

**THE RELATIONSHIP BETWEEN CAREER ANCHORS AND PERSONALITY
PREFERENCES**

by

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DECLARATION

I declare that the dissertation entitled **“THE RELATIONSHIP BETWEEN CAREER ANCHORS AND PERSONALITY PREFERENCES”** is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

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GUGU NGOKHA

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DATE

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The relationship between career anchors and personality preferences

SUMMARY

The objective of the present study was to explore whether individuals' career anchors are dependent on their personality types. The Career Orientation Inventory (COI) and the Myers–Briggs Type Indicator (MBTI) were administered to a sample of honours students in the subject field of Industrial and Organisational Psychology in order to measure the relationship between the two constructs. For statistical purposes only the female participants were included in the final sample analysis (N=117) because of the under-representation of males. Statistically significant differences were established with regard to the security/stability career anchor and the ESFJ, ENFP, ESFP and INFP personality types. It is recommended that future studies include larger samples that are more representative of all possible sixteen (16) personality types and a broader range of occupations. The findings contribute new knowledge regarding the career anchors and personality preferences of females pursuing further studies in the field of IO-Psychology.

Key concepts: careers, career anchors, career choice, career orientations, career development, career satisfaction, personality, personality preferences

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This dissertation focuses on the relationship between career anchors and personality preferences. Chapter 1 describes the background to and motivation for the study; formulates the problem statement and research questions; states the general as well as specific theoretical and empirical aims; discusses the paradigm perspective, which demarcates the boundaries for the study, the research design and methodology, and concludes with an outline of the dissertation.

1.1 BACKGROUND TO AND MOTIVATION FOR THE STUDY

In the new millennium, the boundaries between work and non-work are becoming increasingly blurred. The world of work has moved away from an era of the one-life and one-career perspective, where one series of career stages (entrance into the world of work, establishing oneself in one's job, mastering and maintaining one's job, retiring from the workplace) covered the whole of a person's work life (Bergh & Theron, 2006).

Factors such as time scarcity (caused by competing demands of work, operational demands, family and study) and increasing cost shorten occupational life cycles. Further, in the modern era job descriptions increasingly overlap and careers are less secure. Success in employment now requires that individuals be proactive and flexible. This means that individuals must now be prepared to further their education and develop new skills in new domains with regard to their career aspirations (Jorgensen, 2005;).

Schein (1996) states that change in the occupational environment has implications for career development in the future. Unlike the career-centric professional workers of the past, a growing number of individuals have come to realize that they must develop and secure their own careers independently (Jorgensen, 2005). In order to update their skills and remain marketable, people are encouraged to create their own patchwork of job experiences to suit their lives, with many people instead focusing on a dual agenda of concentrating on both work and family. Individuals, who are becoming tired of the fast-paced corporate grind, are getting off the fast track or declining promotions in order to spend more time with friends and family or to focus on self-development (Baruch, 2006).

A rigid hierarchy and limited opportunities for workforce participation place organisations in a disadvantageous position because they do not mirror the realities of modern life and work. Jorgensen (2005) and Schein (1996) suggest that strategies to deal with outdated employment practices involve creating conditions that allow employees to manage and balance their personal lives and careers in accordance with their own needs, motives and values.

Barrick and Ryan (2003) point out that research has shown that personality characteristics form valid and important predictors of career and job satisfaction and resultant work performance, more especially when people's personality preferences are matched with work performance criteria. In their study, Barrick and Ryan (2003) found different sets of personality characteristics are likely to be congruent with the levels of performance found within various occupations. Pittenger (1993a) cites Myers' view that vocations favour different personality orientations and that Jung's (1921,1933,1934) theory provides the theoretical structure to link personality, career satisfaction and job performance.

Furthermore, it appears that people's career anchors or career orientations influence career decisions and career intentions to stay or leave the work environment. Feldman (2002) hold that once formed, stable career identities or career anchors have significant consequences for individuals' career satisfaction and job stability. Custodio (2000) adds that matching career anchors and job setting achieves greater organisational commitment, stronger job satisfaction and lower turnover intentions among employees.

The increasing emphasis on employment equity in South African workplaces with its focus on recruitment and selection of a diverse workforce presents even more challenges in the establishment of the organisation-person-fit (Robbins, 2003). In addition, more women are entering the workplace and knowledge regarding career orientation, personality preferences, needs, values and motives are becoming imperative in recruiting, placing and retaining these employees (Judge & Ferris, 1992; Schneer & Reitman, 1994).

Guthrie, Coate and Schwoerer (1998) state that relatively little is known about the type of individual differences that predispose individuals to use particular career strategies. Research relating to the relationship between Schein's (1996) career anchors and

personality preferences, particularly with regard to the multicultural context of South African organisations, are also limited.

Organisations that desire to develop effective individuals need to analyse and understand the personality type compositions of their employees and help them understand how their personal attributes and career orientations, interests and work values relate to their career job satisfaction Berings, de Fruyt and Bouwen (2004) found that attention to individual differences in both personality and work values can contribute to a better understanding of the vocational streaming and career decision process.

Carlson, Derr and Wadsworth (2003) maintain that as work expectations and roles become increasingly complex and competitive, effective career development and planning depends on accurate self-knowledge of one's career orientation, career values and interest. Knowledge and understanding of personality preferences and career anchors can aid new entrants to the workforce, women and Black people in expanding their career choices and the amount of control they have by helping them understand how their preferred or typical way of behaving, thinking and feeling influences their career decision-making. Increased self-awareness generally leads to more rewarding career choices, person-organisation fit and thus job satisfaction (Sullivan & Mainiero, 2007).

1.2 PROBLEM STATEMENT

Against the foregoing background, it is evident that knowledge regarding people's career anchors and personality preferences may add valuable knowledge in optimising the person-organisation fit and also enhance people's career and job satisfaction.

However, the problem is that research regarding the career anchors of different personality types in the diverse, multicultural South African context is limited. In particular, with more women and Black people entering the South African workforce through employment equity strategies, knowledge about employees' career anchors and personality types will contribute valuable knowledge to enhance organisational career support practices such as mentoring and coaching.

The current study therefore intended to explore the nature of the relationship between Schein's (1996) career anchors and the personality preferences measured by the Myers-Briggs Type Indicator (MBTI) and to identify the practical implications of this relationship for career choice and decision-making practices in the South African organisational context.

Most publications consulted on the relationship between personality preferences and career anchors were on American and European samples (Afolabi, 1996; Custodio, 2000; Igbaria & Baroudi, 1993; Marshall & Bonner, 2003; Yarnall, 1998). This study will contribute to deepening insight into whether South African samples exhibit similar or dissimilar findings.

According to Van Rensburg, Rothmann and Rothmann (2001), the thought that personality relates meaningfully to the kinds of careers people choose and how they perform their careers has a long history in Career Psychology. Van Rensburg et al (2001) further suggest that when studying the relationship between personality preferences and career anchors, it may be useful to examine the relationship between Myers and Briggs' (cited in Myers, McCauley, Quenk & Hammer, 2003) types of personality preferences and Schein's (1974, 1975) types of career anchors for the different race and gender groups in the multi-cultural South African work environment.

This study was undertaken to study the relationships between the career anchors and personality preferences of a sample of respondents in the South African organisational context. Against this background the researcher formulated the following general research question:

Does a relationship exist between career anchors and personality preferences?

To answer this question, the following specific subsidiary questions were formulated:

- How is the concept "career anchors" conceptualised in the literature?
- How is the concept "personality preferences" conceptualised in the literature?

- Does a theoretical relationship exist between career anchors and personality preferences?
- Does an empirical relationship exist between career anchors and personality preferences of a sample of respondents from the South African organizational context?
- What are the implications for the field of Industrial and Organisational Psychology and for career choice and decision-making practices?

1.3 AIMS OF THE STUDY

From the above research questions, the researcher formulated the following general objective and specific objectives:

1.3.1 General aim

The general aim of the study was to investigate, analyse and evaluate whether a relationship exists between career anchors and personality preferences and to determine whether there are any differences between the career anchors of various personality type preferences.

1.3.2 Specific aims

The specific aims of the study were related to the literature review and the empirical study:

1.3.2.1 Literature review

The specific aims of the literature review were to conceptualise:

- (1) Career anchors from a theoretical perspective.
- (2) Personality preferences from a theoretical perspective.
- (3) The theoretical relationship between career anchors and personality preferences.
- (4) The implications of the theoretical relationship between career anchors and

personality preferences for career choice and decision-making practices in the South African organisational context.

1.3.2.2 Empirical study

The specific aims of the empirical study were to:

- (1) Determine the empirical relationship between the variables career anchors and personality preferences as manifested in a sample of respondents employed in the South African organisational context.
- (2) Formulate the implications of the findings and make recommendations for future studies on the relationship between the two concepts, within the discipline of Industrial and Organisational Psychology, particularly with regard to career choice and decision-making practices.

1.4 PARADIGM PERSPECTIVE

This study was conducted within the field of Industrial and Organisational Psychology, more specifically, the sub-disciplines of Personnel Psychology, Career Psychology, Analytical Psychology and Psychometrics. According to Bergh and Theron (2006), Industrial and Organisational Psychology encompasses a field of study whose basic aims are to understand, explain and predict human behaviour and experience in the work context.

1.4.1 Disciplinary context of the study

1.4.1.1 Personnel Psychology

As a sub-discipline of Industrial and Organisational Psychology, personnel psychology focuses on the measurement of personality differences in individuals. The study of personality focuses on individual people's characteristics and the differences and similarities between people (Bergh & Theron, 2006).

1.4.1.2 *Career Psychology*

Career psychology is the study of career development and career behaviour as an integral part of human development (Greenhaus, Callanan & Godshalk, 2000). Career psychologists can assist both employees and managers with career choices and career paths and also with redefining themselves and their careers (Bergh & Theron, 2006). The literature survey on career anchors was based on Schein's theory (1974, 1975, 1978, 1990).

1.4.1.3 *Analytical Psychology*

Analytical psychology originated from the ideas of Jung (1921) and according to Steven (2001), is a term used mostly to distinguish Jung's (1921) work from experimental psychology and Freud's psychoanalytical psychology.

Stevens (1999) argues that the Jungian analytical psychology is as much a state of mind as it is a system of theory and practice. Jung (1921) placed great significance on the importance of the universal and specific phenomena in human life. He held that for Psychology to fully meet its goals it had to identify and define the psychic structure and functions which he believed are commonly shared by all people as well as to describe how these structures and functions could assemble in a unique combination which accounts for individual differences.

The Myers-Briggs Type Indicator, commonly known as the MBTI (Myers, 1995) and one of the instruments used in this study, is based on Jung's analytical theory which forms the basis for Myers and McCauley's (1990) interpretation of the concept *personality preferences*.

1.4.1.4 *Psychometrics*

Industrial psychologists may also employ psychometric tests to measure the abilities and personality traits of prospective and current employees (Bergh & Theron, 2006). The use of psychometrics enables researchers to measure behaviour in various forms and provide different explanations for inter- and intrapersonal functioning.

When used appropriately, psychometrics can be hugely beneficial in improving knowledge of oneself and other people – one’s own and others’ motivations, strengths, weaknesses, preferred thinking and working styles and also strengths and preferred styles for communications, learning, management, being managed and team-working (Bergh & Theron, 2006). In this study, the researcher used questionnaires to measure individuals’ career anchors and personality preferences.

1.4.2 Relevant paradigms

Hergenhahn and Olson (2005) describe a paradigm as a viewpoint that is commonly shared by most members of a science and suggests a shared set of beliefs or assumptions about their chosen subject matter. According to Mouton and Marais (1991), a paradigm perspective refers to the intellectual climate or variety of meta-theoretical beliefs, values and assumptions underlying the theories and models that form the definite context.

In this study, the theoretical review on the concept of career anchors was approached from the humanist paradigm, the concept of personality preferences from the psychodynamic paradigm of Jung’s (1921, 1969, 1971, 1974) analytical psychological perspective, and finally, the empirical study from the functionalist paradigm.

1.4.2.1 Humanist paradigm

The humanist paradigm regards a human being as an integrated being who actively and consciously strives towards the self-actualisation of their potential. The humanist paradigm acknowledges that the world has a subjective meaning for the individual and that human nature can be conceptualised in a positive manner as human beings are considered to be inherently good. The humanist paradigm places significant value on conscious processes and regards the individual as an active agent in the construction of the realities in their own world (Bergh & Theron, 2006).

1.4.2.2 *Psychodynamic paradigm*

The psychodynamic approach to personality founded by Sigmund Freud (1856-1939) rejected the earlier belief that people's behaviour is under their conscious and rational control as proposed by its forerunners namely, the structuralists and the functionalists schools of thought. Structuralism, also known as psychology's first major school of thought, argued that the task of psychology is to identify the basic elements of consciousness in much the same way that physicists break down the basic particles of matter. Functionalism, on the other hand, believed that the real task of psychology is to investigate the function, or purpose, of consciousness rather than its structure (Bergh & Theron, 2006).

The subject matter of the psychodynamic perspective on personality relates to the role of the unconscious in mental disorders. Its basic premise centres on the realities of making sense of what seems not to make sense and these theorists also believe that there are no coincidences in life. Bergh and Theron (2006) argue that certain central ideas can be identified in all psychodynamic theories as indicated in the following statements:

- Personality is viewed as a dynamic set of processes, which are constantly in motion.
- The processes sometimes work in harmony with each other and at other times against one another but are seldom passive.
- Personality comprises structures that pressurize and compete with each other.
- The processes like conflicts and motivations, which occur as a result of interaction amongst the elements of personality, are often conscious.
- The basic drive (life instinct) supplemented by aggression (death drive) originates from a person's biology.
- An individual's resultant contemporary behaviour is determined by his/her history of progression through childhood.
- The defence mechanism of the ego shields the individual from psychological harm.

- Individuals' state of well-being or mental health depends on the balance of forces in their life.

Many of the ideas introduced by the psychodynamic approach argue that much mental activity occurs outside of mental awareness. Like structuralism and functionalism, psychodynamic approaches are concerned with uncovering basic, general principles that can account for a variety of behaviour which people are capable of engaging in and further propose different specific units for conceptualising and studying people (Bergh & Theron, 2006).

1.4.2.3 Functionalist paradigm

The empirical study was based on the functionalist perspective. According to Kavous (2000), the functionalist perspective assumes that universal standards of science determine what constitutes an adequate explanation of what is observed and that society has a concrete existence and follows a certain order. The approach to social science is rooted in the tradition of positivism which assumes that scientific theories can be assessed objectively by reference to empirical evidence. The functionalist perspective also emphasises the importance of understanding order, equilibrium, and stability in society and the way in which these can be maintained (Kavous, 2000).

These assumptions lead to the existence of an objective and value-free social science that can produce true explanatory and predictive knowledge of reality. This perspective attributes independence to the observer from the observed, meaning it acknowledges the researcher's ability to observe *what is* without affecting it. Functionalists are also individualists in that the properties of the aggregate are determined by the properties of its units (Kavous, 2000).

1.4.3 Theoretical models

The researcher approached the literature review on career anchors from Schein's (1975) career anchor theory and on personality preferences from Myers and Briggs' theory of psychological or personality type (Myers, 1998; Myers et al, 2003).

1.4.4 Definitions of concepts

The key concepts relevant to this study are *career*, *career anchors*, *personality* and *personality preferences*. For the purposes of this study, these concepts are operationally defined as follows:

1.4.4.1 *Career*

Career is often defined as the unfolding sequence of a person's work experiences over time within an occupational or organisational context. This definition of a career as 'a sequence of moves' acknowledges the trend that organisations no longer provide fixed career paths (Schreuder & Coetzee, 2006:58). Employees no longer pursue lifetime employment and security within a single organisational context. Rather, organisations provide restricted opportunities for development and individual employees take on new, restricted opportunities when they appear (Cappellen & Janssens, 2005).

1.4.4.2 *Career anchor*

A *career anchor* refers to a pattern of self-perceived talents and abilities, values, and motives that influences a person's career-related decisions (Schein 1975, 1980, 1996). Yarnall (1998) concurs by defining a career anchor as a cluster of self-perceived talents, motives, and values that forms the nucleus of a person's occupational self-concept.

1.4.4.3 *Personality*

Personality refers to an individual's pattern of behaviour, which is established over time. An individual's personality is a combination of lifetime experiences as well as genetic characteristics. Personality is an indelible characteristic and results in a pattern of predictable behaviour (Bergh & Theron, 2006). Personality is also regarded as the set of inherited traits, individual style, behaviour patterns, thoughts, feelings and attitudes that make each person unique.

Pervin and John (1997:4) define personality as “those characteristics of people that account for consistent patterns of feeling, thinking, and behaving”. These consistent patterns of behaviour are referred to as *individual differences* in some psychological circles. The study of individual differences recognises that all people are similar in some ways, but is more concerned with the reasons why people differ (Pervin & John, 1997).

1.4.4.4 *Personality preference*

Jung (1990) defines *personality preferences* as patterns in which people decide to perceive and make judgments. Myers et al (2003) describe a preference as being indicative of the natural difference between people in their focus of attention and energy, the manner in which information is taken in, the manner in which decisions are made and their orientation toward the external world.

1.4.5 **Central hypothesis**

In this study, the central hypothesis was formulated as follows: A relationship exists between career anchors and personality preferences. This hypothesis assumes that individuals who exhibit different personality preferences will exhibit different career anchors.

1.5 **RESEARCH DESIGN**

According to Mouton and Marais (1991), a research design refers to the arrangement of conditions for collecting and analysing of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In the context of this study research design refers to all the decisions a researcher makes in planning the study, not only about what type of design to use, but also about sampling, sources and procedures for collecting data, measurement issues and data analysis plans. The research design and methodology were based on the specific research problem (Mouton & Marais, 1991).

The literature review and the empirical study were mainly exploratory. In addition, the hypotheses on the probable relationship between the variables *career anchors* and

personality preferences and the differences observed in the respondents' biographical characteristics regarding these variables provided descriptive qualities. This allowed for the empirical testing of the relationship between these variables and their integration in the conclusion and recommendations in the context of the research problem (Mouton & Marais, 1991).

The purpose of this study was to determine whether there is a relationship between an individual's career anchors and personality preferences. The unit of analysis is the individual and is instrumental in measuring or determining whether there is a relationship between the independent variable (personality preferences) and the dependent variable (career anchors). Consequently, the ultimate goal is to identify and measure effects of an independent variable on a dependent variable. According to Mouton and Marais (1991), the independent variable is considered to be an antecedent phenomenon in a cause-and-effect relationship and the dependent variable is considered a resultant phenomenon.

The researcher used a quantitative design as the data was recorded and analysed numerically. Quantitative studies are characteristically systematic, less liable to errors caused by subjective assessments, and require significantly less time to analyse the data obtained (Breakwell, Hammond & Fife-Shaw, 1995).

In this study, the researcher ensured validity and reliability at contextual level by providing an overview of the literature in a structured manner when presenting and relating constructs. The use of internationally acceptable and reliable instruments and statistical methods increased the prospects of both internal and external reliability in the empirical study.

1.6 RESEARCH METHODOLOGY

The study was conducted in two phases: conceptualisation and operationalisation. The conceptualisation phase was undertaken through an extensive literature review and the operationalisation phase through an empirical study.

1.6.1 Phase 1 Literature review

The literature review consisted of three steps:

- Step 1 Explore, clarify and define the construct *career anchors*.
- Step 2 Explore, clarify and define the construct *personality preferences*.
- Step 3 Propose a theoretical relationship between the constructs *career anchors* and *personality preferences*.

1.6.2 Phase 2 Empirical study

The empirical study consisted of the following nine steps based on the realities of South Africa:

Step 1 Determine and describe the population and sample

The sample was drawn from a population of honours students registered for the degree in Industrial and Organizational Psychology at a higher education institution in a particular year. Only those questionnaires that met the basic requirements of the chosen instruments and were usable were included in the sample.

Step 2 Choose and justify the psychometric battery

Van Rensburg et al (2001) argue that psychometric testing in South Africa is currently facing a dilemma: ethically (and legally), it is improper to use many of the existing instruments as they are either imported or unstandardised on the South African population or have only been standardised mainly on the White South African population. At the same time, however, psychometric evaluation has become a part of everyday life and to stop all such assessment would be detrimental to many sectors in the field of psychology (Van Rensburg et al, 2001).

The decision on the choice of appropriate measuring instrument was guided by the literature study regarding their proven suitability, validity and reliability. Consequently, this study made use of two measuring instruments and a biographical questionnaire as discussed below:

- **The Career Orientation Inventory (COI)**

The Career Orientation Inventory (COI) survey developed by Schein (1990, 1996) in collaboration with DeLong (1982) was used to measure each respondent's dominant career anchor.

- **The Myers-Briggs Type Indicator (MBTI) Form G**

For the purpose of this study, the well-established Myers-Briggs Type Indicator (MBTI) (Myers, 1998), which is based on Jung's (1921) work, was used to measure each respondent's personality preferences.

- **A biographical questionnaire**

A biographical questionnaire was used to obtain personal details of the respondents.

Step 3 Administer the psychometric battery

Envelopes containing a set of three questionnaires (see step 2 above) per respondent were mailed to all honours students enrolled for the degree in Industrial and Organisational Psychology, using the postal facilities of the higher education institution.

Step 4 Score the psychometric battery

Both the COI and the MBTI were scored electronically in accordance with the instructions provided in their respective manuals.

Step 5 Process statistical data

The statistical analysis was carried out with the help of the SAS programme (SAS Institute, 2000). The data was processed according to the standard processes for each inventory. Descriptive statistics, like frequency tables, means, standard deviations and Cronbach alpha coefficients, were calculated. Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between personality types as categorical data and participants' career anchors (as a set of interval data) (Tredoux & Durrheim, 2002). Post hoc multiple pair-wise comparison procedures were used to test the effect of the differences detected between the means of the variances.

Step 6 Formulate the research hypotheses

The research hypotheses were formulated in order to address the objectives of the study.

Step 7 Report and interpret the results

The findings were presented and discussed in systematic conceptual framework.

Step 8 Integrate research findings

The results of the empirical study were integrated into the findings of the literature review.

Step 9 Formulate the research conclusions, limitations, and recommendations

Conclusions of the study were formulated on the basis of the formulated aims of the study. The limitations were discussed with reference to the literature review and the empirical study. Finally, recommendations were formulated to address the research problem.

1.7 OUTLINE OF THE STUDY

Chapter 1 discusses the background to, rationale for and purpose and objectives of the study, the paradigm perspective, and the research design and methodology, defines key concepts, and outlines the study.

Chapter 2 conceptualises *career anchors* through an integration of existing literature, presents different models and approaches and a discusses on the uniqueness of each model and commonalities between models.

Chapter 3 conceptualises *personality preferences* and discusses the paradigmatic and conceptual foundations in order to describe the theoretical framework for the concept. Jung's (1921,1971) theory of psychological type is discussed by defining its concepts and refining the theory.

Chapter 4 covers the research methodology, including the research problem, hypotheses, sample, instruments and statistical methods.

Chapter 5 reports and interpreting the results of the empirical study, using descriptive and inferential statistics.

Finally, Chapter 6 discusses the results, implications and limitations of the study and makes recommendations for future research.

1.8 CHAPTER SUMMARY

This chapter discusses the background to the study, and stating the problem, purpose and aims, paradigm perspective, research design and research methodology of the study.

Next, in chapter 2, the construct *career anchors* is discussed.

CHAPTER 2 CAREER ANCHORS

This chapter defines and conceptualises the construct of career anchors through an integration of existing literature, presenting different models and approaches and discussing both their uniqueness and commonalities. Finally, the practical application of career anchor theory for career choice and decision-making is discussed.

2.1 CONCEPTUAL FOUNDATIONS

For the purposes of this study, the following career concepts were used as defined below.

2.1.1 Career

The term “career” is often defined as the unfolding sequence of a person's work experiences over time within an occupational or organisational context. This definition reflects the path metaphor that approaches career as a journey or as movement. The path metaphor incorporates two key underlying facets of career: time and direction that reflect an individual’s career of multiple moves towards different locations and positions (Cappellen & Janssens, 2005). Chompookum and Derr (2004) define a career as the pattern of work-related experiences that span the course of a person’s life and add that all careers have objective and subjective elements that together form the basis of a person’s career.

The definition of a career as ‘a sequence of moves’ acknowledges the trend that organisations no longer provide fixed career paths (Schreuder & Coetzee, 2006). Employees no longer pursue lifetime employment and security within a single organisational context. Rather, organisations provide bounded opportunities, which encourage employees’ personal development and ability to adequately manage new challenges (Cappellen & Janssens, 2005).

A career is now seen as “boundaryless”, encompassing moves between organisations as well as in flexible, non-hierarchical organisations in which there are no or few objectively observable pathways and no norms of objectively observable progress or success

(Schreuder & Coetzee, 2006). Baruch (2004) maintains that it is no longer apparent how an overall career path can be logical and purposeful because career moves can be upwards, downwards, forwards, backwards, sideways or idiosyncratic.

According to Schein (1996), the concept of protean careers becomes especially applicable in today's turbulent world in the context of downsizing and lack of job security. Protean careers and marketability imply that people consciously seek to multi-skill themselves in order to stay more employable. Hall (1976:201) states that the protean career "is a process which the person, not the organisation, is managing. It consists of all of the person's varied experiences in education, training, work in several organisations, changes in occupational field, etc. The protean person's own personal career choices and search for self-fulfilment are the unifying or integrative elements in his or her life."

Kim (2004) concurs with Schein (1996) and Hall (1976), adding that what a career means is closely related to how people define career success.

Schein (1985), Derr and Laurent (1989) and DeLong (1982b) regard the internal career as a more stable, longer-term and deeper definition of work identity than just occupying the job or being part of the organisation. The internal career is a person's subjective career self-identity about work and life and his or her role within it. It focuses not only on what a person wants or thinks is important but, also, on what that person feels and believes he or she can do best.

2.1.2 Career success

The meaning of career success varies considerably, given the diversity of the modern workforce and its work values. Kim (2004) defines career success as a hierarchical advancement, a larger income, and increasing recognition and respect from others, because these aspects are traditionally associated with career success. Schein (1978; 1985) suggests that employees need to have a very strong sense of who they are and what they want from their work and that will lead to career success.

In the context of this study, career success refers to a comprehensive and psychological judgment stemming from individuals' career orientation and consisting of their own beliefs, interests, and values about work and life (Schreuder & Coetzee, 2006).

Chompookum and Derr (2004) add that career success entails being able both to live out the subjective and personal values one really believes in and to make contributions to the world of work. Many people experience change in their definitions of career success as they grow older. Kim (2004) points out that many people as they grow older place more value on the internal aspects of work (subjective meaning of work) than external aspects such as social status.

Career success measures may have shifted from positions in the organisational hierarchy to psychological success. For example, due to the new organisation structures together with changing societal values, fewer employees, especially younger ones, are interested in managerial positions because of the perceived stress and time commitment (Chompookum & Derr, 2004). More and more people assess their career success in terms of the amount of learning they have acquired over a period, outputs instead of inputs and the amount of marketable skills they have gained (Lau & Shaffer, 1991; Coetzee, 2006).

2.1.3 Career development

The concept of career success is closely related to individuals' career development. Career development is no longer only about gaining the skills and knowledge employees need to move up in a company. It denotes the lifelong sequence and pattern of an individual's work-related behaviour, including all work-relevant experiences and activities before and after entry into a formal occupation (Cappellen & Janssens, 2005, Schreuder & Coetzee, 2006; Swanepoel, Erasmus, van Wyk & Schenk, 2003).

Schreuder and Coetzee (2006) refer to Super's definition of career development as an ongoing process by which individuals progress through a series of stages, each characterised by a relatively unique set of issues, themes or tasks throughout the lifespan.

Cappellen and Janssens (2005), however, view career development as a continual process of working out a synthesis or compromise between the self and the reality opportunities and limitations of the world.

Swanepoel et al (2003) regard career development as related to how employees achieve flexibility and continuous self-evaluation by developing their skills in order to remain employable and fulfilled over the long term, regardless of who their employer is or what industry they are affiliated with (Sullivan, 1999).

2.1.4 Career decision-making

Schreuder and Coetzee (2006) view career choice as a process of decision-making involving the development of ego-identity over the lifespan.

Career decision-making requires constant review of decisions already made and consideration of decisions yet to be made. Each career decision is limited by what individuals are capable of now or in the future, by their ability to identify alternatives, and by what they are willing to do. Therefore skilful career decision-making requires individuals to be focused, flexible and open to new learning in their career choices.

Coupland (2004) states that the process of career decision-making is unique to each individual and is rooted in their career identity, which consists of interests, values, skills, experiences and goals. A career identity is a structure of meanings in which individuals link their own motivation, interests and competencies with acceptable career roles.

Career decision-making is a dynamic and lifelong process where people's knowledge of themselves, their values, interests, temperament, financial needs, physical work requirements, effects of past experiences, new information, and changes in their life situation and environment all intertwine (Chompookum & Derr, 2004).

Career decision-making also involves increasing self-awareness, exploring career options, and acquiring the knowledge, skills and experiences that will assist in the implementation of career choices. It also constitutes of differentiation and reintegration,

which enable the constant formation, reformation and integration of new knowledge and experience over the lifespan (Schreuder & Coetzee, 2006).

2.1.5 Career maturity

Career maturity is the readiness to make appropriate career decisions. Naidoo (1997) suggests that it is influenced by age, race, ethnicity, locus of control, socio-economic status, work salience, and gender. Creed and Patton (2003) suggest that the complex interaction of these factors affects individuals' readiness to succeed in mastering the tasks appropriate to various stages of career development. Schreuder and Coetzee (2006) hold that individuals who make career decisions that reflect decisiveness, involvement, independence, task orientation and willingness to compromise between needs and reality have usually achieved a high degree of career maturity.

2.1.6 Career orientations

According to Coetzee (2006), career orientations determine the nature of the learning cycle that people experience throughout their life. Career orientation assists people to decide on whether to stay in a specific career, the duration of stay or to move to a different career field.

A career orientation exists inside the individual, is learned from accumulated work experience, encompasses the interaction of abilities, motives and values in an individual's self-concept and serves as a guide to constrain, stabilise and integrate an individual's career (Schein, 1978, 1990, 1996).

Similar to career orientations, Schein (1978, 1990, 1996) proposes a concept of career anchor (see section 2.2.4) and defines it as a pattern of self-perceived talents, motives and values that serve to guide, constrain, stabilise and integrate individual careers. Yarnall (1998) and Van Rensburg et al (2001) add that career anchors serve to explain how and why an individual interacts with the organisation. Employees are less likely to take on a job where the needs of their career anchors are not met, even if there is a more desirable career alternative available.

Schein (1978, 1990, 1996) adds that a career anchor functions in people's work life as a way of organising experience, identifying their area of contribution in the long run, generating criteria for different work settings in which they want to function, and identifying patterns of ambition and criteria for success by which they will measure themselves.

The above descriptions indicate that there is a strong link between the concepts of career orientation and career anchor. Both are associated with career values, knowledge of which can assist individuals to identify the career orientation or anchor they truly desire.

Many people have one strong career orientation and a second one, which may be nearly as strong (Coetzee, 2006; Yarnall, 1998). This dual orientation or anchor affords some degree of flexibility in terms of working roles people can experiment with.

2.2 MODELS OF CAREER DECISION-MAKING

This section discusses Super's (1957, 1990), Holland's (1973, 1996), Derr's (1986) and Schein's (1978, 1990, 1996) models of career decision-making. These models present the individual with ample opportunities to discover and rediscover careers in which they can match their changing lifestyle while maintaining active participation in the career decision-making process.

2.2.1 Super's life-span model of career development

According to Super's (1957, 1963, 1980, 1990, 1992) life-span model of career development, people's career choice is an implementation of their self-concept, which consists of attributes such as abilities, personality traits, needs, interests and values. Both the person and the self are central to the decision-making process (Super, 1957, 1963, 1980, 1990).

Super's (1957) theory comprises five stages, namely, growth, exploration, establishment, maintenance, and decline or disengagement.

2.2.1.1 Growth (Birth to age 12-14)

During this period the child develops physically and psychologically and forms self-concept, develops capacity, attitudes, interests and needs, and forms a general understanding of the world of work that will be critical to future vocational choices.

2.2.1.2 Exploration (Adolescence, age 14 to 25)

In this period the individual begins to develop an awareness of occupations. The individual collects relevant information and tries out new experiences through classes, work experience, and hobbies. In the early or fantasy period of this phase, the individual's choices are frequently unrealistic and related to play life. The tentative period comes next and choices are narrowed, but there is still incomplete knowledge of self and the world of work. In the final period of this phase the individual further narrows the list of possible choices to more realistic goals provided they have gained more knowledge of self and the world, since the growth stage.

2.2.1.3 Establishment (Early adulthood, age 25 to 45)

Here individuals are in actual work situations, experiencing some that fit and others that do not. At this establishment stage, they are also building entry skills and gradually achieving stabilisation through work experience when an occupation is selected which offers the best chance to obtain satisfaction.

2.2.1.4 Maintenance (Middle adulthood, age 45 to 65)

Here individuals continue in and attempt to improve their situation in a chosen occupation. People try to maximise the satisfying aspects of their work and minimise the unsatisfying aspects.

2.2.1.5 Decline (Old age from 65 and older)

This includes the pre-retirement phase where individuals' attention is on continuing to meet the minimum requirements of the job rather than on enhancing their position. This

period is characterised by reduced output and preparation for retirement, and culminates in leaving the workforce.

Super (1957) recognises the changes that people go through as they mature. According to Super (1990), a person journeys through developing interests, skills, and values; exploring the world of work and trying tentative choices; developing greater commitment to a choice; adapting to changes in the world of work, and moving toward selective participation and retirement. Furthermore, people seek career satisfaction through work roles in which they can express themselves and implement and develop their self-concepts (Super, 1990; House, 2004).

Nazli (2007:448) mentions the creation and development of self-concept constitute the focal point of Super's theory. Schreuder and Coetzee (2006) state that the self-concept represents individuals' view of their personal characteristics. Zunker (1998) adds that the occupational self-concept develops through physical and mental growth, observations of work, identification with working adults, general environment, and general experiences. The self-concept has an ever-developing nature and as experiences become broader in relation to awareness of the world of work, the more sophisticated vocational self-concept is formed. As an individual gets older, the self-concept gains a clearer, sharper, and more realistic structure (Nazli, 2007).

The choice of profession is the reflection and expression of the self-concept and personality preference, which are formed as a result of the interaction between the individual and the environment and job selection is a reflection of identification design in relation to an occupation (Schreuder & Coetzee, 2006)

Hall (2002) questions the relevancy of career age/stage theories (such as Super's, 1990) on the basis of the following realities: (a) most careers are no longer associated with a long-term relationship in a particular organisation; (b) individuals are expected to change careers more frequently, and (c) the idea of an individual having one, linear, career path that mirrors the stages of adult development in light of the more dynamic career pattern suggested by the protean career, increasingly becomes obsolete.

2.2.2 Holland's theory

According to Holland (1973), the choice of a vocation is partly related to a person's personality. Members of a vocation tend to have similar personalities; people choose vocations that relate to their personality. People in one vocation would tend to possess a common characteristic that relates to their vocation. Holland (1973) contended that people enter a particular vocation because of their personality and background history. Since people in a specific vocation tend to possess similar personalities, they also tend to respond in similar ways in many situations. Accordingly, based on the validity of these postulations, it may be contended that congruence between a person's personality and environment contributes to vocational satisfaction, stability and achievement.

Holland's (1996) theory of careers forms the basis for most major career inventories used today. It can be easily understood and used by practitioners whose goals are to help individuals make successful career choices and/or to achieve the best person-job fit. The primary focus is to explain vocational behaviour and to suggest practical ideas to help people select jobs, change jobs, and achieve vocational satisfaction (Swanepoel et al, 2003).

Holland's (1996) theory of careers is an interactive model based on a typology of persons and environments. Holland's theory assumes that (Afolabi, 1996; Feldman, 2002; Swanepoel et al, 2003):

- (1) People can be characterised by their resemblance to each of six personality types: realistic, investigative, artistic, social, enterprising, and conventional. Each personality type has a characteristic set of activities, skills, and talents. All jobs in the world of work can be classified according to their alignment with these six career types.
- (2) People belonging to the same personality types are more likely to react to situations and problems in the same way.
- (3) People whose personality characteristics are congruent with their chosen careers or work environments are likely to experience more stable vocational choice, high

vocational achievement, better maintenance of personal stability and greater job satisfaction.

2.2.2.1 *Realistic personality*

The realistic personality type is characterised by competitive or assertive behaviour and by interest in activities that require motor coordination, skill, and physical strength. People oriented toward this role prefer situations involving "action solutions" rather than tasks involving verbal or interpersonal skills. They like to take a concrete approach to problem solving rather than relying on abstract theory. They also tend to be interested in scientific or mechanical rather than cultural and aesthetic areas (Afolabi, 1996; Swanepoel et al, 2003).

2.2.2.2 *Investigative personality*

People exhibiting characteristics of this personality type prefer to think rather than act, to organise and understand rather than persuade. They are not apt to be too people-oriented (Afolabi, 1996; Swanepoel et al, 2003).

2.2.2.3 *Social personality*

These people seem to satisfy their needs in teaching or helping situation. In contrast to investigative and realistic people, social types are drawn more to seek close interpersonal relationships and are less apt to engage in intellectual or extensive physical activity (Afolabi, 1996; Swanepoel et al, 2003). Arnold (1997) states that people with this type of personality might find relevance in the concept of a sustainable workplace, since it is associated with people who enjoy working together to help others and solve problems.

2.2.2.4 *Conventional personality*

People with a conventional type personality do not mind rules and regulations and emphasise self-control. They prefer structure and order to ambiguity in work and interpersonal situations, and place value on prestige or status (Afolabi, 1996).

2.2.2.5 *Enterprising personality*

This personality is characterised by the kind of people who are verbally skilled and use this skill in persuasion rather than support of others. They value prestige and status and are more apt to pursue it than conventional people (Afolabi, 1996).

2.2.2.6 *Artistic personality*

This is type represents a group of people who value self-expression and relations with others through artistic expression. They dislike structure, prefer tasks involving personal or physical skills, and are more prone to expression of emotion than others. They are like investigative people but are more interested in the cultural-aesthetic than the scientific (Afolabi, 1996; Swanepoel et al, 2003).

