A VALIDATION OF THE
MYERS-BRIGGS TYPE INDICATOR®
ON BLACK HIGH SCHOOL CHILDREN

by
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Dedicated to the memory of my father whose wisdom, faith and love gave me the courage to believe in myself.
What lies behind us and what lies before us are small matters compared to what lies within us.

Ralph Waldo Emerson
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Summary

The Myers Briggs Type® Indicator is a personality assessment instrument, which is based on the ideas of the Swiss psychiatrist Carl Gustav Jung, and was developed by a mother-daughter team. Isabel Briggs Myers and Katherine Briggs dedicated their lives to type watching and perfecting their instrument. The notion of type became a focal point in the lives of these two women but especially Isabel Briggs Myers whose wish was that people recognise and understand their own, as well as others' uniqueness. By appreciating each other’s “gifts”, it was her deepest desire that people would be happy and effective in what they did.

The MBTI® is used extensively throughout the world in many fields such as education, career guidance, family therapy, conflict resolutions in the business world, team-building etc. In South Africa the MBTI® is relatively new but has secured a very strong position amongst therapists, counselors, educationalists and business.

With the dismantling of apartheid in South Africa in 1994, opportunities were open to all race groups. The South African society is both complex and diverse, bringing with it difficulties in adaptation, making sound career choices and developing mature career identities. The loss of opportunity and exposure during the apartheid era has created contradictions and uncertainty for many young black adolescents who must make career choices.

In completing the MBTI® and the SDS questionnaires it is hoped that the young adolescent will have a better understanding of him or her self and that
he or she would be guided in making sound career choices that will lead to a fuller and satisfying life.

The purpose of this study is to validate the MBTI® in the context of career guidance against the Self-Directed Search; an instrument developed by John Holland as a means of operationalising his theory of Careers.

There were 125 subjects in this research sample who were chosen from a group of predominantly black school children who came from a disadvantaged background and who were recognised as having the potential for tertiary education, specifically at university level.

The study discusses the findings of the MBTI® types and SDS. The results are elaborated in terms of the influence of other possible variables.
Opsomming

Die Myers-Briggs Type Indicator® is 'n persoonliksheidvraelys, wat gebaseer is op die idees van die Switserse psigiater Carl Gustav Jung, en wat ontwikkel is deur 'n moeder-dogter span. Isabel Briggs Myers en Katherine Briggs het hul lewens gewy aan die ontwikkeling van die instrument. Die fokus op tipe het Isabel Briggs Myers verder aangegryp en sy het ten doel gestel dat mense die uniekheid van andere in die proses moes leer begryp. Deur dan herkenning te gee aan die "gawes" van mense sou daar nader beweeg kon word aan die bereiking van geluk en doeltreffenheid in wat mense doen.

Die Myers-Briggs Type Indicator® word wêreldwyd aangewend in onder meer velde soos opvoedkunde, loopbaanvoorligting, gesinsterapie, konflikresolusie in die besigheidswereld, spanbou, en vele ander. Die Myers-Briggs Type Indicator® is relatief nuut in Suid-Afrika maar het reeds 'n hoë gebruiksfrekwensie onder terapeute, beraders, opvoedkundiges en in besigheidstoepassings.

Sedert die opheffing van apartheid in 1994 het geleenthede beskikbaar begin raak vir all bevolkingsgroepe. Die Suid-Afrikaanse samelewing is beide kompleks en divers, en dit veroorsaak aanpassingsprobleme, probleme rakende die neem van verantwoordelike beropsbesluite, sowel as die ontwikkeling van loopbaanvolwassenheid. Die verlies aan geleenthede tydens die apartheid-era het teenstrydigheid en onsekerheid vir vele swart jeugdiges veroorsaak wat aan die voorraad van 'n beroepsbesluit was.
Deur die voltooiing van die Myers-Briggs Type Indicator® en die Selfondersoekvraelys (SOV) word gehoop dat hierdie jong volwassenes beter selfinsig sal bereik word en dat hulle ook in die proses van loopbaanvoorligting gelei sal word tot die neem van 'n gepaste beroepbesluit wat eventueel ook tot 'n sinvolle lewe kan lei.

Die doel van hierdie studie is om die Myers-Briggs Type Indicator® te valideer teenoor die SOV in die konteks van beroepsvoorligting. Die SOV as instrument is onwikkel deur John Holland as operasionalisering van sy loopbaanteorie.

'Een Groep van 125 skoliere is by die navorsing betrek en hulle is gekies uit 'n groep oorwegend swart skoliere vanuit 'n benadeelde gemeenskap wat geïdentifiseer is as synde in besit van potensiaal om suksesvol te kan wees in tersiêre onderrig, veral dan op universiteitsvlak.

Die studie bied 'n bespreking van die Myers-Briggs Type Indicator® en SOV-tipes. Resultate word hierna volledig aangebied en daar word veral aandag gegee aan die invloed van tipe op die neem van beroepbesluite.
Chapter 1

Introduction and Problem Statement

1. Introduction

Katherine Briggs and Isabel Myers, a mother and daughter team of which neither were trained psychologists, developed an indicator which was based on the ideas about personality types of the famous Swiss psychiatrist Carl Gustav Jung. This indicator the *Myers Briggs Type Indicator* was the life long work of these two women whose goal was to help people to be happy and effective in whatever they chose to do (Myers & Myers, 1995).

Jung's basic underlying premise was that the differences he observed between individuals, during his time at the Burgholzi mental hospital, was essentially their preferred attitudes in life. However, Jung generally dealt with patients with severe psychological problems and he was concerned with the unsuccessful or unbalanced development of type. Isabel Myers, on the other hand devoted her life to adapting Jung's theory and to formulate and develop a scale measuring this attitude which would help ordinary, healthy people understand that difference and uniqueness is normal. People will exhibit differences in processing information and making choices. Myers and Myers (1995) refer to these differences as gifts or a set of mental tools that people are comfortable with, which they use in dealing with everyday issues and in relating to other people.
The MBTI® was developed from data collected by Isabel Myers of literally thousands of high school children and students. It was developed in a forced-choice questionnaire that intended to let people indicate the effects of Jungian preferences in everyday life. The intention was not to tap Jung's theory directly, but to stimulate a response based on the way the individual interpreted the questions (McCaulley, 1998). Central to Jung's theory is the theme of opposites which is used to explain the preferences that people have. These preferences are made up of four pairs of opposites of which 16 combinations are presented in the MBTI® which depict the fundamental differences between people (Bayne, 1997).

The MBTI is considered one of the most extensively used personality instruments in history (Myers & Myers, 1995).

In this research study the MBTI® measures are compared with the Self-Directed Search (SDS), an instrument developed by John Holland. The research sample is a group of predominantly black high school children who were tested in the context of career guidance. Whilst the MBTI® has been used extensively worldwide, it is relatively new in South Africa. The aim of the study is to validate the MBTI® using a sample of pupils from a population group that are considered to be disadvantaged, for the purpose of career guidance. It is believed that this type of research is invaluable in enabling the increasing number of school leavers and potential employees, to understand themselves. By so doing it is expected that suitable subject choices for tertiary education will be made and ultimately satisfying careers will follow.
This research group consists of predominantly black high school children who, when tested, were in Grades 10 and 12 respectively. They fall into the developmental stage of adolescence and therefore it is expected that they will exhibit specific developmental characteristics. Many career developmental theorists focused their attention on adolescence as it is the time when educational commitment to career choice is made. Adolescence is the time when abstract thinking facilitates career planning. As the ability to solve problems and to plan develops, so does the adolescent become more introspect and thinks about himself or herself in a variety of situations and future occupations (Sharf, 1992). The stage of adolescence is discussed in 1.3.1.

The characteristics of the adolescent need to be elaborated in order to facilitate a better understanding of this study and the research group. In discussing John Holland's theory of Vocational Choices in Chapter 4 the reader must bear in mind that the theory does not take into account the specific characteristics and crises experienced by the adolescent.

1.1 Problem statement and rationale

The changing face of the education system and the work environment in South Africa calls for a look at a different tool for assisting people in making sound, yet realistic career choices. During the apartheid era the general culture of most organisations were predictable and people more or less maintained the status quo in terms of role expectations and performance. However, when looking at the black labour market, few, if any, career opportunities were available. Today, the masses leaving school and entering the job market are diverse, with, in some cases,
extremely different cultural backgrounds. It is therefore expected that different perceptions and aspirations regarding careers will be seen.

