. The next highest average score of the leader participants was on Social Astuteness, then Interpersonal Influence, and then Apparent Sincerity, though this pattern could be related to the number of items in each domain (Networking Ability had the greatest number, followed by Social Astuteness, then Interpersonal Influence, and then Apparent Sincerity). In terms of variance, Networking Ability showed the greatest variance, whereas Apparent Sincerity showed the least of the four domains.
For non-leaders, mean scores ranged from 19.07 to 27.89, with standard deviations of between 2.01 and 5.97. The highest average score of the non-leader participant group was on Networking Ability. The next highest average score of the non-leader participants was on Social Astuteness, then Interpersonal Influence, and then Apparent Sincerity, though this pattern could be related to the number of items in each domain (Networking Ability had the greatest number, followed by Social Astuteness, then Interpersonal Influence, and then Apparent Sincerity). In terms of variance, Networking Ability showed the greatest variance, whereas Apparent Sincerity showed the least of the four domains.
Appendix A25

Work-relevant value orientations linked to Professionalism

Ambition. Leaders are ambitious about their work and careers. They have a desire to get ahead. To advance, leaders actively take steps to demonstrate their drive and determination. Ambition impels leaders to set hard, challenging goals for themselves and their organisations. Effective leaders are more ambitious than non-leaders. In their 20-year study, Howard & Bray (1988) found that among a sample of managers at AT&T, ambition (specifically the desire for advancement) was the strongest predictor of success twenty years later.

Results-oriented. Previous leadership studies have discovered that a clear leadership arises during the initial stage of operation of an independent work team (Neubert & Taggar, 2004; Taggar, Hackett & Saha, 1999). Leadership motivation is an important factor for the emergence of leadership. The finding becomes noteworthy as in most cases, there is no particular tangible reward for the leader in an independent work team. Members share the rewards and responsibilities of their work evenly (Taggar et al., 1999). The group member who shows a higher level of leadership motivation and participates actively in leadership behaviours emerges as the person who is more likely to be recognised as a formal or informal leader (Sorrentino & Field, 1986).

Strategic. The strategic perspective of leadership attributes organisational outcomes to the choices made by top leaders, similar to Child’s (1972) strategic choice model and which can be traced to Hambrick and Mason's (1984) upper echelons theory. The strategic perspective holds that top leaders are in a unique position to have the most impact on the organisation’s strategy (Finkelstein & Hambrick, 1996), and it seeks to
explain leaders’ strategic choices by looking into the psychological make-up of the top leader.

This viewpoint posits that top leaders vary on a range of psychological constructs - such as knowledge, preferences, and values - and that this variability operates on top leaders’ processing of information to influence the strategic choices they make (Carpenter, Geletkanycz, & Sanders, 2004; Chatterjee & Hambrick, 2007; Finkelstein, Hambrick, & Cannella, 2009). Essentially, it is a decision making theory, as it contends that leaders’ personalities, cognitions and values affects their field of vision and perception and interpretation of information – this in turn affect the options that leaders select. A small number of empirical studies have examined the relationship between top leader psychological make-up and organisational strategy; these studies have generally provided support for strategic leadership theory.

**Critical.** Critical thinking is the ability to see beyond simple facts and to think at a more comprehensive level. Paul (2005) suggests that ‘critical thinking is the art of thinking about thinking in an intellectually disciplined manner’. This definition goes beyond merely giving thought to something; it involves intentional consideration.

Leaders deal with complex problems that require complex solutions, thus leaders who can think critically will be more effective given these parameters. Unfortunately, most leaders operate from an egocentric worldview and lack well-developed critical thinking skills (Rooke & Torbert, 2005). Critical thinking from a leadership perspective entails the ability to think complexly.
Autonomous. Leaders are achievement-oriented, ambitious, energetic, tenacious, and proactive. These same qualities, however, may result in a manager who tries to accomplish everything alone, thereby failing to develop follower commitment and responsibility. Effective leaders must not only be full of drive and ambition, they must want to lead others – this is leadership motivation.

Leadership motivation involves the desire to influence and lead others and is often equated with the individual’s need for power. People with high leadership motivation think a lot about influencing other people, winning an argument, or being the greater authority. They prefer to be in a leadership rather than followership role. The willingness to assume responsibility, which seems to coincide with leadership motivation, is frequently found in leaders.