According to Holland's theory, the six broad types of categorising careers can be represented around a hexagon (see figure 2.1). These types are commonly referred to as RIASEC to reflect the first letter in each of the themes (Montross, Leibowitz & Shinkman, 1995).

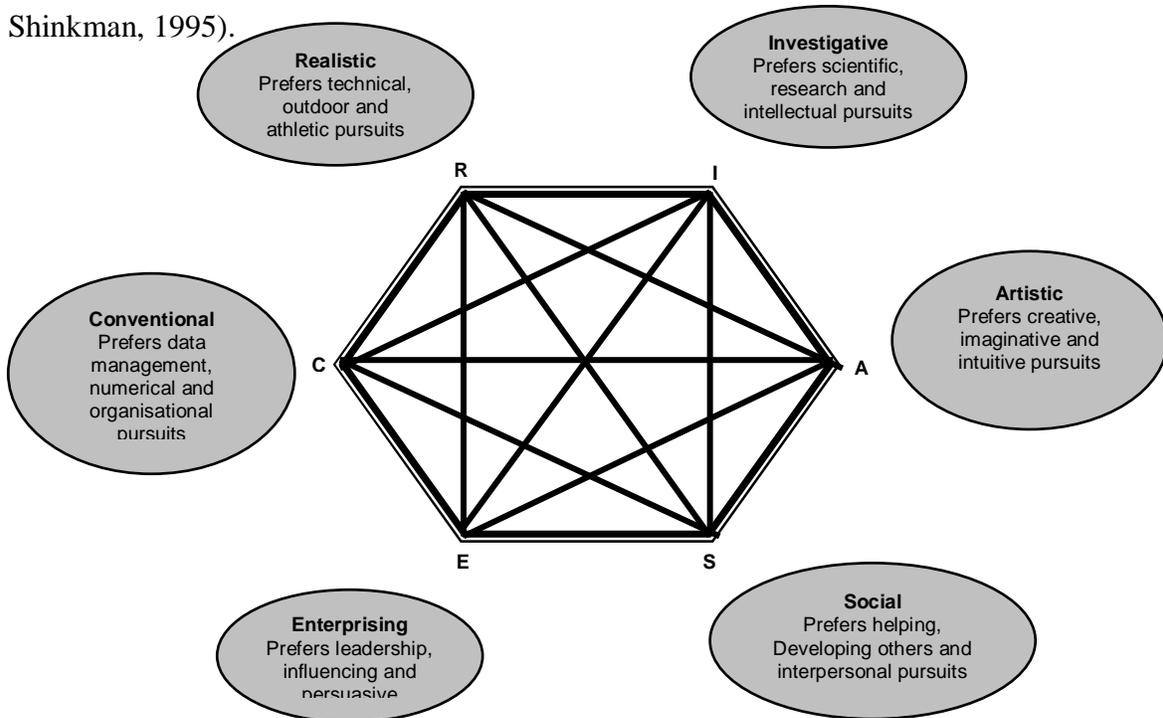


Figure 2.1 Holland's hexagon of personality types
(Adapted from Feldman, 2002)

Holland (1996) infers a match between personality and career choice. He proposes that a person may reflect a combination of two or three of his six personality types. Each type shares some characteristics in common with the types next to one another adjacent to it on the hexagon. Each type has only a little in common with those types two positions removed from it and is quite unlike the type opposite it on the hexagon.

Types that are next to one another on the hexagon are most closely related. Types opposite one another on the hexagon are the most dissimilar. For example, the realistic and investigative types are similar, while the realistic and social types are often dissimilar. The investigative type, then, shares some characteristics in common with the realistic and artistic types, has little in common with the conventional and social types, and is quite different from the enterprising type (Petrides & McManus, 2004).

The environments in which people live and work can be characterised by their resemblance to model environments classified according to the same six types (Holland, 1996). Since people search for environments which allow them to express their interests, skills, attitudes and values, and take on interesting problems and agreeable roles, work environments become populated by individuals with related occupational personality types.

Holland's (1996) assumptions provide a theoretical framework for making theoretical inferences of how insight and knowledge of a person's personality type can assist in the prediction outcome of person-environment interactions. Such understanding would assist in explaining three fundamental questions (Afolabi, 1996; Swanepoel et al, 2003):

- What personal and environmental characteristics lead to satisfying career decisions for the sample group?
- What personal and environmental characteristics lead to stability and change in the kind and level that working women typically perform over a lifetime?
- What are the most effective methods for providing assistance to women who experience career problems?

Based on these assumptions Holland (1996) defines three variables, which are hypothesised to enhance the validity of predicting vocational choice, stability, satisfaction, and achievement. The three variables are congruence, consistency, and differentiation (homogeneity). Congruence is defined as a matching of personality with environment. Holland (1996) assumes that some personality types complement each other while others conflict. He defines a consistent person as one whose two highest personality types are complementary (adjacent on the hexagonal model, see figure 2.1); if the types at the top are in conflict, the person is inconsistent. Differentiation (homogeneity) is the magnitude of the difference between the highest and the lowest scores on the six variables used to determine a person's resemblance to a personality type (Arnold, 2004).

TABLE 2.1 A DESCRIPTION OF PEOPLE AND WORK ENVIRONMENTS ACCORDING TO HOLLAND'S THEORY (ADAPTED FROM MONTROSS ET AL, (1995)

PEOPLE AND THEIR WORK ENVIRONMENTS ACCORDING TO HOLLAND'S THEORY		
TYPE	PEOPLE	WORK ENVIRONMENTS
Realistic	Strong mechanical, psychomotor, and athletic abilities; honest; loyal; like the outdoors; prefers working with machines, tools, plants, and animals.	Structured; clear goals and lines of authority; works with hands, machines, or tools; casual dress; focus on tangible results; engineering, military, skilled trades
Investigative	Strong problem-solving and analytical skills; mathematically inclined; likes to observe, learn, and evaluate; prefers working alone; reserved; idea generators	Non-structured; research oriented; intellectual; discovers, collects, and analyses ideas/data; science, math, medicine, and computer related; labs, universities, high tech, hospitals.
Artistic	Creative; complex; emotional; intuitive; idealistic; flair for communicating ideas; prefers working independently; likes to sing, write, act, paint, think creatively	Non-structured; creative; flexible; rewards unconventional and aesthetic values; creation of products and ideas; arts organisations, films/TV, publishing, advertising, museums, theatre, galleries
Social	Friendly; outgoing; finds fulfilment in helping others; strong verbal and personal skills; teaching abilities; impulsive	Harmonious; congenial; works on people-related problems/issues; informs, trains, develops, cures, or enlightens others; team oriented; human resources; training, education, social service, hospitality, health care, non-profit
Enterprising	Confident; assertive; sociable; speaking and leadership abilities; likes to use influence; strong interpersonal skills; status conscious	True business environment; results oriented; driven; high-quality service and product orientation; entrepreneurial; high prestige; power focused; sales, management, politics, finance, retail, leadership
Conventional	Dependable; disciplined; precise; persistent orderly; efficient; practical; detail oriented; clerical and numerical abilities.	Orderly; clear rules and policies; systematised manipulation and organisation of data; control and handling of money; high income potential; accounting, business, finance, administration.

Holland's theory has provoked a great deal of research. Most of such research is based on assumption (3) that a good match or congruence between person and environment will lead to people experiencing greater satisfaction, performing better and persisting longer

than if they were in an incongruent environment (Chartrand & Walsh, 1999; Spokane, Meir & Catalano, 2000). Arnold (2004) emphasises that as a general proposition this idea of person-environment match is so fundamental that it could be described as ‘common sense’. Yet over the years research has suggested that congruence assessed using Holland constructs and measures has a much weaker association with outcomes than might be expected theoretically and required for effective use in practice. According to Arnold (2004), this incongruence is potentially a major problem in Holland’s theory.

2.2.3 Derr’s career orientation theory

According to Carlson, Derr and Wadsworth (2003), career orientations comprise individuals’ motives, values, talents and perceived personal constraints and are a central component of employees’ subjective self-concept that they are unwilling to relinquish.

Derr (1986) maintains that it is very important to assess individuals’ internal career orientation to gain additional insight into the rationale behind their strategy development. Furthermore, such exposure could be instrumental in aiding understanding of why in a given context some individuals are very conflicted regarding their ability to balance various aspects of life and others are satisfied with their situation and why they employ certain strategies.

Chompookum and Derr (2004) describe getting ahead, getting free, getting secure, getting high, and getting balanced as useful dimensions for describing career orientations.

2.2.3.1 Getting ahead (GA)

Individuals with a getting ahead internal career orientation aspire to progress through the hierarchies, status systems, and professional societies as quickly as possible. These people often set career plans for one to ten years’ ahead and are willing to work very hard to achieve their career goals (Chompookum & Derr, 2004).

2.2.3.2 *Getting secure (GS)*

Maslow (cited in Bergh & Theron, 2003) describes a hierarchy of needs in which the need for security is categorised as a lower need. According to Chompookum and Derr (2004), however, people with a strong GS view security as their career goal. They aspire to lifetime employment, adequate pay and status, good benefits, being appreciated for being loyal and hardworking, good relations with colleagues and peers, and organisational respect. At the heart of the getting secure career orientation is the idea that a career is reciprocal. In return for loyalty, hard work, flexibility, competence and more on the part of the careerist, the organisation gives job security, appreciation, respect, and sometimes may even include rewards that demonstrate this appreciation (Chompookum & Derr, 2004).

2.2.3.3 *Getting free (GF)*

Primarily concerned with their personal freedom and autonomy, a long-term career desire for maximum control over people's work life is central to this internal career orientation. Such careerists might become experts in a valued specialty and then negotiate for their freedom; knowledge is power and expertise is freedom. They often seek positions where there is lots of personal space. Another tactic is intense investment followed by intense time-outs (Chompookum & Derr, 2004).

2.2.3.4 *Getting high (GH)*

Getting-high careerists thrive on exciting work. They also need autonomy, but would not be willing to exchange freedom for exciting work. Technical gurus, entrepreneurs and ideologues often pursue this adrenaline-first strategy to meet their bottom-line career agendas. Avoiding boredom and routine is an important motivator (Chompookum & Derr, 2004).

2.2.3.5 *Getting balanced (GB)*

This orientation is focused on balancing three forces: work, relationships and self-development. They view their work as very important, but in the long-term seek work-life balance. Their career has to be counterbalanced by self-care and relationships. People

who function predominantly in this orientation, commonly focus on different aspects of their life at different stages, but overall seek balance for a lifetime between the various spheres (Chompookum & Derr, 2004).

According to Derr (cited Chompookum & Derr, 2004:414) everyone has one or two dominant orientations that motivate them in their careers. However, people vary in terms of their internal career orientations, which are the product of their motives, values, talents, and personal constraints and these career orientations change over time in response to varying individual personal circumstances and age.

Derr (cited in Chompookum & Derr, 2004:409) contends that organisations should analyse career orientations in order to determine which career interventions are most appropriate for each career orientation. For example, the use of assessment centres would be better suited for people who exhibit a getting ahead orientation, whilst career counselling would better suit individuals with strong getting secure orientations and lastly the getting high and getting free orientations seem better suited for the use of career paths as a form of career intervention (Yarnall, 1998). This recommendation could prove hard in practice, however, as recruitment and selection policies in South Africa require that treatment of all applicants (irrespective of personality and career orientation) be standardised and consistent throughout the group.

TABLE 2.2 DERR'S (1986) CAREER ORIENTATIONS

KEY CHARACTERISTICS			
		Individual	Organisation
DERR'S CAREER ORIENTATIONS	Getting ahead	<ul style="list-style-type: none"> • Highly ambitious • Highly competitive • Lives revolve around their career • Motivated by financial rewards, increased influence, and status • Makes substantial contributions • Will move to another company to advance their career 	<ul style="list-style-type: none"> • Clear path for advancement • Recognition of success and innovation with financial rewards, promotions, and increased status • Fosters a competitive environment
	Getting free	<ul style="list-style-type: none"> • Does not like to be managed • Experts at what they do • Not easily bought with financial incentives • Will not exchange autonomy • Highly self-motivated. 	<ul style="list-style-type: none"> • Loosely structured organisation • Depend on and value specialist knowledge • Flexible in how employees complete their projects
	Getting secure	<ul style="list-style-type: none"> • Completely dedicated and loyal to the company • Wants lifelong employment with predictable career progression • Hard working and prefers a predictable work routine • Likes to maintain a sense of order • Resists change and outside ideas • Wants to be a part of the inner circle for the sake of belonging 	<ul style="list-style-type: none"> • Reputation for lifelong and secure employment • Predictable patterns of advancement • Well-developed middle management • Rewards loyalty and conformity
	Getting high	<ul style="list-style-type: none"> • Thrives on interesting and challenging work • Driven to learn new concepts and refine his/her skills • Not motivated by traditional rewards, like career advancement or financial incentives • Will exchange autonomy if necessary • Will not hesitate to go where the excitement/challenge is 	<ul style="list-style-type: none"> • Can be either a large and established organisation or a small start-up company • Provide the opportunity to refine knowledge and expertise • Project-oriented work environment
	Getting balanced	<ul style="list-style-type: none"> • Career, self-development, and family are of equal importance • Loyal and model workers, especially once they've found an employer who meets their needs • Must regularly adjust his/her schedule • Report being very happy and content • Willing to invest several years of "paying dues" in order to achieve balance 	<ul style="list-style-type: none"> • Offers child-care benefits, such as onsite day-care and paternity leave • Offers options such as flexible scheduling and working from home • Offers programs to support dual-career couples • Generally flexible in how employees meet their objectives

2.2.4 Schein's career anchors

As people gain occupational and life experience their career anchors evolve and once the self-concept has been formed it becomes a stabilising force or an anchor. The concept of career anchor refers to a pattern of self-perceived talents and abilities, values, and motives that influence a person's career-related decisions (Schein, 1975, 1987, 1996). A career anchor is a cluster of self-perceived talents, motives, and values that forms the nucleus of a person's occupational self-concept. Career anchors evolve through a process of career development, which involves a process whereby people assesses their congruence in various kinds of work settings and in different kinds of jobs until they have a clearer picture of the qualities that elicit a sense of intrinsic motivation (Erwee,1990; Jiang, 2001; Jiang, Klein & Balloun, 2001; Yarnall, 1998).

According to Yarnall (1998), career anchors constitute three distinct elements:

- (1) Self-perceived talents and abilities based on actual successes in a variety of work settings.
- (2) Self-perceived motives and needs based on opportunities for self-diagnosis in real situations and feedback from others.
- (3) Self-perceived attitudes and values based on actual encounters between the self and the norms and values of the employing organisation and work setting.

According to Järnlström (2000), a career anchor functions as a set of driving and constraining forces on individuals' career decisions and choices, serving to guide, constrain, stabilize, and integrate their career choices. It sets the platform for individuals' career choice as most people are more likely to make job and organisational selections that are consistent with their self-image or in this context, personality (Schein, 1996).

In order to identify job characteristics that arouse intrinsic motivation, it is necessary to first understand what motivates employees in their jobs. Schein (1975, 1985, 1990) indicates that career anchors are career motivators that make employees hold on to their jobs. They are strong non-monetary factors, which affect work and career satisfaction,

and provide a way of understanding these motivators of career decisions. Career anchors determine the intrinsic motivation present in a job to the extent that the characteristics of the job match the jobholder's career anchors.

Kumar (2003) points out that jobs high on variety, identity, significance, autonomy and feedback have a high probability of eliciting intrinsic motivation and lead employees to display organisational citizenship behaviour.

During the exploration phase of development, people may move into careers in which they may not attain satisfaction. Such failure could be as a result of incapacity or being forced to compromise their values, motives and attitudes. Such people are more likely to pursue other work opportunities until they are 'pulled back' into something more congruent. Career anchors only evolve as an individual gains occupational and life experience. However, once the self-concept has been formed, it functions as a stabilising force, hence the metaphor of "anchor", and can be thought of as the values and motives that people will not give up if forced to make a choice. People are more likely to seek and value a career they are good at and will improve on their abilities in those areas that they want or value (Schein, 1996).

Career anchors function as a way of organising experience in a person's life. In an organisation some employees may perceive the atmosphere, climate and culture comfortable and conducive to performance while others may find the same organisation unfit to work for. Schein (1996) attributes this difference in perception to variations in capabilities and competencies pushed and driven by different motives and goals. Each person has a unique set of ambitions and values. What holds people to their chosen organisation or drives them away is the career anchor or anchors they subscribe to consciously or otherwise (Schein, 1990; 1996).

DeLong (1982a) regards the career anchor as a composite of one's career orientation and self-perceived talents. In the context of this study, the emphasis is on career orientation as a central part of the concept of career anchors and for which measurement could be operationalised by means of Schein's (1990) Career Orientations Inventory.

Feldman and Bolino (1996) reconceptualise Schein's eight career anchors into three distinct groupings along with their inherent motivations, namely talent-based, need-based and value-based anchors. This provides a useful framework for the present study. The talent-based anchors consist of managerial competence (willingness to solve complex, whole-of-organisation problems and undertake subsequent decision-making), technical/functional competence (the achievement of expert status among peers) and entrepreneurial creativity (opportunity for creativity and identification of new businesses, products or services) (Kniveton, 2004).

The need-based anchors consist of security and stability (long-term employment for health benefits and retirement options), autonomy and independence (personal freedom in job content and settings) and lifestyle (obtaining balance between personal and the family's welfare with work commitments). The value-based anchors consist of pure challenge (testing personal endurance through risky projects or physically challenging work) and service and dedication to a cause (working for the greater good of organisations or communities) (Grzeda, 1999). Table 2.3 outlines the eight career anchors and their underlying motivations.

**TABLE 2.3 CHARACTERISTICS OF THE EIGHT CAREER ANCHORS
(SCHREUDER & COETZEE, 2006:221)**

CAREER ANCHOR	CHARACTERISTICS
<i>Talent-based anchors</i>	
Technical/functional competence	<ul style="list-style-type: none"> • Identity built around content of work-the technical/functional skill in which the individual excels • Challenging work that allows application of expertise <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Wants to be paid according to skills level • Opportunities for self-development in particular field
General managerial competence	<ul style="list-style-type: none"> • High levels of responsibility • Challenging, varied and integrative work • Leadership opportunities that allow contribution to organisation • Measures self by pay level - desires to be highly paid <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Bonuses for achieving organisational targets • Promotion based on merit, measured performance, or results • Promotion to a position of higher responsibility - rank, title, salary, number of subordinates, size of budget
Entrepreneurial creativity	<ul style="list-style-type: none"> • Enjoys creating new products or services, building new organisations through financial manipulation, or by taking over an existing business and reshaping it in one's image • Obsessed with the need to create, requires constant new challenge <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Wealth • Ownership • Freedom and power
<i>Need-based anchors</i>	
Autonomy/Independence	<ul style="list-style-type: none"> • Clearly delineated, time-bounded kinds of work within area of expertise • Clearly defined goals which allow means of accomplishment to the individual • Does not desire close supervision <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Pay for performance, bonuses • Autonomy oriented promotion systems
Security/Stability	<ul style="list-style-type: none"> • Stable, predictable work • Concerned about the context of the work and the nature of the work itself • Prefers to be paid in steady, predictable increments based on length of service • Benefit packages which emphasise insurance and retirement programs <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Seniority-based promotion systems with published ranks spelling out how long a person must serve in any given grade before promotion is preferred • Recognition for loyalty and steady performance • Assurance of further stability and steady employment
Life-style	<ul style="list-style-type: none"> • Desires to integrate the needs of the individual, family and career • Flexibility • Organisational attitude that respects personal and family concerns and makes renegotiation of the psychological contract possible <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Company benefits that allow options for travelling or moving when family issues permit, part-time work if life concerns require it, sabbaticals, paternity and maternity leave, day-care options, flexible work arrangements
<i>Value-based anchors</i>	
Service/Dedication to a cause	<ul style="list-style-type: none"> • Works toward some important values of improving the world in some manner • Prefers helping professions (e.g. nursing, teaching, ministry) <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Fair pay • Recognition for one's contributions • Opportunities to move into positions with more influence and freedom
Pure challenge	<ul style="list-style-type: none"> • Pursues challenge for its own sake • Jobs where one faces tougher challenges or more difficult problems, irrespective of the kind of problem involved • Highly motivated <p><i>Rewards</i></p> <ul style="list-style-type: none"> • Adequate opportunities for self-tests

2.2.4.1 *Talent-based anchors*

The talent-based anchors consist of three anchors: managerial, technical and entrepreneurial competence.

(a) *Managerial competence*

Individuals who have a strong managerial anchor are interested in general management so that they can exercise large degrees of formal authority, power, and influence, and link organisational achievements to their own efforts (Schein, 1978). They are able to perform general management functions well because they have strong analytical competencies, which enable them to identify, analyse, and solve problems under conditions of incomplete information and uncertainty (Schein, 1978). Due to increased competitive pressures and corporate downsizing, individuals face fewer opportunities for promotion in their workplaces (Marshall & Bonner, 2003). Instead, they are expected to behave as 'entrepreneurs', and be flexible and responsive to changing work requirements. As individuals gain experience managing their own careers, more move toward self-employment, rather than pursue lifelong careers in a single organisation (Lee & Wong, 2004).

Since individuals who have a strong managerial anchor have general management skills, they tend to be generalists and regard specialist posts only as a means of gaining some relevant experience (Kniveton, 2004). These people typically want a high-level position in a firm because they measure their success by the amount of responsibilities the size of their job tasks (Schein, 1978) and income (Kniveton, 2004).

(b) *Technical anchor competence*

Individuals who have a technical/functional anchor organize their careers around their specific area of technical or functional competencies (Schein, 1978). Such individuals are most interested in a technical career ladder to maximize their opportunities to remain challenged in their specific functional area (Kim, 2004). Igbaria, Kassicieh and Silver (1999) and Feldman, (2002) found that technically oriented employees were reluctant to switch from technical work to managerial responsibilities and when faced with the need to establish their own businesses this category of individuals are most likely to operate in

their strong technical or functional competence field (Kniveton, 2004). Although results from past studies do not provide evidence on the strength of entrepreneurial intentions among individuals with a high technical anchor, Vesper (cited in Kniveton, 2004) noted that some individuals who enjoy developing technologies and have a technical anchor have started entrepreneurial careers.

(c) *Entrepreneurial creativity*

Schein (1978) and Barth (1993) argue that individuals with a strong creativity/innovative anchor have a need to create 'something new.' Hence, the creativity anchor is similar to 'opportunistic' entrepreneurial orientation as these individuals tend to be highly oriented towards the future by following market and economic trends and the growth rate of their company (Barth, 1993). Feldman and Bolino, (2000) found that individuals with a strong creativity anchor were motivated to become self-employed for a chance to use their skills and be creative in order to capitalize on good business ideas. They would keep trying their hands at new kinds of projects in order to identify opportunities for creativity and identification of new businesses, products or services (Igarria & Greenhaus, 1991).

Hence, among individuals who intend to found a business venture, those with a strong creativity anchor would most likely be interested in building or creating something entirely new (Schein, 1978). This is mainly motivated by the need to create or to build new projects rather than manage existing ones. People with entrepreneurial intentions are more likely to be indifferent to the type of business they find themselves in as long as their needs are met (Kniveton, 2004).

2.2.4.2 *Need-based anchors*

There are three need-based anchors, namely security and stability, autonomy, and independence and lifestyle.

(a) *Security and stability*

Security is a twofold construct. On one hand, it concerns security with respect to the organisation to ensure long-term employment for health benefits and retirement options

and on the other, it implies stability as the possibility of keeping the working geographical area unchanged (Petroni, 2000).

The need for secured employment is also motivated by long-term job security and attachment to one organisation, and being willing to adapt to norms and standards. Individuals with a strong security/stability anchor tie their careers to organisations that provide them with job security and tend to dislike travel and relocation (Suutari & Taka, 2004) consequently they prefer career stability compared to risky employment (Schein, 1978; 1996). They are willing to conform and to be fully socialised into an organisation's values and norms unwilling to leave a given organisation even if they have to lose some degree of freedom or if their talents go unrecognized (Barth, 1993).

People anchored in security tend to do what is required of them by their employers in order to maintain job security, a decent income, and a stable future (Lee & Wong, 2004).

They accept an organisational definition of their careers and 'trust' the organisation to develop their career paths for them. These people are labelled the 'organisation man/woman' and "the conformist" because in order to remain in the organisation, they become socialized into the organisation's values and norms (Barth, 1993). Hence, individuals with a strong security anchor are less likely to have entrepreneurial intentions, as they are less willing to step outside of their comfort zone to take risks. Schein (1978) predicts that it will become less popular as a result of the increasingly transitory nature of employment. As individuals gain experience managing their own careers, more move toward self-employment, rather than pursue lifelong careers within a single organisation.

(b) Autonomy and independence

People who exhibit this career anchor are usually associated with the desire of developing a career in which respondents can decide when, what on and how hard to work (Suutari & Taka, 2004). Individuals with this anchor desire personal freedom in job content and settings, including organisational rules and control from supervisors (Schein, 1990).

They would seek out work situations in which they are maximally free from organisational constraints so that they can pursue their own interests. They prefer to be on their own to set their own work pace and schedules so that work fits their lifestyles and

habits. Hence, the autonomy/dependence anchor is similar to Smith and Miner's 'craftsman' (cited in Katz, 1994:23).

Feldman and Bolino (2000) found that individuals with the autonomy/independence anchor were most driven by the desire to live as they would like. Since these 'independents' prefer to leave salaried employment for careers that would permit them to define for themselves their areas of interest and on how to pursue them individuals who are strong in this anchor are likely to have higher levels of entrepreneurial intentions (Schein, 1990).

(c) *Lifestyle*

The lifestyle integration anchor supports the recent trend in human resource management that recognises the importance employees place on balancing the commitments of their careers, family life and other interests. These people are focused mainly on lifestyle as the motivation for their whole pattern of living. They do not so much balance work and life as integrate it. They may even take long periods off work to indulge in passions such as sailing or travelling. Schein (1978) predicts an increasing emphasis on this anchor with the growing proportion of dual career (job and family) individuals. In the context of this study, women would be expected to have a significantly higher score of this anchor.

2.2.4.3 *Value-based anchors*

There are two value-based anchors, namely pure challenge, and service and dedication to a cause.

(a) *Pure challenge*

People with this type of career anchor tend to seek constant stimulation overcoming obstacles or problems concerned with competition and winning. They regard competition and challenge as essential ingredients for success. Such people will change jobs when their current one becomes boring. They also tend to have extremely varied careers. These people test personal endurance through risky projects or physically challenging work. Qualities of this anchor directly correlate with Derr's (1986) orientations, getting ahead, getting free and getting high (Schein, 1990; Swanepoel et al, 2003).

(b) *Service and dedication to a cause*

This career anchor is largely concerned with working for the greater good of organisations or communities. Individuals who have a strong preference for this anchor seem anxious to work in a field that meets their values, rather than their skills. Schein (1975, 1978) ranks service and dedication to a cause amongst the bottom third, but predicts an increase with growing emphasis on ecology and recycling. Marshall and Bonner (2003) rank it about mid-point.

2.2.4.4 *Additional anchors*

In addition to Schein's (1978) six career anchors, Suutari and Taka (2004) include an additional (seventh) anchor called "internationalism". Suutari and Taka (2004) indicate that this anchor is characteristic of people who are primarily excited by working in international task environments and prefer to develop their professional competencies in international environments. These people favour career opportunities embedded in searching for new experiences and getting to know unfamiliar different cultures.

Like Suutari and Taka (2004), Ituma and Simpson (2006:208) refer to an anchor called "being marketable". This anchor is characteristic of people who are primarily interested in continual learning and skill development in order to enhance future career opportunities and to remain employable. Ituma and Simpson (2006) attribute this desire for marketability to the need to meet personal and family obligations, which include education, shelter and money to immediate or extended family.

These anchors to which Suutari and Taka (2004) and Ituma and Simpson (2006) refer do not form part of the current study. Moreover, they do not provide examples of items used in their questionnaires to assess these anchors.

Baruch (2004) identifies three different types of career anchors, namely *employability*, *work-family balance* and *spiritual purpose* as having emerged in the 21st century. Coetzee and Roythorne-Jacobs (2007) place the employability anchor with Schein's (1975, 1990, 1996) talent-based anchors (technical/functional, general managerial and entrepreneurial anchors), the work-family seems to relate to need-based anchors

(autonomy/independence, security/stability and lifestyle) and the spiritual purpose seems to relate to value-based anchors (service/dedication to a cause and pure challenge).

Schein (1996) argues that each of the anchor categories still attracts a set of people, although in the context of changing world of work the working out of a given anchor can become problematic. People are better advised to become more self-reliant and determine where their particular anchor best fits into the emerging occupational structure. The ability to analyse oneself as well as the ability to establish what kind of job is available and how that job will evolve become crucial skills if one is to succeed (Schein, 1996).

According to Schein (1990), each individual has only one true career anchor, which emerges after the person has accumulated meaningful life and work experiences. Feldman and Bolino (1996) emphasise that Schein's main contribution is that his work describes how a stable career identity is formed and distinguishes this process from initial vocational choice.

In this study, Schein's (1978) career anchor theory was chosen over Derr's (1986) career orientations, as the latter appears to map easily onto Schein's (1978) anchors (Erdoğmus, 2004; Igarria & Greenhaus, 1991; Kniveton, 2004; Yarnall, 1998).

2.2.5 SUPER'S, HOLLAND'S AND DERR'S THEORIES ON CAREER CHOICE AND DECISION MAKING

This section briefly discusses Super's (1957,1990), Holland's (1973, 1996), Derr's (1986) theories on career choice and career decision-making practices and then contrasts them (see table 2.4). Since Schein's (1975, 1980, 1996) theory forms the basis of this study, it is discussed in more detail.

2.2.5.1 Super's views on career choice and career decision-making

Super (1990) represents the most important determinants of career development and resultant career choice, success and satisfaction by means of the archway model (see

figure 2.2). In this model individuals' specific life stage and role self-concepts codetermine career decisions, outcomes and behaviours.

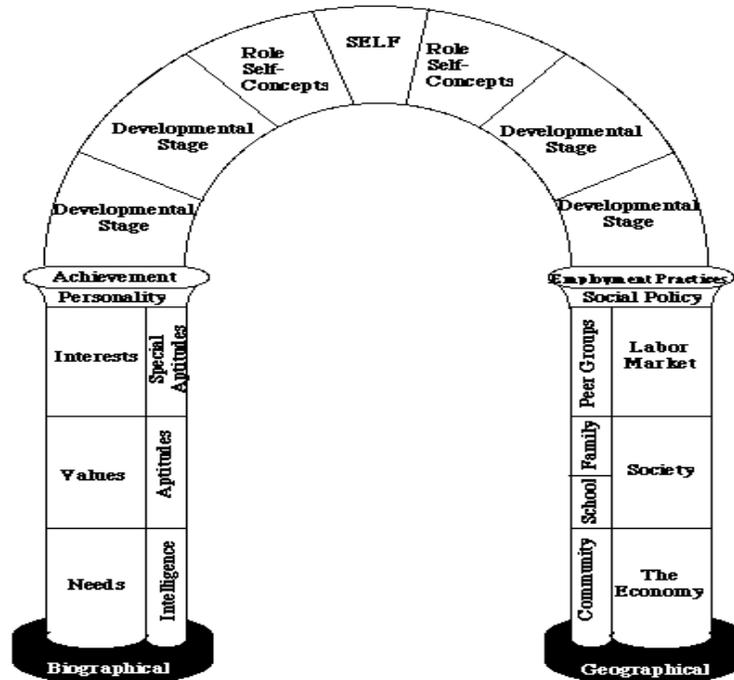


Figure 2.2 Super's Archway of Career Determinants (Schreuder & Coetzee, 2006:146)

Super (1992) depicts the self at the top of the arch and making satisfying vocational choices requires an accurate understanding of the self. This is achieved through person-centred values clarification. Understanding the self is the key to making a successful vocational choice. Lewis (2001) infers that this implies that a person is still an active agent and not a victim in career decisions. As decision-makers, adults need to synthesise the effects of all the determinants of their careers (Super, 1992). Throughout their various life stages individuals will reach several decision points, where roles are accepted, relinquished or changed. Adults reach decision points in the worker role between the ages of forty and fifty and between the ages of sixty and seventy. A decision point can be seen as a time of changing roles (Super, 1980,1990,1992).

Schreuder and Coetzee (2006) have a similar view to Super's archway model and regard the determinants of a career as building blocks, which in their interaction determine the career as a whole.

Apart from these specific decision points in time, individuals go through cyclical decision steps or phases, which Super (1990) calls the cyclical decision-making model. In this model, upon reaching a career decision point individuals ask a decision question, review premises, and identify and seek the necessary information. They then identify possible alternatives and the probabilities of outcomes and weigh up alternatives before selecting a plan. Once a plan has been selected, they may pursue a tentative action plan, evaluate the execution and outcomes of the plan in order to modify it, and then pursue the evolving plan until a new decision point is reached (Lewis, 2001; Nazli, 2007).

2.2.5.2 *Holland's views on career choices and career decision-making*

Holland's (1996) theory, like Super's (1982, 1990, 1992), emphasises the accuracy of self-knowledge and career information necessary for career decision-making and holds that a fit between people's interests and their occupation will bring about job satisfaction and success (Zunker, 1998). Lewis (2001) points out that Holland's (1996) theory presents the choice of occupation as an expressive act that reflects a person's motivation, knowledge, personality (including self concept) and ability. Occupations therefore represent a way of life, an environment rather than a set of related work functions and skills.

Holland (1996) views vocational satisfaction, stability and achievement as depending directly on the congruence (or match) between individuals' personalities and the environments in which they work (Luzzo, McWhirter & Hutcheson, 1997). According to Afolabi (1996), in Holland's theory satisfaction in a job and staying or leaving depends on whether people's needs, personalities and occupational environments match. Consequently, if career counsellors know individuals' personality patterns and the pattern of their environment, then, in principle, they can use their knowledge of personality types and environmental model to forecast some of the outcomes of such a pairing. Such outcomes include choice of vocation, job changes, vocational achievement, personal

competence and educational and social decision-making (Afolabi, 1996; Lewis, 2001; Luzzo et al, 1997).

2.2.5.3 *Derr's views on career choices and career decision making*

Schonegevel (2006) points out that for Derr (1986), effective career development allows people to live by their personal values whilst at the same time making an effective contribution at work. Since different people define their goals differently, frustration and low performance will result if they cannot match them to the organisation's needs. Romzek and Utter (1996), who used Derr's career orientation inventory, found different individuals' engagement in career choices and career decision was highly influenced by their characteristic orientation and tended to reflect the qualities associated with each orientation category.

Derr (cited in Chompookum & Derr, 2004: 408) suggests a self-directed approach to career development. No one will be more aware of their own career drivers and values than the individuals concerned. When they use that insight to make decisions about their future, they take personal responsibility and are likely to be far more committed to achieving the outcome than if the decision was imposed on them (Schonegevel, 2006).

According to Järnlström (2000), career orientations influence career choice, affect decisions to relocate, shape career desires, determine an individual's view of the future and sway employee reactions to work. Chompookum and Derr (2004) point out that career orientations may help show characteristics which may serve as significant predictors of organisational citizenship behaviour.

TABLE 2.4 A COMPARISON OF SUPER'S, HOLLAND'S, DERR'S AND SCHEIN'S THEORIES ON CAREER CHOICES AND DECISION-MAKING

	SUPER (1990, 1992)	HOLLAND (1996)	DERR (1986)	SCHEIN (1975, 1980, 1996)
Stage/category differentiation	<p>Developmental stages</p> <ul style="list-style-type: none"> • Growth • Exploration • Establishment • Maintenance • Decline 	<p>Personality types</p> <ul style="list-style-type: none"> • Realistic • Investigative • Artistic • Social • Enterprising • Conventional 	<p>Career orientation</p> <ul style="list-style-type: none"> • getting ahead • getting free • getting secure • getting high • getting balanced. 	<p>Career anchors</p> <ul style="list-style-type: none"> • General managerial competence • Technical/functional competence • Entrepreneurship creativity • Autonomy/independence • Security/stability • Lifestyle integration • Service/dedication to a cause • Pure challenge
What is the relationship between categories in each theory?	People "recycle" through the various stages.	Some personality types complement others while others conflict with others.	An individual may exhibit more than one type of orientation, which vary in their intensity levels	Career anchors theory does not attempt to categorise the whole person but rather outlines individuals' orientation towards one focused aspect of their lives, namely their work.
Can an individual occupy more than one stage/category at a time?	Engaging in different roles simultaneously may result in role conflict	Individuals may reflect a combination of two or three of his six personality types	Everyone has one or two dominant orientations that motivate them in their careers	Each individual has only one true career anchor
What factors influence the career decision making process	An individual's specific life stage and role self-concepts codetermine career decisions, outcomes and behaviours.	Accuracy of self-knowledge and career information necessary	Decisions are influenced by their characteristic orientation and tend to reflect the qualities associated with each orientation category	Decisions are influenced by self-insight, which comes from experience and from systematic self-diagnosis.
How is career satisfaction achieved?	Through work roles in which individual can express himself or herself and implement and develop their self-concepts	Through congruence between a person's personality and environment	Through understanding of an individual's career orientation both monetary and non-monetary motivators which affect work and career satisfaction.	Through achieving a state when individuals' job characteristics or settings match their career anchor
What is the theory's usefulness for careers?	Useful in application in career counselling and career guidance	Useful in helping individuals to gather information that facilitates career decision-making	Useful as information base for individuals contemplating career changes and for organisations seeking to help individuals plan their careers	Useful, as it recognises the need for a balance between individual and organisation, rather than having a purely individual focus

2.3 PRACTICAL APPLICATION OF CAREER ANCHORS IN CAREER DECISION-MAKING

Schein (1990) states that the process of career decision making is influenced by flexible reward systems, promotion and recognition systems to deal with individuals' differing needs. People with a lifestyle anchor, for example, are likely to place a high value and be attracted to careers that offer flexible benefits, whereas people with a security/stability anchor will be more biased towards companies with attractive pension schemes and steady incremental pay scales.

Kim (2004) found differences in Korean employees' career anchors among different age groups. Marshall and Bonner (2003) found that specific relationships emerged related to age, downsizing and careers. The younger subjects had more favourable views on their downsizing experiences, and were more likely to cite positive career and job satisfaction gains in comparison to negative responses from older subjects (Marshall & Bonner, 2003).