Thomas Carskadon, as cited in Prichard and Mclaren (1994), maintains that the differences of students is not only seen in intelligence and aptitude but also differences in personality, which illicit differences in response. Carskadon (1994) maintains that the best and most proven way to tap the student’s personality is with the psychological types as measured by the MBTI®. The indicator had become one of the most widely used in America and its appeal lies in the fact that the key concepts are easily understood, communicated and applied. There is an abundance of supporting resources and it is used in a broad range of fields, e.g. education, counseling, business and management, psychology and religion.

The focus of the Meyers Briggs Type Indicator® is on how people judge and perceive the world. The goal of the MBTI® is to establish the fact that people indeed are different in predictable ways and by knowing and understanding one’s own uniqueness, then it is also understandable that diverse interests and careers will be pursued.

The MBTI® has been researched and developed for more than 50 years and it is the most widely used instrument for understanding normal personality differences. In this study it is researched on black high school children and the aim is to validate it against the SDS. As the research group are in the adolescent stage of development, they are beginning to think about careers. Knowledge and understanding of their own personality types will lead to a realistic observation and better understanding of themselves. It can alleviate anxiety as the pupil becomes more aware of his or her
strengths, abilities and skills. Such information may further motivate the pupil to seek out information regarding career plans, opportunities as well as work options. The pupil can also focus on strengthening certain skills and exploring alternatives that may positively influence career development (Myers & Myers, 1995).

The Self-Directed Search Questionnaire is an inventory that determines a person's resemblance to type as described by John Holland. The resemblance to each type is defined by the vocational interest as manifested in vocational and educational preferences (Holland, 1997).

The SDS was originally developed in the USA by John Holland in order to provide a questionnaire that would fit in with the structure of his theory of career choice, and which could also be used in career guidance. The first edition of the SDS appeared in 1970, it has been revised several times and the latest edition was introduced in 1995.

The Human Sciences Research Council became interested in the SDS as an effective occupational interest questionnaire and it was adapted for South African use.

The aim of the SDS was to measure occupational interest. The questionnaire fits into a broad framework of career planning as it provides important information about a person's occupational interest and also facilitates the establishment of a correlation between personal and career information. The items of the SDS enable the testee to show preferences, skills that they are familiar with, occupations that they are interested in, and an assessment of their own abilities. Testees are also able
to link a wide spectrum of possible occupations to an occupational classification system (Gevers, du Toit & Harilall, 1997).

1.2 Goal

The purpose of this research study is to validate the Myers Briggs Type Indicator® for use with black high school children in a career counseling context. The MBTI® will be validated against the Self Directed Search.

1.3 Definition and clarification of terms and concepts

1.3.1 The Stage of Adolescence

During this stage the individual becomes more aware of himself or herself. He sees himself as a unique individual but at the same time the sense of wholeness and security experienced during childhood is threatened by the physical, sexual, cognitive and social changes that take place. Rosenthal (1987) maintains that the most important psychological task of adolescence is identity development (Louw, Van Ede & Louw, 1998; Stevens & Lockhat, 1997).

Erik Erikson’s (1963) psychosocial theory addresses the stage of adolescence as a specific developmental stage within a coherent and integrated life stage framework. His theory is based on several psychosocial stages, in which internal psychological needs and drives are mediated by various social influences. At each stage there is a new developmental obstacle or conflict to resolve, with either a positive or negative
outcome. Generally positive outcomes will lead to mental health and negative outcomes to maladjustments.

This stage, according to Erikson’s theory (1963) cited in S. Stevens and Lockhat 1997, is characterised by the adolescent’s struggle to overcome role confusion and to develop an ego identity. Adolescence is conceptualised as a psychosocial moratorium, a time in which society provides a period of grace for adolescents to experiment and pursue various identities. It is a time when there is no more important task than to find themselves, to define who they are and what is important to them as they experiment with roles and look for niches where they might fit (Stevens & Lockhat, 1997).

Identity refers to the individual’s awareness of himself or herself as an independent, unique person with a specific place in society. Identity development essentially begins during infancy and continues till the end of the life cycle, but the greatest degree of identity development occurs during adolescence. It is at this stage that the adolescent tries to integrate the various areas in his or her life. One notes that during this stage the young adolescent is often troubled by inconsistencies in their self-descriptions. By late adolescence these inconsistencies are recognised and some consider alternative identities by becoming rebellious, studious or detached as they make major shifts in their self-concepts (Louw et al., 1998; Clarke-Stewart & Friedman, 1987).

Erik Erikson (1968) as in Stevens and Lockhat 1997, theorised that adolescence is a crisis among crises, a period when old issues resurface from childhood and must be resolved. It is a time whereby the individual discovers his or her sexual,
occupational and ideological identities. This is done through combining certain aspects of earlier childhood identifications with the adoption of certain socio-historically influenced systems of value, norms and standards. As the time approaches for graduating out of high school, going into tertiary education, choosing careers, and forming new relationships, the adolescent’s sense of self is challenged and an identity crisis ensues. This crisis is often perceived as an intense traumatic experience which is not necessarily so. But rather, it is the active search for an identity, a time to find the roles, attitudes, and the social connectedness that will let the adolescent take a place in adult society. The resolution of this crisis results in an ego identity (Clarke-Stewart & Friedman, 1987; Stevans and Lockhat, 1997).

Identity achievement is attained when a unified self-image emerges and the adolescent has sought out a career, shows a commitment to various ideologies e.g. political and religious. The period in which the identity formation takes place varies from individual to individual, although the identity crisis is resolved by most individuals by age 19 or 20. Some adolescents, however, remain uncommitted, they are in a state of identity diffusion, they have trouble making decisions, they lack direction and fail to show interest in academic, political, or social questions (Clarke-Stewart & Friedman, 1987).

Identity foreclosure occurs when the adolescent has not searched for his or her identity. The adolescent has not been able to pursue, experiment or explore various roles or identities. He or she has not felt the sense of crisis and accepted the identity set for them by their parents (and even community). In other words, the self-definition has been prematurely concluded (Clarke-Stewart et al., 1987; Stevens & Lockhat, 1997).
Whilst adolescent identity development is a universal phenomenon, it is influenced by a number of factors, such as cognitive ability, parental influences and cultural-historical influences. Erikson (1963), believes that the direction and form of identity development depends on the culture and historical period in which adolescents find themselves.

In Western societies of the 20th Century it has been noted that experimenting, exploring and questioning is a characteristic of this era. Whereas in earlier eras, and possibly traditional cultures of today, adolescents took on the roles that were expected of them without self-exploration or experimentation.

Researchers in South Africa (Ferreira & Monyemoratwe, 1992; Myburgh & Anders, 1989) as discussed in Thom 1988 found no differences in the identity development of urban black and white adolescents. Both black and white adolescents proceed through a period of change in their self image, which later become stable and integrated into a sense of who they are (Louw et al., 1998). However, this is not to say that parental, cultural influences and socio historical influences did not play a role in the development of the identity which may only manifest itself in such aspects as career identity or unrealistic career identity (discussed in Chapter 7).

1.3.2 Personality

Maddi (1989, p.8) defines personality as "...a stable set of tendencies and characteristics that determine those commonalities and differences in people’s psychological behaviour (thoughts, feelings and actions), that have continuity and
that may not be easily understood as the sole result of the social and biological pressures of the moment”.

Another definition of personality “........it is the constantly changing but nevertheless relatively stable organisation of physical, psychological and spiritual characteristics of the individual which determine his or her behaviour in interaction with the context in which the individual finds himself or herself” (Meyer, Moore & Viljoen, 1997, p.12).

Personality theories attempt to organise observations of people by providing some kind of underlying framework for classifying and describing behaviour (Quenk, 1993).

1.3.3 Type

Type is the preference of the individual to behave in a particular way, a way that has been developed, but is also able to behave in the opposite way but with less comfort. Types are complex theoretical groups based upon personality and interests and are not intended to fit someone perfectly, rather they fit actual people in varying degrees and are intended to help in self-understanding, not to be definitive. In the MBTI®, type means a difference in kind (Bayne, 1997; Brown, Brooks & Associates, 1996).

Psychological type is a theory developed by Carl Jung to explain some of the apparently random differences in people’s behaviour. From his observations of clients and others, Jung found predictable and differing patterns of normal
behaviour. His theory of psychological type recognizes the existence of these patterns, or types, and provides an explanation of how types develop (Myers, 1993).

1.3.4 Temperament

Temperament refers more specifically to people's emotions and the way in which they express themselves and deal with them. It has a narrower meaning than 'personality' as it focuses on the emotional aspects of the person's biological and psychological dimensions which is an inherited aspect of the person (Meyer et al., 1997).