For Schein (1978), a career is a socialisation process characterised by age and movement towards the inner core of the organisation. Baruch (2004) maintains that, judging from the international trends of ageing populations, the need to increase employment rates among older working-age women and men may become a more important issue in the future, as employers face growing skills shortages.

Kniveton (2004) and Nordvik (1996) point out that the concept of career anchors does not attempt to categorise the whole person but rather outlines individuals' orientation towards one focused aspect of their lives, namely their work. The concept of career anchors takes into account the occupational experiences of individuals and any changes in their work circumstances (Kniveton, 2004).

The main use of career anchors seems to be to act as a stabilising force in the total personality that guides and constrains future career decisions (Schein 1992; Van Vuuren & Fourie, 2000). As such, career anchors affect the way that individuals respond to events and experiences at work (Igarria & Greenhaus, 1991).

For example, an individual whose dominant career anchor is security and stability could be expected to respond negatively to news of a corporate restructuring or downsizing compared to a person whose dominant anchor is autonomy (Ramakrishna & Potosky, 2003).

According to Schein (1990), individuals have a responsibility to know what they want and require from the career and any given job. Moreover, such self-insight comes from experience and systematic self-diagnosis. Through knowing what their career anchors are, people can make better choices and negotiate better with organisations when they are confronted with job opportunities and options (Schein, 1990).

Within a few years of entering employment, most people establish a dominant career anchor that will play a significant part in future career choices and decisions (Schein, 1996). Kumar (2003) maintains that if people's job characteristics match their career anchors, they will experience job satisfaction and then display organisational citizenship behaviour as a result of this satisfaction.

It is important to understand that the level of significance attached to non-monetary motivators of career satisfaction, depends on individuals' motives, values and talents. Barth (1993) and Chompookum and Derr (2004) maintain that a greater understanding of career anchors can help organisations to tailor and focus career initiatives more successfully. Career anchors are therefore broader than values, as they emphasise discovery through work experience and the importance of feedback in shaping development. They serve to explain how and why individuals interact with the organisation since, theoretically, individuals are not expected to give up their predominant career anchor even if a choice is available. For example, employees will not take on a job where their career anchor needs are not met, if there is an alternative.

Changes in the business environment do not necessarily affect everyone to the same extent or in the same way. Different people make use of different information when making career decisions. Marshall and Bonner (2003) found that males and females focused on different career anchors. In their choice of careers, females put more emphasis on factors such as working conditions, facilities for child rearing, career certainty, and working hours. Males were more likely to run their own businesses than females (Marshall & Bonner, 2003).

Custodio (2000) is of the opinion that human resource planning, utilisation and evaluation in educational systems should involve both organisational and individual interest to avoid unproductive career decision-making. For organisations to achieve effective human resource planning and development, they should match their needs for human resources with the individuals' need for personal growth and development.

Yarnall (1998) recommends Schein's (1978) model as a tool for analysing employee career orientations. The particular advantage of Schein's model is that it recognises the need for a balance between the individual and organisations, rather than a purely individual focus (Yarnall, 1998). A pluralistic approach to career management should be adopted in order to maintain and reward diverse competencies in their workforces, as is the case in the South African population (Igbaria & Greenhaus, 1991; Brousseau, Driver, Eneroth & Larsson, 1996).

2.4 CHAPTER SUMMARY

This chapter explored the career concepts which are relevant to this study. Super's, Holland's, Derr's and Schein's models were discussed in order to gain clarification on how people's personality, career orientation and career anchors influence their career decision-making.

Next in chapter 3, the concept of personality preferences will be explored and an integration of both career anchors and personality preferences will be included.

CHAPTER 3 PERSONALITY PREFERENCES

Chapter 3 represents the second part of the literature survey, namely a literature review on the construct *personality preferences*. The paradigmatic and conceptual foundations are discussed with the aim of describing the theoretical framework for the concept *personality preferences*. Jung's theory of psychological type is discussed by defining its concepts along with further refinement of the theory. Finally, the chapter focuses on the practical use of *personality preferences* in career choice and decision-making. The chapter concludes with a theoretical integration of the discussion on the constructs *career anchors* and *personality preferences*.

3.1 PARADIGMATIC AND CONCEPTUAL FOUNDATIONS

The aim of the discussion on the paradigmatic and conceptual foundations is to establish a broader understanding of the constructs *personality* and *personality preferences* from the paradigmatic perspective of Jung's (1921, 1969, 1970, 1971, 1974) analytical psychology. In order to fully understand the logic behind Jung's analytical theory, it is necessary to briefly discuss Freud's (1963, 1983, 1986, 1988) psychodynamic theory and its assumptions, as it forms the base from which Jung developed his theory.

3.1.1 Freud's psychoanalysis theory

Freud (1963, 1983) believed that behaviour is psychologically determined by underlying unconscious causes and motives. Lafer (2006) reports that according to Bion (1992), Freud saw patients who displayed strange symptoms that had no discernible physical cause, such as a young woman who appeared to be blind although tests of her vision showed that her eyes and visual system were undamaged. To elucidate such perplexing realities, Freud (1963, 1983) proposed that personality consists of three structures, namely the *id*, the *ego*, and the *superego*, which are always in dynamic conflict, hence the use of the term "psychodynamics" (Bergh & Theron, 2006; Louw & Edwards, 1997).

The *id* consists of two biologically based instincts: self-preservation (desire for basic needs like food and shelter) and sexual instinct (like the drive to find an intimate partner) (Louw & Edwards, 1997). As people try to satisfy these instincts, a state of biological tension arises. The *id* functions in accordance with the "pleasure principle", which seeks immediate gratification of

basic biological sexual and aggressive impulses, regardless of reality considerations (Bergh & Theron, 2006; Louw & Edwards, 1997).

The *superego*, on the other hand, represents the moral standards of a person's society, obtained through the internalisation of parental values, rules, and characteristics in the course of socialisation.

The *ego* mediates between the instinctual demands of the id and the outer world of reality thereby localizing the appropriate objects for gratification in the environment so that the impulses of the id can be satisfied. It operates by means of logical thinking and rational planning. The responsibility of the ego include cognitive appraisal of the situation; the avoidance of pain produced by internal conflict in the effort to control and master the impulses or desires of the id, and the attainment of a harmonious integration among the needs of both the id and the superego (Bergh & Theron, 2006; Louw & Edwards, 1997).

3.1.2 Jung's analytical theory

In this study, the study of personality type was approached from a psychoanalytical perspective, particularly Jung's (1921, 1969, 1971, 1974) analytical theory.

Both Freud (1963, 1983) and Jung (1921, 1969, 1971) regard personality as the result of an internal struggle. Jung (1921, 1969, 1971) developed a different theoretical position in his analytical theory. His concept of the self differed from Freud's and revealed a more optimistic view, which considered the future and the potential of the person (Louw & Edwards, 1997; Bergh & Theron, 2006).

Jung's (1969, 1971) analytical theory has become one of his best-known works and he credited the reason for its development to "finding some kind of order among the chaotic multiplicity of points of view" (Jung, 1971: xiv). Mouton (1998) defines a typology as a conceptual framework in which phenomena are classified in terms of characteristics that they share with other phenomena. McBride (1992) points out that Jung viewed a typology as a critical and practical tool for researchers as it helps with the understanding of wide variations amongst people and provides an explanatory basis and theoretical framework for the boundless diversity in the area. The discussion that follows gives a brief outline of Jung's theory.

3.1.2.1 *The structure of personality*

Jung (1921, 1969, 1971) equated the term *psyche* to the concept of personality, which he likened to a brain as it is an open system that has an input/output with its environment. In the same way as the brain comprises a number of interrelated components, Jung's psyche comprises numerous complex systems that continually interact with each other. These include the conscious and the unconscious, which constantly exchange information, where the contents of unconscious spill into consciousness and the data held in the conscious level becomes suppressed or repressed (Boeree, 2006; Ewen, 1998; Maddi, 1996; McGuiness, Izard & McCrossin, 1992).

a. *The ego*

In the Freudian conceptualisation, ego refers to a psychic structure that mediates between society (superego) and instinctual drives (id). For Jung (1921, 1969, 1971), however, the ego can be understood in a much more dynamic, relative, and fragile way as a complex, a feeling-toned group of representations of oneself that has both conscious and unconscious aspects and is at the same time personal and collective (Hopcke, 1989).

Jung (1921, 1969, 1971) regarded the ego as being in contact with reality and is the centre of consciousness. It represents a person's identity, the 'I' and 'me' (Boeree, 2006; Ewen, 1998). Jung added that the ego mediates between subjective and objective realms of experience by existing at the junction between inner and outer worlds (Von Franz, 1998). According to McGuiness et al (1992), the ego is the centre of consciousness and the dominant function is the centre of the ego but consciousness is only part of the whole.

b. *The unconscious*

The other composite of the psyche is the unconscious. There are two types of unconscious, the *personal unconscious* and the *collective unconscious*.

Freud (1963, 1983, 1986) gave only a superficial understanding of the unconscious mind, reducing it to a storage place for all repressed personal psychological baggage. According to Jung (1990), the personal unconscious contains various complex materials which are not conscious. It is a place where all uncomfortable or repressed feelings are kept. The personal unconscious is like most people's understandings of the unconscious in that it does not include the instincts that Freud would have it include (Boeree, 2006; Ewen, 1998).

Jung (1990) identifies the collective, or transpersonal, unconscious as the centre of all psychic material that does not come from personal experience. Its contents and images appear to be shared with people of all time periods and all cultures. Some psychologists, such as Skinner (cited in Bergh & Theron, 2006), implicitly assume that each individual is born as a blank slate, a *tabula rasa*; consequently, psychological development can come only from personal experience. Jung (1956,1967,1968) postulates that the mind of the infant already possesses a structure that moulds and channels all further development and interaction with the environment. This basic structure is essentially the same in all infants. Although we develop differently and become unique individuals, the collective unconscious is common to all people and is therefore one (Frager & Fadiman, 2005).

Boeree (2006) likens the concept of Jung's collective unconscious to a 'psychic inheritance' and adds that it is the reservoir of our experiences as a species, a kind of knowledge we are all born with. Although people can never be directly conscious of it, it influences all of their experiences and behaviours, most especially the emotional ones, but they only know about it indirectly, by looking at those influences. The collective unconscious contains archetypes and instinct (McGuiness, Izard & McCrossin, 1992).

c. *The archetypes*

According to Jung (1990), an *archetype* is a generic, idealized model of a person, object, or concept from which similar instances are derived, copied, patterned, or emulated (Boeree, 2006). Archetypes have a hierarchical order and are not images but structures which represent the psychic world whose reality is seen through its effects on the conscious mind.

Jung (1990) identifies five archetypes which he regards as being most important, the persona, the anima, the animus, the shadow and the self.

The *persona* is a part that represents a person's public image which is presented to the outside world. Jung (1990) equated it to a mask worn by actors to signify the role they are playing. Different circumstances yield different persona, which are always in line with the dominant's viewpoint to preserve the individual's perception of what is appropriate to the occasion (McGuiness et al, 1992).

The *anima* represents the feminine image in a man's psyche whereas the *animus* represents the masculine image in a woman's psyche. Both the anima and the animus are the agent of the persona and develop in interaction with the opposite sex.

The *shadow* corresponds with Freud's (1963) id and comprises inherited biological instincts.

The *self* is according to Jung the most important archetype which together with the ego, determine the order parameters of the entire psyche (biases, dispositions, likes and dislikes and values). The self is the centre of the psyche and is credited with the act of striving to wholeness and an integrated personality (McGuinness et al, 1992). According to Jung, one must get in touch with the shadow and anima/animus before one can truly get in touch with the self (Boeree, 2006).

At the conscious end, the persona acts as a filter for the ego to the external world, while at the unconscious end, the archetype of the anima-animus acts as a filter to the collective unconscious (Boeree, 2006).

d. Motivation of personality

Jung (1990) viewed personality as an energy system. Motivation of personality in Jung's theory is explained with regard to the movement of energy between structures of the psyche. Jung explained the dynamic of operation in the psyche by referring to three principles: the principle of opposite, the principle of equivalence and the teleological principle.

The *principle of opposites*, according to Jung (1990), originates from the opposition that creates the power (or libido) of the psyche (Boeree, 2006). Compare this energy to that of two poles of a battery. It is the contrast that gives energy such that a strong contrast gives strong energy and a weak contrast gives weak energy.

The energy created from the opposition is distributed to both sides equally, which is in line with the *principle of equivalence* (Boeree, 2006).

The *teleological principle*, according to Jung (1990), links the present with the future through a future goal which guides and directs behaviour. (Bergh & Theron, 2006)

The *principle of entropy* represents the tendency for oppositions to come together and so for energy to decrease over a person's lifetime. Whereas Freud's (1963) theory was more

deterministic and mechanical, Jung's (1990) conformed to the *teleological principle*. *Mechanism* is the idea that things work through cause and effect, and *teleology* on the other hand refers to the idea that people are led on by their our ideas about a future state, by things like purposes, meanings, values, and so on. Mechanism is linked with determinism whereas teleology is linked with free will. Jung (1990) made mention of the concept of synchronicity, which relates to the occurrence of two events that have neither a causal nor teleological link but are meaningfully related (Boeree, 2006).

3.2 JUNG'S THEORY OF PERSONALITY TYPES

In order to understand the Myers-Briggs psychological type theory, Jung's personality type theory will be discussed briefly as it forms the basis from which the former theory was built. Myers and McCauley (1990) concur, stating that type theory refers to Jung's theory as interpreted by Myers and Briggs' psychological type theory.

Jung originally intended his typology (1921,1971) as a schema for distinguishing fundamental differences in psychological approach based on distinctly delineated parameters that act as universal 'variables' in the psychology of the individual. It is a theory of opposites that is a "critical psychology dealing with the organisation and delimitation of psychic processes that can be shown to be typical" (Jung 1971: 323).

Jung (1990) saw the psyche as a dynamic system that is in constant movement and much of the energy in the psyche results from two opposing poles which in Jung's (1990) theory can be described as dichotomies. Consequently, Jung (1971) distinguished two different orientations toward the world ('extraversion' and 'introversion') and four general 'preferences' or 'styles' of experiencing the world related to what he called the four 'functions' of consciousness (sensing, thinking, intuition, and feeling) which every human being possesses, although in varying degrees. Different combinations of orientation and function preference result in specific psychological types (Myers et al, 2003).

3.2.1 Attitudes of consciousness

Jung (1971) distinguishes between two different attitudes or ways of reacting in given situations and found these sufficiently significant and generally evident to enable him to describe them as

typical. The word ‘attitude’ in this sense means a deeper more settled mode of behaviour than the common day-to-day use of the word. These attitudes are called the extraverted and introverted attitudes. These terms describe and distinguish two directions of energy within consciousness that attract the individual toward, on the one hand, the external world and its objects, and on the other hand, the internal world and its images. This typological distinction is to be understood as a function of the unconscious dynamics particular to each person. It is not intended to group together specific and superficial traits of individuals in a character-logical way.

3.2.1.1 *The Extraversion-Introversion attitudes*

Bilsker (2002) defines attitudes of consciousness as the basic direction in which a person’s conscious interests and energies may flow, inward to objective, psychological or outward to the environment of objects, other people and collective norms.

No one is a pure introvert or a pure extravert. Stein (1995) states that Jung compared the two processes to the heartbeat in that it has rhythmic alternation between the cycle of contraction (introversion) and the cycle of expansion (extraversion). However, each individual tends to favour one or the other attitude and operates more often in terms of the favoured attitude. Introverts see the world in terms of how it affects them, and extraverts are more concerned with their impact upon the world. The attitudes of extraversion and introversion are very different and present a remarkable contrast.

Jung (1971) posited that *extraversion-introversion* attitudes or orientations of energy indicate the direction in which the psychic energy flows and reflects the extent to which individuals are oriented to the outer world of people and objects versus the inner world of concepts and ideas (see table 3.1).

TABLE 3.1 WORDS USED TO DESCRIBE EXTRAVERTED AND INTROVERTED ATTITUDES (BRADLEY & HERBERT, 1997:341)

Extraverted	Introverted
External	Internal
Outside thrust	Inside pull
Blunt out a comment	Keeps comments inside
Breath	Depth
Involved with people/things	Interested in ideas/thoughts
Interaction	Concentration
Action	Reflection
Do-think-do	Think-do-think

According to Jung (1921, 1971), individuals preferring extraversion (E) prefer to focus on the outer world of people and things. Extraverted types are more outgoing and likely to seek out social situations that provide them with energy. They prefer to communicate more by talking than by writing and tend to react quickly and are more inclined towards action than consideration and reflection. Introverted types (I), however, prefer their own inner world of conviction, memories and thoughts. They like to work quietly without interruption, striving to understand the world before experiencing, and reflecting before acting (Myers & McCauley, 1990).

Myers and McCauley (1990) add further that introverted people are more inclined to slower reactions to events that occur and to demands from other people. They need more time to incorporate, integrate and absorb impressions from outside. As opposed to extraverts, who experience loneliness as something awkward, introverts are energized by periods of loneliness. For both attitudes the case is the same; the outer and inner worlds are linked together, but the flow of energy is in opposite directions (Jung, 1971). Table 3.2 lists several definitions that have been proposed for Jung’s extraverted and introverted attitudes.

TABLE 3.2 DEFINITIONS OF JUNG’S EXTRAVERSION AND INTROVERSION

Extraverted	Introverted	Source
The person’s psychic energy is directed out of the person to the world outside them	The person's psychic energy is internally directed	Quenk (2000)
Feel happiest in stimulating environments	Would feel best in low-arousal settings	Matthews, Deary and Whiteman (2003)
Maintains a positive relation to the object. To such an extent does he/she affirm its importance that his/her subjective attitude is continually being orientated by, and related to the object.	Attitude to the object is an abstracting one.... he/her is always facing the problem of how libido can be withdrawn from the object.	Jung (1921,1969, 1971)
Reacts to immediate and objective conditions in his/her environment	Responds to internal and subjective reactions to external events	Pittenger (1993a)

Contrary to most beliefs, introversion does not translate to ‘quietness’ but people who are ‘recharged’ by being alone after spending time in company of other people. Introverts can be as talkative and communicate just as easy as extraverts but believe that ‘talk is cheap’ and therefore prefer to only talk after some reflection (Kroeger & Thuesen, 1994).

3.2.2 Functions of consciousness

According to Jung and Campbell (1976:134), a function is “a certain psychic action form which under different conditions, in principle, remains the same”. Jung and Campbell (1976) found that different people think, feel, and experience the world in fundamentally different ways. Jung’s (1956, 1967, 1971, 1990) type theory is a powerful tool to help us understand how people function. Whether introverts or extraverts, they have their preferred way of dealing with world, problems or tasks in a way they feel comfortable with and are good at.

Jung (1990) also developed a framework of four functional types, which he described as being most significant in the principal role in an individual’s adaptation or orientation to life. Jung (1976) cited in Benfari (1991) defines the concept of a “function” as designating specific forms of psychic activity and behaviour in people generally which remain the same regardless of circumstances.

Each individual demonstrates a preference for one of the four functions (sensing, thinking, intuition, and feeling), which is referred to as their dominant, superior, or first function. The use of the word ‘preference’ does not imply a matter of conscious choice nor is it conceived of as being easily changed. Different combinations of orientation preference and function preference result in specific psychological types (Fudjack & Dinkelaker, 1994).

Jung (1990) perceived the four ego-functions as making up a kind of fixed dial. The upper part of the dial is shown light, meaning that it is the developed conscious faculty, and the other part dark, meaning that it is the undeveloped or suppressed unconscious faculty. One function is perceived as full consciousness and fully developed, another function as secondary to this, a third function, the opposite of the second, as slightly suppressed and unconscious, and the fourth, the opposite of the first, as totally unconscious (Feist & Feist, 2002).

For Jung (1990), sensation and intuition are irrational functions in being functions of perception, which are irrationally given. Thinking and feeling, by contrast, are rational functions, being choices, in the sense of judgments by consciousness, as to how to discriminate among objects that are perceived (McCauley, 2000).

TABLE 3.3 A SUMMARY OF JUNG'S FUNCTIONAL TYPES (ADAPTED FROM QUENK, 2000)

Irrational Perceiving (P) functions	Sensing	Something exists	Sensual perception	Realistic, down-to-earth, practical, sensible
	INtuition	Where it is from	Possibilities	Hunches, future, speculative, fantasy, imaginative
Rational Judging (J) functions	Thinking	What something is	Meaning and understanding	Analytic, objective, principles, standards, criteria
	Feeling	Whether it is good or not	Weight and value	Subjective, personal, valuing intimacy, humane

3.2.3 *Jung's eight personality types*

Jung's (1971, 1990) eight psychological types are represented by the two attitudes (extraversion and introversion) and four functions (sensing, thinking, intuition, and feeling). Each of the four functions of the type theory can be expressed in relation to either the inner world (Introverted) or the outer world (Extraverted). Sometimes the same function may look completely different in one world than in the other (Feist & Feist, 2002).

The eight type combinations can be listed as follows:

- **Introverted types**

Introverted Sensing (IS), Introverted Thinking (IT), Introverted iNtuition (IN) and Introverted Feeling (IF).

- **Extraverted types**

Extraverted Sensing (ES), Extraverted Thinking (ET), Extraverted iNtuition (EN) and Extraverted Feeling (EF).

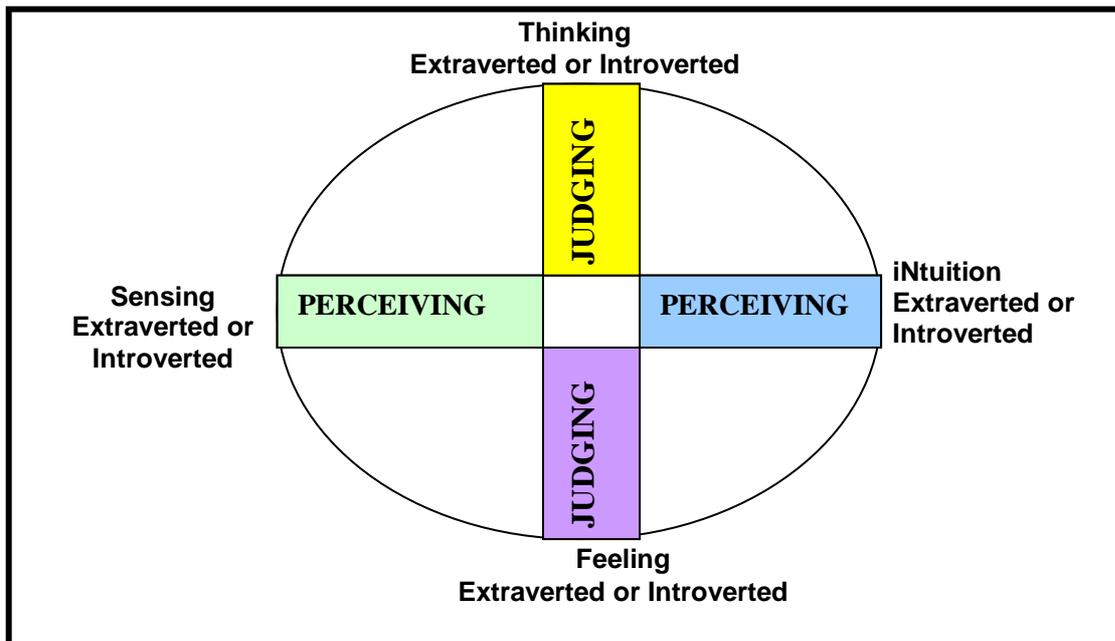


Figure 3.1 The Jungian compass – Judging and Perceiving functions (Myers & Kirby, 1994:5)

3.3 THE MYERS-BRIGGS PERSONALITY TYPE THEORY

Myers et al (2003) describe type theory as an interpretation of Jung’s (1921,1971,1990) theory by Isabel Myers and Katherine Briggs. The dynamic character specified by type theory involves an interaction of a person’s basic preferences. The next section explains how the Perceiving (P) and Judging (J) functions as an addition to Jung’s (1921) analytical theory, contributed to the derivation of the sixteen personality types of the type theory.

3.3.1 The Perceiving (P) and Judging (J) functions

As mentioned in section 3.2, Jung’s work originally posited only eight personality preferences grouped into two attitudes namely, extravert and introvert, the two perception functions, namely sensing and intuition functions and the judgment functions which are thinking and feeling functions. Myers and Briggs modified Jung’s (1921, 1971, 1990) theory, by adding the Judgment-Perception (J-P) dichotomy (Myers & McCauley, 1990). This addition has been described by most authors to have provided some much needed clarity on some prior ambiguity related to interactions among preferences in the mental functions (Myers & McCauley, 1990).

Myers and McCauley (1990) describe the mental functions in terms of decisions. Myers (1962, 1995, 1998), like Jung (1921; 1971; 1990), used the term function to describe two of the bipolar preferences. One preference relates to perception and information gathering (sensing and intuition); the other pertains to the subsequent judging process of coming to conclusion (thinking and feeling) (Quenk, 2000).

The bipolar preference, *judgement and perception*, pertains to an attitude or orientation for dealing with the external world and involves two previous preferences. The attitude of judgement (J) relates to the decision-making preference of either thinking or feeling. Individuals with this propensity prefer to live in a planned, organized fashion; for such individuals, decisions are relatively easy to make. The perception process refers back to the second preference of acquiring information (either sensing or intuition). A preference for perception (P) involves a tendency to seek information, rather than control or act on the information. Perceivers prefer to live in a flexible, spontaneous way and seek to understand life and adapt to it (Myers, 1998).

3.3.1.1 *The Perceiving (P) functions*

The *sensing and intuition* functions deal with methods of acquisition or perception of the world, the problem or the task (Myers & McCauley, 1990).

(a) *Sensing*

The *Sensing (S)* process relies on facts obtained in a non-evaluative first experience of a phenomenon or transmission of physical stimulus through one or more of the five senses. The sensing types perceive things as they are. Sensing (S) types usually live in the 'here and now' and have a great ability to register details. They seldom fail when facts and details are part of the situation (Myers & McCauley, 1990).

Extraverted Sensing: Prefer to act on concrete data from here and now. They trust the present and would then let it go.

Introverted Sensing: Like to compare present facts and experiences to past experience. They trust the past and store sensory data for future use (Myers & Kirby, 1994; Myers & McCauley, 1990).

(b) *iNtuition*

iNtuition (N) is defined as a function that transmits perceptions in an unconscious manner. It relies on meanings, relationships and/or possibilities that have been worked out beyond the reach of the sensory input and instead having a tendency to grasp patterns of a bigger picture. The intuitive person often finds the solutions directly without basing them on facts (Myers & McCauley, 1990).

Extraverted Intuition: See possibilities in the external world. They trust flashes from the conscious which can then be shared with others.

Introverted Intuition: Look at consistency of ideas and thoughts with an internal framework. Trusts flashes from the unconscious, which may be hard for others to understand (Myers & Kirby, 1994, Myers & McCaulley, 1990).

Andersen (1999) clarifies the differences between functions based on the concept of time orientations which characterize each type. Individuals with dominant sensing functions are oriented towards the present while the intuitives are oriented towards the future. Feist and Feist (2002) adopt the same format, using the value each function places on the interpretation of a phenomenon's significance. Sensation endorses the existence of something, thinking enables people to recognize its meaning.

3.3.1.2 *The Judging (J) functions*

Järllström (2000) reports that while Perceiving (P) types value excitement, pleasure, and love, judging types value security. The bi-polar opposites of *thinking and feeling* functions relate to the judgment process or decision-making, whilst *sensing and intuition* are bi-polar opposites relate to the perceiving process.

(a) *Thinking*

Thinking (T) is a method of deciding that uses logic by linking up of presentations by means of a concept in order to determine consequences. Thinkers are analytical, particular, precise and

logical. They see things from an intellectual angle and often miss the emotional sides of the problem (Feist & Feist, 2002).

Extraverted Thinking: Seek logic and consistency in the outside world. These people have high concern for external laws and rules.

Introverted Thinking: Seek internal consistency and logic of ideas. People with this kind of disposition trust their individual internal framework which may sometimes be difficult to explain to others (Myers & Kirby, 1994 ; Myers & McCauley, 1990).

(b) *Feeling*

Bilsker (2002) suggests that the *Feeling (F)* type refers to a subjective evaluation of experience that may be independent of external stimuli.

Extraverted Feeling: Seek harmony with and between people in the outside world and value interpersonal and cultural values.

Introverted Feeling: Seek harmony of action and thoughts with personal values and may not always articulate those values (Myers & Kirby, 1994; Myers & McCauley, 1990).

According to Andersen (1999), whilst the thinking types see time as a continuous line, the feeling type, have their time orientation in the past. Feist and Feist (2002) state that the feeling type will be orientated toward the value or worth of a phenomenon and intuition types may know about phenomenon without questioning how they know.

3.3.2 The sixteen personality types

The four attitudes (E-I/J-P) combined with the four mental functions (S-N/T-F) interact to yield 16 (eight combinations of function and two attitudes) possible combinations of type, each denoted by the preferred letter of each dichotomy. According to both Jung (1971) and Myers (1998), an individual tends to prefer one pole for each of the four dimensions to the other pole, and the intent is to sort individuals into types, rather than to measure traits. Myers and McCauley (1990) state that an individual's personality type does not change, although its self-report might change, as individuals focus on developing different mental processes at various stages in life. Jung (1971) believed that we all use these four functions in our lives, but that each individual uses the different functions with a varying amount of success and frequency.

According to Myers (1998), the first of the four functions, which through her use of a ship analogy, she called ‘the Captain of the ship’, is dominant within an individual profile, revealing the individual’s favoured process. People enjoy using their dominant function, becoming experienced and developed in its use. Jung was of the opinion that whichever dominant function dominated consciousness; its opposite would be repressed and would therefore characterize unconscious functioning.

Each dominant function leads and the second preferred function, the auxiliary (the first mate) helps out. Because of the polarity inherent in each dichotomy and the need for balance, the ‘helping’ auxiliary is always formed in the dichotomy that the dominant is not in. In this way, the dominant and auxiliary functions allow perception and judgment to complement one another by enabling the individual to adapt to both inner and outer worlds (Myers, 1998; Myers & McCauley, 1990).

The third or tertiary function, the ‘lazy crew member’, stays out of the way for the most part, but is always there, when needed (Myers, 1998). The fourth or inferior (4th) function, ‘hides below the deck’, operates unconsciously and is the ballast of our emotional ship (Myers, 1998).

Myers (1962, 1995, 1998) noted the challenging task of remembering all the 16 types and developed a table format, which is a four-by-four matrix of 16 cells. This standard framework has proven to be the most preferred method of reproducing sample results for groups by different users (see table 3.4).

TABLE 3.4 MBTI 16 TYPE TABLE (ADAPTED FROM FITZGERALD & KIRBY, 1997)

	2nd function (Auxiliary)						
		Sensing		iNtuitive			
1st function (Dominant)	Introvert	1. ISTJ	2. ISFJ	3. INFJ	4. INTJ	Judging	4th function (Inferior)
		5. ISTP	6. ISFP	7. INFP	8. INTP	Perceiving	
	Extravert	9. ESTP	10. ESFP	11. ENFP	12. ENTP	Perceiving	
		13. ESTJ	14. ESFJ	15. ENFJ	16. ENTJ	Judging	
		Thinking	Feeling	Feeling	Thinking		
	3rd function (Tertiary)						

The Psychological type theory of Myers and Briggs theory assumes that if the person's primary 'judging' function (either thinking or feeling) was directed *outwardly* (to the world), that person's primary 'perceptive function' (either sensing or intuiting) would be directed *inwardly* and vice versa. If the primary 'perceptive' function (either intuiting or sensing) were the one directed *outwardly*, that individual's primary 'judging' function would have to be directed *inwardly* (Myers & McCauley, 1990).

In the Myers-Briggs system, each of the sixteen types is a *four*-letter combination. The first letter in the combination is either I or E and designates a preference for introversion or extraversion, in a manner similar to Jung's system. The second and third letters represent the individual's primary and secondary functions (but not necessarily in that order). In contrast to Jung, for the Myers-Briggs system it is significant which of the two intermediary functions is identified as secondary and which is identified as tertiary (Kennedy & Kennedy, 2004; Myers & McCauley, 1990).

The fourth letter has two operational purposes in the system. *First*, since the 'P' tacitly references the second spot in the four letter combination - which is filled by one of the 'perceptual' functions (S or N), and the 'J' references the third spot (filled by F or T - the 'judging' functions), the fourth letter tells us *which* of the two middle letters designates the individual's superior function. The rule is: for Extraverts, if the last letter is a P, the second letter designates the dominant function, and if the last letter is a J, the third letter designates the dominant function. For Introverts, it is the opposite: if the last letter is a P, the *third* letter is the individual's dominant function, and if the last letter is a J, the second letter is the dominant function (Myers & McCauley, 1990).

The aim of studying and learning about Jung's analytical theory and Myers and Briggs' psychological type theory is to bring us back to the recommendations of the Jungian theory that all people should strive to develop any neglected or suppressed functions and to embrace all four functions as being part of the whole person.

3.4 VARIABLES INFLUENCING THE EXPRESSION OF PERSONALITY PREFERENCES

Variables such as demographic, environment and culture factors have been identified by different authors as having direct influence on the expression of personality preferences (Larsen & Buss, 2002, McCrae, 2002; Myers et al, 2003).

3.4.1 Demographic influences

According to Bergh and Theron (2006), the uniqueness of each person's personality type can be sought in a number of factors including demographic influences, which amongst others include age, race, gender, marital status, work experience and educational level. Preferences are viewed as inborn but one's environment at any point throughout life can change, supporting or negating one's preference (Myers & McCauley, 1990).

3.4.2 Environmental influences

According to Myers et al (2003), in the context of the type model environmental factors (like parents, family, cultural values, religion, individual life experiences and profession) have a very significant role to play. Such environmental factors can enhance the development of each person's natural preferences or inhibit such development by reinforcing activities that are less satisfying, less comfortable and less motivating (Myers et al, 2003). When environmental factors interfere with type development, they can distort or suppress a person's natural and innate type to an extent that the affected person becomes skilful in using less-preferred function whilst remaining out of touch with their own best gifts (Myers et al, 2003).

3.4.3 Cultural influences

Cultural psychologists view personality and culture as mutually inclusive (Church, 2000, 2001). Jung (1921, 1971, 1973) devoted his life to the task of exploring and understanding the collective unconscious, he theorized that certain symbolic themes exist across all cultures. In effect, Jung's unconscious, as opposed to Freud's, serves a very positive role; it is the engine of the collective unconscious essential to human society and culture.

Cross-cultural research indicates that basic personality traits, including introversion/extraversion, may be independent of culture, although they may be expressed differently in different cultures (McCrae, 2002). Due to the fact that culture influences the manner in which type is expressed, Myers et al (2003) maintain that users of type theory need to modify definitions and especially the behaviours they associate with type preferences in their endeavours to communicate effectively in another culture. This does not mean, however, that all people within a culture are alike. Several studies have shown that there are more differences in people of the same culture than those of people from different cultures (Larsen & Buss, 2002).

3.4.4 Lifespan development

According to Jung (1974) in Coetzee (2005), all behaviours contribute to the stimulation of an individual's growth toward wholeness. Personality development is regarded as an ongoing process that continues during adulthood, midlife and even advanced age. Progression through wholeness or individuation requires the expansion of knowledge and awareness of oneself, which increases the person's ability to control and direct his/her life. By actively engaging in living, working, relating to others and contemplating their lives, people continue to discover their actualities and potentialities (Coetzee, 2005; Miller & Liciardi, 2003).

According to type theory, a person's type does not change over the life span. The development approach to type recognizes that each type has an 'ideal' order of development over time. The dominant function emerge early in life followed by the auxiliary function and these functions are accessed and function together by the time an individual enters the world of work. The tertiary and fourth functions, on the other hand, are often accessed more in midlife and beyond (Myers et al, 2003).

The personality type theory predicts that younger persons are generally less clear and consistent in their preferences than are mature individuals (Myers et al, 2003). Consequently, it can be expected that the reliability coefficient obtained from testing samples of younger people will be significantly lower compared to higher ones expected from testing more matured subjects (Myers et al, 2003).

3.5 DIFFERENCES BETWEEN TRAIT AND TYPE THEORY

According to Quenk (2000) the fundamental feature of Jung’s theory and type theory is that they postulate qualitatively distinct categories rather than more familiar behavioural traits which vary across the continuum. Jessup (2002) concurs, stating that personality type theory aims to classify people into distinct categories that are distinct and discontinuous. For example, an individual can be categorized in one or the other type.

TABLE 3.5 DIFFERENCES BETWEEN TRAIT-BASED THEORIES AND TYPE THEORIES (ADAPTED FROM QUENK, 2000:19)

TRAIT THEORIES	TYPE THEORIES
Assume universal qualities – people vary only in the amount of the trait possessed	Assume qualitatively distinct categories – individuals prefer one or the other category
Measure the amount of each trait	Sort individual traits into one or the other category
Scores are variables that show how much of a trait a person has	Scores are expected to be bimodal - few scores at the midpoint Scores are estimates of confidence in the accuracy of the sorting procedure – placement into the category indicated
Interpretive interest is in people at the extremes of the distribution	Interpretation interest is in people near the midpoint, where accuracy of sorting may be in doubt
Assume that behaviour is caused by relevant underlying trait	Assume that behaviour is an expression of underlying type preferences
Assume that traits are largely independent of each other	Assume that the four type preferences interact dynamically to form a whole that is different from the sum of its part
Traits are usually identified by a singly descriptor	Type dichotomies are identified by their two opposite poles
Very high and/or low scores on a trait can be negative or diagnostic	The numerical portion of each type results has no negative or diagnostic meaning

To clearly understand the difference between types and traits, the personality dimension of ‘introversion vs extraversion’ can be used as an example.

- A personality type approach expects individuals to be either introverts or extraverts.
- A personality trait approach would expect an individual to be anywhere on a continuum ranging from introversion to extraversion, with most people clustering in the middle,

and fewer people towards the extremes. Table 3.5 tabulates more differences between trait-based theories and type theories.