1.3.5 Functions

Jung (1990) defines a function as a form of psychic activity that essentially remains the same under various conditions. He identified four basic functions, two rational (thinking and feeling) and two irrational (sensing and intuition). He sees these functions as independent or unrelated entities (De Beer, 1997).

The MBTI® is borne out of the theory of Carl Jung and these functions are discussed at length in the literature.

1.3.6 Attitudes

Jung (1990) sees the concept of attitude as a relatively recent addition to psychology and he acknowledges that the origin of the concept comes from people such as Muller and Schuman, Kulpe and Ebbinghaus. He formulates attitude as a readiness
of the psyche to act or react in a certain way. An attitude is a selective choice of readiness that takes place automatically (De Beer, 1997).

1.3.7 Culture

The concept of culture is relevant in the context of this study, as the research sample is predominantly black and it is likely that different belief systems, norms and values will prevail.

Culture or ethnicity is described by Vargas and Koss-Chiono (1992, p. 2) as “...a sociological distinction regarding a social group or category that differs in it’s values, worldview, and traditions from the other social groups in a complex society”. Culture guides and motivates behaviour and differences can be seen in customs, ideas and attitudes. Cultural beliefs and values are the bedrock of child development principles which will in adulthood enable the individual to function optimally within the expectations and sanctions of that particular society (Vargas et al., 1992).

The cultural issue can be problematic, especially in a society where no one culture predominates.

In the context of this study one must bear in mind the differences of the traditional values of the black culture and how in the process of acculturation these values may conflict with the Western culture. For example, traditionally, blacks are inclined towards interdependence, group decision-making and the focus is always on the well being of the group. In Western cultures children are encouraged to become
autonomous, independent and self-sufficient. These fundamental differences may result in intergenerational conflicts and identity struggles (Vargas et al., 1992).

1.3.8 Career Maturity

Career maturity has been defined as the individual’s readiness to cope with the developmental tasks with which he or she is faced with, because of biological and social developments and because of society’s expectations of people who have reached that stage of development (Super & Overstreet, 1960; in Brown, Brooks, & Associates, 1990, p. 213). Vocational maturity is accompanied by the following components:

a) an orientation to vocational choice
b) information and planning about a preferred career
c) consistency about a preferred career
d) a crystallization of traits which pertain to the individual’s understanding of his or her potential
e) wisdom of vocational preference, which is the relationship between choice, ability, activities and interest (Sharf, 1997).

1.3.9 Vocational identity

This implies that the adolescent is realistic and possesses a clear and stable picture regarding his ability, goals, interests and achievements in order to make a realistic career choice (Louw et al.; 1998; Holland, 1985a, p.5 cited in Brown et al., 1996).
Career is a life time process which often changes course. According to John Holland (1997), career choice is an extension of one's self and by allowing individuals to express their preferences and apply their skills in a suitable environment, the resultant interaction will be of mutual benefit and satisfaction (Holland, 1997).

1.3.10 Validation

According to Smit (1991), validation is the method of empirical research by which validity of a measurement instrument is determined. During this process the aim is to ascertain whether a certain test really measures what it is supposed to measure. The validity of a test is calculated by determining the correlation between performance on a test and an independent objective measurement of the behavioural aspect being measured, also referred to as criterium. The biggest problem with the validation of a test is usually that a valid, reliable and quantifiable criterium is not always available (Frazer, 1994).

In this study the aim is to determine whether scores on the four MBTI® dichotomous scores correspond with the scores on the six scales of the SDS.

1.4 Structure of the study

In Chapter 2 an overview of Carl Jung’s life will be given, followed by the development and structure of his theory. Chapter 3 will begin with an account of Katherine Briggs and Isabel Briggs Myers and the development of the Myers Briggs Type Indicator®. The theory will be explored in detail followed by some
research findings. In Chapter 4 John Holland’s Theory of Career development will be discussed. Chapter 5 will look at the Research method carried out for this study. A look at the results will follow in Chapter 6. In Chapter 7 a discussion of the findings will be given. And finally in Chapter 8 recommendations regarding the findings will be suggested.
Chapter 2

The Theory of Carl Gustav Jung

2. Introduction

Jung believed that people were capable of directing their own personality development and of recognizing and benefiting from both positive and negative life experiences. Whilst not everyone successfully heals their psychological wounds or develops their personality maximally, Jung focused on the potential for growth and development of both individuals and humanity as a whole (Quenk, 1992).

2.1 Biographical Background

The theory of Carl Gustav Jung is universally considered to be highly complex. As his theory is borne out of his own life struggle, it is impossible to separate the ideas of Jung from the personality of the man to whom they occurred.

Jung was born on 26 July 1875, the son of a parson of the Swiss Reformed Church. He was a gifted and creative individual whose conventional father was either unable or unwilling to answer his son’s queries and doubts, preferring to reinforce religious beliefs. It is therefore not surprising that much of the views developed by Jung were influenced by his personal experience and the religious atmosphere in which he grew up. In developing his theory he practiced various psychological exercises and different intrapsychic techniques, searching through childhood memories, playing and working in different media and largely being open to whatever emotions, images and forms the unconscious had to offer him (Spoto, 1995).
A good deal of Jungian psychology can also be seen as part of Jung’s attempt to find a substitute for the orthodox faith in which he was reared. It is also worth noting that religious problems were the chief occupations of some of the most able minds of the 19th Century (Storr, 1973; Maddi, 1989).

Jung’s mother was described as dynamic and powerful but problematic as she was inconsistent in that she would vacillate from conventional to unconventional opinions. When Jung was about three years old his mother left home to enter hospital for several months from an illness which Jung later attributed to difficulty in the marriage. This desertion had a great impact on Jung as he developed an ambivalent attitude towards his mother and a deep distrust of women in general. In contrast he perceived his father as reliable but powerless (it is believed that Jung’s later association with Freud, 19 years his senior, filled the ‘father-figure’ in his life) (Storr, 1973).

Jung remained an only child for the first nine years of his life. This enforced solitude was later to form the foundation of his self analysis. His most important experiences in life came to him when he was alone. At school, Jung was far ahead intellectually from his peers. Whilst he developed into a warmhearted, sympathetic and compassionate individual, it appears from his writings that real intimacy did not come easily to him (Storr, 1973).

Jung’s preference for solitude accounts for the fact that Jungian psychology is principally concerned with the process of growth and development of the personality, seen as taking place within the individual psyche and not with interpersonal relationships. Whilst Jung did incorporate many Freudian principles in
his theory, Freud’s psychoanalysis differed from Jung’s analytical theory as Freud maintained that psychoanalysis has as its end-point of development a mature relationship with another individual. Jung’s notion of an end-point of integration or balance is within the individual mind itself, without overt relationships with other persons at all (Meyer, Moore & Viljoen, 1997). Freud was an observer of natural science and attributed supreme value to the orgastic release of sex, whereas with Jung there was always the background of something supernatural which could not be explained away by rationalism.

Jung originally wanted to study archaeology but due to a lack of financial resources he chose medicine. Inspired by a book on psychiatry written by Kroft-Ebing, Jung decided to specialise in this somewhat neglected and poorly regarded branch of medicine. This decision had a profound effect on his theory. Jung was interested in natural science and the need for objectivity. He was also aware of his own internal preoccupation with religious speculation, philosophy and the search for value and meaning; interest which is difficult to apply the strict criteria of science and in which subjectivity is bound to find a place. It seemed to Jung that psychiatry might fulfill his need to reconcile these opposites within himself, and the reconciliation of opposites is a theme which runs through Jung’s work (Storr, 1973; Maddi, 1989).

After qualifying as a doctor in December 1900, Jung obtained a post as an assistant in the Burgholzi mental hospital in Zurich. Here he became interested in schizophrenia. It was during his time at the Burgholzi that Jung made some of the observations which led to his hypothesis of a ‘collective’ as opposed to a merely personal unconscious. His knowledge of philosophy, comparative religion and myth
led him to make comparisons between this material and the fantasies and delusions of schizophrenics. He found many parallels; and concluded that schizophrenia laid bare, as it were a deeper level of the mind than can be explained in terms of personal repression and the vicissitudes of early childhood (Storr, 1973).

Perhaps one of the most significant encounters that Jung was to experience was his relationship with Freud. Their association was significant in that these two powerful minds served each other’s needs at the time, albeit a difficult alliance. For Freud, Jung was an ambitious medical doctor who was involved in research at an internationally renowned psychiatric hospital which could give Freud’s movement greater credibility, breadth and objectivity (Spoto, 1995).