Quenk (2000:20) mentions several consequences of mistaking type theories for trait theories, including

- Assuming that people with very clear preferences have ‘more of’ the function or attitude than people with less clear preferences.
- Believing that greater clarity implies greater skill or maturity of use of a preference.
- Inferring that one or other preference pole of a dichotomy is “better” or “healthier” than the other. Myers et al, (2003) adds that type theory indicate how clearly a respondent prefers one of two opposites poles of a dichotomy, not how much of that pole he or she has.
- Assessing people from a standpoint of a single norm of psychological health rather than considering what is usual and expected from their type.

3.6 PRACTICAL APPLICATION IN CAREER CHOICE

Myers et al (2003) state that people choose occupations for many reasons, such as challenge, money, location, family expectations and desire to serve others. The assumption when using the type theory in career counselling is that one of the most important motivations for choosing a career is a desire for work that is interesting and satisfying and that will permit use of one’s preferred functions and will entail relatively little use of the less-preferred functions. No occupation provides a perfect match, but knowledge of a person’s preferences can help individuals to avoid major mismatches and understand sources of stress (Houghton, 2007).

Bradley and Herbert (1997) suggest that when employers and employees become aware of their individual personality differences they can then easily adopt and accommodate other personality types, provided management puts close monitoring interventions in place. Understanding psychological type preferences of employees promotes insights into the reasons for employees’ choice of specific career orientation (Wicklein & Rojewski, 1995).

A number of generalizations have been made concerning the match between personality and career orientation. Consequently, it is more probable that people will select careers that will

result in satisfaction of personality-related behaviours (Bradley & Herbert, 1997). This perspective has been useful both in explaining career choice and career preferences (Holland, 1997; Myers & McCauley, 1990). Nikolaou (2003) states that employees' personality preferences and skills are an integral part of their work performance. This person-organisation fit concerns the antecedents and consequences of compatibility between people and the organisations in which they work.

When human resource managers and Industrial Psychologists understand the forms of different dominant and inferior functions they can be in a position to understand, predict and explain workplace behaviours, which are typical of a person or out-of-character (Quenk, 2000).

Myers et al (2003) state that both theory and research support the importance of work values in making career decisions as state in Table 3.6. According to Hammer (cited in Myers et al, 2003: 312), values seem to relate statistically with type preferences in ways that are to be expected but they do not completely converge. For example, Sensing and Judging functions often relate to a desire for security and stability while intuition and Perceiving often relate to a desire for creativity.

TABLE 3.6 CAREER SATISFACTION VALUES OF THE 16 PERSONALITY TYPES
(ADAPTED FROM MYERS ET AL, 2003)

<p>ISTJ <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Rules and procedures • Financial security • Leisure activities • Individual contributor role • conservative 	<p>ISFJ <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Stable and secure future • Employee loyalty and job security • Clear structures • No expectation for working extra hours • Health and spirituality 	<p>INFJ <i>Dominant: Intuition</i></p> <ul style="list-style-type: none"> • Use of special abilities • Variety of tasks • Clear structure • Independence and achievement spirituality • Learning • Community service • Promotions 	<p>INTJ <i>Dominant: Intuition</i></p> <ul style="list-style-type: none"> • Creativity and originality • Variety of tasks • Clear structures • Independence and achievement • Future work opportunities • Promotions • Job security
<p>ISTP <i>Dominant: Thinking</i></p> <ul style="list-style-type: none"> • Stable and secure future • Independence and achievement • Clear structure • Variety of tasks • Autonomy 	<p>ISFP <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Variety of tasks • Loyalty and security • Making the job as simple as possible • No expectation of extra hours • Clear structure • Independence and achievement • Happy family 	<p>INFP <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Creativity and learning • Independence and achievement • Variety of tasks • Clear structure • Nurturing affiliation • Autonomy • Opportunities for accomplishment 	<p>INTP <i>Dominant: Thinking</i></p> <ul style="list-style-type: none"> • Creativity and originality • Advancement • Variety of tasks independence and achievement clear structures • Autonomy • Freedom
<p>ESTP <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Variety of tasks • Independence and achievement • Clear structure • Visible autonomy • Prestige • Opportunity to contribute to society 	<p>ESFP <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Stable and secure future • Making job as simple as possible • No expectation for working extra hours • Happy family • Home/family • Health • Financial security • Friendships 	<p>ENFP <i>Dominant: Intuition</i></p> <ul style="list-style-type: none"> • creativity and learning • independence and achievement • teamwork • people from different backgrounds • organisational values • home/family • friendships and relationships • community service 	<p>ENTP <i>Dominant: Intuition</i></p> <ul style="list-style-type: none"> • creativity and originality • independence and achievement • opportunities for advancement • variety of tasks • clear structure • opportunity to use talents
<p>ESTJ <i>Dominant: Thinking</i></p> <ul style="list-style-type: none"> • stable and secure future • clear structures and responsibilities • working as part of a team • rules and procedures • achievement within the system • working conditions • health • financial security 	<p>ESFJ <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Service to others • Clear structure • Loyalty and security • Making the job as simple as possible • Happy family • Outgoing affiliation • Business sociability • Home/family • Health • Friendships • Financial security • Community service 	<p>ENFJ <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • use of special abilities • variety of tasks • teamwork • people from different backgrounds • independence and achievement • nurturing affiliation • friendships • learning and creativity • community service • job security 	<p>ENTJ <i>Dominant: Thinking</i></p> <ul style="list-style-type: none"> • A variety of tasks • People with different backgrounds • Home/family • Achievement • Creativity and learning • Opportunities to use talents • Opportunities to contribute to society • Job security

Garden (1997) examined the relationship between the 16 MBTI personality preferences and people's motivation and career decisions and found that although all valued money and comfort, recognition and autonomy, suggest similarities within professions, they showed no significant differences between type preferences. However, when Garden (1997) further examined four possible career paths (managerial, technical, challenging and own company), she found that there was a high correlation between the type preference and specific career paths:

- ESTJ, ENFJ and ISTJ were more likely to choose the managerial path.
- INTJ most often chose the technical path.
- INFP were found to most often choose challenging projects.
- ENTP and INTP most often chose the autonomy or own company path.
- ENFPs appeared to sort themselves nearly equally amongst the four paths.

Järnlström (2000) also found statistical significant results between different scales of the MBTI preferences and Schein's career anchors, which showed the following:

- The technical competence was related to I, S, T, and J;
- The managerial competence to E, S, and J;
- The autonomy/independence to I, N, F, P;
- The security to S and J;
- The service and dedication to a cause to E and F;
- The pure challenge to E and N;
- The life-style integration scantily to S and J; and
- The creativity to I, N, and P

3.7 IMPLICATIONS FOR CAREER-DECISION MAKING

There is a growing importance of personality measures for job selection, which has triggered a renewed interest in using personality constructs for research in the context of work. In their study, Berings, Fruyt and Bouwen (2004) found that attention to individual differences in both personality and work values could contribute to a better understanding of the vocational streaming and career choice process. In the following section, the two attitudes and three functions as described by Jung (1971,1990) and Myers-Briggs (cited in Myers et al, 2003) will be explored in relation to how they engage in decision-making under different conditions.

3.7.1 Extraversion (E) or Introversion (I)

This bi-polar pair of personality preferences explores the extent to which individuals prefer other people, communication, and situations that are varied and spontaneous. Tan and Tiong (1999) further expand on this polarity by noting that extraverts also tend to draw to variety, action, and uncomplicated processes.

Extraverts also gain pleasure from personal networking and are not generally aggravated by disruptions. They tend to act quickly and become impatient with long projects, and usually communicate freely. Introverts, on the other hand enjoy peace and quiet concentration, details, and do not mind working on long projects. They also become agitated with disruption and sweeping statements (Tan & Tiong, 1999).

Recognizing these differences within employees or clients, managers or consultants may be able to incorporate these preferences in making change to improve performance by embracing these different strengths and understanding the natural inclinations to either extraverted or introverted behaviour (Dawdy, 2003). Schermerhorn, Hunt and Osborn (2000) note that using psychology type theory not only to recognize the introverted versus extraverted preference, but also to explore the results regarding different preferred problem solving styles can benefit organisations by allowing consultants and employers to fit various problem solving styles with a task's requirements and processing.

3.7.2 Sensing (S) or Intuition (N)

The S-N preference recognizes the different tendencies regarding the absorption of information. Sensing people tend to gather data through observation and use of the senses whereas iNtuitive people tend to gather data by use of hunches, patterns, and relationships (Leonard & Strauss, 1997b). Sensing people base their decision on concrete information and present circumstances whereas iNtuitive people come to their decisions by examining whole big picture, focusing on imagination, insights and the unusual (Tan & Tiong, 1999).

When understanding the dominant aspect of the S-N preference within individuals in an organisation, it may further encourage leaders to recognize the different thought patterns and ways of gathering information needed to make different decisions. To recognize whether one is

more inclined to Sensing or iNtuition may aid in the process of task assignment, group cohesion, or communication of job duty (Tan & Tiong, 1999).

3.7.3 Thinking (T) or Feeling (F)

In T-F preference, the discussion centres on the way in which decisions are made once information has been gathered as well as how much a person allows subjective information like values, emotions, and relationships to influence their decision. Feeling people tend to use emotional intelligence and value judgment regarding decisions based on what is right or what is wrong. Lindon (1995) state that feeling people tend to be highly aware of feelings within themselves and others, often deriving pleasure out of pleasing others. Hence they are value based and consider others when making decisions.

Thinking people, on the other hand, tend to decide based on logic, objective components, and assessment of truth versus untruths (Leonard & Strauss, 1997b). Tan and Tiong (1999) supplement these descriptions with the recognition that thinking people do not express emotions very readily and may become quite uncomfortable when dealing with others' feelings and emotions. Because of this, thinkers may not be aware of hurting other's feelings because they are often unaware of those feelings in the first place.

An understanding of which of the T-F preferences are dominant in clients with whom a consultant is working may improve communication structures and feedback in a way that most impacts the employee or client. If someone tends towards the thinking preference, then offering feedback full of emotional praise and concepts of feelings may not be nearly as effective or as rewarding to that person as would be feedback full of objective data like quantitative reports of improved productivity (Dawdy, 2003).

TABLE 3.7 DESCRIPTION OF INFORMATION-PROCESSING AND DECISION-MAKING TYPE (BRADLEY & HERBERT, 1997: 343)

Information receiving		Decision making	
Sensing	Intuition	Thinking	Feeling
Details	Patterns	Scientific	Alogical
Concrete	Hypothetical	Justice	Harmony
Practical	Imaginative	Objective	Caring
Facts	Innovations	Impersonal	Personal
Direction	Futures	Rational	Empathise
Depth	Variety	precise	Subjective

3.7.4 Judging (J) or Perceiving (P)

The J-P personality type preference encompasses the concept of how quickly or slowly a decision is made. Leonard and Strauss (1997b) summarize that judging types need closure and consequently need to be able to quickly come to a decision and move on. Leonard and Strauss also note that perceiving types are quite different in that they crave certainty and their inclination is to keep options open and make a decision on their own time when they have gathered what they considered to be enough information to make the necessary decision.

Once again, Tan and Tiong (1999) complement this description further. They note that judging people like to plan, need organisation, and prefer settlement whereas perceiving people like flexibility and spontaneity and prefer ambiguity like keeping options open rather than controlling the experiences.

TABLE 3.8 DESCRIPTION OF JUDGING AND PERCEIVING TYPES IN DECISION MAKING (BRADLEY & HERBERT, 1997:343)

JUDGING	PERCEIVING
Plan	Spontaneous
Regulate	Flow
Control	Adapt
Settle	Tentative
Run one's life	Let life happen
Set goals	Gather information
Decisive	Open
Organized	Flexible

In terms of recognizing these characteristics within an organisation, the importance herein lies in assigning the proper candidate to the proper task or group. If a person who tends to be highly compelled to the judging preference is given a task that does not encompass much organisation, does not offer a sense of closure and completion, or does require flexibility with change and altering the final outcome or objectives, it may discourage or aggravate a judging person and the job may not be as well performed or as embraced as it would be by a perceiving person (Bradley & Herbert, 1997).

When a consultant or leader is able to recognize the various qualities that coincide with each of the 16 types, then that person is also able to customize the activity at hand, whether it is communication, feedback, behaviour change or work allocation. When these activities are tailored towards the psychological type inclinations of others, then those people may feel more comfortable, more motivated, and more empowered to work towards the greater goal, whatever that may be (Tan & Tiong, 1999).

Personality assessment and testing in employment contexts is more complicated than it would appear. Organisations that desire to develop effective teams need to analyse and understand the personality type compositions of these groups and help team members understand their own personal attributes as well as those of their team members (Bradley & Herbert, 1997).

Practitioners and researchers must be mindful of these issues in the application of personality tests to employment decision-making (Arthur, Woehr & Graziano, 2001). Dawdy (2003) cautions these types should be used as guidelines for interaction, but be certain to not stereotype the clients or employees based on their type. As the workforce becomes more diverse, cultural cohesiveness becomes ever-more challenging. Selecting for style diversity and job fit, while also creating a strong, cohesive culture is a key issue for twenty-first century leaders (Bradley & Herbert, 1997).

Jennings and Disney (2006) report that an association between personality type preferences in line with the strategic planning process has a number of beneficial implications which are relevant to educators and trainers and also practicing managers. Shelton, McKenna and Darling (2002) add further that benefits include better hiring, career planning, and job placement, as well as enhanced collaboration and teamwork, better communication, more effective conflict

resolution, increased job satisfaction and morale, improved meeting effectiveness and overall improvement in team and organisational performance.

Myers and McCauley (1990) caution that it is very important to keep in mind that no one preference is better than another. The best preference is the one the person was born with. When dealing with other people all individuals bring their strengths to tasks and benefit from the strengths of others. It is the combination of all personality types and the preferences displayed that bring a richness and wisdom to the workplace and day-to-day activities (Myers & McCauley, 1990).

3.8 INTEGRATION

This section will build on the conceptualisation of the concept of career anchors (chapter 2) and personality types (chapter 3). The theoretical integration aims to propose a hypothesis on the relationship between career anchors and personality preferences and to identify the implications for career choice and decision-making practices in the workplace.

Figure 3.2 illustrates the proposed integrated theoretical relationship between career anchors and personality preferences.

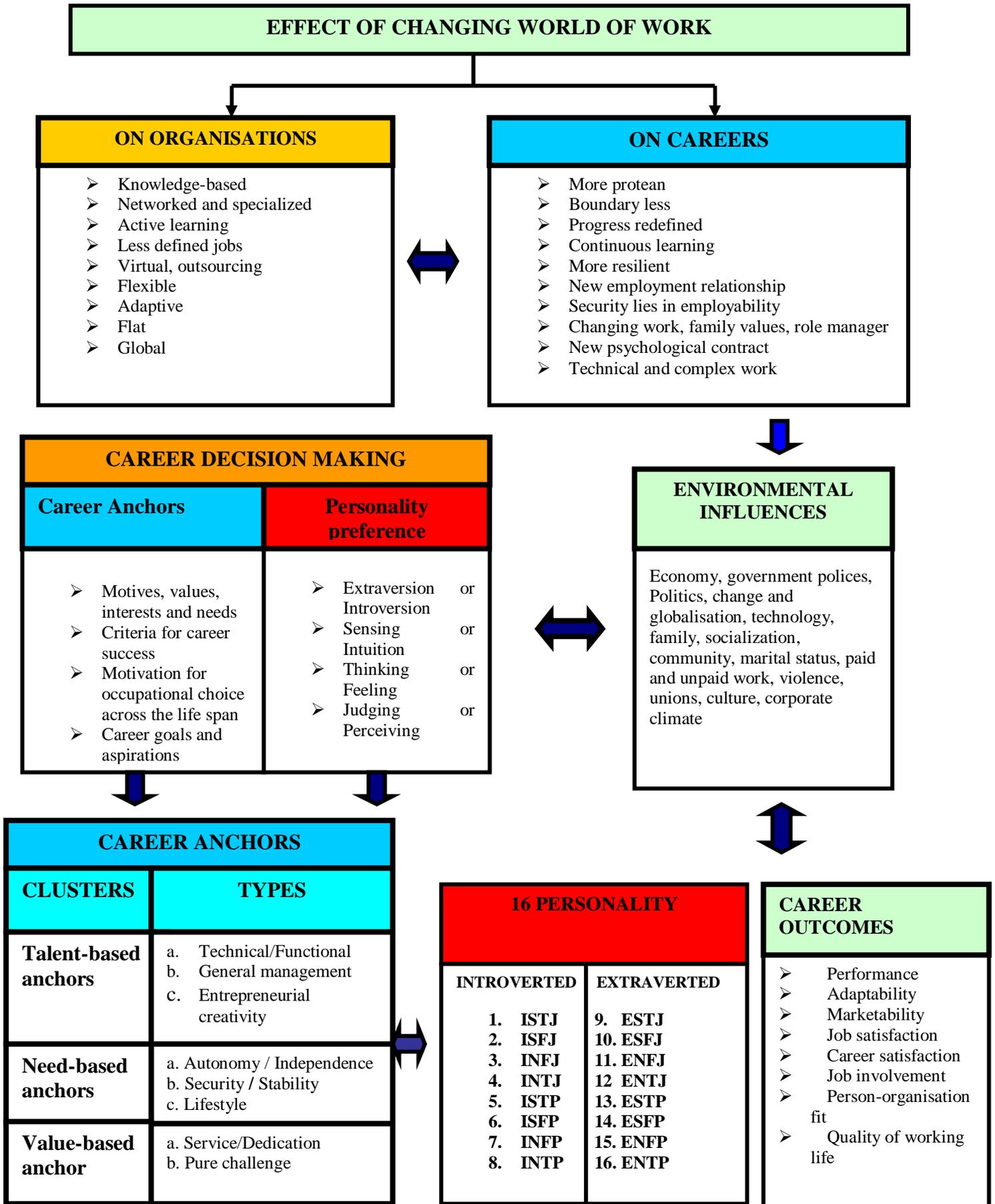


Figure 3.2 A theoretical relationship between career anchors and personality preferences (Based on Bergh & Theron, 2006, Myers et al, 2003, Quenk, 2000 & Swanepoel et al, 2003)

3.8.1 Theoretical relationship between career anchors and personality preferences

In the 21st century companies have to compete in a complex and challenging context that is being transformed by many factors from globalisation, increasingly rapid diffusion of new technology to the development and use of knowledge. Contingent employment arrangements such as outsourcing, virtual workplace, part-time and short-term contracts often result in less loyalty, dedication, commitment and willingness to expend extra effort on behalf of the organisation (Cunha, 2002). The workplace has become more transitional and is characterized by qualities such that it is flat, flexible, networked, diverse and global (Ancona, Kochan, Scully, Van Maanen & Westney, 2005; Zhu, 2004).

The dynamics of restructuring and uncertainty blur the former routes for success and people increasingly develop new perspectives of what career success entails for them. People now have multi-optional criteria for assessing success in their careers. Careers are characterized by more investment in continuous learning, employability and balanced lifestyle (Pearce & Osmond, 1999).

It appears from the literature survey that knowledge and insight into how people's career anchors and personality preferences interact is instrumental in informing career choice and decision making in an uncertain and unstable workplace. Such information can also make valuable contributions to career practices in an organisation. In chapter 2 it was suggested that Schein's (1978) concept of the career anchor was a practical means for guiding an individual's career through greater self-awareness of talents, motives, and abilities. However, chapter 3 concluded that knowledge of psychological or personality preferences enable individuals to look at themselves in relation to their colleagues, to their work and to their overall environment. Both career anchors and personality preferences were found to be instrumental in the employees' experience of career satisfaction.

From the discussion in chapter 2 and 3 it is apparent that careers arise, mostly, from the interaction of individuals with organisations and society. This makes the interest in careers a legitimate concern for a discipline such as Industrial and Organisational Psychology. A better understanding of the relationship between career anchors and personality preferences can also help organisations make better decisions with regard to their recruitment and selection interventions (Baruch, 2004).

It is familiar practice for career psychologists to use personality characteristics to explain career choice development and decisions. Järnlström (2000) points out that career psychologists propose a multidimensional relationship between an individual's needs, referred to as self-concept, and attitudes towards various careers. Abilities, interests, and values are related to what the person can do, likes to do, and considers important to do (Feldman & Bolino, 2000; Schein, 1996; Van Rensburg et al, 2001).

The relationship between Schein's (1990) eight career anchors and the MBTI's (Myers et al, 2003) sixteen personality preferences is influenced by environmental influences such as the economy, government policies, forces of change, marital status, family responsibilities, corporate climate and many more. If these environmental influences are adequately managed, there is likely to be a strong match between the career anchors and personality preferences which will lead to more self awareness, adaptability, marketability, job involvement, job satisfaction, career and general job success thereby fostering an ideal person-organisation fit and a satisfactory quality of life.

Understanding the relationship between employees' career anchors and personality preferences will also be a worthwhile investment for the success of any organisation. The reciprocal relationship between personality (behaviours, feelings and abilities) and occupational behaviour has generated considerable interest, more especially in order to facilitate the best fit between an employee and the work environment. According to Feldman and Bolino (2000), individuals' career motives and values as described by their career anchors are a key determinant of an individual's choice of career or workplace and have an impact on their career decision-making and their psychological attachment to an occupation. Personality has been established as a useful predictor of a variety of work performance or productivity criteria (Bergh & Theron, 2006).

Previous research suggests a relationship between career anchors and personality preferences. Järnlström (2000) and Van Rensburg et al (2001) assessed the relationship between personality preferences, traits and career anchors of practicing South African pharmacists. However, knowledge regarding the career anchors and personality preferences of particularly women in the South African context needs to be expanded, especially considering the Employment Equity initiative, which allows women to pursue professional careers in the South African organisational context.

Type theory also assumes that people differ in the ways they like to use their minds, and that these differences influence the ways people like to work, what motivates them, and what satisfies them (Macdaid et al, cited in Järnlström, 2000). The preferred dominant function forms the core identity and direction for the overall personality. Research and practice indicate that identifying a type's dominant function illuminates core values and motivations, which can also influence individuals' career choice and decision making (Kyriakidou & Özbilgin, 2004; Myers et al, 2003).

3.8.2 Implications for career choice and decision-making

Hsu, Jiang, Klein and Tang (2003) suggest that in order to make effective career decisions, it is important that individuals understand themselves through self-awareness of their career choices and decisions. Such self-awareness can help to confirm the information people already know about themselves, provide them with new data and reveal common threads and patterns in their lives, which they may not have been aware of. Schein (1990) adds that if an individual knows about their skills, abilities, personal qualities, personal preferences, values and interests and what really matters in their personal and work life they easily determine their career aspirations and goals.

Consequently, individuals can use their greater understanding and improved self-awareness which will in turn assist them in making education and career-related decisions and which will notably enable them to achieve optimum person-job fit also most likely to lead to more job and career satisfaction. Improving individuals' and groups' abilities to solve career related problems and make informed career decisions is recognised as an important issue in the workplace (Hsu et al, 2003).

3.9 CHAPTER SUMMARY

This chapter discussed the researcher's comprehensive literature study, which incorporated the concept of personality and its paradigmatic foundations. Jung's theory was discussed under the analytical psychology paradigm. The next aspect of the chapter dealt with the extension of Jung's work into the development of the psychological type theory – its constructs and sixteen the personality types as described by Myers et al (2003). An overview of implications of studying personality preferences in the work context and resulting implications for career choice

and decision-making were discussed next. Finally in view of concluding step 3 of the literature review, an integration of the theoretical perspectives on the variables career anchors (discussed in chapter 2) and personality preferences were provided.

Next in chapter 4 the first phase of the empirical study is discussed. The aim is to describe the research process followed in determining whether there is a relationship between the independent variable (*personality preferences*) and the dependent variable (*career anchors*).

CHAPTER 4 EMPIRICAL STUDY

The aim of chapter 4 is to describe the research process followed in determining if a relationship exists between the independent variable (*personality preferences*) and the dependent variable (*career anchors*). The chapter outlines the steps of the research process, including the research method with special reference to the population; sample and sampling technique; measuring instruments, and data collection, capturing and analysis.

From the above, a research hypothesis is formulated and tested by means of descriptive and inferential statistics. This phase consists of the following nine steps:

- | | |
|--------|---|
| Step 1 | Determination and description of the sample |
| Step 2 | Choosing and motivating the psychometric battery |
| Step 3 | Administration of the psychometric battery |
| Step 4 | Scoring of the psychometric battery |
| Step 5 | Statistical data processing |
| Step 6 | Formulation the research hypotheses |
| Step 7 | Reporting and interpreting the results |
| Step 8 | Integration of research findings |
| Step 9 | Formulating the research conclusions, limitations, and recommendations. |

Chapter 4 discusses the first four steps, and the remainder are covered in chapters 5 and 6.

4.1 DETERMINATION AND DESCRIPTION OF THE SAMPLE

The first step of the research design was the determination and description of the biographical characteristics of the sample.

4.1.1 Population, sample and participants

According to Leedy and Ormrod (2005), research is a viable approach to a problem only when there are data to support it. In this study, a survey was used as a data-collection method. Nesbary (2000) defines survey research as the process of collecting representative sample data from a larger population and using the sample to infer attributes of the population. The main purpose of a survey is to estimate, with significant precision, the percentage of population that has a specific attribute by collecting data from a small portion of the total population (Wallen & Fraenkel, 2001).

The population is the entire group of individuals that the researcher seeks to find out more information about. The sample is the part of the population that the researcher actually examines in order to gather information (Leedy & Ormrod, 2005).

In this study, the population comprised all 470 honours students registered for the degree in Industrial and Organisational Psychology in a particular year at a higher education institution. Questionnaires were sent to all 470 students. The initial sample comprised only 155 respondents whose returned questionnaires were usable, which corresponded to a response rate of 33%. Of the respondents, 20% were male and 80% were female. For statistical purposes, only the female participants were included in the inferential statistical analysis (N=117), due to the under-representation of the MBTI personality types in the male and female sample.

TABLE 4.1 TOTAL POPULATION AND SIZE OF REALIZED SAMPLE

Total population	Questionnaires returned and usable	Rate of response %
470	155	33%
Sample used in final inferential statistical analyses N=117 (80% of total sample)		

4.2 CHOOSING AND JUSTIFYING THE PSYCHOMETRIC BATTERY

Myers and McCauley (1990) define psychometric tests as procedures for the evaluation of psychological functions which involve those being tested in solving problems, performing

skilled tasks or making judgments. Boyle (1995) suggests that the psychometric approach rests on the assumption that a test can measure individual differences in the characteristics of people.

In the present study, the decision on the choice of appropriate measuring instrument to use was guided by the literature study. Consequently, this study made use of three measuring instruments, namely

- the Career Orientations Inventory (COI) (Schein, 1990)
- the Myers-Briggs Type Indicator (MBTI) (Myers & McCauley, 1990)
- a biographical questionnaire

Both the COI and the MBTI were chosen for their proven suitability, validity and reliability.

4.2.1 Career Orientations Inventory (COI)

The COI survey developed by Schein (1990, 1996) in collaboration with DeLong (1982c) was used to measure each respondent's dominant career anchor. In this study, the COI as an instrument is discussed with reference to the theoretical basis for its development, rationale scales, administration, scoring and interpretation, reliability and validity.

4.2.1.1 Theoretical basis for the development of the COI

The COI is an instrument in which respondents can identify their career orientations; a perceived area of competence, values and motives which an individual would not give up (DeLong, 1982; Schein, 1975, 1978, 1990). The COI can help people to better understand their own personal pattern of interests and how these patterns are related to different jobs and occupations (Hudson & Inkson, 2006: 306).

DeLong (1982) regarded the career anchor as a composite of the individual's career orientation and self perceived talents. In the context of this study, the emphasis in the empirical study is on the construct *career orientation* as a central part of the concept *career anchor* and for which measurement could be operationalised by means of the COI.

The COI consists of a set of 40 items which measure all eight career anchors. All 40 items are considered to be of equal value and to which subjects respond in terms of how true the statement is for them (Schein, 1990).

It should be pointed out that the COI does not purport to measure career anchors as such, but rather career orientations. In an attempt to validate and refine Schein's (1978) career anchor model, DeLong (1982b) found that the COI measured career attitudes, values and needs of individuals, but did not reflect individuals' perception of their talents. According to DeLong (1982b), the COI measures a central part of the concept of career anchors, namely career orientations. Schein (1990) acceded to the view that the construct career anchors could be measured by means of a combination of the COI and a structured in-depth interview exercise. However, applying the COI as a measurement of career anchors for research purposes is regarded as an acceptable and reliable practice by researchers in the field (Burke, 1983; Custodio, 2000; Erdoğan, 2004; Kacmar, Carlson & Zivnuska, 2002; Marshall & Bonner, 2003).

4.2.1.2 Rationale of the COI

The COI is a self-report questionnaire developed by Schein (1978) aimed at measuring eight career anchors of individuals which are clustered into talent based anchors (technical/functional competence, general managerial competence and entrepreneurial creativity), the need-based anchors (autonomy/dependence, security/stability and lifestyle) and value-based anchors (service/dedication to a cause and pure challenge).

4.2.1.3 Scales of the COI

Six-point Likert response scales for subject responses were designed to avoid neutral answers. Sumner, Yager and Franke (2005, 2006, 2007) and others have administered four-, five- and six-point scales. The response options on a 6-point Likert scale (which was relevant from this study) ranged from 1, "not important" to 6, "very important".

TABLE 4.2 A LIST OF THE 8 SUBSCALES OF THE COI, THEIR CORRESPONDING ALLOCATED ITEMS AND DESCRIPTION (BASED ON CUSTODIO, 2000; FELDMAN AND BOLINO, 1996; SCHEIN, 1996)

COI subscales	Allocated Items	Description
<i>Talent-based anchors</i>		
Technical/functional	1,9, 17, 25, 33	Is associated with motivation for the challenge of a technical field, functional area, or content of the work
General management	2, 10, 18, 26,34	Represents the need to be competent in the activities associated with management such as problem analysis skills, emotional stability, and interpersonal competence
Entrepreneurial creativity	5, 13, 21, 29, 37	Embodies the need to create something, that is, to try new projects
<i>Need-based anchors</i>		
Autonomy/Independence	3, 11, 19, 27, 35	Encompasses people's need to be free of constraint to pursue professional or technical competence
Security/stability	4, 12, 20, 28, 36	Symbolizes the desire for an Organisation that provides long-run stability, good benefits, and basic job security
Lifestyle	8, 16, 23, 32, 40	Motivated by creating a balance between careers and lifestyle
<i>Value-based anchors</i>		
Service/dedication	6, 14, 22, 30, 38	Concern with helping others and seeing changes that result from efforts
Pure challenge	7, 15, 23, 31, 39	Primarily motivated to solve major obstacles

The three highest ranked items that respondents regarded as most important were given an additional four points as per the COI instruction manual (Schein, 1990). Total scores obtained for each of the eight categories of career orientations were summed up and divided by 5 to yield an individual score for each career orientation. The category that yielded the biggest score was regarded as the individual's dominant career orientation.

4.2.1.4 Administration of the COI

The instructions of how the COI should be administered are stated on the response sheet. The instrument can be administered to individuals and groups, and requires 10 to 20 minutes for administration. The respondents are required to complete the questionnaire by choosing their best alternative on a six-point Likert scale by marking it with a cross. Although it is important

for the administrator to establish that the respondents understand the guidelines on how to complete the COI, supervision is not necessary as the COI is self-explanatory.

4.2.1.5 Scoring and interpretation of the COI

The COI can be scored either manually or electronically. The goal of scoring the COI is to identify major themes in a respondent's history and to seek to establish whether these themes form any consistent patterns across that particular respondent's working life. These patterns, where they exist, are weighed, and the anchor which received the highest raw score is labelled as that respondent's dominant anchor (Erdogmus, 2004).

4.2.1.6 Validity and reliability of the COI

The COI is a well-established instrument with demonstrated high internal validity and reliability (Custodio, 2000).

(a) Validity

Burke (1983), DeLong (1982a, 1982b, 1982c) and Wood, Winston and Polkosnik (1985) have validated and refined the COI. Kniveton (2004) conducted a crude test of validity in which a degree of validity in the sample of 167 was found to be possible, in which 135 (81 per cent) respondents had a job, or position, which approximately matched their chosen career anchor. The level of validity of the questionnaire was considered adequate for the study, as it was being used to predict broad trends rather than individual differences (Kaplan, 1990).

(b) Reliability

The COI is a well-established instrument which has a proven high reliability (Custudio, 2000; Sumner, Yager & Franke, 2004, 2007). The scale reliability was examined by computing Cronbach's alpha coefficients for the items intended to measure each construct, by principal components analysis of all the items together and by inter-correlations of the scales. Ellison and Schreuder (2000) reported internal consistency reliability estimates for the technical/functional (0.59); general management (0.71); autonomy (0.75); security (0.78); entrepreneurship (0.75), service (0.73); pure challenge (0.70) and lifestyle (0.64) career orientation scales for a sample of

295 predominantly white managers. These internal consistency reliabilities as measured by the Cronbach alpha coefficient are moderately high, with the exception of somewhat lower reliabilities for the technical/functional and lifestyle career orientations scale. A desirable reliability coefficient would usually fall in the range of 0.8 to 0.9 (Tredoux & Durrheim, 2002). However, in the case of individual testing, reliabilities as low as 0.3 are quite acceptable when instruments are used to gather group data (Tredoux & Durrheim, 2002).

4.2.1.7 Motivation for choice

The selection of the COI as an instrument of choice was based on its value as a self-insight and development tool. The purpose of this study was not to make individual predictions based on the COI, but rather to investigate certain relations between constructs. The COI was considered to be psychometrically acceptable, as its user practicality has been internationally acknowledged (Van Vuuren & Fourie, 2000). Consequently, a wealth of information has been generated about the instrument's theoretical basis and its practical application in widely diverse areas (Erdogmus, 2004).

4.2.2 Myers-Briggs Type Indicator (MBTI)

The MBTI, which is based on the work of Jung (1921), an influential figure in the field of personality theory (Myers, 1998), was used for the purpose of this study.

Myers and Briggs used Jung's theory of personality as the foundation upon which they developed their type indicator (Myers et al, 2003). Krucmar (2006) states that Jung's personality theory is not a model for how to assess or measure personality, but rather a theoretical model for what constitutes personality. The MBTI attempts to measure those aspects of personality described by Jung (Myers et al, 2003). Myers et al's (2003) MBTI manual contains valuable information about the theory, psychometric characteristics, research relationships, and applications of the MBTI.

In this study, the MBTI as an instrument is discussed with reference to the theoretical basis of its description, development, scales, administration, interpretation, reliability and validity.

4.2.2.1 *Theoretical basis for development of the MBTI*

The MBTI is the most popular psychometric test or instrument for the measurement of Jungian personality with an estimated user population of between 1.5 and 2 million persons completing it each year (Thompson & Ackerman, 1994).

Pittenger (1993a) states that no test of personality measures underlying constructs with great precision. Consequently, the test user must identify potential risks and benefits of using a particular test and seek a reasonable balance between the two. Myers and McCauley (1990) point out that the merit of the theory underlying the MBTI is that it enables researchers to expect specific differences in specific people and to deal with these people and their differences more constructively than the researcher otherwise could.

The MBTI was structured based on Jung's (1921) work on psychological types. According to Jung (1921), three dimensions, namely orientation of energy, process of perception and process of judging could be used to explore an individual's psychological type. Briggs and Myers extended the model in the J/P (Judging and Perceiving) scale by making explicit one aspect of the theory that was implicit but undeveloped in Jung's work. The J/P scale describes identifiable attitudes and behaviours to the outside world (Myers & McCauley, 1990).

The MBTI is consequently based on different scales of measurement of preferences, which cover different orientations of the eight scales (extraversion, E and introversion, I), processes of perception (sensing, S and intuition, N), processes of judging (thinking, T and feeling, F) and attitudes towards dealing with the outside world (perceiving, P and judging, J). These preferences result in 16 different personality types, e.g. ISTJ (introversion-sensing-thinking-judging), ENTP (extraversion-intuition-thinking-perceiving) (Hautala, 2006; McCauley, 1991; Myers and Myers, 1990) (see chapter 3 on the theory behind the MBTI).

4.2.2.2 *Rationale for MBTI, Form G*

Several variations of the MBTI forms are available and they differ with the kind and amount of additional information provided (Myers, et al 2003). The well-established MBTI, Form G, was used for this research project to measure the personality preferences of the participants.

The MBTI, Form G, is a self-reporting instrument and consists of three parts. Part I contains 26 items; part II, 45 items and part III, 55 items. Overall, the individual has to respond to 126 items. The MBTI is a questionnaire-style instrument consisting of items arranged in a forced-choice format. For each item, subjects are provided with two responses to choose between.

Each of the preferences is described in order to provide a holistic picture of psychological type through the aid of four preferences (Myers et al, 2003). Preferences are viewed as inborn, but one's environment at any point throughout life can change, supporting or negating one's preference. As a result, the MBTI is not necessarily an indicator of individuals' abilities to utilize either their most or least preferred personality functions, only a measure of preference (Myers & McCauley, 1990).

4.2.2.3 *Scales of the MBTI*

The MBTI comprises of four components, on which eight preference scales which are organised in bipolar categories of introversion/extroversion (E/I), sensing/intuition (S/I), thinking/feeling (T/F), judging/perceiving (J/P) are described. Theoretical requirements were primary in the development of items and construction of the four MBTI scales. Myers and McCauley (1990) describe the functions in terms of decisions. Myers (1995, 1998) as did Jung (1921, 1971, 1990) used the terms attitudes and functions to describe the bipolar scales of the MBTI. Items ask about simple surface behaviours and attitudes that are designed to reflect the presence of an underlying preference for one or the other mental function (S or N; T or F) or attitude (E or I; J or P).

(a) *Extraversion (E) and Introversion (I) preferences*

Extraverted (E) people are usually social and they get energy from others. Lawrence (1997) associated Extraversion with exhibition, dominance, talkativeness, being active, being gregarious, and being close to reality.

On the contrary, Introverted (I) people will lose energy when around others and thus they need to spend more time alone than extraverts (Hautala, 2006; Myers, 1980; Myers et al, 2003). Lawrence (1997) associated Introversion (I) with intellectual achievement, solitariness, verbal reasoning, ideational fluency, reality-distance, and reading.