Jung had been familiar with Freud’s ideas as he had read the “The Interpretation of Dreams” long before he had actually met him, (there was an overlap of Jung’s work on the unconscious and that of Freud). Jung was often regarded as a renegade Freudian, yet by the time he had met Freud he had six years experience in a psychiatric hospital (Freud never worked in a psychiatric hospital other than for brief periods as a locum), and had produced original works of his own. A man still in his early thirties he formulated some characteristically “Jungian” ideas which did not accord with Freud’s conceptions. These ideas found their full expression only in 1913 after Jung broke away from Freud.

During their association Jung was acutely aware of the differences in their assumptions of mankind, he nevertheless set aside his own judgment and criticism of Freud’s thinking. However, in writing his book “The Psychology Of the Unconscious” Jung realized that it was likely that the publication of the book would
result in a break between the two men. Jung, compelled by his own integrity proceeded with the book. In 1913, Jung much pained by the breakdown in the relationship, described himself as having experienced some “psychotic disturbance” (Storr, 1973). This crisis led Jung into further self-analysis in which he devoted his attention to experimenting with and documenting his own psychological process. Jung’s break with Freud left him in a very real way alone with his psychology, i.e. the emotions, images and ideas of Jung the man. What is of significance of this period is that Jung was distinguishing his thinking from Freud and in the process fleshing out his understanding of the forms of consciousness and their relationship to the unconscious. This was his typological project. Being thrown into a period of total disorientation and inner and outer conflict, forced the problems of differences and opposites onto Jung in vitally urgent ways, ultimately resulting in the publication of Psychological Types, one of Jung’s major works (Spoto, 1995). It is to a large extent this period in Jung’s life which also shaped the course of his subsequent theorizing as well as influencing his technique of psychotherapy.

It is interesting to note that Jung experienced this mental upheaval at the age of 38 which would now be described as a ‘mid-life crisis.’ Elliot Jaques as in Storr (1973) wrote a paper on the subject of the ‘mid-life crisis’ and notes the frequency with which creative people experience a profound crisis around this age which often results in a change in outlook and a difference in the quality of work produced.

One notes that in the midst of this crisis Jung withdrew almost entirely from all external activities, he gave up his appointment at the Burgholzi hospital as well as his lectureship at the University of Zurich, and a new orientation began to take shape (Storr, 1973).
Jung spent the remainder of his years running his practice and conducting lectures abroad. He received honorary doctorates from the universities of Calcutta, Benares, Allahabad, Clark University, Fordham University, Harvard University, Oxford University, University of Geneva and the Federal Institute of Technology in Zurich. He was also an honorary fellow of the Royal Society of Medicine, London. Jung continued to live in Kusnacht, Zurich until his death in 1961.

2.2 The Structure of the Personality

Jung believed that human beings are complex, dynamic organisms made up of opposing factors that may drive or draw them into action, either consciously or unconsciously. Polarization, the opposition of elements, is basic to his conception of life. Jung’s typology is based on a particular understanding of polar opposites (Spoto, 1995). In view of these opposing forces that Jung distinguished in the human psyche, his theory can be conceptualised as a dialectical relationship between opposing forces. These opposing forces propel the psyche from a simple, undifferentiated unconscious natural state to a complex state of higher psychic awareness and spiritual fulfillment. Human beings strive towards integrating these opposite tendencies into a harmonious whole, the *self* (Meyer et al., 1997).

2.3 The Psyche

Jung saw the psyche as containing everything necessary to grow, adapt and heal itself. He uses the term psyche to refer to the ‘totality of all conscious and unconscious psychic processes’ (Jung, 1971, p.463 in Meyer et al., 1997). For him
the psyche represents people and the world and, because it is so complex, it can be studied from various angles.

"The psyche is the greatest of all cosmic wonders and the sin qua non of the world as an object" (Jung, 1960, p.169 cited in Meyer et al., 1997). It is a dynamically structured totality or whole; not an indivisible whole, but rather a divisible or divided entity which continuously strives towards 'wholeness' (Jung 1960, p.307 cited in Meyer., 1997). Although the various components of the psyche within the whole are connected to one another, they function quite independently of one another. The components are, however, in most cases in a polar relationship - personal and impersonal, conscious and unconscious, internalised and externalised, constructive and destructive, public and private. Despite the contrasting nature of the psyche's component, the main purpose of all life is a striving towards 'wholeness' through reconciling the polarities to bring about the eventual integration of the conscious and unconscious into a whole (the self) (Meyer, et al., 1997; Quenk, 1993).

According to Jung, the psyche consists of three levels: the conscious, the personal unconscious, and the collective unconscious.

2.3.1 The Conscious

For Jung the essence of the conscious is the ego, and the conscious is an essential prerequisite for its development. Ego consciousness, the conscious experience of the 'I' emanates from the unconscious. The ego directs the business of everyday living. It is especially concerned with problems of personal identity, reality testing
and continuity over time (Spoto, 1995). It comprises complex combinations of conscious perceptions, thoughts, memories, and feelings which lead to a sense of one’s identity and continuity. The ego functions both externally and internally.

- **External functioning** is the process by which the ego helps to structure reality through sensory perception and thereby facilitating interaction with the external world. It is the ego which enables the individual to understand the physical world and the social world and to be active in them.

- **Internal functioning** refers to the way the ego structures the individual’s awareness of him or herself to bestow on the person his or her own identity which remains fairly consistent over time (Maddi, 1989; Meyer et al., 1997).

### 2.3.2 The personal unconscious

Each individual’s personal unconscious is unique and can be regarded as the storeroom of individual experiences and interactions with the world and the accompanying interpretations of these experiences and interactions. The contents of the unconscious are charged with energy that must be discharged in order for a person to function comfortably and with minimal tension.

The personal unconscious is very similar to what Freud meant by unconscious and preconscious material. It consists of experiences that were once conscious and either have been defensively forced out of awareness because of their threatening nature or are merely no longer within the focus of attention. The contents of the personal unconscious are, however, usually available to consciousness and there is a
continual interaction between the personal unconscious and the ego (Meyer et al., 1997; Quenk, 1993; Maddi, 1989).

2.3.3 The collective unconscious

It is also known as the transpersonal unconscious. It is one of Jung’s most original and most controversial concepts. The collective unconscious represents the accumulated experience of the human species. It is the inherited potential which has been transmitted from previous generations. It is a kind of ‘blueprint’; universal to all human beings and possibly animals (Meyer et al., 1997). It encompasses the dilemmas suffered, the experiences of fears, joys, triumphs, tragedies, beliefs, problem solutions - all that has been experienced over the eons. Jung maintains that new generations of children are not blank slates, but rather the accumulated culture of humankind is lodged in the psyche at birth, in the form of a collective unconscious (Maddi, 1989).

The collective unconscious contains instincts and archetypes. Instincts refer to physiologically inherited impulses which determine behaviour without conscious motivation, whereas archetypes or primordial images are trans- historical or universal psychic tendencies, but which are manifested in outer behaviours, symbolic forms, patterns or images (Spoto, 1995). They are regarded as innate psychic predispositions influencing the person to perceive in a certain way, to experience and form images. For example maternal love, as an archetype, is not acquired by imitation or through one’s experience of one’s own mother. Instead, a mother is compelled to act maternally by an inherited predisposition emanating from the collective unconscious (Meyer et al., 1997).
According to Jung, an archetype exists for each universal human experience and he lists a great variety of archetypes, including birth, death, sun, darkness, power, women, men, sex, water, mother and pain.

2.3.3.1 The Persona

*Persona,* the Greek word used by Jung to describe a person’s public self means ‘mask’ or ‘facade’. It develops in relation to the role which the individual must fulfill in society. It also reflects the individual’s perception of his or her expected role in society and reveals how he or she would like to be perceived by others. Jung describes the persona as follows: “.....the persona is that which in reality one is not, but which oneself as well as others think one is” (1959a, p.123 in Meyer et al., 1997). It is presumed that this archetype has developed out of accumulated experiences of human beings with the need to assume social roles in order to facilitate interaction. The persona therefore usually consists of various masks.

For Jung it is wrong to equate the persona and the whole psyche. When the individual identifies with his or her persona to such an extent that the psyche and the persona become almost identical, he or she is not only deceiving himself or herself in terms of identity, he or she is also risking alienation from his or her genuine emotions and experiences. When the persona assumes too important a role within the psyche, neurosis or pathology can develop (Jung, 1953a) (Meyer et al., 1997).
2.3.3.2 The anima and animus

Jung holds that a person possesses not only the physiological traits of both sexes, but also the psychological traits of both sexes, such as emotions, attitudes and values. He therefore postulates the anima as the female archetype that is present in every male at an unconscious level, and the animus as the male archetype that is present in every female at an unconscious level. At the unconscious level the anima represents feelings and emotionalism in men, while the animus represents logic and rationality in women (Meyer et al., 1997).