(b) Sensing (S) and Intuition (I) preferences

Sensing (S) types usually live in the “here and now” and they tend to gather information via their five senses. They approach work step-by-step and focus on the small things more than intuitive people. Sensing (S) types are also associated with order, sociability field-dependence, economic interests, reality-closeness, a practical outlook, seeing learning as being for practical use and carefulness in problem solving.

Intuitives (N) prefer to use well their imagination and ability to see the big picture. The Intuition preference has also been associated with autonomy and independence, artistic, aesthetic interest and creativity, liking to use mind and intellectuality, field independence, reality-distance, managing abstract symbols, imagination, theoretical orientation, reading, and quickness in problem solving (Hautala, 2006; Lawrence, 1997; Myers, 1998; Myers et al, 2003).

(c) Thinking (T) and Feeling (F) preferences

Thinking (T) people tend to make decisions using impersonal points of logic. Lawrence (1997) associated with theoretical interests and endurance.

However, people with a Feeling (F) preference adopt the logical use of their personal values when deciding. They are usually better at taking other persons' feelings into account than thinking types (Hautala, 2006; McCauley, 1991; Myers, 1998). Lawrence (1997) correlated the Feeling (F) preference with social interest, affiliation, and nurturance.

(d) Judging (J) and Perceiving (P) preferences

Judging (J) types prefer order endurance and attitude to work (achievement orientation) and closure whereas perceiving (P) types tend to exhibit high levels of flexibility, autonomy, impulsiveness, tolerance of complexity and their lifestyle reflects a tendency to go with the flow as they readily embrace change (Hautala, 2006, Lawrence, 1997; McCauley, 1991; Myers, 1998).

4.2.2.4 *Administration of the MBTI*

The MBTI Form G has clear guidelines which the administrator should adhere to during the administering process. According to Myers et al (2003), particular care should be warranted when administering the MBTI as it seeks to maximize the respondents' freedom to reveal personality preferences rather than skills, abilities or simple attitudes. With the Form G format questionnaire, the individual has to respond to 126 items or questions, where each item presents a choice between opposite aspects of personality, each of which the individual uses at least some of the time (Myers et al, 2003). For this reason when administering the MBTI, as with other self-report instruments, it is crucial to ensure an atmosphere which ensures consistency of instructions conditions, handling and other administrative variables in order to obtain accurate reports (Myers et al, 2003).

4.2.2.3 *Scoring and interpretation of the MBTI*

The MBTI seeks to classify an individual into one of the 16 personality types (Myers et al, 2003). The primary goal of scoring the MBTI is to assign the respondent to categories E or I, S or N, T or F and J or P (Quenck, 2000). The Form G has a total of 126 items, of which 94 scored for type identification whilst the remaining 32 are included for research items. The responses for the items are weighted 0, 1 or 2 next to the value allocated. The total number of point allocated is indicated at a specified section of the Form G form. The higher of the two scores in the total column indicate the strength of the most preferred preference (Quenck, 2000).

4.2.2.6 *The validity and reliability of the MBTI*

The MBTI has been tested extensively for validity and reliability and has become the most widely used instrument for normal (non-clinical) subjects (Murray, 1990). More research into validity and reliability of the questionnaire continues and new forms of the questionnaire have evolved (Hautala, 2006). Murray (1990) further states that reliability and validity are at the heart of the MBTI, as it promises great usefulness if it is, indeed, a dependable instrument. Because personality type pertains to every human interaction, applications for the MBTI are limited only by understanding of the underlying theory and the desire to implement it in practical situations.

(a) Validity

Myers et al (2003) regard validity of the MBTI as more difficult to assess. In order to demonstrate validity, the test must adequately reflect the personality theory it claims to represent (Babbie & Mouton, 2001). While views differ on many aspects of the validity of the MBTI, there is general consensus on its high levels of face validity (McCrae & Costa, 1990, 1996, 1997). Johnson (1992) and Murray (1990) argue that because the MBTI is based on theory, its validity must be evaluated according to how well it demonstrates relationships and predicts outcomes posited by that theory.

The third edition of the MBTI Manual (Myers et al, 2003) reports evidence supportive of construct validity both from comparisons of MBTI results with self-estimates of type based on brief type descriptions and studies of behavioural observation of differences according to reported type. Myers et al (2003) report that the validity of the MBTI is estimated at over 75%, based on feedback received from psychologists who administer the test and interpret results.

Myers et al (2003) report that the functional attitude dichotomy of judgment-perception (JP) is found as being the strongest area of correlation between MBTI and other measures of personality, competency or behaviour. Hammer (1996) states that the MBTI instrument has a significant convergent, discriminate and predictive validity with regard to best-fit assessment, scores on other measuring instruments, occupational choice and independent behavioural observation.

(b) Reliability

Since the MBTI generates dichotomous results (types), the preferred approach to reliability is to consider how often the same types emerge in repeated testing. However, for comparative purposes, the MBTI manual (Myers & McCauley, 1990; Myers et al, 2003) also presents split-half and coefficient alpha measures of internal consistency using continuous scores for various samples.

The MBTI is an ipsative instrument, which means it is measured against itself. An ipsative result is observed as a fact, not compared to other results and then put in the context of an average or expected outcome. Each person thus provides his or her own frame of reference (Blenkinsop &

Maddison, 2007). Harvey (1996), supported by Järllström (2000), reports that the ipsative nature of the MBTI scales enhances its split-half reliability although test-retest reliability is highly dependent on time between the tests sessions. Results of meta-analytic studies, using generally accepted standards applied to instruments with continuous scores, found the reliabilities of the MBTI continuous scores to be quite good.

In presenting reliability results in the manual, Myers et al (2003) have examined internal consistencies based on Alpha coefficients, none of which are below 0.7 for the MBTI scales. In particular, Myers et al (2003) report the internal consistency of the MBTI to range from .91 to .92, depending on the scale. In an assessment of test-retest reliability, 66% of the respondents reported the same four preferences after a four-week interval, and 91% were the same on 3 out of 4 preferences (Myers et al, 2003). Harvey (1996) reported average overall reliabilities of 0.84 and 0.86 for internal consistency measures and 0.76 for temporal stability.

According to Myers et al (2003), the actual probability of test re-test are said to be different from events that occur by chance and test-retest reliabilities also show consistency over time. According to Järllström (2000), the reliability of the MBTI results have been across age groups, gender, occupations and cultures.

4.2.2.7 *Motivation for choice*

The selection of the MBTI as an instrument of choice was based on its value as a self-insight and development tool. The MBTI is used extensively nationally and internationally (Myers & McCauley, 1995). It has been used in South Africa, Israel, Belgium, England, Germany (Levert et al, 2000). Consequently, a wealth of information has been generated about the instrument's theoretical basis and its practical application in widely diverse areas (Quenck, 2000).

The MBTI has been used as a productivity tool for its ability to allow people to understand themselves and their co-workers better through the knowledge of personality types, which has been reported to contribute more to employee productivity (Myers & McCauley, 1990).

Myers et al (2003:316) suggest that all major decisions an individual makes need to include each function: the Sensing (S) facts, the iNtuitive (N) possibilities, the objective analysis of Thinking (T) and the values focus of Feeling (F). Equally important are the Introverted (I) reflective time

and some Extraverted (E) action, as well as a time to stay open with Perceiving (P) and a time to come to a conclusion with Judging (P). Similarly, it can be concluded that career decision-making includes not only the decision itself but also what goes into the decision and its implementation. The use of the MBTI can therefore assist respondents with all of the above (Myers et al, 2003).

4.2.3 Limitations of the psychometric battery

The COI is constructed based on a Likert scale. In general, forced-choice responses such as those in the Likert scale have been found to be reliable, valid, and responsive. Likert scales are also easier for the researcher to administer as well as easy to complete and reader-friendly for the respondents (Meyers, Anthony & Glen, 2005). Likert scale measures are fundamentally at the ordinal level of measurement because responses indicate a ranking only.

According to Dyer (1995), attitude scales like the MBTI do not need to be factually accurate, they simply need to reflect one possible perception of the truth. Therefore the responses which the respondents provide will not be assessing the factual accuracy of each item, but will be responding to the feelings that the statement triggers in them. In line with the above statement, the construction of both the COI and the MBTI pool of statements seem to have been generated such that their items are relevant to the attitude and not necessarily fact (Bucci, 2003).

Although the use of personality types instruments like the MBTI has several advantages, its conceptual and statistical validity, more especially with regard to limitations of dichotomizing continuously scaled personality scales, had been criticised. Pittenger (1993a) refers to the psychometric limitations of the MBTI as an instrument which purposefully converts scale scores into a four-letter type classification. Although the MBTI is an extremely popular test, its use of ipsative and dichotomization scoring methods raises questions regarding its utility. According to Pittenger (2003a), from the data gathered it could be confirmed that dichotomization of personality traits reduces the accuracy of measurement and prediction.

4.2.4 Ethical issues

Ethical issues have been taken into consideration. Ethics in the fields of psychometrics and career studies have been a subject of research for a considerable time. Lindfelt and Törnroos (2006)

state that ethics are the principles, norms, and standards of conduct governing an individual or group and ethical issues have a more direct bearing on business than ever before. Consumers and businesses are more cautious when making decisions related to goods and services that have been produced under harmful circumstances. According to Babbie and Mouton (2001), all research projects are bound to ethical principles. Leary (2004) emphasises that, irrespective of personal feelings about ethics, behavioural researchers are bound by ethics, which involve principles set by their professional governing bodies, and by regulations set forth by their country's governmental policies.

Particular to this study is conduct towards the participants and information as well as research honesty in reporting results. Ethical issues indicate an awareness and recognition of the rights of the individual (Kumar, 2003). Furthermore, during the administration of the questionnaires, participants were free to withdraw from the research at any stage should they wish to do so. Anonymity and confidentiality were guaranteed. Permission was obtained from all concerned.

In South Africa, legislation on psychological and similar assessments stipulates that the administration thereof is restricted by the Employment Equity Act, 55 of 1998, unless it can be scientifically proven that the assessments being used are valid and reliable and can be applied fairly to all employees without being biased against any employee or group.

The psychometric battery used in this study was chosen based on the established reliability and validity of the two instruments. The utmost effort was made to ensure that strict procedure followed in collecting the data was similar to those used in previous research (Babbie & Mouton, 2001; Kriek, 2001). Also, the items used for both the MBTI and the COI anchors inventory have already established reliable and valid analyses procedures (Schein, 1996; Myers et al, 2003).

4.3 ADMINISTRATION OF THE PSYCHOMETRIC BATTERY

The researcher took great care to ensure that the aspects of validity and reliability were adhered to. Consequently, the process of data collection, sampling and analysis were ethically developed, based on the day-to-day realities in the South African context.

Envelopes containing a set of three questionnaires per respondent were mailed to all honours students enrolled for the degree in Industrial and Organisational Psychology, using the postal facilities of the higher education institution. These questionnaires included

- Biographical questionnaire,
- MBTI Form G and
- Schein's (1990) Career Orientations Inventory (COI)

Each questionnaire had a covering letter inviting subjects to participate in the study and assuring them that their individual responses would remain confidential. Participants were requested to complete the questionnaires and return them by mail to the researcher, using the enclosed return envelope.

Each questionnaire was coded to identify the respondent and this was used to construct a match between the responses measured by the various measuring instruments. In addition, a letter describing the purpose of the study and the follow-up procedure (specifically with reference to feedback) was included in each envelope.

4.4 SCORING OF THE PSYCHOMETRIC BATTERY

Proficiency with statistical software packages is indispensable today for serious research in the sciences (Leedy & Ormrod, 2005). Both the COI and the MBTI instruments can be scored both manually and electronically with the aid of applicable software packages. In this study, both instruments were scored electronically. The responses of 155 respondents were captured using the Statistical Package for Social Scientist (SPSS 12.0.1 for Windows, 2000, 2004) to which all data were converted.

The SPSS is one of the most widely available and powerful data management and statistical software packages and covers a broad range of statistical procedures that allow the user to summarize data (for example, compute means and standard deviations), determine whether there are significant differences between groups (for example, analysis of variance), examine relationships among variables (for example, MANOVA), and graph results (for example, bar charts, line graphs). The use of the SPSS program enabled the researcher to obtain raw scores for each COI category and MBTI personality type index and to treat the variables as on nominal scale of measurement (Field, 2000; Griffith, 2007).

Although the MBTI, Form G makes provision for the documentation of biographical details, a more detailed biographical questionnaire was used. The data obtained from these additional biographical questionnaires were transformed into categorised data so it could also be measured on a nominal scale. This same data was used as the basis for reporting and incorporated into statistical processes (see chapter 5).

4.5 STATISTICAL DATA PROCESSING

To conduct any type of research investigation, data must be gathered (Cohen & Manion, 1997). Both the questionnaires were scored electronically according to the instructions. This enabled the researcher to obtain raw scores from the COI and the MBTI which could then be treated as nominal scores. Leedy and Ormrod (2005) point out that nominal measurement is elemental and unrefined, but it does divide data into discrete categories that can be compared with one another. Moreover, the nominal scale was useful in the measuring of data gathered through the biographical questionnaire.

In this study, descriptive and inferential statistics were employed in the data analysis. Descriptive statistics of the sample, the independent variable (personality preferences) and the dependent (career anchors) were obtained to gain insight into their nature. These statistics include minimum and maximum scores, means, standard deviations and frequency distribution (Leedy & Ormrod, 2005).

Inferential statistics are typically distinguished from descriptive statistics. With descriptive statistics, the researcher is simply describing what is or what the data shows. With inferential statistics, the researcher tries to reach conclusions that extend beyond the immediate data alone. For instance, inferential statistics are used in an attempt to infer from the sample data what the population might think (Leedy & Ormrod, 2005).

Three types of files were created from the database, namely for

- biographical details
- the COI responses
- the MBTI responses

Specific statistical procedures were conducted before merging these three files into one, namely frequency distribution, Cronbach alpha coefficient, univariate tests, multivariate tests and post hoc tests.

4.5.1 Frequency distribution tables

According to Leary (2004), the basis of many data descriptions is the frequency distribution. A frequency distribution table is an efficient way which summarises the information in a raw data matrix by showing the number of scores that fall within each several categories. This enables the researcher with the investigation of any possible patterns. Frequency distributions were calculated for biographical variables, career anchor types and the MBTI personality preferences. These tables were used to verify data and as an aid which assisted the researcher to describe the sample population and the distribution of career anchors and personality preferences (Tredoux & Durrheim, 2002).

4.5.2 Internal consistency reliability analyses of the COI scales (Cronbach alpha coefficient)

When using Likert-type scales, it is imperative to calculate and report Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales being used. A Cronbach's alpha is a test reliability technique that requires only a single test administration to provide a unique estimate of the reliability for a given test. Cronbach's alpha is the average value of the reliability coefficients one would obtain for all possible combinations of items when split into two half-tests (Gliem & Gliem, 2003).

The analysis of the data must then use these summated scales or subscales and not individual items. If one does otherwise, the reliability of the items is at best probably low and at worst unknown. Although the Cronbach's coefficient is an estimate of responses to different scales, it does not, however, provide reliability estimates for single items (Gliem & Gliem, 2003; Tredoux & Durrheim, 2002).

The Cronbach's coefficient was used to indicate the reliability of scales in the COI, specifically within in the context of the diverse and multicultural South African population.

4.5.3 Multivariate analysis of variance (MANOVA)

When data presents more than one related dependent variable, a multivariate analysis of variance (MANOVA) should be conducted. MANOVA is an extension of the ANOVA methods to cover cases where there is more than one dependent variable and where the dependent variables cannot simply be combined. Whereas in a univariate case, a single dependent measure is tested for equality across the groups, in a multivariate case, a variate is tested for equality. As well as identifying whether changes in the independent variables have a significant effect on the dependent variables, the MANOVA also seeks to identify the interactions among the independent variables and the association between dependent variables (Tabachnick & Fidell, 2001).

The MANOVA tests whether there are mean differences among groups (the various MBTI personality type preferences) on a combination of dependent variables (the eight COI scales) are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA, a new dependent variable that maximises group differences is created from the set of dependent variables. One-way analysis is then performed on the newly created dependent variable.

MANOVA presents several criteria with which to assess differences across groups. According to Hair, Anderson, Tatham & Black (1995:277), the four most popular are Roy's greatest characteristic root, Wilks' Lambda, Hotelling's trace and Pillai's criterion.

The Wilk's Lambda test is used to investigate the differences between three or more groups. The goal of the test is to determine the significant difference between participants with different preferences for career anchors and personality preferences. Both the Pillai's criterion and the Hotelling's trace are similar to Wilk's Lambda because they consider all the characteristic roots and can be approximated by an F statistics. The F statistic was considered significant at the 95% level of significance (Hair et al, 1995:278). In the case of this study, Wilk's Lambda was used to assess the significance in individual results. Wilk's Lambda examines whether groups are somehow different without being concerned with whether they differ in at least one linear combination of the dependent variables. The larger the between-groups dispersion, the smaller the value of Wilk's Lambda, and the greater the implied significance (Hair et al, 1995:277).

4.5.4 M Box test

Homogeneity of covariance (HOC) is a necessary assumption for valid tests of multivariate differences across groups. HOC implies that the within-group variances and co-variances are similar, and can therefore be pooled together to create a common variance/covariance matrix for the multiple groups (Tredoux & Durrheim, 2002). The most common approach to investigating HOC is the Box M test. The Box M statistic is given together with a significance value based on a chi-square approximation.

Tabachnick and Fidell (2001) caution that, in cases where the Box M test indicates a problem, it may prove difficult to find a resolution. This is because if Box-M is statistically significant, the problem may be a result of violation of normality somewhere in the different variables. However, if Box-M is not statistically significant, it could be due to low power wherein the HOC may be violated but the sample size does not allow the researcher to detect it. In this way patterns of univariate variances and/or multivariate generalized variances can be used to understand what is happening within the data.

4.5.5 Statistical significance

Statistical significance refers to the probability that the observed result could have occurred randomly if it has no true underlying effect. Many procedures can be used to test the significance of any contrast or comparison. The significance level is the criterion used for rejecting the null hypothesis (Leedy & Ormrod, 2005).

In the case of a test of significance, the decision whether to reject or fail to reject the null hypothesis is based on a comparison to the significance level. If the rejection region approach to significance testing is considered, H_0 will be rejected. If, however, the test statistic is in the rejection region that is determined by the significance level, some values of the sampling distribution defined by H_0 will fall in the rejection region by chance. Consequently, H_0 could be rejected even though it is true. This will result in a type I error (Dooley, 1995; Leedy & Ormrod, 2005).

The identification and calculation of the probability of a Type II error is more complicated. A Type II error concerns the error of accepting a null hypothesis when the alternative hypothesis is

the true state of nature. In other words, this is the error of failing to observe a difference when in truth there is one. This type of error can only occur when the statistician accepts the null hypothesis (Leedy & Ormrod, 2005).

**TABLE 4.3 LEVELS OF STATISTICAL SIGNIFICANCE
(TREDOUX AND DURRHEIM, 2002)**

Probability	Level	Significance
<i>P</i>	0.10	Less significant
<i>P</i>	0.01 to 0.05	Significant
<i>P</i>	0.001 to 0.01	Very significant
<i>P</i>	0.001	Extremely significant

This probability ‘*p*’ should be smaller than 5% to consider a finding significant. Sometimes researchers insist on stronger significance and want *p* to be smaller than 1%, or even 0.1%, before they’ll accept a finding with wide-reaching consequences (Wikipedia, 2007). Traditionally, experimenters have used either the 0.05 level (sometimes called the 5% level) or the 0.01 level (1% level), although the choice of levels is largely subjective. The lower the significance level, the more the data must diverge from the null hypothesis to be significant. Therefore, the 0.01 level is more conservative than the 0.05 level (Leedy & Ormrod, 2005).

According to Garson (2006), the choice of a significance level should correspond with the research purpose. As such, Garson (2006) points out that it is inappropriate to set a stringent significance level in exploratory research. A $p < 0.10$ level is therefore regarded as acceptable in exploratory research.

Although the commonly used value for level of significance is $p < 0.05$, it was decided for the purpose of this study, to increase the alpha level to $p < 0.10$ due to its exploratory nature. Increasing the significance level from $p < 0.01$ to $p < 0.10$ increases the chances of Type I error and decreases the rigor of the statistical procedure of making a Type II error. Increasing the level increases the power of the statistical procedure because the null hypothesis will be more often rejected and the alternative hypothesis will be more often accepted. Consequently, when the alternative hypothesis is true there is a greater chance of accepting it (Trochin, 2006).

4.5.6 Post hoc tests

The second step in MANOVA is that if the overall F-test shows that the centroid (vector) of means of the dependent variables is not the same for all the groups formed by the categories of the independent variables, post-hoc univariate F tests of group differences are used to determine just which group means differ significantly from others. This helps specify the exact nature of the overall effect determined by the F test. Pair-wise multiple comparison tests test each pair of group means to identify similarities and differences (Garson, 2007).

When an effect is significant in MANOVA, ANOVA is used to discover which dependent variables were affected. Although the variables were initially investigated in terms of planned comparisons in accordance with the hypotheses, other possible significant effects were investigated by application of post hoc tests using the Bonferroni technique. The Bonferroni is a single-step pairwise multiple comparison procedure used to control for the family-wise error (Rafter, Abell & Braselton, 2002). The multiple comparison procedure is carried out by comparing the means of the independent variables (personality types) with the means of other personality types in the total group, in terms of the means of the dependent variables (the eight COI scales) (Shaughnessy & Zechmeister, 2003).

When there are many dependents, some univariate tests might be significant due to chance alone. If the nominal 0,05 level is not the actual alpha level researchers may adjust the nominal alpha level. Because multiple ANOVA's are used, a Bonferroni type adjustment is made for inflated Type I error (Bland, 2002). Although the traditional cut-off point of $p < 0,05$ is set for significance, for the purpose of this research allowance is made for increasing the alpha level to $p \leq 0,10$ for interpreting the significance of findings, since the Bonferroni adjustment tends to be very stringent in testing hypotheses (Bland, 2002). Garson (2006) and Trochin (2006) also recommend using an alpha level of $p \leq 10$ in exploratory research.

4.6 FORMULATION OF THE RESEARCH HYPOTHESES

According to Mouton (1998, 2001), a hypothesis is a statement postulating a possible relationship between two or more phenomena or variables. Leedy and Ormrod (2005) describe a hypothesis as a logical supposition, a reasonable guess, an educated conjecture which provides a tentative explanation for a phenomenon under investigation. By formulating a series of reasonable guesses

of cause and effect a researcher is able to understand and explore the events in his or her surrounding environment (Leedy & Ormrod, 2005).

A hypothesis is important because it guides the research. An investigator may refer to the hypothesis to direct his or her thought process toward the solution of the research problem or sub-problems. The hypothesis helps an investigator to collect the right kinds of data needed for the investigation. Hypotheses are also important because they help an investigator to locate information needed to resolve the research problem or sub-problems (Leedy & Ormrod, 2005). Often, an investigator will formulate a hypothesis based on the problem or sub-problems of the research, meaning the hypothesis is driven by the research question (Leedy & Ormrod, 2005).

A research hypothesis has to be formulated and tested by analysing the relationship between personality preferences and career anchors. The reason for this is to enable empirical testing of the relationship between the two variables. The following research hypotheses were formulated in order to address the objectives of the study;

H01: There is no significant relationship between the constructs measured by the COI (career anchors) and those measured by the MBTI (individuals' personality preferences).

H1: There is a significant relationship between the constructs measured by the COI (career anchors) and those measured by the MBTI (individuals' personality preferences).

4.7 CHAPTER SUMMARY

This chapter discussed the first six steps of the empirical study, namely determination and description of the sample, choosing and justifying the psychometric battery, administration of the psychometric battery, scoring of the psychometric battery, data processing and formulation of research hypotheses.

Next in chapter 5, the researcher will focus on reports and interpretation of the empirical data. This forms part of steps 6 to 8 of the research process. It deals with descriptive and inferential statistics, including the integration of the literature and the empirical research.

CHAPTER 5 RESULTS

Chapter 5 discusses the data analysis and interpretation, which is part of steps 6 to 8 of the research process. The results of this study are presented in descriptive and inferential statistics followed by an integration of the literature with the empirical findings.

5.1 DESCRIPTIVE STATISTICS

Descriptive statistics are used to describe the data obtained in the empirical study. Each descriptive statistic reduces large amounts of data to a simpler summary (Trochim, 2006). Bergh and Theron (2006) declare that descriptive statistics allow a researcher to organise, describe or summarise their raw data in order to interpret it meaningfully. The descriptive statistics relevant to this study include the sample size, mean age of participants, percentage of males and females, frequency distribution of scores, the normal distribution curve, and measurement of central tendency (means and standard deviations) (Bergh & Theron, 2006). Together with simple graphics analysis, descriptive statistics form the basis of virtually every quantitative analysis of data (Trochim, 2006).

The demographic characteristics of the sample, the means of each of the scales of COI and the MBTI will be discussed next.

5.1.1 Frequency distribution of biographical variables

For the purpose of this study, the researcher chose to limit the population to a single institution with the focus on individuals who were registered for the honours degree in Industrial and Organisational Psychology. The chosen institution is a South African tertiary institution, which is internationally regarded as one of the largest in South Africa, consisting of a head office and regional offices in different provinces.

The population for this research study comprised all 470 honours students registered for the degree in Industrial and Organisational Psychology at the higher education institution for a particular year. Questionnaires were sent to all 470 students. The initial sample comprised only the 155 respondents whose returned questionnaires were regarded as usable, which corresponded to a response rate of 33%. Of the respondents, 20% were males and 80% were females.

Table 5.1 to 5.4 and figures 5.1 to 5.4 indicate the participants' biographical profile by gender, race, age and type of employment.

5.1.1.1 *Participants' gender*

Males comprised 20% (N=31) and females 80% (N=124) of the participants (N=155).

TABLE 5.1 PARTICIPANTS' GENDER

GENDER				
	Frequency	Percent	Valid percent	Cumulative percent
Male	31	20.00	20.00	20.00
Female	124	80.00	80.00	100.00
Total	155	100.00	100.0	

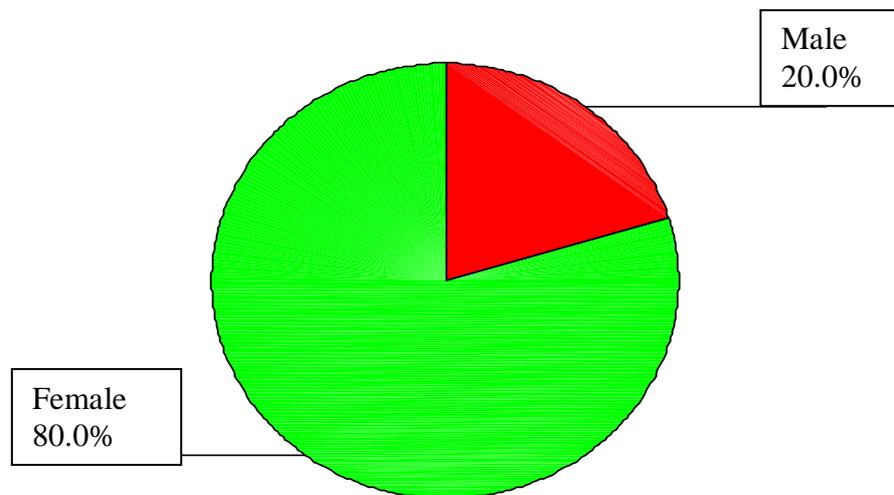


Figure 5.1 Participants' gender distribution

5.1.1.2 *Participants' racial groups*

TABLE 5.2 PARTICIPANTS' RACE

RACE				
	Frequency	Percent	Valid percent	Cumulative percent
African	65	41.9	41.9	41.9
Coloured	10	6.5	6.5	48.4
Indian	21	13.5	13.5	61.9
White	58	37.4	37.4	99.3
Other	1	0.7	0.7	100.0
TOTAL	155	100	100.0	

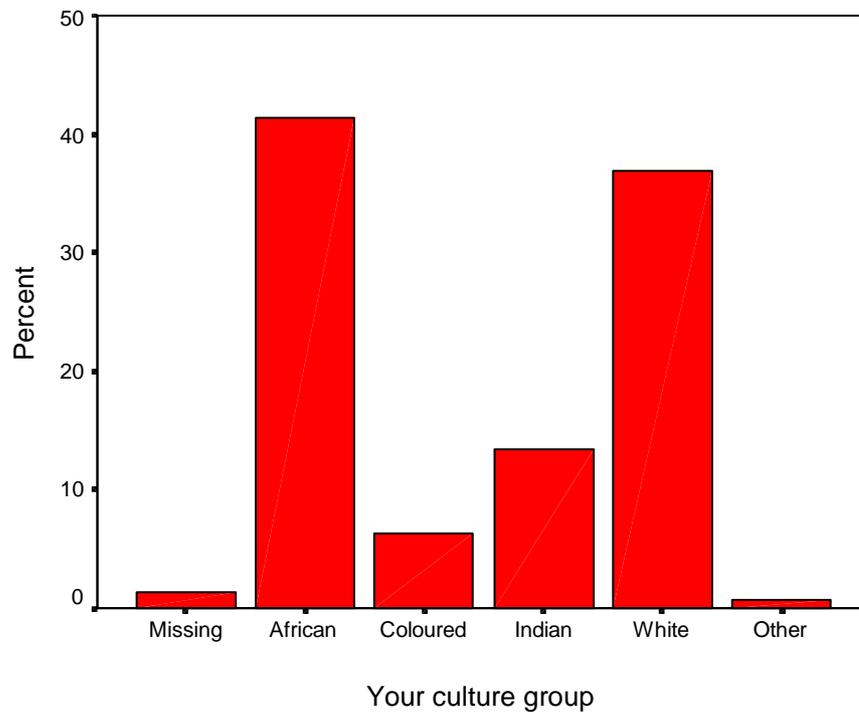


Figure 5.2 Distribution of participants' racial groups

The findings indicate that the females predominated. The interpretation of the empirical results therefore had to consider the unique needs and interests of the professionally employed adult females.

5.1.1.3 *Participants' gender by race groups*

Black males (Africans, Coloured and Indians) constituted 17% (N=26) and White males 3% (N=4) of the total sample. Black females (Africans, Coloured and Indians) constituted 45% (N=70) and White females 35% (N=54) of the total sample. In total, the Blacks constituted 62% of the participants.

TABLE 5.3 PARTICIPANTS' GENDER BY RACE GROUP

		GENDER BY RACE GROUP						TOTAL
			African	Coloured	Indian	White	Other	
GENDER	MALE	Count	23	2	1	4	1	31
		% within Gender	74.2%	6.5%	3.2%	12.9%	3.2%	100.0%
	FEMALE	Count	42	8	20	54	0	124
		% within Gender	33.9%	6.5%	16.1%	43.5%	.0%	100.0%
TOTAL		Count	65	10	21	58	1	155
		% within Gender	41.9%	6.5%	13.5%	37.4%	.6%	100.0%

Chi-square = 22.887; exact significance (two-sided) = .000

5.1.1.4 *Participants' employment status*

As shown in table 5.4, 83% of the participants were employed part-time and 17% full time. This indicates that the findings of the statistical analysis can be interpreted as relevant to the South African organisational context.

TABLE 5.4 PARTICIPANTS' EMPLOYMENT STATUS

PARTICIPANTS' EMPLOYMENT STATUS				
	Frequency	Percent	Valid percent	Cumulative percent
Part-time	130	82.8	82.8	82.8
Full-time	27	17.2	17.2	100.0
Total	157	100.0	100.0	

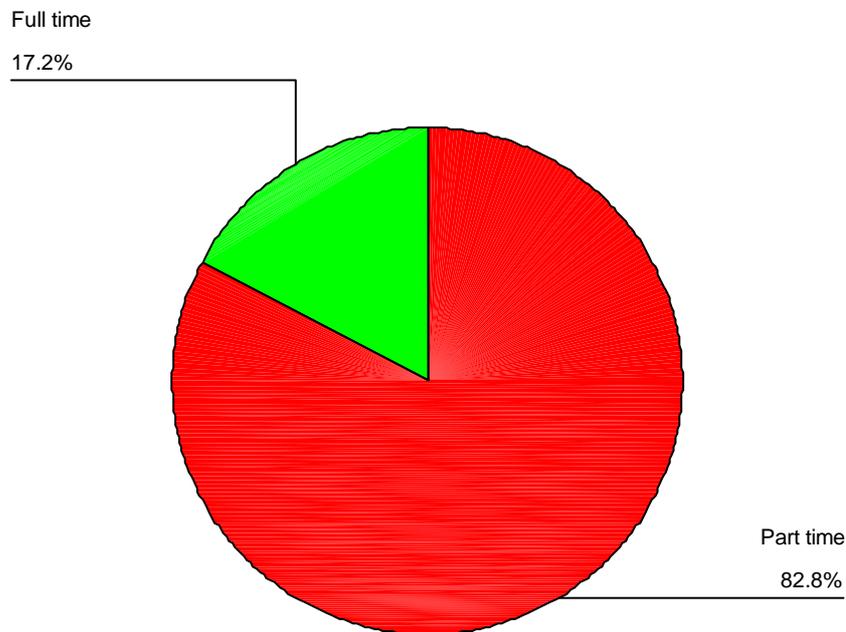


Figure 5.3 Participants' employment status

5.1.1.5 Participants' age groups

Figure 5.4 indicates that only a small percentage of the participants clustered in the midlife stage. The mean age of the participants was 29.2, and the predominant age groups ranged between 20 and 44 years (which Super regards as belonging to the early adulthood life stage). Schein (1996) regards the ages 29 to 30 as the age by which people have well-defined career anchors, which implies that the career anchors reported in this study can be used for making valid inferences from the statistical proceedings. In addition, this means that the findings are mostly applicable to females in the early adulthood career development stage, which also represents the career entry and establishment phases of their careers.

According to Super (1957), individuals in the early career development stages are typically characterised by gradually building entry skills and achieving stabilisation through work experience when an occupation is selected that offers the best chance to obtain satisfaction.

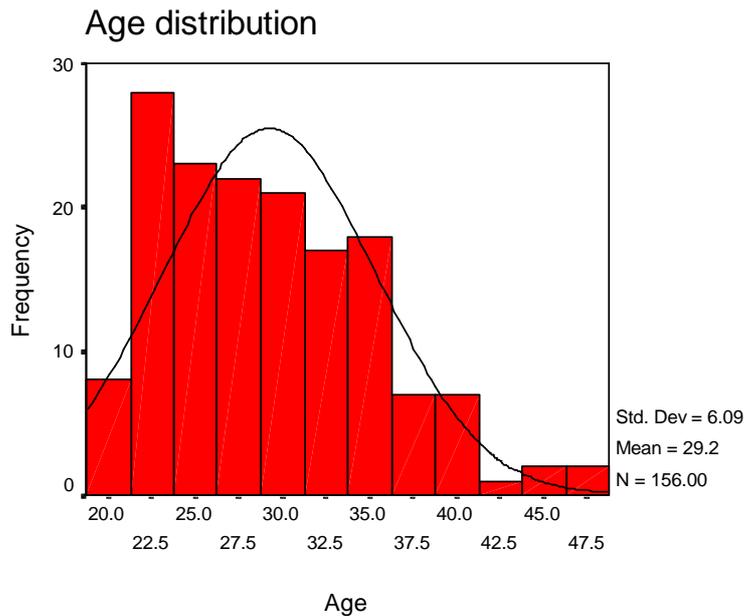


Figure 5.4 Participants' age

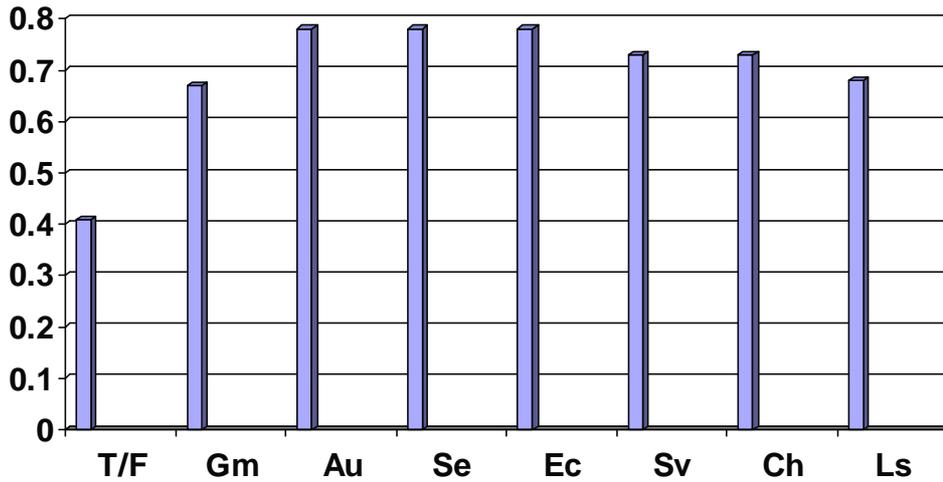
5.1.2 Item-reliability and Cronbach alpha coefficients: COI (N=155)

The objective of this study was to establish whether individuals' career anchors depended on their personality type. The internal consistency reliabilities as measured by Cronbach alpha was calculated for the total sample (N=155), comprising both male and female participants. As the participants were predominantly Black (62%), the reliability of the COI questionnaire was tested for the total sample as well as for the Black group (N=96).

Table 5.5 reflects the reliability scores obtained using the 1990 version of the COI. These scores varied from 0.78 to 0.41 for the total group and 0.79 to 0.28 for the Black group.