Jung indicates that the persona is usually in a supplementary role in determining behaviour of the two sexes towards each other, their understanding of each other and their choice of a partner. For example, if a man’s anima emphasises dependency and tenderness and his personal experience with women (represented initially by his mother) emphasises passivity in a female characteristic, he could very well misunderstand a woman with a self-assertive and competitive personality by regarding her as very aggressive. A woman whose animus emphasises aggression and who equated her personal experience of masculinity with hunting and adventure could in turn misjudge a man who is interested in cooking and home-care as being weak and effeminate. These discrepancies between ideals and actualities may provide for disappointment and conflict between the archetypes of the collective unconscious and the actualities of experience (Meyer et al., 1997).

However, an adult creative person is one who succeeds in integrating both the masculine and feminine components of the personality by allowing enough expression to both aspects of the psyche. If a man denies his anima and a woman
her animus, they negate the existence of an important part of their psyche and this denial can lead to problems, especially in their relationships with people of the opposite sex, however a man’s overemphasis on his anima and a woman on her animus could lead to homosexuality (Maddi, 1989; Meyer et al., 1997).

2.3.3.3 The Shadow

The shadow represents the primitive animal instincts inherited by humanity in the evolutionary process from the lower forms of life. The shadow is the strongest but also the most dangerous archetype because it contains the impulsive urge and emotions normally unacceptable to society and therefore repressed. Jung poses two possible reasons for the shadow’s repression:

- The norms of society are usually irreconcilable with the shadow’s impulses and society expects its members to conform to its norms. The more confining the societal norms, the larger the shadow and the stronger the repression.

- The shadow might be repressed when its impulses are irreconcilable with and threatening to the persona (Jung, 1959b in Meyer et al., 1997).

The shadow however, is not purely a negative force. It is also the source of vitality, spontaneity and creativity. Integration of the ego and the shadow leads to creative behaviour, and a person who achieves such integration shows effective and appropriate behaviour in a crisis. The person who represses his or her shadow or channels it inappropriately can behave destructively towards himself or herself and others and is overwhelmed by a sense of inadequacy in a crisis because the impulses
of his or her repressed shadow are not to be relied upon. People who deny their shadow are people who do not fully acknowledge their humanness (Meyer et al., 1997).

2.3.3.4 The Self

The self is the centre or coordinating archetype of the psyche which is central to the development of the individual personality. The Self motivates an individual to integrate the various components of the psyche into a harmonious whole. It represents a person’s striving towards unity, integration, completeness and wholeness. As we participate in both consciousness and the unconscious, the Self surfaces when the conscious and unconscious are no longer in opposition to each other and accept each other to form a greater whole. According to Jung, the Self is the central archetype and forms the nucleus of the personality around which all the other systems cluster (Spoto, 1995; Meyer et al., 1997).

Although Jung is not always clear about the development and dynamics of the Self, its development appears to be powered by a religious instinct and a transcendent function, which compel the psyche to strive towards transcending its opposing systems and integrating them into a new state of balance and unity.

The archetype of the self is not present from birth. It emerges only during the middle years of life, after the psyche has become fully differentiated into various systems through the process of individuation. These differentiated, opposing systems are synthesized into a new unity or wholeness by means of the transcendental function.
The individuation process is the process whereby the infant’s undifferentiated psyche divides into subsystems. Each of the subsystems - ego, persona, shadow, anima, animus etc. - strives to differentiate itself fully from the infant-psyche and to develop into an integrated system on its own (Meyer et al., 1997).

For Jung the transcendent function is a developmental principle, whereby he seeks to explain how the psyche is able to achieve wholeness after differentiating into various subsystems. Jung uses the term “transcendent function” to designate the means by which the consciousness moves into an “area” or “realm” in the psyche that he refers to as the “middle ground”. This is hypothetically an area in which neither consciousness nor the unconscious has unfair advantage over the other. It exists in potentia as a field of opportunities for the personality to effect temporary collaboration between normally combative sides of the psyche (Spoto, 1995).

The archetype of the Self is manifested in various symbols, such as the mandala (which appears in Sanskrit writing and in many religions), and plays an important role in Jung’s theory, signifying the wholeness or unity of the psyche (Meyer et al., 1997).
2.4 The dynamics of the Personality

2.4.1 Basic Assumptions

a) Jung’s description of the personal unconscious and the collective unconscious appears to render human beings as determined towards behaviour, thus rendering a causal approach.

b) He maintains a teleological future perspective of mankind. For Jung the individual’s behaviour is not only the outcome of past forces which drive him or her into action, but also the result of the individual’s (psyche) striving for completeness and wholeness through the attainment of the Self.

c) Jung added a third principle to the causal and goal-directed principles underlying the dynamics of behaviour, namely synchronicity. According to this principle, the causes of behaviour are not sought in the past, nor in the future, but in a ‘meaningful concurrence between events’. Behaviour is therefore not explained in terms of causes because what is significant is the fact that events occur concurrently.

2.4.2 The Human Being as an Energy System

Jung regards the human being as a complex energy system. Psychic energy or ‘life energy’ is the energy of the personality (Meyer et al., 1997). As many of the recent books on the new physics convey, physicists are no longer viewing matter as passive or inert, and therefore subject to easy, objective definition and study.
Instead, matter itself is viewed metaphorically as a continuous dance whose rhythmic patterns are determined by the molecular, atomic and nuclear structures of mass interacting with energy (Spoto, 1995).

This dynamic approach to matter and energy is similar to the one described in approaching Jung's typological theory. In typology human behaviour is viewed through patterns determined by the structure of the individual's psyche interacting with itself and the world. The reciprocal movement between what is being studied and who is doing the studying forms part of the dynamic nature for which Jung's theory was created, i.e. the human personality (Spoto, 1995). Jung specifically stated that, unlike Freud whose understanding of the libido was tied to sexuality, rather, the psyche was capable of being taken up in virtually endless transformations.

Psychic energy is a hypothetical construct and therefore not directly observable. It is expressed in all psychic attitudes and functions as well as in the psychic's attempt to achieve balance between it's various subsystems. Jung also distinguishes between psychic energy as a force that generates motion, and as a state that has the potential for action (Meyer et al., 1997).

2.4.2.1 The Distribution of Psychic Energy

According to Jung there are two principles that determine how psychic energy is distributed throughout the psychic functioning:
i) The **principle of equality** (or conservation of energy) which postulates that the psyche conserves energy and it never loses or adds to it. Energy lost in one component of the system will simply reappear in another component.

ii) The **principle of entropy** (or balance) postulates that energy flows from a stronger (or warmer) element to a weaker (or colder) element. The psyche therefore constantly tries to maintain a balance between the different subsystems through the redistribution of energy from stronger to weaker components. Ideally, the psyche strives to recreate a situation in which all the subsystems have an equal amount of psychic energy at their disposal so that a system of total balance can exist.

These two principles are derived from thermodynamics which is the science of the relationship of heat as a source of energy to other sources of energy, and in particular the conversion of heat into mechanical energy.

Jung (1960 in Meyer et al., 1995) coined the term 'channeling of the libido' and by this he refers to the distribution of psychic energy, or the process whereby energy is transferred or transformed. According to Jung, the libido is channeled largely by means of two processes:

- **Progression** is the psychological adaptation of the demands of the environment arising as an unconscious need for such adaptation and has been successfully achieved when the ego adapts to the environment’s demands so that the flow of energy reconciles these opposing forces.
Regression occurs whenever the flow of energy is blocked, preventing a successful compromise between the opposing systems. Unlike progression, however, regression is directed towards adaptation within the psyche. Regression need not necessarily be negative, as with Freud, but rather regression may make it easier to access useful knowledge from the personal unconscious or the collective unconscious thereby counteracting one-sided development of the psyche and promoting greater harmony within.

According to Jung, progression and regression should be regarded as transitional stages in the flow of energy, and not as mutually exclusive processes. Man is only able to adapt to the demands of the outside world if he has also adapted to his own inner world, i.e. if he is in harmony with himself. Conversely, he can only adapt to his inner world and achieve harmony with himself when he has adapted to environment conditions (Meyer, et al., 1995).

Jung states, however, that regression can pose a great danger to the psyche if the rechanelled energy from the unconscious threatens to overwhelm the ego, thus causing psychotic or neurotic behaviour.

- **Sublimation** is the displacement of energy from instinctive or less differentiated process to a more differentiated process, usually of a cultural or spiritual nature, e.g. a woman decides as a result of frustrated love to enter the nursing profession thereby displacing her love and transforming it into loving care.

- **Repression** takes place when conscious impulses threaten the ego or persona and are repressed to the unconscious e.g. a person may experience homosexual
tendencies as threatening and may therefore repress them. Since this energy is not destroyed, the psychic energy may build up in his or her unconscious until it is manifested in the launching of an intense anti-homosexual campaign.

2.4.2.2 Interaction between subsystems of the psyche

Although the psyche strives through life to attain dynamic unity between the subsystems, these subsystems are in continual interaction because of the redistribution of energy. Jung differentiates three forms of interaction in these subsystems:

i) **Opposition** - psychological opposites are essential for the whole of Jung’s theory. According to this principle most subsystems are in a polar relationship to one another so that they can generate the tension essential for life. Without tension there would be no energy and therefore no psyche or even life. This opposition provides a way for the psyche to correct one-sidedness through what he termed compensation.

ii) **Compensation** - opposites attract and complement each other. Jung borrowed this concept from Newton’s 3rd law of motion in proposing compensation as a way to regulate and balance human functioning; every action force has a reaction force equal in magnitude and opposite in direction. Through compensation the psyche prevents a lopsided development of a subsystem which could lead to neuroses or psychoses. Compensation occurs mostly between the conscious and unconscious. The overemphasis of a characteristic or function on the conscious level is compensated for by emphasizing the opposite characteristic or function on the
unconscious level. Dominant masculinity on the conscious level, for example, is compensated for by the anima on the unconscious level.

iii) Synthesis - occurs as a union between opposing systems. Such unity can be achieved only though the transcendent function according to which opposing forces can be integrated in the development of the self (Meyer et al., 1997).

2.5 Attitude of the psyche.

Jung distinguishes two types of attitudes or orientations in terms of the direction in which psychic energy is channeled. These are Introversion and Extraversion. The movement of energy along the extraversion-introversion continuum implies a movement along the conscious-unconscious pole. He believes that the category of extraversion-introversion reflect typological differences that cross all ranks of society, are gender neutral and transcend cultural and historical conditions (Spoto, 1995). Of all Jung’s concepts these are probably the most famous especially since they have been established as personality types.

For Jung, each individual can be characterised as oriented primarily inwardly or primarily outwardly according to the primary channeling of psychic energy.

- **Introversion** is an inner directedness of psychic energy based on the subjective experiences of the ego. Introverts are preoccupied with their own emotions and experiences, they are more independent and idea oriented. They get their stimulation from the interior or subjective world and often appear to be very aloof and even asocial.
• **Extraversion** is directed towards external reality – people, objects and events outside the ego. Their relationship to the world is open, sociable and active. Stimulation comes from the outside. The extravert reveals a lively interest in the world around him or her and appears very sociable. They usually appear confident and accessible. They tend to think “out loud”.

Even though both attitudes are present in all people, one is usually dominant and conscious and the other unconscious and subordinate.

Individuals who are prevented from acting in a manner that they are comfortable with, a naturally preferred way, run the risk of neuroses due to what Jung terms a “falsification of type” (Spoto, 1995).

### 2.6 Functions of the psyche

After Jung’s conception of the introversion-extraversion polarity he went through a ten-year period of doubting these formulations. He realised that he tried to explain too much in too simple a way. The basic functions enabled him to explain the tremendous differences between individuals in either the extraverted or introverted class.

The functions are defined or understood in polar opposites to each other. They refer to the specific manner or means of adaptation. A way of dealing with the inner or outer worlds. The four functions are sensation, intuition, thinking and feeling. Jung further classified these functions as irrational (sensation and intuition) and rational functions (thinking and feeling).
2.6.1 Irrational or Perceiving Functions

Jung termed sensation and intuition polarities as irrational or perceiving functions as he wanted to call attention to the flow of what is happening without regard as to how it is organised, evaluated, ordered or judged. The irrational functions refer to the way the psyche collects information and orients itself towards outer reality, and also how it reacts to stimulation directly without rational considerations coming to play.

*Sensation* refers to the way in which the psyche experiences external impulses through the senses - sight, hearing, smell, taste and touch. It focuses on reality as it is presented. Sensation is perception via conscious, sensory activity. It is a direct experience through the senses. It is designated as an irrational or perceiving function because Jung believes it has to do with elementary “facts” or taking in things without tracing them back to reason or rational formulation. Because sensing-types are so interested in reality as it is presented to them, they tend to be factual and very observant, and they are capable not only of “seeing” things but remembering those facts and details. They tend to be conservative and reluctant to change (Spoto, 1995).

*Intuition* is unconscious perception on a subliminal level. Through this function the psyche is elevated beyond the bodily confines of time and space and what happens is an ‘immediate experience and consciousness’ which cannot be achieved by any of the other functions. Intuitive-types have an attraction for complexity. They appreciate the odd world of symbols and myths. They can see abstract, theoretical,
even universal relationships that convey meaning above and beyond the obvious. They are more open to change and novelty.

2.6.2 Rational or Judging functions

The rational or judging functions are based on the principles of evaluation and discrimination. They indicate ways of processing information and indirect ways of reacting on the basis of a rational decision process.

Thinking is a logical and structuring function which pertains to ordering and judging to reach an objective and logical explanation and understanding of the world. It is therefore the function which the psyche uses to interpret what has been perceived. As Jung expresses it, "thinking, following its own laws, brings the contents of ideation into conceptual connection with one another" (Spoto, 1996, p.45). It emphasizes logic and objectivity in reasoning through to correct and truthful conclusions. Thinking suppresses or subordinates personal values or attachments. Thinking types are capable of abstracting principles to make distinctions and definitions of what seemingly is chaotic or confusing material (Spoto, 1995).

Feeling is an evaluative function by which information has a personal value and is judged as good or bad, right or wrong, positive or negative. It forms the basis for the individual's experience of subjective feelings of pleasure, sadness, anger or love. This does not mean that such a person is emotional (persons of all the functions experience strong emotions) or highly strung. But rather it is a difference in criteria for forming judgment - it is a preference for the personal over the impersonal. Because of the emphasis on the personal and subjective, feeling-types value
harmony and human relationships. They have an aptitude of knowing what matters most to themselves and to other people and can be very adept at handling interpersonal situations or problems.

The four functions taken together form a powerful picture of the whole of reality. As Jung puts it; "sensation establishes what is actually present; thinking enables us to recognise its meaning; feeling tells us its value and intuition points to possibilities as to whence it came and wither it is going in a given situation". Because each function plays its part in connecting us with the whole of reality, Jung refers to the four functions as a "totality" (Spoto, 1995, p. 48).

2.6.2.1 Superior function

In Jung’s observation, the development of a particular function goes along in some way with the practical criteria of whatever works best for the particular individual. By this measure, the dominant or *superior* function can often be judged as a good, operative habit. Jung has likened the superior function to the lion who strikes down his enemy or prey with his fore-paw as this is where his strength lies. Similarly, the crocodile will use its tail. Thus the superior function is the most reliable and efficient function, which is an expression of one’s particular strength. It is characterised by strength, confidence, preference, comfort and getting results. When any one function habitually dominates consciousness in this manner, a corresponding function-type results which may itself be either introverted or extraverted, giving eight possible personality types (Spoto, 1995). Thus an "extraverted thinking" type implies someone whose attention is habitually turned toward the object and away from the subject, with the thinking-function (the
superior function) as characteristic of the preferred and conscious means of adaptation.

2.6.2.2 Auxiliary function

Another refinement of Jung’s typology is that of the auxiliary function. Jung maintains that the auxiliary function, which is of a ‘secondary importance’, is different to the superior function, e.g. thinking type cannot team up with feeling type in consciousness because they are both rational and judging functions. Theoretically speaking, thinking and feeling must team up with intuition or sensation; and sensation must team up with thinking or feeling, as must intuition.