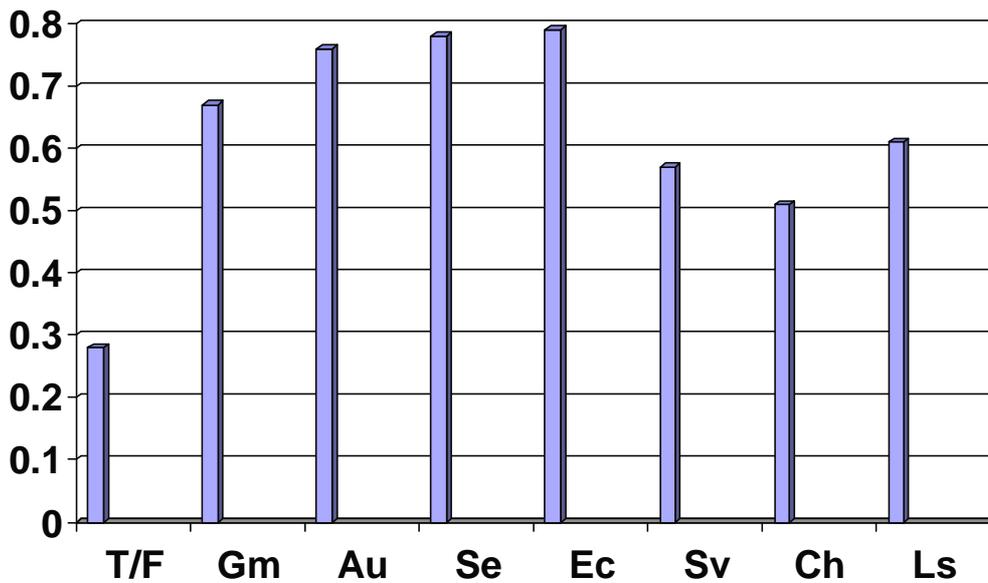
TABLE 5.5 RELIABILITY OF THE COI

Scale	Cronbach alpha Total sample (N=155)	Cronbach alpha Black group (N=96)
COI		
Technical/functional (T/f)	0.41	0.28
General management (Gm)	0.67	0.67
Autonomy (Au)	0.78	0.76
Security/stability (Se)	0.78	0.78
Entrepreneurial creativity (Ec)	0.78	0.79
Service (Sv)	0.73	0.57
Pure challenge (Ch)	0.73	0.51
Lifestyle (Ls)	0.68	0.61



T/f -Technical/functional, Gm - General management, Au – Autonomy, Se - Security/stability, Ec - Entrepreneurial creativity, Sv- Service/dedication to a cause, Ch -Pure challenge and Ls - Lifestyle

Figure 5.5 Cronbach alpha coefficient values of the COI for the participants (N=155)



T/f -

Technical/functional, Gm - General management, Au – Autonomy, Se - Security/stability, Ec - Entrepreneurial creativity, Sv-Service/dedication to a cause, Ch - Pure challenge and Ls - Lifestyle

Figure 5.6 Cronbach alpha coefficient values of the COI for the Black group (N=96)

5.1.3 Item reliability and Cronbach alpha coefficients: COI (N=155)

In order to validate the internal reliability of the items in each anchor, Cronbach's alphas were calculated. Kaynak and Hartley (2006) state that the widely accepted social science cut-off is that

the Cronbach's alpha coefficient should be 0.70 or higher for a set of items to be considered a scale, although some researchers use 0.75 or 0.80 while others are as lenient as 0.60. Nunnally and Bernstein (1994) suggest a threshold value of 0.70. Tredoux and Durrheim (2002) concur, stating that a desirable reliability coefficient would usually fall in the range of 0.8 to 0.9. However, reliabilities as low as 0.3 are quite acceptable in the case of individual testing when instruments are used to gather group data, as in the case of this study (Tredoux & Durrheim, 2002).

For the whole group of participants, all but three values of Cronbach alpha obtained for each career anchor were moderately high, and satisfactorily exceeded the threshold value of 0.70 (Kaynak & Hartley, 2006; Nunnally & Bernstein, 1994; Tredoux & Durrheim, 2002). Since the purpose of this study was not to make individual predictions based on the COI, but rather to investigate certain relations between constructs, the instrument was considered psychometrically acceptable (Van Vuuren & Fourie, 2000).

TABLE 5.6 COMPARISON OF RELIABILITY COEFFICIENTS OF THE COI

SOURCE		(a) Igbaria and Baroudi (1992)	(b) Custodio (2000)	(c) Marshall and Bonner (2003)	(d) Ellison and Schreuder (2000)	(e) Van Rensburg et al (2001)	(f) Current Study
SAMPLE		Information Systems employees N = 396	Filipino academic executives N = 116	Australian business students N = 423	Mainly white managers (South Africa) N = 295	Retail and hospital pharmacists (South Africa) N = 56	Honours students in I/O psychology (South Africa) N = 155
Cronbach alpha of the COI	Tf	0.80	0.78	0.59	0.59	0.62	0.41
	Gm	0.78	0.84	0.71	0.71	0.87	0.67
	Au	0.69	0.83	0.75	0.75	0.64	0.78
	Se	0.82	0.78	0.78	0.78	0.81	0.78
	Ec	0.93	0.84	0.75	0.75	0.78	0.78
	Sv	0.79	0.83	0.73	0.73	0.66	0.73
	Ch	0.62	n/a	0.70	0.70	0.85	0.73
	Ls	0.68	0.84	0.64	0.64	n/a	0.68

T/f -Technical/functional, Gm - General management, Au – Autonomy, Se - Security/stability, Ec - Entrepreneurial creativity, Sv- Service/dedication to a cause, Ch -Pure challenge and Ls – Lifestyle

Table 5.6 lists the internal consistency reliability estimates for the different career anchors as reported by Custodio (2000), Ellison and Schreuder (2000), Igbaria and Baroudi (1993), Marshall and Bonner (2003), Van Rensburg et al (2001) and the current study.

According to table 5.6, in five of the six studies (b, c, d, e and f), the technical/functional obtained the lowest Cronbach alpha coefficient of all the eight anchors. Further analysis shows that for the five studies (b, c, d, e and f), the participants' identifying characteristics suggest that the technical anchor might not have been a critical skill for the respondents' as they were either academics (Marshall & Bonner, 2003), managers (Ellison & Schreuder, 2000), pharmacists (Van Rensburg et al, 2001), or students in Industrial and Organisational Psychology being employed in a human resource-related field.

Igbaria and Baroudi (1993) found that the technical/functional anchor for the information systems employees was significantly higher for those whose entire career was based on a possession of superior technical skills.

5.1.4 Participants' career anchors

The mean scores of all the participants' career anchors ranged between 4.42 and 3.18 (see table 5.7). The distribution of the participants' career anchors indicated that the service/dedication to a cause (4.42), pure challenge (4.34), lifestyle (4.31) and technical/functional (4.22) anchors were more important to the majority of the participants. These anchors were ranked first, second, third and fourth, respectively. The security/stability (3.91), entrepreneurship creativity (3.83), autonomy (3.82) and general management (3.18) anchors were ranked lower as the fifth, sixth, seventh and eighth important anchors, respectively.

TABLE 5.7 ESTIMATED MARGINAL MEANS FOR THE COI (N=155)

Dependent Variable	Rank	Mean	Std Error	95% Confidence level	
				Lower bound	Upper bound
Technical/functional (T/f)	4 th	4.221	.070	4.082	4.360
General management (Gm)	8 th	3.176	.085	3.007	3.345
Autonomy (Au)	7 th	3.821	.096	3.630	4.011
Security/stability (Se)	5 th	3.908	.095	3.721	4.095
Entrepreneurial creativity (Ec)	6 th	3.832	.106	3.621	4.042
Service/dedication to a cause (Sv)	1 st	4.416	.092	4.233	4.600
Pure challenge (Ch)	2 nd	4.339	.087	4.168	4.511
Lifestyle (Ls)	3 rd	4.313	.091	4.133	4.494

5.1.5 Participants' distribution of career anchors

The participants ranked both the value-based anchors, namely *service/dedication to a cause* (at a mean of 4.42) and *pure challenge* ($m = 4.34$), the highest.

Individuals who have a strong preference for the service and dedication to a cause career anchor are primarily motivated to improve the world in some fashion. They seek to align work activities with personal values about helping society and are more concerned with finding jobs that meet their values than their skills. As the participants were predominantly Blacks, the reason for expressing a strong preference for the service/dedication to a cause career anchor may be attributed to the South African societal culture that is socially oriented in nature. Moreover, this preference could be ascribed to the notion that South Africans seem to pride themselves on the feeling of doing something important for others as in the spirit of *ubuntu*. Mbigi and Maree (1995) describe *ubuntu* as a metaphor that embodies the significance of group solidarity in many African cultures. Similar to the service/dedication to a cause anchor, the philosophy of *ubuntu* stresses supportiveness, sharing, and cooperation values collectivism in contrast to individualism.

Booyesen (2001) found that Blacks (particularly the women) generally emphasise collective mutual support and interdependence, concern for employees, compared to Whites' emphasis on independence and individual freedom. Thomas and Bendixen (2000) add that the special nature of African collectivism, in which individuals act autonomously, but remain socially united, is also referred to as communalism. As a form of collectivism, communalism can coexist with personal freedom or individualism.

According to Suutari and Taka (2004), people with a preference for the service/dedication to a cause anchor more commonly seek the care professions, such as doctors or teachers. As the profession of Industrial and Organisational Psychology and organisation rely a great deal on empathy and concern for the clients' or employees' well-being in the organisational context, the present participants thus had a higher probability of attaining job satisfaction within their chosen profession. The need to demonstrate care for people's well-being is in line with the core values of Industrial and Organisational psychology as a profession, as it is concerned with the scientific structuring of organisations and of work to improve the productivity and quality of work-life of people at work (Suutari & Taka, 2004).

The participants' biographical characteristics indicated that the group had a mean age of 29.2 and that 82.8% of the participants were employed on a part-time basis. This would account for the high preference for the pure challenge and lifestyle anchors, ranked second and third highest, respectively. According to Super's (1990) theory of career development, people in this age category are more likely to pursue challenges and to take more job-related risks (see chapter 2). Schein (1996) concurs by describing a career as an occupational self-concept, which employees gradually gain during the early course of their employment history. Schein (1996) would thus consider a group with a mean age of 29 to 30 as comprising well-developed career anchors.

In a study on the career anchors among information technology (IT) workers in Nigeria, Ituma and Simpson (2007) found that, although the respondents were predominantly Blacks, there was no evidence of a service and dedication to a cause anchor. Ituma and Simpson (2007) attribute the absence of this anchor to differences in the national context between their Nigerian study and Schein's work. Since the Nigerian group and the current group shared a common factor of being composed predominantly of Blacks, but yielded different rankings on this anchor, it could be assumed that the reasons behind the individuals' choice of career anchors could be ascribed to more than just the race factor.

In fact, the choice could be due to unstable and insecure employment and economic conditions (Ituma & Simpson, 2007). In addition, the role of family obligations might mean that individuals are more motivated by and attuned to the type of career that promises maximum financial benefits for individuals and their families, rather than the pursuance of broader social issues that address wider societal values.

The results from this study identify *pure challenge* as the second most cherished career anchor, after the *service/dedication to a cause*. Marshall and Bonner (2003), however, found the pure challenge anchor ranked the second most valued career anchor, after lifestyle career anchor. Marshall and Bonner (2003) cite Schein's (1996) view that respondents who identify pure challenge as an important career anchor are possibly active learners, requiring ongoing training and opportunities through on-the-job experience to enable them to take full advantage of change such as evolution of technology, development of job roles, and organisational restructuring.

This study confirmed Kniveton's (2004) observation that female respondents were more likely to be oriented towards the *lifestyle anchor* compared to the managerial competence and entrepreneurial career anchors. The lifestyle anchor is primarily concerned with aspects of the whole life, balancing career with family and other interests (Schein, 1990). In a study of career anchors and the effects of downsizing, Marshall and Bonner (2003) found that their Australian graduate business students ranked it the highest anchor. Schein (1970) ranks it amongst the bottom level anchors but predicts that its emphasis will increase with the growing proportion of dual career (job and family) individuals.

In South Africa, there is currently a prominent trend in organisations to focus on promoting women's careers due to legislative requirements stipulated by the Employment Equity Act, No 55 of 1998. Schreuder and Coetzee (2006:34) point out that female students represent 58% of students at a South African higher education institution, implying that an increasing number of professionally qualified females are entering the labour force. A similar trend is observed in terms of employed students who enrol for qualifications in the subject field of Industrial and Organisational Psychology (Landy & Conte, 2004).

The respondents ranked the *technical/functional* career anchor fourth highest with a mean of 4.22. In Singapore, however, Ling and Poh (2004:431-436) investigated the barriers preventing female quantity surveying graduates from entering the construction industry and found that most females were not confident of their technical skills.

One of the reasons that could explain the relatively high ranking of the technical/functional anchor is that women like working in an environment that treat them with dignity and respect, and invests in their skills (Misra & Panigrahi, 1996). Productive work and shared involvement in household work are valuable for all family members. In the context of South Africa, which is

characterised by high levels of unemployment, the growing employment of women is important for families and society as their financial contributions substantially reduce the percentage of families who are at the lower end of the economy. The relatively high ranking of the technical/functional anchor could also be attributed to the fact that South African legislation encourages business initiatives

It is interesting that the group ranked the *security/stability* (3.91) as the third lowest anchor, which is in line with the concept of modern careers as discussed in chapter 2. As proposed by Schein (1996) in the 21st century employment security cannot be guaranteed and 'employment security' needs to be replaced by 'employability security'. The moderate ranking of security/stability anchor could be a probable response to the unstable and limited nature of part-time employment. In order to design organizational training and development initiatives which would better serve the type of respondents Marshall and Bonner (2003) suggest that such initiative should incorporate measures which shift from dependence on the organization to dependence on oneself.

It was surprising to observe that the current sample ranked the *entrepreneurial creativity anchor* at a third lowest position with a mean = 3.83. A number of previous research including Erdogmus (2004) found a strong positive correlation between the entrepreneurial creativity anchor and the autonomy/independence and the service/dedication to a cause anchor. Along with entrepreneurial/creativity, Schein (cited in Marshall & Bonner, 2003) asks whether people have a predisposition towards the pure challenge career anchor and whether the preference for this career anchor is the result of adaptation to the challenges of working life and consecutive move away from stability and security of jobs.

The *autonomy career anchor* was not very typical among the present sample as it was ranked at a second lowest position with a mean = 3.82. People who strongly identify with this anchor are primarily motivated to seek work situations which are maximally free of organizational constraints. They may want to set own schedule and own pace of work and are willing to trade off opportunities for promotion to have more freedom (Suutari & Taka , 2004).

In the context of South Africa where there are such practices as employment equity and business empowerment initiatives which are targeted at the female population, more especially black females, it was anticipated that both the entrepreneurial creativity and the autonomy anchor

would rate higher than the security/stability anchor. The contrary findings imply that with regard to these two anchors the respondents in this study considered the acquisition of marketable skills to ensure security/stability as more attractive than pursuing their independent entrepreneurial desires. Booyesen (2001) argues that this apparent contradiction can be reconciled by the special nature of African collectivism in which individuals remain socially united whilst they may to a lesser extent act autonomously, a concept that has been referred to as communalism.

The *general managerial career anchor* had a lowest ranking with a mean of 3.1. This finding corresponds with the findings reported by Marshall and Bonner (2003). This anchor requires analytical and financial skills and high level interpersonal skills, supported by emotional intelligence to make consequential decisions (Hall, 2002, Marshall & Bonner, 2003, Super, 1990). The participants in this group engaged in Industrial and Organisational field of study which is aimed at professional service related occupations rather than managerial careers.

On the other hand, the profile of the sample in this study (mean age of 29.2 and 82.8% in part-time employment) could also account for the low ranking of the general managerial anchor as the above mentioned competencies (analytical and financial skills, high level interpersonal skills and emotional intelligence) had either not yet fully mastered due to age or the opportunity had not yet been realized due to part-time employment.

5.1.6 Frequency distribution of the participants' MBTI types

Table 5.8 provides an overview of frequency distribution of males' personality types.

TABLE 5.8 MALE PARTICIPANTS' PERSONALITY PREFERENCES (N = 31)

	FREQUENCY	PERCENT
ENTJ	1	3.2
ENTP	4	12.9
ESFP	2	6.5
ESTJ	8	25.8
ESTP	6	19.4
INTP	1	3.2
ISFP	1	3.2
ISTJ	2	6.4
ISTP	6	19.4
TOTAL	31	100

Table 5.8 indicates that there was only one group of 8, implying that comparison between the male and female groups on the MBTI personality preferences could not be made. Due to this under-representation of male participants (N=31) as compared to the female participants (N=117), it was decided not to include the male group in the subsequent statistical analyses as the distribution of personality preferences would not yield a large enough representation to make statistically meaningful interpretations. It was therefore decided that for statistical purposes only the female participants will be included in the inferential statistical procedures.

Table 5.9 presents the females' personality preferences for the MBTI preferences. In analysing the female participants' frequency distribution, only 117 MBTI questionnaires were found to be usable. In terms of the MBTI personality types, the females (N=117) represented predominantly the ESFP types (30.7 %), followed by ESFJ types (16.4%), ENFP types (16.2%), ISFP types (17.1%), ISFJ types (13.7%), INFP types (6.9%), ENFJ types (0.8%) and the INFJ types (0.8%).

TABLE 5.9 FEMALE PARTICIPANTS' PERSONALITY PREFERENCES (N = 117)

	FREQUENCY	PERCENT
ENFP	19	16.2
ESFJ	18	15.4
ESFP	36	30.7
INFP	8	6.9
ISFJ	16	13.7
ISFP	20	17.1
Total	117	100.0

TABLE 5.10 FEMALE PARTICIPANTS' MBTI TYPES (N=117)

		A				
		Sensing (S) (77%)		iNtuitive (N) (23%)		
		Thinking (T) (0%)	Feeling (F) (77%)	Feeling (F) (23%)	Thinking (T) (0%)	
		ST (0%)	SF (77%)	NF (23%)	NT (0%)	100% (A)
Introvert (I) (37.7%)	IJ (13.7%)	ISTJ (0%)	ISFJ (13.7%)	INFJ (excluded)	INTJ (0%)	13.7%
	IP (24%)	ISTP (0%)	ISFP (17.1%)	INFP (6.9%)	INTP (0%)	24%
Extravert (E) (62.3%)	EP (46.9%)	ESTP (0%)	ESFP (30.7%)	ENFP (16.2%)	ENTP (0%)	46.9%
	EJ (15.4%)	ESTJ (0%)	ESFJ (15.4%)	ENFJ (excluded)	ENTJ (0%)	15.4%
		0%	76.9%	23%	0%	100% (C+D)

From the initial female sample N=125, only MBTI preferences with frequencies of 8 and more were used for inferential statistics. Finally, 94% of the female participants were included in the statistical analysis (N=117).

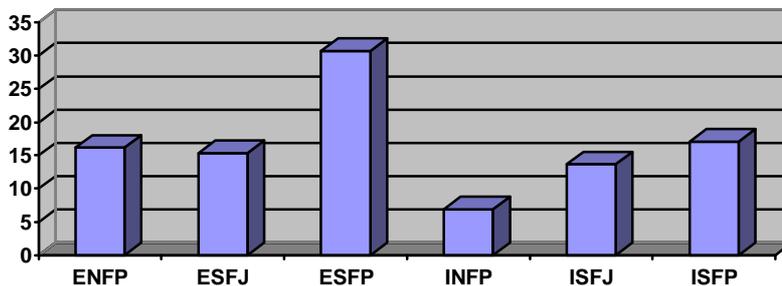


Figure 5.7 Female participants' MBTI preferences (N=117)

5.1.7 Interpreting the frequency distribution of the females' MBTI types

The following can be deduced from tables 5.9 and 5.10 and figure 5.7:

For the E-I scale, the Extraverted (E) scale predominated, with 62.3% of the female participants indicating a preference for the extraverted orientation, whilst the introverted (I) scale had a much lower representation of 37.7%.

This implies that if these females were to be put in a group setting in the workplace context, the Extraverted majority would more likely prefer a working environment rich in practical experiences that afforded them contacts with the outside world and relationships with others. They would value group interaction and work assignments done together with other employees. They would also be more likely to take conversational risks even though they might be dependent on outside stimulation and interaction.

The introverted minority would most certainly keep to themselves, as this personality type prefer and work more effectively in individual, independent situations where they are involved with ideas and concepts. The strengths of introverts lie in their ability to concentrate on the task at hand as well as their self-sufficiency. They appear as if they are not participating in teamwork, as they need to process ideas before speaking, and this sometimes leads to avoidance of linguistic risk-taking in conversation (Myers et al, 2003).

The Sensing (S), Intuitive (N) and Feeling (F) types predominated in the sample. The Thinking (T) – Feeling (F) scale reflects the extent to which the individual's decision-making relies on logical consequences and whether something is true or false as opposed to subjective feelings associated with personal or social values. The Sensing (S) – iNtuition (N) scale measures the extent to which an individual's perceptions are likely to rely on observable facts or events through one or more of the five senses versus relying on meanings, relationships and/or possibilities that have been worked out beyond the reach of the conscious mind (Järnlström, 2000).

The Sensing (S) participants, who comprised 77% of the females, would most likely prefer work settings which allow them to produce practical, useful products or services for people or organisations and where they are allowed the opportunity to learn a skill and practice it to the point of mastery. Their willingness to work hard in a systematic way and their attention to details will help keep the group focused on the task at hand. They would, however, be hindered should there be a lack of clear sequence, goals or structure in the work allocation (Myers et al, 2003).

The remaining 23% showed a strong preference for the iNtuitive (N) scale as a means of perceiving and gathering information. Participants with a stronger preference for iNtuition would prefer to find new possibilities for people, things, and data and be involved in tasks that allow them to continually learn to do new things (Myers et al, 2003). The iNtuitive (N) participants' strengths are their ability to guess from the context, structuring their own training, conceptualising and model-building. However, they can be hindered by inaccuracy and missing important details (Myers et al, 2003).

The Thinking (F)–Feeling (F) scale dimension describes how a person makes decisions. Of the 117 females, none reflected preference for the Thinking (T) scale. This suggests that as the female participants had a 100% Feeling (F) preference, they placed high value on the emotional satisfaction they derive from the work context and learn more effectively from personalized circumstances and social values. Feeling (F) individuals are strongly influenced by how their decision-making will impact other people. Employees with a strong Feeling (F) preference tend to display a strong desire to bond with the leader, supervisor or manager, which results in good relations leading to high self-esteem. Myers et al (2003) add that they can, however, become discouraged if not appreciated and disrupted by lack of interpersonal harmony.

By contrast, Young and Walters (2002) report that individuals with a preference for Thinking (T) will tend to use logic and analysis in problem solving. They are also likely to value objectivity and be impersonal in drawing conclusions and as a result may appear to be less concerned with people's feelings and may hurt others unintentionally. They will want solutions to make sense in terms of the facts, models, and/or principles under consideration.

According to Gentry, Mondore and Cox (2007), in general, 'feelers' are probably more pleasurable to have around, while 'thinkers' can become too concerned with their own thought-processes to consider the opinions of their co-workers, subordinates, or even bosses. Women tend to be more relationship orientated and also have higher needs for nurturing work environments (Coetzee, Martins, Basson & Muller, 2006). The predominance of the Feeling (F) group over the Thinking (T) is in line with the profile of an Industrial Psychologist, as this professional is required to exhibit care and compassion for clients and employees whilst also minding how their decision-making will impact other people.

The Perceiving (P) scale predominated the sample with an overall 62.3% representation whilst the Judging (J) scale had a lower 37.7% representation in the sample. The Judging (J)–Perceiving (P) scale reflects how individuals orient themselves toward the outer world. Young and Walters (2002) state that individuals with a ‘Judging (J)’ preference are typically organized, prefer schedules, and like to finish one task/project before starting another. They may not notice when new things need to be done. On the contrary, individuals with a ‘Perceiving (P)’ preference are eleventh hour or last-minute individuals. They like to take in information for a long time before making a decision (postpone it) and prefer being casual, flexible and open-ended (Young & Walters, 2002).

The participants with a strong Perceiving (P) preference will face a challenge of developing organisational skills. As Industrial Psychologists, they will be faced with situations where they will be expected to work with schedules and limit the turn-around time by finishing tasks on demand. However, their casual, flexible and open-ended disposition will be instrumental in putting the clients or employees at ease and fostering rapport, which is a core occupational requirement.

Of the respondents who displayed an introverted preference, more preferred the perceiving function (IP = 24%) compared to the judging function (IJ = 13.7%). Myers et al (2003:46) maintain that IJ types are underrepresented amongst college students. Myers et al (2003) add that the IJ prefer managerial control compared to IP’s preference of physical comfort. The order of career anchors dominance in this study supports this observation. The managerial anchor (managerial control), which is typical of the minority IJ, was ranked lower than the lifestyle anchor (physical comfort), which was highly favoured by the IP.

Amongst the respondents with the extraverted preference, twice as many preferred the perceiving function (EP = 46.9%) as those who preferred the judging function (EJ = 15.4%). The EP participants are more likely to show their dominant perceiving function of either sensing or intuition to the outer world. The EJ participants, on the contrary, desire a more structured environment and tend to show their dominant judging function of either thinking or feeling to the outer world. The challenge for Industrial Psychologists working with EP employees would be to incorporate some variety in the work environment and keep a strict monitoring of formal order, which will then bring out the employees’ qualities of creativity, physical comfort and interaction with others (Ellis, 2003).

The Thinking (T), Feeling (F), Judging (J) and Perceiving (P) combinations are measures of how a person supervises another and the preferred leadership style (Myers et al, 2003). The TJ combinations are logical decision makers, TP are adaptable thinkers, FPs are gentle types, and FJ are benevolent administrators. The findings of the sample group also displayed a strong inclination towards the FP types.

Overall, the ESFP preference dominated the sample with a 30.7% representation. According to Myers et al (2003:72-74), these individuals are warm, outgoing, optimistic, caring and cheerful individuals. They are always ready for a good time and avoid the company of dreary “doom and gloom” people who take themselves too seriously. ESFPs are more likely to settle in occupations which let them be “people’s people”, such as working in sales, human services, business, nursing, crisis intervention or the performing arts. Myers et al (2003) explain that ESFPs are naturally gifted at observing human behaviour and figuring out what others want, which suggests that they would find the profession of being an Industrial Psychologist very fulfilling as observing human behaviour forms the core task of the job. Hammer and MacDaid (1992) concur, adding that ESFPs often choose occupations in counselling, and teaching where “they can communicate with, and help foster the growth of, others”. Myers et al (2003) point out that ESFPs will go to great lengths to avoid solitude and isolation. As ESFPs believe that life, work and relationships should be fun and rewarding, they are more likely to function at their best when they are around other people.

The ISFPs were the group with the second highest representation (17.1%). Myers et al (2003:91-92) emphasise that the ISFPs are guided by inner values to which they are loyal and committed, and want their outer life to reflect those values. ISFPs are also likely to display commitment to people who are important to them and appreciate those who take time to understand and support their values and goals. In addition, they are quiet, friendly, sensitive and kind. They are also observant, realistic, concrete and factual. They enjoy the present moment, and what’s going on around them. ISFPs are attuned to the feelings and needs of others and flexible in responding to them. Furthermore, they are unassuming and do not force their opinions or values on others. These qualities would enable ISFPs to achieve some job satisfaction in the profession of Industrial and Organisational Psychology, as they would show empathy to their clients without being assuming and judgmental. This would further enable and allow the client to self-reflect and make informed decisions that suit them best (Myers et al, 2003).

The ENFPs had the third highest representation (16.2%). Myers et al (2003: 79-81) state that ENFPs are warm, friendly, caring, enthusiastic and imaginative. They see life as full of possibilities and through their exceptional insight can make connections between events and information very quickly and confidently proceed based on the patterns they see. Through their ability to be spontaneous and flexible, ENFPs can often rely on their ability to improvise and their verbal fluency (Myers et al, 2003). Hirsh and Kummerow (1990, 1998) add that ENFPs are enthusiastic, insightful, innovative, versatile and tireless in pursuit of new possibilities. As prospective Industrial and Organisational Psychologists, having the ability to make connections between events and information will be of benefit as it form the core responsibilities of the profession.

Myers et al (2003:54) maintain that all four of the Feeling Perceiving types are introverted, regardless of whether Feeling is the dominant (ISFP, INFP) or auxiliary (ESFP, ENFP) function in their personality. This type is further characterised by their focus on clarifying and maintaining the consistency of their values and actions, although since they are reserved, they may not always succeed in expressing their values and actions to others (Myers et al, 2003).

According to Myers et al (2003), the FPs generally pose an adaptable disposition while they also enjoy affiliating with harmony seekers, who are concerned with the human aspects of problems. They also have a preference for enlisting support from others and communicating in a sincere manner, which attracts liking and trust (Myers et al, 2003). As the Feeling function of the FPs is introverted, it may not always be apparent to others what motivates them until an opportunity arises to impart internal values. They use values or subjective criteria in dealing with the inner world of thoughts, in which they tend to do what they would want to have done to them. If their feelings are attacked or disregarded, however, the FPs can change and become stubborn and insist on doing things the 'right' way.

The second type observed in the participants was the FJ type. As with the FPs, Myers et al (2003:54) hold that all four of the Feeling Judging types display extraverted Feeling regardless of whether it is the dominant (ESFP, ENFP) or auxiliary (ISFJ, INFJ) function in their type. The FJs are said to be compassionate administrators and, like the FP's, seek harmony and care about people and their needs.

The ESFJs had a fourth highest representation (15.4%). According to Myers et al (2003:72-74), these individuals are at their best when they are presented with opportunities to learn. They tend to live for the moment and can find enjoyment in things around them, which makes them fun to be with. Due to their dominant Feeling (F) preference, the ESFJs usually base their decisions on their personal values. If the environment is not conducive for the ESFJs to realise their potential, they may feel frustrated by becoming distracted, have trouble meeting deadlines and over-personalize the decisions and actions of other people.

Career practitioners generally hold that work values are important in making career decisions and that highly prioritised values are chosen when they are available. Myers et al (2003) maintain that more career satisfaction will occur when there is congruence between an individual's personality type and the task demands of the occupation or work environment. A mismatch between type and occupation has important implications for careers counsellors and HR practitioners. Myers and McCauley (1990) contend the client usually reports feeling tired and inadequate.

Myers et al (2003) state further that a mismatch occurs because it is more tiring to use less-preferred or under-developed processes. A mismatch also causes discouragement because, despite the greater expenditure of effort, the work product is less likely to show the quality that would be developed if the preferred process were utilised. At the same time, tasks that call on dominant, preferred and well-developed processes require less effort for better performance, and give more satisfaction.

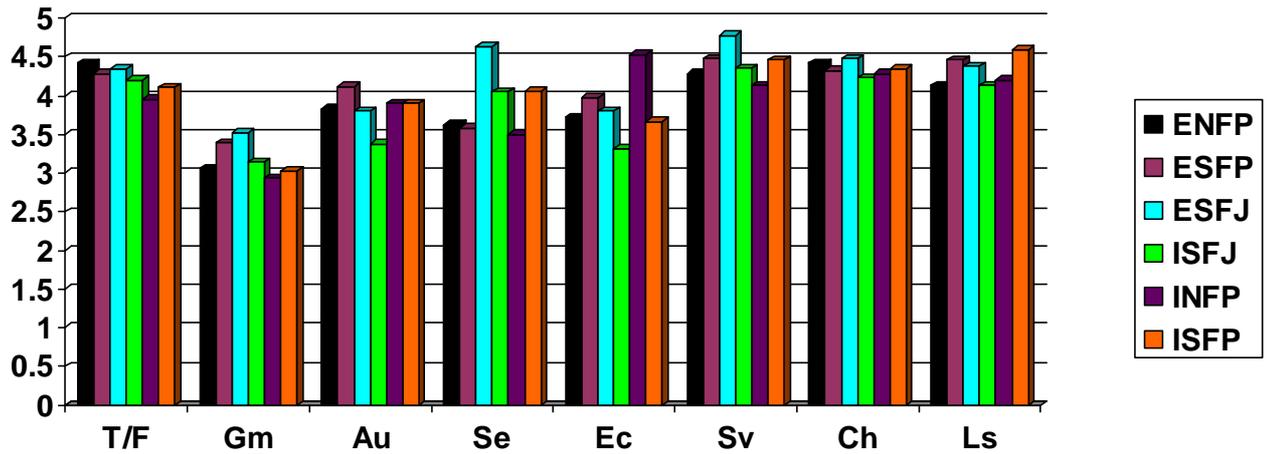
5.1.8 Female participants' COI and MBTI preferences

Table 5.9 represents the females' (N=117) descriptive statistics for mean scores on the COI and the MBTI personality types. Figure 5.7 represents the females' (N=117) descriptive statistics for scores on the COI and the six MBTI personality types. Figure 5.11 represents the females' (N=117) descriptive statistics for the dominant career anchors with regard to the six dominant personality types.

TABLE 5.11 FEMALE PARTICIPANTS' (N=117) DESCRIPTIVE STATISTICS FOR MEAN SCORES ON THE COI AND THE MBTI PERSONALITY TYPES

DESCRIPTIVE STATISTICS				
COI	MBTI PERSONALITY PREFERENCES	Mean	Std. Deviation	N
Technical/functional (T/f)	ENFP *	4.42105	.656234	19
	ESFJ	4.35556	.656391	18
	ESFP	4.28889	.736702	36
	INFP **	3.95000	.498569	8
	ISFJ	4.20000	.715542	16
	ISFP	4.11000	.697288	20
	Total		4.25470	.686633
General management (Gm)	ENFP	3.06316	.577553	19
	ESFJ *	3.52222	.987305	18
	ESFP	3.38889	.841691	36
	INFP **	2.92500	.961769	8
	ISFJ	3.13750	.965315	16
	ISFP	3.02000	.722277	20
	Total		3.22735	.843190
Autonomy (Au)	ENFP	3.83158	.830698	19
	ESFJ	3.80000	1.080305	18
	ESFP *	4.11667	.922574	36
	INFP	3.90000	1.110984	8
	ISFJ **	3.37500	.934880	16
	ISFP	3.90000	.900292	20
	Total		3.86838	.953456
Security/stability (Se)	ENFP	3.62105	1.051760	19
	ESFJ *	4.63333	.994692	18
	ESFP	3.58333	.897457	36
	INFP **	3.50000	.778276	8
	ISFJ	4.05000	.895917	16
	ISFP	4.06000	.870813	20
	Total		3.89060	.984884
Entrepreneurial creativity (Ec)	ENFP	3.71579	.789700	19
	ESFJ	3.80000	.979796	18
	ESFP	3.97778	1.196927	36
	INFP *	4.52500	.913001	8
	ISFJ **	3.31250	1.080663	16
	ISFP	3.66000	1.017944	20
	Total		3.80000	1.060254
Service/dedication to a cause (Sv)	ENFP	4.29474	.912551	19
	ESFJ *	4.77778	.880879	18
	ESFP	4.47778	.856942	36
	INFP **	4.12500	1.401785	8
	ISFJ	4.36250	.842912	16
	ISFP	4.46000	.833761	20
	Total		4.45128	.904454
Pure challenge (Ch)	ENFP	4.42105	.788514	19
	ESFJ *	4.47778	.840557	18
	ESFP	4.31667	.849033	36
	INFP	4.27500	.575078	8
	ISFJ **	4.22500	.965747	16
	ISFP	4.32000	.907048	20
	Total		4.34359	.836184
Lifestyle (Ls)	ENFP **	4.12632	.936211	19
	ESFJ	4.37778	.947787	18
	ESFP	4.46111	.743458	36
	INFP	4.20000	1.200000	8
	ISFJ	4.12500	1.073002	16
	ISFP *	4.59000	.752470	20
	Total		4.35214	.890815

* indicate the personality preference with the highest mean
 ** indicate the personality preference with the lowest mean



T/f -Technical/functional, Gm - General management, Au – Autonomy, Se - Security/stability, Ec - Entrepreneurial creativity, Sv- Service/dedication to a cause, Ch -Pure challenge and Ls – Lifestyle

Figure 5.8 Female participants’ descriptive statistics for scores on the COI and the six dominant MBTI personality types (N=117)

From table 5.11 and figure 5.8 it can be deduced that the dominant career anchors with their corresponding highest personality preferences (means above 4.00) can be tabled as indicated in table 5.12:

TABLE 5.12 FEMALES’ DOMINANT CAREER ANCHOR AND MBTI PREFERENCE (N=117)

Career anchors and their descriptions	Associated personality preferences
Value-based Service/dedication to a cause career anchor m=4.45	ISFP (m = 4.46) ESFJ (m = 4.78) ESFP (m = 4.48) ISFJ (m = 4.36)
Value-based Pure challenge career anchor m=4.34	ISFP (m = 4.32) ENFP (m = 4.42) ESFJ (m = 4.48) ESFP (m = 4.30) INFP (m = 4.28)
Needs-based Lifestyle career anchor m=4.35	ISFP (m = 4.59) ENFP (m = 4.13) ESFP (m = 4.46) INFP (m = 4.20)
Needs-based Security/stability career anchor m=3.89	ESFJ (m = 4.63)
Talent-based entrepreneurial career anchor m=4.3	INFP (m = 4.52)
Talent-based technical/functional career anchor m=4.25	ENFP (m = 4.42)

5.1.9 Interpreting the descriptive statistics: COI and MBTI preferences

ESFJ showed the highest mean on the service/dedication to a cause, security/stability and pure challenge career anchors.

5.1.9.1 The value-based service and dedication to a cause anchor

In terms of the female participants (N=117), the service/dedication to a cause anchor dominated the group. This high ranking of the service/dedication to a cause career anchor in both the female and the general group confirms Schein's (1996) predication, and Marshall and Bonners' (2003) and Kniveton's (2004) findings that with time, the value-based anchors will gain more preferences amongst younger individuals compared to their older counterparts.

Schein (1996) asserts that more and more young people as well as mid-life career occupants report feeling the need not only to maintain an adequate income, but also to do something meaningful in a larger context. Igarria and Baroudi (1993) concur, adding that people who belong to this anchor are largely concerned with improving the world, helping society, anxious to work in a field that meets their values, rather than their skills. Schein (cited in Igarria & Baroudi, 1992) ranks this anchor amongst the bottom third, but predicted an increase with growing emphasis on the used of environmentally friend products.

The ESFJ personality type obtained the highest scores ($m=4.78$) on the service/dedication to a cause anchor. These participants are committed to service to others, friends and the community. This would explain the service and dedication anchor being ranked the highest. The INFP personality type obtained the lowest score ($m=4.13$) on the service/dedication to a cause anchor. The INFP prefer autonomy, independence, opportunities for accomplishment and working with clear structures. For this reason, they may find a career in Industrial and Organisational Psychology unfulfilling as its the task sometimes requires doing the same kind of job over and over without any clear structure.

5.1.9.2 The need-based lifestyle career anchor

The lifestyle anchor was the second dominant in the sample (N=117). This career anchor is primarily concerned with aspects of the whole life, balancing a career with a family and other interests. Schein (cited in Igarria & Baroudi, 1992) predicted an increasing emphasis on this anchor with the growing proportion of dual-career (job and family) individuals.

With regard to the female participants (N=117), the ISFP personality type obtained the highest mean score (4.59) on the lifestyle career anchor. The ENFP and ISFJ equally obtained the lowest mean scores (4.13) on the on the lifestyle career anchors.

Simonsen (2000) states that men and women who have family responsibilities and interests outside of the workplace mostly choose lifestyle-driven careers. Lifestyle-driven careers also enable individuals to not only manage and promote their career expectations, but also allow them to promote themselves as flexible and motivated individuals with a balanced view of lifestyle and career aspirations. Danziger and Valency (2006) found that the proportion of women was significantly higher than that of the men in the lifestyle anchor (38.5 percent versus 22.7, $p=0.000$). In their study, Igbaria and Baroudi (1993) found the percentage of women with lifestyle as their dominant anchor was almost twice the percentage among men.

Career success is increasingly being seen as careers managed by the individuals, ensuring that they promote their capabilities and skills in the marketplace while still maintaining a balance between their work, family and personal needs (Simonsen, 2000). Kniveton (2004) found that female participants constantly expressed strong awareness of their family responsibilities and needs, but this was discussed as something they had to cope with rather than as something influencing their perceptions of their careers.

This, therefore, would indicate why the ISTP types ranked this anchor as their most preferred. The ISFP are orientated towards making their families happy and prefer clear structures within their jobs, which make their jobs as simple as possible. They prefer not to work long hours, as they would rather spend more time balancing their family lives, which is in line with the female participants' ranking lifestyle anchor the second dominant anchor. As Industrial Psychologists, the ISFPs would need to learn to balance their personal and work life, as they might sometimes be compelled to put more hours into their work.

The ENFPs prefer independence and achievement opportunities for advancement, which suggest a strong need to proceed up the career ladder toward management positions. The ISFJ prefer more stable job environments, which present the potential for a secure future. Consequently, the ISFJ participants ranked security/stability anchor higher compared to the ISFPs. Both the ENTP and ISFJ career need would not be met fully met by the profession of Industrial Psychology, as it is a social science that encourages service to others (De Fries, 2004).

5.1.9.3 *The value-based pure challenge anchor*

The participants rated the pure challenge anchor as third in the order on dominance. This anchor relates primarily to overcoming obstacles or problems, concerned with competition and winning. According to Schein (1996), as long as individuals with a dominant pure challenge anchor are willing to become active learners and because the nature of challenges will evolve with advancing technology, they will never run out of challenges.

In this study, the ESFJ personality type obtained the highest mean score (4.48) on the pure challenge career anchor. Myers et al (2003) maintain, however, that ESFJs are orientated towards job opportunities in which job security can be achieved and they usually appear to be quite satisfied with their lives and show no desire to leave their jobs.

It is crucial that Industrial Psychologists understand the differing needs and values of Introverts and Extraverts. When ESFJs and INFPs are faced with challenging problem-solving activities, they will react differently. As introverts, when INFPs are faced with challenging environments, their attitude is more likely to be that of caution, reservation and reflection. Such attitudes will emanate from within in order to inspire their sense of reality. In contrast, the extraverted ESFJs' attitude is one of immediate response, adaptability and involvement. When faced with challenging environments, the ESFJs' sense of reality and problem solving will be directly proportional to their participation in the outer world (Myers et al, 2003).

The ISFJ personality type obtained the lowest mean score (4.23) on the pure challenge career anchor. The ISFJ would rather settle for more stable job environments, which present potential for a secure future, over the pure challenge anchors which may encourage individuals to pursue personal goals and risky or temporary employment opportunities.

O'Leary (1997) found that women value challenging work and personal job satisfaction first before career aspirations, power and reward, and prefer to experience lateral rather than vertical career paths. This preference for challenge and job satisfaction over promotion could also result from women being less inclined to plan careers consciously and meticulously, being more accustomed to unpredictable experiences such as pregnancy, blocked career paths or moving with a partner's career (O'Leary, 1997).

5.1.9.4 *Talent-based technical/functional career anchor*

The technical/functional competence anchor was the fourth and least dominant, with an overall mean score (4.25). This concerns the content of the work itself, prefers advancement in a technical area rather than in general management. Schein (cited in Igbaria & Baroudi, 1993) predicts an ambiguous future for popularity of this anchor. According to Schein, although technology is becoming more important, it is nevertheless not seen by many as a basis for a career.

The ENFP personality type obtained the highest score (mean=4.42) on the technical/functional competence anchor whilst the INFP personality type obtained the lowest score (mean=3.95). The ENFPs have a strong need to use their specialised abilities and prefer independence and achievement opportunities for advancement which suggest a strong presence of technical/functional anchor and a need to proceed up the career ladder toward management positions. The INFPs prefer autonomy, independence and opportunities for accomplishment which are qualities which may not be easily met by the technical/functional anchor (Igbaria & Baroudi, 1993; Kniveton, 2004).

The participants showed the least preference for the security/stability, autonomy/independence, entrepreneurial creativity and the general managerial competence career anchors, in that particular order.

5.1.9.5 *Need-based security/stability career anchor*

The ESFJ personality types (mean=4.63) showed a greater preference for the security/stability career anchor than the ISFJ (mean =4.05), ISFP (mean =4.06), ENFP (mean =3.62), ESFP (mean =3.58) and INFP (mean = 3.50) personality types. ESFJ types prefer a work setting that contains conscientious, cooperative, values-oriented people who work at helping others. They appear to want to be close to the action, working most effectively in settings that are friendly, sensitive to human needs, personal and appreciative. Recognition for their loyalty, financial security and clear structures seem to be important career satisfaction values (Myers et al, 2003). These values are in agreement with the motives and values that define the security/stability career anchor (Schreuder & Coetzee, 2006).

Even though the security/stability career anchor was the first on the list of least preferred anchors, its mean distribution for the ESFJ type (mean=4.63) far outweighed all the individual six MBTI types (ENFP, ESFP, INFP, ISFJ, ISFP including ESFJ) tallied for the second dominant lifestyle, third dominant pure challenge and fourth dominant technical/functional career anchors.

The ESFJ thrive when working as part of a team and respect rules and procedures. They also desire to realise their achievements within the system which would imply that they have a strong need to progress through managerial positions in pursuit of employment environments that are stable and secure, and also have clear structures and responsibilities. Furthermore, due to their extraverted disposition, ESFJs require highly stimulating environments to maintain a stable reality structure and will bring value to discussions by their grasp of the significance within the “big(ger) picture”. The INFPs, who ranked the security/stability the lowest, as Introverts will often feel overwhelmed in highly stimulating environments and will prefer to focus on specific external objects at a time (Myers et al, 2003).

Woodd (1999) contends that women have traditionally followed a different career pattern from men and that today’s challenges and recent changes have had little effect on this pattern. Women rate the intrinsic values, such as a challenging job, development opportunities, quality of feedback and autonomy, significantly higher than men. Men in the meantime are significantly more concerned with extrinsic factors, such as high earnings, fringe benefits and job security. Given that these extrinsic factors are more difficult to sustain in the current competitive environment, Woodd (1999, 2000) suggests that if job insecurity is in short supply in modern times and if women rate extrinsic values lower than men, then women may cope better than men with the uncertainty surrounding the world of work.

5.1.9.6 Need-based autonomy/independence career anchor

The findings indicated that the ESFP personality types (m=4.12) had a higher preference for the autonomy career anchor compared to the ISFJ type, which scored a lowest mean (3.38). Whilst both types tend to prefer work settings that allow them to be of direct and practical service to others, Perceiving types tend to prefer a work setting that is spontaneous, flexible, and provides for more autonomy. Judging types tend to prefer work settings that provide them with boundaries and clear structures (Myers et al, 2003).

5.1.9.7 *Talent-based entrepreneurial creativity career anchor*

According to the findings, the INFP personality types ($m=4.53$) showed a higher preference for the entrepreneurial creativity career anchor than the ISFJ personality types, who scored a lowest mean of 3.31. The career satisfaction values of the INFPs suggest that they tend to prefer work settings that allow them opportunities for learning and expressing their creativity; prefer occupations in which they can be involved in making the world better, and value their independence and achievements (Myers et al, 2003). These values are in agreement with the motives and values underlying the entrepreneurial creativity career anchor, which emphasises freedom, ownership, power and opportunities to create anew (Schreuder & Coetzee, 2006).

5.1.9.8 *Talent-based general managerial competence career anchor*

The general management career anchor obtained the lowest mean scores compared with all the other seven anchors. Moreover, the mean score of the ENFP type ($m=3.52$), which ranked highest in this anchor, is relatively smaller than those of lowest ranking personality preferences of all anchors except for the autonomy and entrepreneurial creativity anchors.

The general management career anchor scored the lowest overall mean for all career anchors. The INFP personality preference, which had a mean of 2.93, showed the least preference for the general managerial competence. This was to be expected, since the INFP scored the highest mean for the entrepreneurial creativity career anchor. According to Kniveton (2004), individuals with a dominant entrepreneurial creativity career anchor are mainly motivated by the need to create or to build something to be identified with and are more interested in setting up new projects rather than managing the existing ones. In order for INFPs to engage in entrepreneurial activities, they will need to have some technical skills. The findings confirm this, as the INFPs scored relatively higher on the technical/functional competence anchor (3.95) compared to the management anchor (2.93).

Kniveton (2004) found a pattern of differences between age groups for all three talent-based anchors, in which the younger portion of the sample scored higher than the older. In two cases (management and technical skills), this difference was significant. The younger participants appeared to be more aware of and concerned about the skills they needed in their jobs. Kniveton (2004) found a different pattern with regard to the need-based anchors. The older people were

more inclined towards identification with the organisation and yet indicated a high need for a greater degree of independence.

5.2 INFERENCE STATISTICS

Inferential statistics are used to allow a researcher to make statistical inferences by making judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance. In this way, the researcher is enabled to draw conclusions about the data (Babbie & Mouton, 2001).

The statistical analysis was carried out, using the SAS programme (SAS Institute, 2000). Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between personality types as categorical data and participants' career anchors (as a set of interval data) (Tredoux & Durrheim, 2002).

5.2.1 Test of equality of covariance

One of the assumptions of a MANOVA is that the within-group variances are all the same or exhibit homoscedasticity (Sokal & Rohlf, 1995). Homoscedasticity is the assumption that the variability in scores for one variable is roughly the same at all values of the other variables. If the variances are different from each other (exhibit heteroscedasticity), the probability of obtaining a significant result if the null hypothesis is true is greater than the desired alpha level. Sokal and Rohlf (1995) recommend that the homogeneity of covariances be checked before performing MANOVA.

The box M test was conducted in order to test the MANOVA's assumption of homogeneity or homoscedasticity, using the F distribution within the eight career anchors and the dominant personality preference groups, respectively. Generally, the box M tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

TABLE 5.13 BOX M TEST OF EQUALITY OF COVARIANCE MATRICES

Box's Test of Equality of Covariance Matrices(a)	
Box's M	398.441
F	.912
Df1	312
Df2	12794.267
Sig.	.863
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a Design: Intercept+femalegrp	

As indicated in table 5.13, the Box M test was not significant (sig. = 0.863) and it could therefore be accepted that the observed covariance matrices of the dependent variables were equal across the groups. Variances and error variances were thus assumed to be homogeneous across the career anchors and personality preferences. On the whole, the multi-variate procedure was assumed a valid procedure for comparing the different career anchors and personality preferences, respectively (Tredoux & Durrheim, 2002).

5.2.2 Multivariate test

In order to establish whether there were any significant differences between the mean scores of the career anchors and personality types, multivariate analyses of variance (MANOVA) were performed. Wilk's Lambda's chi-square test was performed to determine the statistical significance of $p < 0.5$ (5%) and $p < 0.10$ (10%). Although $p < 0.5$ is the value to determine level of significance, it was decided to increase the alpha level to $p < 0.10$ due to the exploratory nature of this research.

According to Garson (2006), the choice of a significance level should correspond with the research purpose. As such, Garson (2006) also points out that it is inappropriate to set a stringent significance level such as $p < 0.01$ or $p < 0.05$ in exploratory research. However, increasing the significance level from $p < 0.05$ to $p < 0.10$ increases the chances of Type I error (rejecting the null hypothesis when it is in fact true). At the same time, the increased significance level decreases the rigor of the statistical procedure of making a Type II error (rejecting the alternative hypothesis when it is in fact true). The increased significance level also increases the power of the statistical procedure because it allows for a greater chance of accepting the alternative hypothesis (Trochin, 2006).

Table 5.14 depicts the results of Wilk’s Lambda’s chi-square test based on the mean scores of the respondents on all variables. The larger the between-groups dispersion, the smaller the value of Wilks’ lambda and the greater the implied significance (Shah, Cho, Nah & Brossard, 2006).

TABLE 5. 14 MULTIVARIATE TESTS (N=117)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.988	680.819(a)	12.000	100.000	.000	.988
	Wilks' Lambda	.012	680.819(a)	12.000	100.000	.000	.988
	Hotelling's Trace	81.698	680.819(a)	12.000	100.000	.000	.988
	Roy's Largest Root	81.698	680.819(a)	12.000	100.000	.000	.988
Femalegrp	Pillai's Trace	.646	1.287	60.000	520.000	.081	.129
	Wilks' Lambda	.490	1.297	60.000	472.039	.076	.133
	Hotelling's Trace	.795	1.304	60.000	492.000	.071	.137
	Roy's Largest Root	.369	3.199(b)	12.000	104.000	.001	.270
A Exact statistic							
B The statistic is an upper bound on F that yields a lower bound on the significance level.							
C Design: Intercept+femalegrp							

Table 5.14 shows that the MANOVA yielded a significant Wilk’s Lambda statistics at $p < 0.10$ ($F_p = 0.076$), firmly implying that there was an overall significant difference between the group means of the personality types on the career orientation scales. A post-hoc single-step multiple comparison procedure by means of the Bonferroni technique was conducted to investigate the effect of the observed differences.

5.2.3 Post-hoc test

Although the variables were initially investigated in terms of planned comparisons in accordance with the hypotheses, other possible significant effects were investigated by application of *Post hoc* multiple comparison tests, using the Bonferroni technique. The Bonferroni test was carried out by relating each one of the independent variables (personality types) with the other personality types in the total group, in terms of each of the dependent variables (the eight career anchor scales), thereby reducing the overall Type I error rate in a set of comparison (Tredoux & Durrheim 2002).

The Bonferroni technique assisted in determining which personality type means differ significantly from the other personality types’ means in terms of the career orientation scales scale. Because multiple ANOVA’s were used, a Bonferroni-type adjustment was made for inflated Type I error (Bland, 2002). Although the traditional cut-off point of $p < 0.05$ was set for significance, allowance was made for increasing the alpha level to $p \leq 0.10$ since the Bonferroni

adjustment tends to be very conservative and stringent in testing hypotheses, particularly with regard to exploratory research. (Bland, 2002; Tredoux & Durrheim, 2002).

TABLE 5.15 (A) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI - TECHNICAL/FUNCTIONAL CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Technical/functional career anchor	ENFP	ESFJ	.06550	.226701	1.000	-.61462	.74561
		ESFP	.13216	.195442	1.000	-.45417	.71850
		INFP	.47105	.290486	1.000	-.40042	1.34253
		ISFJ	.22105	.233864	1.000	-.48055	.92266
		ISFP	.31105	.220804	1.000	-.35137	.97348
	ESFJ	ENFP	-.06550	.226701	1.000	-.74561	.61462
		ESFP	.06667	.198964	1.000	-.53024	.66357
		INFP	.40556	.292867	1.000	-.47306	1.28417
		ISFJ	.15556	.236815	1.000	-.55490	.86601
		ISFP	.24556	.223927	1.000	-.42624	.91735
	ESFP	ENFP	-.13216	.195442	1.000	-.71850	.45417
		ESFJ	-.06667	.198964	1.000	-.66357	.53024
		INFP	.33889	.269399	1.000	-.46932	1.14710
		ISFJ	.08889	.207089	1.000	-.53239	.71017
		ISFP	.17889	.192218	1.000	-.39777	.75555
	INFP	ENFP	-.47105	.290486	1.000	-1.34253	.40042
		ESFJ	-.40556	.292867	1.000	-1.28417	.47306
		ESFP	-.33889	.269399	1.000	-1.14710	.46932
		ISFJ	-.25000	.298446	1.000	-1.14536	.64536
		ISFP	-.16000	.288327	1.000	-1.02500	.70500
	ISFJ	ENFP	-.22105	.233864	1.000	-.92266	.48055
		ESFJ	-.15556	.236815	1.000	-.86601	.55490
		ESFP	-.08889	.207089	1.000	-.71017	.53239
		INFP	.25000	.298446	1.000	-.64536	1.14536
		ISFP	.09000	.231176	1.000	-.60354	.78354
	ISFP	ENFP	-.31105	.220804	1.000	-.97348	.35137
		ESFJ	-.24556	.223927	1.000	-.91735	.42624
		ESFP	-.17889	.192218	1.000	-.75555	.39777
INFP		.16000	.288327	1.000	-.70500	1.02500	
ISFJ		-.09000	.231176	1.000	-.78354	.60354	
Based on observed means.							
* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.							
*** The mean difference is significant at the $p < 0.01$ level.							

TABLE 5.15(B) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI – GENERAL MANAGEMENT CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
General management career anchor	ENFP	ESFJ	-.45906	.275255	1.000	-1.28485	.36672
		ESFP	-.32573	.237302	1.000	-1.03765	.38619
		INFP	.13816	.352702	1.000	-.91997	1.19628
		ISFJ	-.07434	.283952	1.000	-.92621	.77753
		ISFP	.04316	.268095	1.000	-.76114	.84746
	ESFJ	ENFP	.45906	.275255	1.000	-.36672	1.28485
		ESFP	.13333	.241578	1.000	-.59141	.85808
		INFP	.59722	.355593	1.000	-.46958	1.66402
		ISFJ	.38472	.287535	1.000	-.47790	1.24734
		ISFP	.50222	.271887	1.000	-.31345	1.31790
	ESFP	ENFP	.32573	.237302	1.000	-.38619	1.03765
		ESFJ	-.13333	.241578	1.000	-.85808	.59141
		INFP	.46389	.327098	1.000	-.51742	1.44520
		ISFJ	.25139	.251442	1.000	-.50295	1.00573
		ISFP	.36889	.233386	1.000	-.33128	1.06906
	INFP	ENFP	-.13816	.352702	1.000	-1.19628	.91997
		ESFJ	-.59722	.355593	1.000	-1.66402	.46958
		ESFP	-.46389	.327098	1.000	-1.44520	.51742
		ISFJ	-.21250	.362367	1.000	-1.29962	.87462
		ISFP	-.09500	.350080	1.000	-1.14526	.95526
	ISFJ	ENFP	.07434	.283952	1.000	-.77753	.92621
		ESFJ	-.38472	.287535	1.000	-1.24734	.47790
		ESFP	-.25139	.251442	1.000	-1.00573	.50295
		INFP	.21250	.362367	1.000	-.87462	1.29962
		ISFP	.11750	.280688	1.000	-.72458	.95958
	ISFP	ENFP	-.04316	.268095	1.000	-.84746	.76114
		ESFJ	-.50222	.271887	1.000	-1.31790	.31345
		ESFP	-.36889	.233386	1.000	-1.06906	.33128
INFP		.09500	.350080	1.000	-.95526	1.14526	
ISFJ		-.11750	.280688	1.000	-.95958	.72458	
Based on observed means.							
* The mean difference is significant at the p < 0.10 level.							
** The mean difference is significant at the p < 0.05 level.							
*** The mean difference is significant at the p < 0.01 level.							

TABLE 5.15(C) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI – AUTONOMY CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
Autonomy career anchor	ENFP	ESFJ	.03158	.310946	1.000	-.90128	.96443	
		ESFP	-.28509	.268071	1.000	-1.08932	.51914	
		INFP	-.06842	.398434	1.000	-1.26375	1.12690	
		ISFJ	.45658	.320770	1.000	-.50575	1.41891	
		ISFP	-.06842	.302857	1.000	-.97701	.84017	
	ESFJ	ENFP	-.03158	.310946	1.000	-.96443	.90128	
		ESFP	-.31667	.272902	1.000	-1.13539	.50205	
		INFP	-.10000	.401700	1.000	-1.30512	1.10512	
		ISFJ	.42500	.324818	1.000	-.54947	1.39947	
		ISFP	-.10000	.307141	1.000	-1.02144	.82144	
	ESFP	ENFP	.28509	.268071	1.000	-.51914	1.08932	
		ESFJ	.31667	.272902	1.000	-.50205	1.13539	
		INFP	.21667	.369510	1.000	-.89189	1.32522	
		ISFJ	.74167	.284045	.154	-.11048	1.59382	
		ISFP	.21667	.263648	1.000	-.57429	1.00763	
	INFP	ENFP	.06842	.398434	1.000	-1.12690	1.26375	
		ESFJ	.10000	.401700	1.000	-1.10512	1.30512	
		ESFP	-.21667	.369510	1.000	-1.32522	.89189	
		ISFJ	.52500	.409352	1.000	-.70308	1.75308	
		ISFP	.00000	.395472	1.000	-1.18644	1.18644	
	ISFJ	ENFP	-.45658	.320770	1.000	-1.41891	.50575	
		ESFJ	-.42500	.324818	1.000	-1.39947	.54947	
		ESFP	-.74167	.284045	.154	-1.59382	.11048	
		INFP	-.52500	.409352	1.000	-1.75308	.70308	
		ISFP	-.52500	.317083	1.000	-1.47627	.42627	
	ISFP	ENFP	.06842	.302857	1.000	-.84017	.97701	
		ESFJ	.10000	.307141	1.000	-.82144	1.02144	
		ESFP	-.21667	.263648	1.000	-1.00763	.57429	
		INFP	.00000	.395472	1.000	-1.18644	1.18644	
		ISFJ	.52500	.317083	1.000	-.42627	1.47627	
	Based on observed means.							
	* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.								
*** The mean difference is significant at the $p < 0.01$ level.								

TABLE 5.15(D) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI SECURITY/STABILITY CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Security/stability career anchor	ENFP	ESFJ	-1.01228(*)	.305265	.019**	-1.92809	-.09647
		ESFP	.03772	.263174	1.000	-.75182	.82725
		INFP	.12105	.391155	1.000	-1.05244	1.29454
		ISFJ	-.42895	.314910	1.000	-1.37369	.51580
		ISFP	-.43895	.297324	1.000	-1.33094	.45304
	ESFJ	ENFP	1.01228(*)	.305265	.019**	.09647	1.92809
		ESFP	1.05000(*)	.267916	.002***	.24624	1.85376
		INFP	1.13333	.394362	.073*	-.04977	2.31644
		ISFJ	.58333	.318884	1.000	-.37334	1.54000
		ISFP	.57333	.301529	.898	-.33127	1.47794
	ESFP	ENFP	-.03772	.263174	1.000	-.82725	.75182
		ESFJ	-1.05000(*)	.267916	.002***	-1.85376	-.24624
		INFP	.08333	.362760	1.000	-1.00497	1.17163
		ISFJ	-.46667	.278856	1.000	-1.30325	.36992
		ISFP	-.47667	.258831	1.000	-1.25318	.29984
	INFP	ENFP	-.12105	.391155	1.000	-1.29454	1.05244
		ESFJ	-1.13333*	.394362	.073*	-2.31644	.04977
		ESFP	-.08333	.362760	1.000	-1.17163	1.00497
		ISFJ	-.55000	.401874	1.000	-1.75564	.65564
		ISFP	-.56000	.388247	1.000	-1.72476	.60476
	ISFJ	ENFP	.42895	.314910	1.000	-.51580	1.37369
		ESFJ	-.58333	.318884	1.000	-1.54000	.37334
		ESFP	.46667	.278856	1.000	-.36992	1.30325
		INFP	.55000	.401874	1.000	-.65564	1.75564
		ISFP	-.01000	.311290	1.000	-.94389	.92389
	ISFP	ENFP	.43895	.297324	1.000	-.45304	1.33094
		ESFJ	-.57333	.301529	.898	-1.47794	.33127
		ESFP	.47667	.258831	1.000	-.29984	1.25318
INFP		.56000	.388247	1.000	-.60476	1.72476	
ISFJ		.01000	.311290	1.000	-.92389	.94389	
Based on observed means.							
* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.							
*** The mean difference is significant at the $p < 0.01$ level.							

TABLE 5.15 (E) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI ENTREPRENEURIAL CREATIVITY CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Entrepreneurial creativity career anchor	ENFP	ESFJ	-.08421	.343029	1.000	-1.11332	.94489
		ESFP	-.26199	.295730	1.000	-1.14920	.62522
		INFP	-.80921	.439544	1.000	-2.12787	.50945
		ISFJ	.40329	.353867	1.000	-.65833	1.46491
		ISFP	.05579	.334105	1.000	-.94654	1.05812
	ESFJ	ENFP	.08421	.343029	1.000	-.94489	1.11332
		ESFP	-.17778	.301059	1.000	-1.08097	.72542
		INFP	-.72500	.443147	1.000	-2.05447	.60447
		ISFJ	.48750	.358332	1.000	-.58752	1.56252
		ISFP	.14000	.338831	1.000	-.87651	1.15651
	ESFP	ENFP	.26199	.295730	1.000	-.62522	1.14920
		ESFJ	.17778	.301059	1.000	-.72542	1.08097
		INFP	-.54722	.407636	1.000	-1.77015	.67571
		ISFJ	.66528	.313352	.540	-.27480	1.60535
		ISFP	.31778	.290851	1.000	-.55479	1.19035
	INFP	ENFP	.80921	.439544	1.000	-.50945	2.12787
		ESFJ	.72500	.443147	1.000	-.60447	2.05447
		ESFP	.54722	.407636	1.000	-.67571	1.77015
		ISFJ	1.21250	.451589	.125	-.14229	2.56729
		ISFP	.86500	.436276	.748	-.44385	2.17385
	ISFJ	ENFP	-.40329	.353867	1.000	-1.46491	.65833
		ESFJ	-.48750	.358332	1.000	-1.56252	.58752
		ESFP	-.66528	.313352	.540	-1.60535	.27480
		INFP	-1.21250	.451589	.125	-2.56729	.14229
		ISFP	-.34750	.349799	1.000	-1.39692	.70192
	ISFP	ENFP	-.05579	.334105	1.000	-1.05812	.94654
		ESFJ	-.14000	.338831	1.000	-1.15651	.87651
		ESFP	-.31778	.290851	1.000	-1.19035	.55479
INFP		-.86500	.436276	.748	-2.17385	.44385	
ISFJ		.34750	.349799	1.000	-.70192	1.39692	
Based on observed means.							
* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.							
*** The mean difference is significant at the $p < 0.01$ level.							

TABLE 5.15 (F) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI SERVICE/DEDICATION TO CAUSE CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Service/dedication to a cause career anchor	ENFP	ESFJ	-.48304	.298638	1.000	-1.37897	.41289
		ESFP	-.18304	.257460	1.000	-.95544	.58935
		INFP	.16974	.382663	1.000	-.97827	1.31775
		ISFJ	-.06776	.308073	1.000	-.99200	.85647
		ISFP	-.16526	.290869	1.000	-1.03789	.70736
	ESFJ	ENFP	.48304	.298638	1.000	-.41289	1.37897
		ESFP	.30000	.262100	1.000	-.48631	1.08631
		INFP	.65278	.385800	1.000	-.50464	1.81020
		ISFJ	.41528	.311961	1.000	-.52062	1.35118
		ISFP	.31778	.294983	1.000	-.56719	1.20274
	ESFP	ENFP	.18304	.257460	1.000	-.58935	.95544
		ESFJ	-.30000	.262100	1.000	-1.08631	.48631
		INFP	.35278	.354884	1.000	-.71190	1.41745
		ISFJ	.11528	.272802	1.000	-.70314	.93370
		ISFP	.01778	.253212	1.000	-.74187	.77743
	INFP	ENFP	-.16974	.382663	1.000	-1.31775	.97827
		ESFJ	-.65278	.385800	1.000	-1.81020	.50464
		ESFP	-.35278	.354884	1.000	-1.41745	.71190
		ISFJ	-.23750	.393149	1.000	-1.41697	.94197
		ISFP	-.33500	.379818	1.000	-1.47448	.80448
	ISFJ	ENFP	.06776	.308073	1.000	-.85647	.99200
		ESFJ	-.41528	.311961	1.000	-1.35118	.52062
		ESFP	-.11528	.272802	1.000	-.93370	.70314
		INFP	.23750	.393149	1.000	-.94197	1.41697
		ISFP	-.09750	.304532	1.000	-1.01111	.81611
	ISFP	ENFP	.16526	.290869	1.000	-.70736	1.03789
		ESFJ	-.31778	.294983	1.000	-1.20274	.56719
		ESFP	-.01778	.253212	1.000	-.77743	.74187
		INFP	.33500	.379818	1.000	-.80448	1.47448
		ISFJ	.09750	.304532	1.000	-.81611	1.01111
Based on observed means.							
* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.							
*** The mean difference is significant at the $p < 0.01$ level.							

TABLE 5.15(G) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI PURE CHALLENGE CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Pure challenge career anchor	ENFP	ESFJ	-.05673	.279880	1.000	-.89638	.78293
		ESFP	.10439	.241289	1.000	-.61950	.82827
		INFP	.14605	.358628	1.000	-.92985	1.22196
		ISFJ	.19605	.288723	1.000	-.67013	1.06224
		ISFP	.10105	.272600	1.000	-.71676	.91887
	ESFJ	ENFP	.05673	.279880	1.000	-.78293	.89638
		ESFP	.16111	.245637	1.000	-.57581	.89804
		INFP	.20278	.361568	1.000	-.88195	1.28750
		ISFJ	.25278	.292367	1.000	-.62434	1.12989
		ISFP	.15778	.276455	1.000	-.67160	.98716
	ESFP	ENFP	-.10439	.241289	1.000	-.82827	.61950
		ESFJ	-.16111	.245637	1.000	-.89804	.57581
		INFP	.04167	.332594	1.000	-.95613	1.03947
		ISFJ	.09167	.255667	1.000	-.67535	.85868
		ISFP	-.00333	.237308	1.000	-.71527	.70860
	INFP	ENFP	-.14605	.358628	1.000	-1.22196	.92985
		ESFJ	-.20278	.361568	1.000	-1.28750	.88195
		ESFP	-.04167	.332594	1.000	-1.03947	.95613
		ISFJ	.05000	.368456	1.000	-1.05539	1.15539
		ISFP	-.04500	.355962	1.000	-1.11291	1.02291
	ISFJ	ENFP	-.19605	.288723	1.000	-1.06224	.67013
		ESFJ	-.25278	.292367	1.000	-1.12989	.62434
		ESFP	-.09167	.255667	1.000	-.85868	.67535
		INFP	-.05000	.368456	1.000	-1.15539	1.05539
		ISFP	-.09500	.285405	1.000	-.95123	.76123
	ISFP	ENFP	-.10105	.272600	1.000	-.91887	.71676
		ESFJ	-.15778	.276455	1.000	-.98716	.67160
		ESFP	.00333	.237308	1.000	-.70860	.71527
INFP		.04500	.355962	1.000	-1.02291	1.11291	
ISFJ		.09500	.285405	1.000	-.76123	.95123	
Based on observed means.							
* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.							
*** The mean difference is significant at the $p < 0.01$ level.							

TABLE 5.15 (H) PAIRWISE MULTIPLE COMPARISONS: BONFERONNI LIFESTYLE CAREER ANCHOR AND SIX ASSOCIATED PERSONALITY PREFERENCES (N=117)

Dependent Variable	(I) Female group	(J) Female group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
Lifestyle career anchor	ENFP	ESFJ	-.25146	.293698	1.000	-1.13257	.62965	
		ESFP	-.33480	.253202	1.000	-1.09442	.42482	
		INFP	-.07368	.376334	1.000	-1.20271	1.05534	
		ISFJ	.00132	.302978	1.000	-.90763	.91027	
		ISFP	-.46368	.286058	1.000	-1.32187	.39451	
	ESFJ	ENFP	.25146	.293698	1.000	-.62965	1.13257	
		ESFP	-.08333	.257765	1.000	-.85664	.68997	
		INFP	.17778	.379419	1.000	-.96050	1.31606	
		ISFJ	.25278	.306801	1.000	-.66764	1.17320	
		ISFP	-.21222	.290104	1.000	-1.08255	.65811	
	ESFP	ENFP	.33480	.253202	1.000	-.42482	1.09442	
		ESFJ	.08333	.257765	1.000	-.68997	.85664	
		INFP	.26111	.349015	1.000	-.78595	1.30817	
		ISFJ	.33611	.268290	1.000	-.46877	1.14100	
		ISFP	-.12889	.249024	1.000	-.87598	.61820	
	INFP	ENFP	.07368	.376334	1.000	-1.05534	1.20271	
		ESFJ	-.17778	.379419	1.000	-1.31606	.96050	
		ESFP	-.26111	.349015	1.000	-1.30817	.78595	
		ISFJ	.07500	.386647	1.000	-1.08496	1.23496	
		ISFP	-.39000	.373536	1.000	-1.51063	.73063	
	ISFJ	ENFP	-.00132	.302978	1.000	-.91027	.90763	
		ESFJ	-.25278	.306801	1.000	-1.17320	.66764	
		ESFP	-.33611	.268290	1.000	-1.14100	.46877	
		INFP	-.07500	.386647	1.000	-1.23496	1.08496	
		ISFP	-.46500	.299495	1.000	-1.36350	.43350	
	ISFP	ENFP	.46368	.286058	1.000	-.39451	1.32187	
		ESFJ	.21222	.290104	1.000	-.65811	1.08255	
		ESFP	.12889	.249024	1.000	-.61820	.87598	
		INFP	.39000	.373536	1.000	-.73063	1.51063	
		ISFJ	.46500	.299495	1.000	-.43350	1.36350	
	Based on observed means.							
	* The mean difference is significant at the $p < 0.10$ level.							
** The mean difference is significant at the $p < 0.05$ level.								
*** The mean difference is significant at the $p < 0.01$ level.								

5.1.4 Interpretation of Post-hoc test

From Tables 5.9 and 5.15 (A-H), it appears that the ESFJ types (mean = 4.63) obtained significantly higher scores than the ENFP (mean = 3.62); ESFP (mean = 3.58) and INFP (mean = 3.50) personality types on the security/stability career orientation scale.

Overall, the post-hoc test confirmed the observations made by investigating the means described by the descriptive statistics, particularly with regard to the security/stability career anchor. When the Bonferroni-type correction was applied, the different confidence levels yielded a variety of

implication for testing the hypothesis. This means that provided the findings were interpreted within the chosen level of significance, the participants in this study could be said to have indicated a clear preference for their chosen career anchors.

At a Bonferroni $p < 0.01$ (1% level), only one relationship between personality preferences yielded results which reached high statistical significance. As indicated by the confidence level, ESFJ's showed a significantly higher preference than the ESFP's ($p < 0.01$) for the security/stability anchor.

At a Bonferroni $p < 0.05$ (5% level), the findings indicated that two relationships between personality preferences yielded results which reached statistical significance. In addition to the two relationships identified and discussed in $p < 0.01$ (1% level) above for the security/stability anchor, an additional relationship between the ESFJ and the ENTP was identified at a $p < 0.05$ significance level (95% confidence level). According to table 5.15(D), the descriptive statistics indicate that with regard to the security/stability anchor the ESFJs showed as stronger preference compared to the weaker preference displayed by the ENFP's and ESFP's.

At a Bonferroni $p < 0.10$ the findings indicated that three relationships between personality preferences yielded results which reached statistical significance. In addition to the two relationships identified and discussed in $p < 0.05$ above, for the security/stability anchor an additional relationship between the ESFJ and the INTP was identified at a $p < 0.10$ significance level. According to table 5.15(D), the descriptive statistics indicate that with regard to the security/stability anchor whereas the ESFJs showed a stronger preference, the INFP's preference for this anchor was even weaker than that of the ESFJ's and the ISFJ's.

5.2 INTEGRATION OF RESEACH FINDINGS

The empirical study provided information on career anchors and personality preferences. The purpose of this section is to integrate the significant findings of the empirical study with the findings of the literature review (see chapters 2 and 3).

Only one hypothesis was proposed, namely that there is a relationship between career anchors and personality preferences. When testing the hypothesis, the significance level was used as a criterion for accepting or rejecting the null hypothesis. If the probability is less than or equal to

the chosen or set significance level, then the null hypothesis is rejected and alternative hypothesis is accepted.

In this study, due to its exploratory nature and the power of the statistical procedures to detect the strength of the relationship between the eight career anchors and corresponding personality types, the level of significance was raised to $p < 0.10$ (10% level). In this manner, more pairs of both the independent variable (personality preferences) and the dependent variable (career anchors) could be included and considered to be at a significant level (Garson, 2006; Trochim, 2006).

TABLE 5.16 SUMMARY OF DECISIONS ON RESEARCH HYPOTHESES

	RESEARCH HYPOTHESIS	DECISION
H01	There is no significant relationship between the constructs measured by the COI (career anchors) and those measured by the MBTI (individuals' personality preferences).	Rejected
H1	There is a significant relationship between the constructs measured by the COI (career anchors) and those measured by the MBTI (individuals' personality preferences).	Accepted

The empirical study provided statistically significant evidence to support the central hypothesis that there is a relationship between the constructs measured by the COI and those measured by the MBTI. Furthermore, significant relationships were found between the eight COI scales and some of the MBTI personality preferences. Consequently, the null hypothesis was rejected on the basis that the findings did confirm the relationship between career anchors and personality preferences. The limited observations of significant relationships could be due to the relatively small sample size, which yielded a predominance for the Feeling (F) preference of the female participants.

The findings will make a valuable contribution by expanding knowledge regarding the dominant career anchors and personality preferences of a group of employed South African female participants pursuing a professional education in the field of Industrial and Organisational Psychology. The findings also added more insight into the predominant career anchors of the Feeling (F) personality type and in particular, the ESFJ personality preference.

A broader representation of various occupational groups and MBTI personality types would have yielded a broader perspective on how career anchors and personality preferences relate to one another. In particular, the security/stability career anchor and its relation to the ESFJ, ESFP and INFP personality types were highlighted in this study.