The auxiliary function complements the superior function in consciousness. By positing the auxiliary functioning in this manner, Jung has effectively asserted that consciousness normally acts from a balanced position of its own, drawing in information from one perceiving or irrational function or ordering that information through one of the judging or irrational functions. That is when a perceiving function is superior, a judging function serves as auxiliary in a co-determined role; when a judging function is superior, a perceiving function serves as auxiliary in a co-determined way (Spoto, 1995). The role of the auxiliary function now raises the possibility of 16 personality types in which psychological descriptions could be given. For example, an “extraverted thinking-type with sensing” means an extravert with thinking as a superior function and sensing as an auxiliary function.
2.6.2.3 Inferior function

Just as each of the sixteen conscious personalities can be viewed as arranged around one of the four functions in combination with an auxiliary function and attitude (extraversion and introversion), sixteen counter personalities can be identified in the unconscious, each arranged around the opposite of the superior function, the function furthest removed from consciousness. Jung calls this troublesome fourth function "the inferior function". We can infer that any of the sixteen "counter personalities" which build up around any of the four functions in this "inferior" position would tell us about what has been suppressed and what the individual is particularly vulnerable to (Spoto, 1995).

Whilst the superior function is represented at the conscious level, the auxiliary or "helper" function is slightly unconscious and operates in the opposite attitude to the superior function but is nonetheless accessible and useful to the person in his daily life. The inferior function (as is the tertiary function) is out of the range of the main activity taking place in the conscious personality. In one sense, by "inferior" Jung simply means to designate a quality of relation between consciousness and the unconscious. The inferior function is the most farthest away from consciousness. Whilst Jung reported the negative and maladaptive aspects of the inferior function, Isabel Briggs Myers focused on the healthy adaptation. She saw it as a normal adaptive way of promoting personality development. It can be observed in everyday life as mild and mundane, as well as in extreme and debilitating manifestations (Quenk, 1993).
Whilst the superior function is the most differentiated function in consciousness, most characteristic and most under control of the personality, the inferior function is the least characteristic and least under control of the personality. Jung describes it as “undomesticated, unadapted, uncontrolled and primitive” (Spoto, 1995, p. 80). It is the dark side of the personality.

2.6.2.4 Tertiary function

The tertiary function was not used by Jung per se, but rather has been suggested. It, however, serves to designate the function which is opposite to the auxiliary function. The tertiary and inferior function together act as distinguishing features through which the shadow archetype emerges from the unconscious into consciousness. The shadow is that archetype which in Jung’s general psychology represents the most despised and neglected parts of our personality.

While the tertiary function can be brought into consciousness, it most commonly stays down in the unconscious with the inferior function, which can never be brought into consciousness. It is highly primitive or undifferentiated. This is as a result of its close affiliation with the unconscious and the inferior function. In many instances the tertiary function could be thought of as the inferior function’s helper. It is in those situations where the individual has a compelling sense “to be strong”, “to be right”, “to be good”, “to be in control”, etc., that the conscious side of the person’s psychological type is reinforced and brought to bear upon unsettling eruptions from the other side, the unconscious. What the inferior function is bringing into consciousness is either denied or projected onto the external world. This type of situation results in continued suffering for the individual as well as
causing problems for others as they become scapegoats as dark sides, the negative contents of the unconscious are projected. The unconscious is cut loose from the conscious personality and thrown out to the world as if it were a power on its own. Normal behaviour is circumvented, laws undermined.

The overall effect of the conscious personality is that the inferior function has turned strength into weakness, right into wrong, good into evil, control into chaos, normalcy into insanity. It has done this by allowing the full weight of the unconscious to move in on the unsuspecting psychological type (Spoto, 1997).

2.7 Personality types which develop from combining and handling attitudes and functions

As is the case with attitudes, one function is usually conscious and dominant while the others are unconscious and secondary. Each function can also be manifested in an introverted and extraverted way. Although one of the functions is usually dominant, Jung (1958b) emphasises that all four are present in every person.

When the attitudes and functions are combined, eight personality types can be distinguished on the basis of the dominant attitude and function.

Jung (1958b) insists that he does not want to categorize people rigidly with his typology. Rather, the typology should be viewed as a framework according to which individual psyches can be distinguished from one another based on their preference for channeling psychic energy. The eight personality types are described as follows;
**Extravert-thinking type:** These type of persons live according to fixed objective rules and all subjective feelings are repressed. This type of person is usually found among scientists and researchers.

**Extravert-feeling type:** Persons in this category are emotionally very labile and the emotions fluctuate as situations change. Such a person is very social and experiences intense relationships, but these relationships are usually of short duration. Actors are usually representative of this type.

**Extravert-sensing type:** The individual here is characteristically very pragmatic and realistic and accepts life as it is without thinking too much about it. Such a person is generally sensual and geared towards experiencing pleasure. This type is found among businessmen and businesswomen.

**Extravert-intuitive type:** Such people are always looking for something new and find it difficult to sustain anything - ideas, jobs, or relationships. This personality type includes impulsive inventors and creative innovators, who have difficulty finding stability and concentrating on anything for long.

**Introvert-thinking type:** People with this type of personality are highly intellectual and care little about day-to-day existence. This group includes people who are ascetic, philosophical, impractical, socially-inhibited and extremely private.
*Introvert-sensing type:* The individual in this grouping takes life as it comes without displaying great social involvement. People in this category generally do not give much of themselves in interaction and can be described as passive, calm and boring.

*Introvert-intuitive type:* This type includes eccentric day dreamers who generate new ideas based on 'visions'. They tend to be highly impractical and asocial, and other people often do not understand them correctly. However, sometimes their intuitive ideas can be implemented very successfully by others.

2.8 The Development of the Personality

Type development is a refinement of ego-consciousness developing out of the unconscious.

For Jung an individual's consciousness, though shaped by time, culture and the unique elements particular to the personality itself, grows out of what he viewed as the virtually timeless, transcultural matrix of the unconscious; that is the unconscious, as an autonomous and independent factor was early on in Jung's career, considered to be the "mother" to consciousness. The unconscious, however, also includes archetypal aspects that transcend one's personal biography to include the history and meaningful development of the human species. The archetypes which fall under the rubric of the collective unconscious is also the point from which the personal unconscious becomes significant and the potential for growth is increased. Jung firmly believed that the interaction of the unconscious with the ego-consciousness was a primary factor for the development of the personality.
Optimal development lies in attaining the self. This usually occurs in the early middle years of a person’s life as a result of the individuation process and the transcendent function. Optimal development occurs when there is a blurring of the boundaries between what is conscious and unconscious and between the individual and the world, so that the person becomes part of a new and greater union as the opposing processes and forces in the psyche are synthesised (Meyer, et al., 1997).

2.9 Chapter review

In this chapter a brief account of Carl Jung’s childhood was given. An observation was made of how some of his life experiences and their effects influenced his thinking. The development of his theory was explored and an account of the theory was given.

In the next chapter it will be seen how the development of the MBTI® was based on the work of Carl Jung.
3. Introduction

The Myers Briggs Type Indicator (MBTI®) falls into the family of personality assessments and is based on Carl Gustav Jung’s theory of psychological types. The focus is on that part of Jung’s theory which is specifically concerned with the way people consciously use their minds (McCaulley, 1990). The central concept is preference, which means ‘feeling most comfortable and natural with’. The theory assumes that each of us prefers some way of behaving to others and Myers suggest that there are primarily 16 kinds of people which can be described in terms of strengths or potential strengths (Bayne, 1997).

3.1 Biography - Katherine Briggs and Isabel Briggs Myers

“Mother’s Light, Daughter’s Journey.”

The MBTI® was developed by Isabel Briggs Myers and her mother Katherine Briggs. Katherine Briggs had become interested in personality differences when her daughter, Isabel, brought home her future husband, Clarence Myers, to meet the family. Katherine Briggs studied Jung’s Psychological Types intensively, and introduced the concepts to her daughter. Mother and daughter became type watchers for two decades testing Jung’s observations against their experiences of their family and friends (McCaulley, 1990).
Katherine and Isabel had been interested in Jung’s theory for sixteen years when the Second World War took many men from the industrial work force into the service and brought many women out of their normal activities to replace them. For most of these women the industrial workplace was strange new territory and Katherine and Isabel felt that if one had knowledge of one’s personality preferences in terms of Jungian type theory, it may be a valuable aid to identifying the kind of job in which someone without previous relevant experience could be most comfortable and effective. They searched in vain for some test or some indicator of a person’s Jungian preferences and finally decided to create their own. The result was to become The Myers Briggs Type Indicator personality inventory (Myers et al., 1995).

Myers and Briggs began by creating forced-choice questions that were intended to let people indicate the effects of Jungian preferences in everyday life. Almost at once they discovered type differences in the way people interpreted the question choices. As a result, each choice is presented in the frame of reference of the types for whom it is intended. In this way, questions became a “stimulus to evoke a type response.”