Industrial Psychologists and managers need to take cognisance of the underlying values and needs that influence the career choice and decisions of the Feeling (F) personality types of women. With more women entering the field of Industrial and Organisational Psychology and the workplace, this is regarded as an important finding. Career choice and decision-making practices are closely related to the attraction, placement and retention of professionally qualified women.

In terms of descriptive statistics, the current findings are similar to Kniveton's (2004), in that they both report similar higher ranking for the service/dedication to a cause career anchor. This constitutes the major difference between the current findings and those of Schein (1996), who ranked this anchor amongst the bottom third group. This anchor is largely concerned with improving the world, helping society, and being anxious to work in a field that meets their values rather than their skills. This is an area Schein (1996) predicted would be expanding with increasing emphasis on ecology and recycling. The other value-based anchor, *pure challenge*, was found to be the second highest ranked anchor, similar to the findings of Marshall and Bonner (2003).

In terms of inferential statistics, the overall results suggest that personality types that share a common preference (for example, the Feeling preference as in the case of the individuals who participated in this study) do not differ significantly in terms of their career orientations. This may be due to their inclination to choose careers and work environments that match their predominant career satisfaction values (Huitt, 1992; Myers et al, 2003).

Statistically significant differences were established at ($p < 0.10$) with regard to the security/stability career anchor and the ESFJ, ENFP, ESFP and INFP personality types, as indicated in figure 5.9 below.

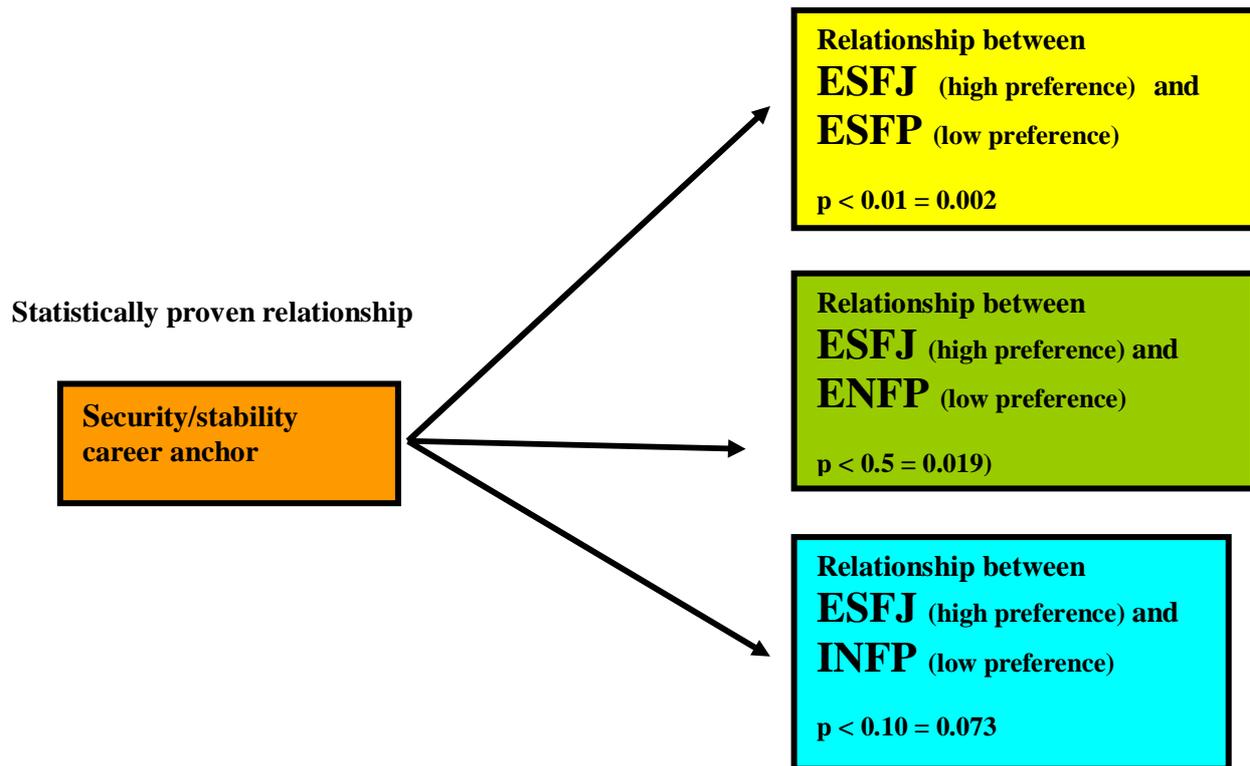


Figure 5.9 Summary of significant mean differences between security/stability anchor and MBTI types

It is evident that participants in the present study did not adopt a single career anchor, as Schein (1974) claims, but were more inclined towards a career profile with two or more anchors, competing for top ranking. In order to keep women in specialised work fields, human resources managers and Industrial psychologists need to recognise that women's career motivations change and they have diverse values and motivations throughout their careers and tailor hiring and retention practices to fit those needs.

Quesenberry and Trauth (2007) argue that one cannot simply classify women by a single category whether that category is desire for technical/functional competence or security/stability anchor. Contrary to traditional theories, none of those anchors alone was a deciding factor in the female participants' career choices. While about 30 percent indicated they valued careers that afforded them opportunities to perfect skills in technical areas, others said they wanted careers with managerial opportunities. In addition, there was little overlap among the participants who reported that managers give up technical skills to develop management skills (Quesenberry & Trauth, 2007).

This draws attention to the fact that individuals or employees do not tend to have a single career orientation which, as suggested by Kniveton (2004:572), raises the need to make individuals aware that they should not view their future options solely in terms of their past career path. An awareness of the range of their own career anchors may help them accept and even seek alternative career development interventions, which they may not have considered earlier.

TABLE 5.17 CORE FINDINGS OF DESCRIPTIVE STATISTICS

CAREER SATISFACTION VALUES OF THE PERSONALITY TYPES (MYERS ET AL 2003)	CAREER PREFERENCE PREFERENCES AS INDICATED BY DESCRIPTIVE STATISTICS MEANS
<p style="text-align: center;">ESFJ (N=18) <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Service to others, Community service • Clear structure ,Loyalty and security • Making the job as simple as possible • Happy family, Home/family • Outgoing affiliation • Business sociability, Financial security • Health, Friendships 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Value-based service/dedication to a cause m=4.78 ➤ Needs-based security/stability anchor m=4.63 ➤ Value-based pure challenge m=4.48 ➤ Need-based lifestyle career anchor m=4.37 ➤ Talent-based technical/functional anchor m=4.35 <p>Lowest overall mean for : No values recorded below the mean = 3.50</p>
<p style="text-align: center;">ESFP (N=36) <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Variety of tasks • Independence and achievement • Clear structure • Visible autonomy • Prestige • Opportunity to contribute to society 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Value-based service/dedication to a cause m=4.78 ➤ Need-based lifestyle career anchor m=4.46 ➤ Value-based pure challenge m=4.32 ➤ Talent-based technical/functional anchor m=4.29 ➤ Need-based autonomy career anchor m=4.12 <p>Lowest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent-based general managerial competence career anchor m=3.39
<p style="text-align: center;">ENFP (N=19) <i>Dominant: iNtuition</i></p> <ul style="list-style-type: none"> • creativity and learning • independence and achievement • teamwork, organisational values • people from different backgrounds • home/family, friendships and relationships • community service 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Value-based pure challenge m=4.42 ➤ Talent-based technical/functional anchor m=4.42 ➤ Value-based service/dedication to a cause m=4.29 ➤ Need-based lifestyle career anchor m=4.13 <p>Lowest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent-based general managerial competence career anchor m=3.06
<p style="text-align: center;">INFP (N=8) <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Creativity and learning • Independence and achievement • Variety of tasks 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent-based entrepreneurial career anchor m=4.53 ➤ Value-based pure challenge

<ul style="list-style-type: none"> • Clear structure • Nurturing affiliation • Autonomy • Opportunities for accomplishment 	<ul style="list-style-type: none"> ➤ m=4.28 ➤ Need-based lifestyle career anchor m=4.20 <p>Lowest overall mean for :</p> <ul style="list-style-type: none"> ➤ Needs-based security/stability anchor m=3.50 ➤ Talent-based general managerial competence career anchor <p>m=2.93</p>
<p style="text-align: center;">ISFJ (N=16) <i>Dominant: Sensing</i></p> <ul style="list-style-type: none"> • Stable and secure future • Employee loyalty and job security • Clear structures • No expectation for working extra hours • Health and spirituality 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent-based technical/functional anchor m=4.42 ➤ Value-based service/dedication to a cause m=4.36 ➤ Value-based pure challenge m=4.23 ➤ Talent based lifestyle career anchor m=4.20 ➤ Need-based lifestyle career anchor m=4.12 ➤ Needs-based security/stability anchor m=4.05 <p>Lowest overall mean for :</p> <ul style="list-style-type: none"> ➤ Need-based autonomy career anchor m=3.37 ➤ Talent-based entrepreneurial career anchor m=3.31 ➤ Talent-based general managerial competence career anchor <p>m=3.14</p>
<p style="text-align: center;">ISFP <i>Dominant: Feeling</i></p> <ul style="list-style-type: none"> • Variety of tasks • Loyalty and security • Making the job as simple as possible • No expectation of extra hours • Clear structure • Independence and achievement • Happy family 	<p>Highest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent based lifestyle career anchor m=4.59 ➤ Value-based service/dedication to a cause m=4.46 ➤ Value-based pure challenge m=4.32 ➤ Talent-based technical/functional anchor m=4.11 ➤ Needs-based security/stability anchor m=4.06 <p>Lowest overall mean for :</p> <ul style="list-style-type: none"> ➤ Talent-based general managerial competence career anchor <p>m=3.02</p>

In table 5.17, the ESFJ and the ESFP personality types showed a greater statistically significant preference for the value driven service/dedication to a cause career anchor when compared to the ENFP, INFP, ISFJ and ISFP personality types.

ESJF types prefer a work setting that contains conscientious, cooperative, values-oriented people who work at helping others. They want to be close to the action, working most effectively in settings that are friendly, sensitive to human needs, personal and appreciative. Recognition for their loyalty, financial security and clear structures are important career satisfaction values (Myers et al, 2003). These values are in agreement with the motives and values that define the security/stability career anchor (Schreuder & Coetzee, 2006).

ESFJ and ESFP both comprise ESF (Extraverted Sensing Feeling) and have a need for a supportive (sensing, mostly ESFJ) system where their values (feeling, mostly ESFP) are expressed (SF theme). Due to the fact that both the ESFJ and the ESFP are extraverted, they prefer to be with people and are sensitive to other people's practical needs, values and feelings and often like to fulfil these. ES's are flexible persons because they accept the world as it is and deal with it in their own down-to-earth kind of way. They are very observant and few things elude their perception, except sometimes the reasons behind abstracts (De Fries, 2004).

The INFP personality types seem to favour more talent driven career anchors hence they tended to prefer work settings that satisfy their strong need for creativity and learning, independence and achievement opportunities (Myers et al, 2003). This could explain their low preference for the security/stability career anchor. These findings are in line with Rothman's (2001) finding amongst White male managers that the SJ and SP personality types tended to prefer the security/stability career anchor. The findings of the current study appear to indicate that SJ personality types tend to have a higher preference for the security/stability career anchor than the SP and NP personality types. This could be due to the fact that Perceiving (P) types tend to prefer more flexibility and autonomy in their work settings, whilst the Judging types prefer more structure and security (Myers et al, 2003).

Although Schein (1978) argued that, by definition, an individual can maintain only one dominant career anchor, his own empirical evidence suggested that individuals can hold more than one career anchor strongly. Given that the career anchor includes needs, values, and talents that surface to the top of a person's self-image, it is plausible that there is room at the top for more than one anchor (Feldman & Bolino, 1996; Ramakrishna & Potosky, 2002). According to DeLong (1982) and Butler and Waldroop (1999), one to three anchors tend to cluster together to form an individual's career and work preferences. To date, no empirical data have eliminated the possibility that multiple career anchors may stabilise over time, thus resulting in multiple stable dominant career anchors (Feldman & Bolino, 1996; Kniveton, 2004; Ramakrishna & Potosky, 2003).

5.4 CHAPTER SUMMARY

In chapter 5 the discussion focused on the data analysis and interpretation with regard the empirical findings and the literature review. The research objectives sought to investigate the relationship dynamics between *career anchors* and *personality preferences* as manifested in the participants employed in the South African work context. The study explored the career anchors and personality types of students, mainly females, pursuing a professional education in the subject field of Industrial and Organisational Psychology.

Next in chapter 6 the conclusions and limitations of the study are discussed and recommendations for practice and future research will be made.

This chapter is the concluding chapter of the dissertation. It follows the research methodology proposed in chapter 1: First conclusions are drawn, followed by a discussion of any possible limitations of the current study, and finally, recommendations are made for career decision-making practices and research in the field of Industrial and Organisational Psychology.

6.1 CONCLUSIONS RELATING TO DEFINED AIMS

The focus of this dissertation was to investigate the relationship between *career anchors* and *personality preferences*. Following the research aims (see chapter 1, section 1.3), the next section formulates research conclusions on the literature review and the empirical study.

6.1.1 Conclusions regarding the literature review

The general aim of this study was to investigate, analyse and evaluate whether there is a relationship between *career anchors* and *personality preferences*, and to determine whether the respondents differed in their career anchors and personality preferences. Addressing and achieving the specific objectives of the research achieved the general aim of the research.

Conclusions are drawn about each of the specific objectives regarding the relationship between organisational commitment and career anchors.

6.1.1.1 *Conceptualise career anchors*

The first aim, namely to conceptualise career anchors, was achieved in chapter 2. A comprehensive literature review, incorporating the definition and evolution of the term 'career', a clarification of the terms associated with career psychology, was provided. A discussion and integration of the various terms and approaches indicated that the term 'career' has evolved over a number of years.

6.1.1.2 *Conclusions about the construct career anchor*

Schein (1978 :128) conceptualised and defined the concept of career anchor as “a pattern of self-perceived talents, motives and values that serve to guide, constrain, stabilise and integrate individual careers”. According to Yarnall (1998), career anchors emerged as a way of explaining the pattern of reasons given by graduates as they progressed through their careers. While Schein’s (1978) research was built around a study of managers, career anchors have since been widely applied to all levels of employees.

According to Schein (1996), career anchors guide individuals’ career decisions and clarify some of the differences in individual approaches to careers. Feldman and Bolino (2000) add that individuals’ career decision making and their psychological attachment to an occupation is greatly dependent on their dominant career anchors. Boshoff, Bennett and Kellerman (1994) agree that career anchors are relatively good predictors of job involvement for most professional people. Career anchors organise individuals’ experiences, identify individuals’ long-term contributions, and establish criteria for success by which individuals can measure themselves. Individuals (even within a homogeneous group) tend to view their careers differently (Coetzee, Schreuder & Tladinyane; Ellison & Schreuder, 2000; Schein, 1978).

Yarnall (1998) points out that anchors are broader than just values, as they emphasise discovery through work experience and the importance of feedback in shaping development. They serve to explain how and why individuals interact with the organisation as, theoretically, individuals will not give up their predominant career anchor if a choice is available. According to Igarria and Greenhaus (1991), understanding career anchors can help organisations deal with career development more successfully. Organisations need to recognise the different career orientations within their employees to develop appropriate reward systems and career paths.

In their study, Ellison and Schreuder (2000) found a relationship between career anchors and jobs and occupations. They add that where there is a fit between employees’ dominant career anchors and their job perception, such employees experience a higher quality of working life and job satisfaction than when there is no congruence between career anchor and job perception.

6.1.1.3 *Conceptualise personality preferences*

The second aim of the literature review was to conceptualise *personality preferences*, which was achieved in chapter 3. A comprehensive literature review, incorporating the definition of the term ‘personality’ and clarification of the terms associated with analytical psychology, was provided. A discussion and integration of the various terms and approaches indicated that the term ‘personality’ has been defined from diverse points of view.

6.1.1.4 *Conclusions about the construct personality preferences*

As in the case of the term ‘career’, a comprehensive literature review, incorporating a historical overview of personality psychology, the concept of personality and general definitions thereof, traced its development.

Personality encompasses those characteristics of people that account for consistent patterns of behaviour, which are referred to as *individual differences* (Pervin & John, 1997). The study of individual differences recognises that all people are similar in some ways, but is more concerned with the reasons why people differ (Pervin & John, 1997). Jung (1971) defined the patterns in the way in which people prefer to perceive and make judgments. Coetzee (2005:26) adds that apart from one dominant attitude that each person uses consciously and in a specific way, the mental functions of perception and judgement (or decision-making) when observing his or her world assign meaning to the experience. Type theory assumes that preferences are inborn and that all are equally valid. They can, however, be falsified by family and other environmental pressures.

People who have the same personality preferences tend to have whatever qualities result from the exercise of those preferences in common (Pervin & John, 1997; Van Rooyen et al, 2001; Myers et al, 2003). It seems, therefore, that understanding personality types helps explain why people may find certain areas in life easy to manage and others more of a struggle.

6.1.1.5 Determine the relationship between career anchors and personality preferences theoretically

The third aim, namely to determine whether a relationship exist between career anchors and personality preferences from a theoretical perspective, was achieved in the integration section of chapter 3.

6.1.1.6 Conclusion regarding the theoretical relationship between career anchors and personality preferences

After a study of the literature it was found that a theoretical relationship does exist between career anchors and personality preferences. This conclusion is in line with findings of previous studies.

The match between personality and career orientation makes it probable that people will select careers that will result in satisfaction of personality-related behaviours (Bradley & Herbert, 1997). This perspective is useful in explaining both career choice and career preferences (Holland, 1996; Myers & McCauley, 1990). Nikolaou (2003) states that employees' personality preferences and skills form an integral part of their work performance. This person-organisation fit concerns the antecedents and consequences of compatibility between people and the organisations in which they work.

Understanding individuals' basic orientation towards the work environment and their reasons for joining and staying with the organisation may assist in designing more informed career counselling or guidance practices.

6.1.1.7 Conceptualise the implications of the theoretical relationship between career anchors and personality preferences for career decisions

The fourth aim, namely to conceptualise the implications of the theoretical relationship between career anchors and personality preferences for career decision-making in the South African organisational context, was achieved in the integration section of chapter 3.

6.1.1.8 Conclusion about the implications for career choice and decision- making

The literature review elaborated on how individuals' career choice and decision-making practices are influenced by their career anchors and personality types. In addition, this study adds to the knowledge about how individuals' personality preferences correspond with their career anchors.

The findings suggest that personality preferences are related to career anchors hence organisations wishing to enhance their employees' self-awareness should strive for congruence between organisational incentives and the important motivations and values underlying their members' career anchors and career satisfaction values underlying personality preferences.

When personality is emphasised in career choice, it is supposed that the personality has been formed before the individual starts to make such a choice. People are more likely to select a career that will result in satisfaction of personality-related behaviours. This perspective has been useful both in explaining career choice and career preferences. Osipow (1991) points out that of all the theories developed to measure levels of career decision, none purports to measure the appropriateness of career choice, but rather confidence in a career choice. These differences influence the ways people like to work, what motivates them, and what satisfies them (Hammer & MacDaid, 1992). The preferred dominant function forms the core identity and direction for the overall personality. Research and practice indicate that identifying a type's dominant function illuminates core values and motivations (Myers et al 2003).

The relationship between career anchors and personality preferences become even clearer when individuals are in a position to make their career choices freely, compared to when people are forced to take any available employment due to pressures of limited job choices in the market and/or chronic unemployment.

It can thus be concluded that the literature review has contributed to the quantitative study through providing a theoretical foundation for the analysis and interpretation of empirical results.

6.1.2 Conclusions regarding the empirical study

With references to the empirical aims for this research the findings for each of the research aims and the hypotheses that warrant a discussion will be presented and the following conclusions can be drawn:

6.1.2.1 *The first research aim*

The first empirical research aim, namely, to determine the empirical relationship between the variables career anchors and personality preferences as manifested in the sample of respondents employed in a South African context, was achieved in chapters 4 and 5.

Findings in this study led to the general conclusion as did Yarnall (2000), that personality is more important for determining differences in career anchors than career anchors for determining personality. This suggests that when personality is emphasized in career choice, it is supposed that the personality has been formed before one starts to make such a choice. This means that by knowing the characteristics of a personality preference (independent variable) informed assumptions can be made as to which career anchor (dependent variable) is most likely to be preferred.

Career anchors are also regarded as a stabilizing force in the total personality which guides or constrains future career decisions and direct transition career and how they develop and evolve over time after a number of years work experience (Schein, 1996). In this study the resultant findings confirmed that Schein's career anchor theory and Myers and Briggs type theory provides a useful framework with regard to determining a sample group's career anchors or orientations and personality preferences, respectively.

Myers et al (2003) state that both theory and research support the importance of work values in making career decisions as state in Table 3.6. According to Hammer (cited in Myers et al, 2003: 312), values seem to relate statistically with type preferences in ways that are to be expected but they do not completely converge. For example, Sensing and Judging functions often relate to a desire for security and stability while intuition and Perceiving often relate to a desire for creativity.

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For example, ESFJs types prefer a work setting that contains conscientious, cooperative, values-oriented people who work at helping others. They want to be close to the action, working most effectively in settings that are friendly, sensitive to human needs, personal and appreciative. Recognition for their loyalty, financial security and clear structures are important career satisfaction values (Myers et al, 2003). These values are in agreement with the motives and values that define the security/stability career anchor (Schreuder & Coetzee, 2006). As a consequence, the descriptive statistics for the ESFJ personality preference showed a greater preference for value driven career anchor, namely, the security/stability career anchor.

The results also indicated that participants with an autonomy career anchor valued their independence more than their relationship with the organisation. In particular, the majority of participants (the sample being predominantly female) appeared to be more committed to an organisation that offered them an opportunity to express their sense of service or dedication to a cause.

6.1.2.2 The second research aim

The second research aim, namely, to formulate the implications and make recommendations for future studies on the relationship between two concepts, within the discipline of Industrial and Organisational Psychology, particularly with regard to career choice and decision-making practices will be addressed subsequently.

6.1.3 Implication for practice

The practical implications of the empirical findings for career choice and decision making practices in organisational context can be summarised as follows;

- Individual career satisfaction values and career anchors influence individual's choice of workplace organisational strategies for attracting, selecting, placing and retaining employees.
- Employees need to gain self-awareness regarding how their personality preferences influence their choice of workplace, experiences of job and career satisfaction and the role of career anchors and personality preferences in influencing career decisions.

- Employers should take cognizance of career satisfaction values underlying career anchors and personality preferences of employees.
- Experiences of career and job satisfaction are influenced by the career satisfaction values and needs underlying personality preferences and career anchors.
- The work–family relationship increases employees’ demands and organisations should retain their best employees by adjusting personnel policies and offering support to employees in the form of childcare, flexi-time and part-time work, particularly for the employees with Feeling (F) as dominant preferences and a dominant security/stability anchor.
- Women with a strong preference for the security/stability career anchor need to consider how their personality preferences influence their career needs particularly in the workplace.
- Managers and Industrial Psychologists need to consider how individuals’ values and motives influence their career decision-making and psychological attachment to the organisation and occupation. Such information could inform the design of human resource policies and practices that take into account the unique career needs of employees.
- Managers and Industrial Psychologists wishing to augment the person-job fit and job satisfaction of their employees should strive for congruence between organisational rewards and the important motivations and values underlying their members’ personality preferences and career anchors.
- Career counsellors can use the MBTI and Career Anchor theory as useful tools to help employees identify their personality preferences and career anchors. Both frameworks can also be used as development tools to enhance self-awareness and career decision-making.
- Organisations need to be aware of the diverse career related needs of their employees and type of rewards and work environment they in order to motivate retain valuable staff.

6.1.4 Conclusions regarding the central hypothesis

With regard to the central hypothesis, it can be concluded that individuals who differed in personality preferences exhibited a preference for different career anchors. The empirical study provided statistically significant evidence to support the central hypothesis.

6.1.5 Conclusions about contributions to the field of Industrial and Organisational Psychology

The findings of the literature survey and the empirical results contributed in the following manner to the field of Industrial and Organisational Psychology.

- Career models

Most traditional career models seem to approach the study of careers from a predominantly male perspective (Wiggins & Peterson, 2004). Therefore the understanding of women's careers requires the acknowledgement that women have fundamentally different experiences and Industrial Psychologists may find themselves in different situations when developing women's careers compared with men. Marshall and Bonner (2003) argue that women have had traditionally less orderly careers due to the fact that they tend to follow their husbands' or partner's career paths and put family and domestic responsibilities before their careers and have been subjected to male managers' prejudice.

- Career development needs of women

More females are also entering the workplace and flexibility around work has become important for them. Having to look after children and family matters, organisations need to accommodate these challenges by providing flexible working hours, crèches at work and the choice of working at home if practical for job.

O'Leary (1997) concurs and argues that by viewing careers through the lens of traditional model which focus on predominantly masculine career development models and vertical career paths, those people who prefer to work in an atmosphere which values and infuses such qualities as cooperation, support and encouragement are regarded as having little or no career ambition. Women value challenging work and personal job satisfaction first before career aspirations, power and reward and prefer to experience lateral rather than vertical career paths (O'Leary, 1997).

In this study, the technical/functional anchor was rated as the most preferred anchor for the ENFP personality type. People with an ENFP preference have a strong need to use their

specialised abilities and prefer independence and achievement opportunities for advancement which supports their inclination towards a strong presence for the technical/functional anchor and a need to proceed up the career ladder toward management positions.

Ling and Poh (2004) further suggest that in order for women to gain more technical skills, they will need a firm foundation in science, mathematics and problem solving. Employers could also assign female graduates to the type of work which requires more technical skills in order to gain more experience and sharpen their skills.

Schein (cited in Yarnall, 1998) puts forward the case for flexible reward systems, promotion systems and recognition systems to address the differing needs of individuals. For example, people with a lifestyle anchor are likely to place a high value on flexible work arrangements, where people with a security/stability anchor will be more biased towards pension schemes and steady incremental pay scales.

Yarnall (1998) also underscores the importance of tailoring career development programmes to fit the culture of an organisation. By analysing career anchor data in this way, it is possible for an organisation to build up a picture of the key drivers of career satisfaction in the organisation, by providing a valuable insight into the career culture in existence. Therefore, it can be concluded that if more organisations begin to take this approach, benchmarking the success of career initiatives with other companies will have a greater relevance against this cultural backdrop (Yarnall, 1998).

Erdoğmus (2004) cautions that when comparing the differences and similarities, research samples should be taken into account in respect of occupation and context. As noted in the studies done by Erdoğmus (2004), Igarria and Greenhaus (1991), Järleström (2000), Schein (1990) and Yarnall (1998) Erdoğmus (2004), career anchors could be said to differ partially because of the type of the participants' intended profession.

The findings also suggest that women who choose to qualify themselves in the subject field Industrial and Organisational Psychology would most probably prefer occupations which provide them with opportunities to move into challenging positions where they can gain recognition for their contributions to the greater good of the organisation and society as a whole, and which allow them to integrate their personal, family and career needs. They are also

sensitive to how organisations treat and value the people in the company and the nature of human relationships in their work settings.

- Organisational career systems

As Schein (1996) noted that individual career anchors are developed over a period of time and one's experience would have some effects over their development, the stability of individuals' career orientations over time needs to be assessed. In this context, the effects of professional tenure and work experiences on career anchors and personality preferences should be examined.

6.2 LIMITATIONS OF THE PRESENT STUDY

The present study has a number of limitations, which future researchers should consider. In this section the limitation of this study will be discussed with regard to the literature review and empirical study.

6.2.1 Limitations of the literature review

The following limitations were encountered in the literature review:

Exploratory research with respect to career anchors and personality preferences within the South African context is currently very limited. This lack of information limited the researcher in determining the existence of a theoretical relationship.

6.2.2 Limitations of the empirical study

The following limitations were encountered in the empirical study:

6.2.2.1 The sample

The main limitation of the study was arguably the relatively small sample size that was used and the resultant under-representation of the personality types. The fact that the final sample was limited to female honours students in the degree field Industrial and Organisational Psychology, naturally also limits the generalisation possibilities of the results.

Only the 470 students registered for the degree in Industrial Psychology formed part of the population of this study. The sample was reduced from the 155 respondents who returned usable questionnaires to only 124 female respondents due to the under-representation of the male group on the MBTI. For statistical purposes, the female sample of 124 was further reduced to 117, as only the personality preferences with a frequency of 8 and above were included in the final sample. Consequently, the overall sample comprised predominantly Black and White females and was thus not representative of all the students in one tertiary institution or the South African population in general.

A sample of 117, although regarded as large enough to determine whether a significant relationship exists between the independent and the dependent variables, may not have been large enough to conclude whether there is definitely a true relationship between the variables. The significance level had to be increased due to the exploratory nature of the study. This increased the chance of Type I error and decreased rigor of statistical procedure and decreased chance of Type II error. A broader sample, representing broader occupational groups and personality preferences, is required to further test the strength of the significance between career anchors and personality preferences.

6.2.2.2 *The measuring instruments*

The present study employed only quantitative psychometric instruments. Ratner and Hui (2003) maintain that the psychological phenomena that exist for individuals can be determined through qualitative methods.

Moreover, House, Wright and Aditya (1997) recommend the use of more than one instrument, maintaining that in cross-cultural research a psychometrically sound instrument and more than a single measure of data collection for the variables under investigation decreases bias and increases validation. Only one psychometric instrument was used for each of the constructs of this study. Had more instruments (which measure same constructs) been used in collaboration with the COI (Schein, 1990) and the MBTI (Myers & McCauley 1990), more insight into career anchors and personality types could have been gained.

Like most self-assessment instruments, both the COI (Schein, 1990) and the MBTI are dependent on the respondent's perception and self-insight which were not measured and could thus pose as a nuisance variable (Myers & McCauley 1990).

From the perspective of empirical study, the potential issues are further compounded by the nature of the COI (Schein, 1990) and the MBTI (Myers & McCauley 1990), as they are self-report instruments and therefore could limit the generalisability of their results and their potential to be compared with other instruments (Higgs, 2001).

Despite all the above limitations, the study showed potential for investigations of the association between individuals' personality preferences and their career anchors.

6.2.2.3 *Generalisability*

Although the findings of the current study are restricted by its empirical limitations, in that interpretations can only be limited to the demographic confines of the sample population, they have added and reinforced other findings in similar contexts with regard to knowledge on the relationship dynamics between career anchors and personality preferences (Marshall & Bonner, 2003; Schein, 1996; Schreuder & Coetzee, 2006; Yarnall, 1998).

6.3 RECOMMENDATIONS

The researcher makes the following recommendations for Industrial Psychologists working in the field of career decision-making and further research.

6.3.1 Industrial Psychologists working in the field of career decision-making

This study confirmed that Schein's career anchor theory and Myers and Briggs' type theory provide a useful framework for career choice and decision-making. The literature review elaborated on how individuals' career choice and decision-making practices are influenced by their career anchors and personality types. In addition, this study adds to the knowledge about how individuals' personality preferences correspond with their career anchors. In particular, it provided new information on how ESFJ personality preferences differ from ENFP, ESFP, INFP,

ISFJ and ISFP regarding their need for security/stability, particularly with regard to females pursuing professions in Industrial and Organisational Psychology.

The growing importance of personality measures for job selection has triggered a renewed interest in using personality constructs for research in the context of work. Berings et al (2004) found that attention to individual differences in both personality and work values could contribute to a better understanding of the vocational streaming and career choice process.

Igbaria and Greenhaus (1991) indicate that career anchors serve as a useful information base for individuals contemplating career change and for organisations seeking to help individuals plan their careers. The possible increasing number of employees who value pure challenge and lifestyle will impact significantly on the relationship between organisations and individuals in meeting their respective work and career values. Training and development programmes that promote strategies to identify and maintain a balance between personal well being and work will strengthen that relationship (Marshall & Bonner, 2003).

The findings also suggested that there has been a significant shift of values and motivations in the workplace toward work-life balance. In today's economy this should be regarded as a positive sign, as a different employment relationship is being established in the sense that organisations owe their workers less and less. ?? The work-family relationship increases employees' demands and organisations should retain their best employees by adjusting personnel policies and offering support to employees in the form of childcare, flexitime and part-time work (Marshall & Bonner, 2003; Schein, 1996; Schreuder & Coetzee, 2006).

On the other hand, Pham (2003) reports that women who work in male-dominated fields still face major personal and professional barriers to success, which hinder their ability to progress through their career at the same pace as their male counterparts. The study showed that women with Sensing-Feeling (SF) personality types have a higher need for security/stability than those with the iNtuitive-Feeling (NF) types.

Despite efforts by a number of initiatives, (like professional boards and government policies) to reduce the barriers that women face, barriers in career development such as the 'glass ceiling' is being broken but it has not yet disappeared, especially for women faced with juggling work and family care responsibilities. This study showed that women with the Feeling (F) preference have

a higher need for supportive, caring and nurturing work environments yet also need variety challenging lifestyles (Schreuder & Coetzee, 2006).

This study could be of benefit and help impart valuable insights for managers and Industrial Psychologists. The findings suggest that personality preferences are related to career anchors hence organisations wishing to enhance their employees' self-awareness should strive for congruence between organisational incentives and the important motivations and values underlying their members' career anchors. Furthermore, attempts to enhance person-job fit and even job satisfaction should focus on both the cognitive components (e.g., independence, autonomy, long-term career goals) and the lifestyle needs of women (e.g., flexible work arrangements).

Tremblay, Wils and Proulx (2002) add that a mismatch in the career anchor preference or in the career choice may also lead some individuals to consider the possibility of a career change. In this case, career anchor preferences may be more difficult to determine. According to Schein (1996), through experience, every employee comes to identify a dominant anchor. However, Tremblay et al (2002) add that it may be possible that some individuals are destabilised by the non-fulfilment of some expectations or by negative organisational feedback. There is a risk that they may lose their dominant anchor and instead experience ambivalence between several anchors, which consequently engenders a mitigated career choice.

6.3.2 Future research

Against the backdrop of the conclusions and limitations of the study, the researcher recommends the following for future research in Industrial and Organisational Psychology:

There is a need for more research on career anchors and personality preferences, specifically within the context of South Africa. Further studies could include the real career situation, that is, whether or not the preferred career choices are actually put into practice. Research on people who actually implement their preferred career options would be helpful for counselling purposes.

Both the COI (Schein, 1990) and the MBTI (Myers & McCauley 1992) assess an individual's adapted behaviour in a given context. Additional questionnaires and measurements could be included to differentiate and assess adapted behaviour compared to inherent behaviour,

especially in the context of South Africa, which is characterised by a high rate of unemployment. Some individuals may be forced to abandon their career anchors if their job opportunities in their career of choice are scarce.

It would be worth noting how the findings from the current study, whose sample comprised of females only, compare with findings from a males only group, a mixed gender group, significantly larger sample sizes, and across various disciplines, occupations and institutions. As the current sample was not representative of the general South African population, working with a more representative sample would more likely increase the reliability and external validity of test results.

Given the fact that there is sufficient research to indicate that certain career anchors and personality preferences are drawn to specific work environments, future research should be conducted with a sample representative of all eight scales of the COI and MBTI combinations across various occupational groups that include the eight scales of career anchors and the sixteen personality preferences.

According to Igarria and Greenhaus (1991), it is important that supervisors learn how to organise the career opportunities of their subordinates such that they match or are compatible with diverse career orientations. In the context of individuals choosing careers of convenience rather than of their choice, further research is needed to determine the consequences of a mismatch between career anchors, personality preferences and job setting, with special reference to the following:

- First, the effects of a mismatch on job performance need to be examined, as it is possible that incompatibility in job and career anchor/personality preference results in deteriorated job performance over time.
- Second, as different people employed by the same department and performing similar tasks may have very different career anchor/personality preferences, empirical research needs to examine the kinds of job experiences that are most compatible with a wider array of career anchors/personality preferences.

While the results are not generalisable, the findings indicated that there are statistically significant differences between the respondents' security/stability career anchor and the ESFJ,

ENFP, ESFP, INFP, ISFJ and ISFP personality preferences. The findings of this study may further provide a step towards a conceptual framework focusing on the psychological well being of female employees with a preference for Feeling (F) personality type in the world of work.

Järlström (2000) contends that the challenge for organisations is to update their recruiting strategies and to clarify how these people should be handled to keep them motivated. As working life is rapidly changing, information on the potential ideal of career anchors and personality preferences for matching future workers with their jobs, strategies, mechanisms and types of organisational changes to be implemented will be vital in aiding managers and Industrial Psychologists in making their recruitment, selection, placement and retention decisions.

6.4 INTEGRATION OF THE STUDY

The literature review indicated that there is a strong likelihood that people's personality preferences influence their career anchors. Due to the changing nature of work and careers, more and more people are taking time off to pursue their personal development through self-awareness and opportunities to improve and maintain their marketable skills. Trial-and-error should ensure optimum fit between personality preferences and career anchors.

The present study explored the relationship between personality preferences and career anchors. It is imperative that organisations understand the nature of the relationship and the impact of employing people with different personality preferences in a single job type or department. Such understanding will not only benefit the organisation, but also add value to the organisation's employee retention and minimise turnover whilst increasing productivity.

Industrial Psychologists are in the best position to help organisations achieve this outcome through the involvement of all the parties (employee, employer and the Industrial Psychologist).

The findings of the study provided an insight into how individuals' personality preferences influence their career anchors. Accordingly, Industrial Psychologists and human resource practitioners should be able to utilise the insights obtained for the enhancement of career decision-making practices in the South African work context.

The empirical study provided statistically significant evidence to support the central hypothesis that there is a relationship between the constructs measured by the COI and those measured by the MBTI. Furthermore, significant relationships were found between the eight career anchors and some of the MBTI personality preferences. Consequently, the null hypothesis is rejected on the basis that the findings did confirm the relationship between career anchors and personality preferences.

6.5 CHAPTER SUMMARY

This chapter discussed the conclusions with regard to the study, in terms of both the theoretical and empirical aims (see chapter 1). Possible limitations of the study were then discussed with reference to both theoretical and the empirical study of the research. The chapter concluded with recommendations for future research to explore the relationship between career anchors and personality preferences.

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