Myers and Briggs were met with much opposition from the academic community as neither were trained psychologists or psychometricians. Further, at that time, few had any interest in Jung’s theory of psychological types or for a self-report questionnaire purporting to identify Jungian type.

Unperturbed by the resistance of the academic community, Isabel Myers obtained the knowledge, techniques and tools needed for test construction, scoring, validation
and statistics by apprenticing herself for one year, to someone who was a qualified expert in the field, Edward N. Hay, at that time Personnel Manager of a large financial bank in Philadelphia (Myers et al., 1995).

Working alone at home, with only family support, Isabel Myers painstakingly constructed a series of versions of the MBTI. She collected data on more than 9,000 high school students, 5,000 medical students, and 10,000 nursing students, hand scoring the answer sheets (McCaulley, 1990).

Isabel Myers believed that each of us is born with different gifts, with unique imprints of how we prefer to use our minds and values and feelings in the business of everyday living. In the first publication of her book *Gifts Differing* (1980), (in Myers et al., 1995) which was co-authored with her son Peter B. Myers, Isabel Myers wanted to help people to be happy and effective in whatever they chose to do. This, she does by interpreting and adapting Jung’s theory to help ordinary, healthy, normal people understand that it is all right to be unique individuals, often quite unlike those around them. And as a result of these differences many problems and misunderstandings that they may experience with others can be explained in terms of the perfectly normal, but different, choices in the way people take in and process information.

Isabel Myers, shortly before her death, expressed as her fondest wish that long after she was gone, her work would go on helping people to recognise and enjoy their gifts. Today, the MBTI® is the most widely used type indicator (Myers et al., 1995).
3.2 The aim and uses of the MBTI®

Rowan Bayne (1997) describes three general aims of the MBTI®:

The first aim is to help people identify or confirm the ways in which they and their 'kind of person' are likely to be most effective and most fulfilled. Type increases self-understanding and seeks to help people clarify what 'suits' them and to value it, by bringing aspects of themselves into focus in a reframing or confirming way. Upon discovering or deciding on a type that fits, individuals gain new insight which enables them to exercise those preferences with which they are comfortable, e.g. an introvert understanding his or her need to spend more time alone. This understanding of individuality provides what Jung termed 'compass points in the wilderness of the psyche'.

The second aim is to help people understand and value others more, especially of very different types from oneself - or at least to be more ready to see them as different rather than odd, weird or wrong. Myers' main concern in developing type theory was to encourage the 'constructive use of differences'. Differences in type can lead to misunderstanding and hostility. Myers wanted people to value the opposite preferences to their own.

The third aim of type theory is to help people understand key aspects of the development of their personality throughout life. MBTI® results and their interpretation at one level help people understand and value their type, and at another level suggest possible areas for development.
Type theory tries to achieve its aims through the accuracy of its descriptions and through a positive tone.

The MBTI® is the most widely used tool for “normal people”. Counselors use it with individuals, groups, couples, and families; for children, young people and adults; for teaching individual development, for career counseling and for communications training. Educators use the indicator with teachers and students to work with type differences in teaching styles, academic achievement and motivation, dropout and college roommate teaching. Organisations in business, industry and government use the MBTI® to deal with type differences in communication, teamwork, management styles and lifelong career planning. In the religious community, the MBTI® is used to value type differences in spiritual development and ministry (McCaulley, 1990).

3.3 The MBTI®

Jung in his theory of types describes extraverts and introverts with maximum contrast giving theoretically “pure” types who have little or no development of the auxiliary. The effects of ignoring the auxiliary means he bypasses the combinations of perception and judging and their broad categories of interest in business, people, language and science. Further, by ignoring the auxiliary process, it has also given a distorted description of the introverted type. These types depend on their auxiliary for their extraversion, their outer personalities, their communication with the world and their means of taking action. By failing to convey that introverts with a good auxiliary are effective and play an indispensable part in the world, Jung opens the door for a general misunderstanding of his theory (Myers and Myers, 1995).
Katherine Briggs and Isabel Briggs Myers expanded and elaborated Jung’s original theory of type to formalize the *Myers-Briggs Type Indicator* (MBTI®) personality inventory and was so formulated in order to describe and explain normal behavioural variations among “normal” people (Hirsh & Kummerow 1989; Quenk, 1993).

Briggs-Myers’ acute awareness of what Jung said about the difficulties which the introverts had in relating to the outside world (Briggs-Myers was herself an introvert), motivated her to extend Jung’s theory in developing the MBTI®. She knew that introverts generally direct their energy to the internal world of ideas and the subjective self, the outside/external world often gets compromised or neglected. Briggs-Myers felt that the information Jung provided on the introversion-extraversion polarity did not adequately explain the typological adaptation that both introverts and extraverts must make to the outside world. Thus she extended the significance of Jung’s perceiving-judging polarity as the main criterion for how one relates to the outside world. According to Briggs-Myers the introverted’s superior or dominant function will be reserved for their preferred internal world and the auxiliary function would be available to the external world. By contrast, extraverts show and use their superior or dominant function in the outside world, which is their preferred world, and their auxiliary function in the internal world (Spoto, 1995).

It is this natural preference observed by both Jung and Myers Briggs upon which the theory is based. Natural preference has been likened to right- and left- handedness. To demonstrate, people were asked to describe the experience when writing with the preferred hand as opposed to the non-preferred hand. When using the preferred hand people felt that it was natural, effortless and had a feeling of competence.
When writing with the non-preferred hand it felt unnatural, awkward and required effort (Myers & Myers 1995; McCaulley 1990; Myers 1993).

Bayne, (1997) says that while preference is strongly related to behaviour, it is not identical with it and there is a potential problem when the preference is not the same as the behaviour, the theory then becomes empty. Bayne has noted how the idea of preference as being ‘natural’ has been compared to the notion of the real self and actualisation of the real self. According to the theory of Carl Rogers (1961), individuals have the potential to self actualise and to reach their potential provided that this is facilitated by an environment of unconditional love (Meyer et al., 1997). However, the argument is that people do not always recognise their ‘real’ needs. Rogers term the ‘Organismic Valuing Process’ (OVP) pertains to the organism’s ability to distinguish between positive and negative functions which will direct the organism to fulfilling it’s needs. Rogers argues that we introject values without considering them or making them our own. The result is inner conflict between OVP - our capacity to recognise our wishes and needs - and the introjected values which may result in our losing touch with our OVP and may eventually result in failing to exercise our preferences.

The MBTI® assumes that four pairs of preferences are particularly important and that type theory suggests that some people will prefer one preference over another. The MBTI® sets out to measure preferences only, not how well or how poorly developed these preferences are. Further, in the MBTI type means a difference in kind. However, the types are not intended to fit someone perfectly; rather they fit actual people to varying degrees and are intended to help in self-understanding, not to be definitive (Bayne, 1997).
The MBTI® is not a “test” in the meaning of a measure of right or wrong, better or worse. It is an assessment tool which lets a person “indicate” preferences between equally valuable opposites in a forced-format. It is designed to make more objective in identifying and measuring the typological patterns of personality as described in Jung’s theory (McCaulley 1990; Spoto, 1995).

The merit of the theory is that it enables one to expect different personality differences in particular people and to cope with the people and the differences in a constructive way. Myers and Myers maintain that variations among people are not the result of chance variations but it is the logical result of a few basic, observable differences (Myers & Myers, 1995).

These basic differences can be identified by attending to the following four questions regarding preferences:

- Where is your source of energy?
- How do you prefer to perceive information (the Perception preference)?
- How do you prefer to make decisions?
- Do you prefer your lifestyle to be organised or flexible?

Whilst answers to these questions using the MBTI® provide information regarding type, the Myers Briggs model is a dynamic model in which:

- the preferences change and develop throughout life
- the preferences interact with each other
- two of the dimensions Sensing/Intuition and Thinking/Feeling are preferences for functions, and have been referred to as ‘mental muscle’, and
- the other two dimensions are preferences that indicate where those mental
muscles are used (http://www.phys.tcu.edu/~ingram/mbti/index.html).

**Introversion** as in Jung’s theory, pertains to the individual drawing energy from the environment and directing it inward to the inner world of concepts and ideas. **Extraversion** describes energy which flows out or is drawn out to the environment pertaining to a world of people and things. This is not to say that anyone is limited to the inner or outer world. Well-developed introverts can deal ably with the world around them when necessary but they do their best work inside their heads, in reflection. Similarly, well-developed extraverts can deal effectively with ideas, but they do their best work externally, in action.

It is always the natural preference that will dominate (Myers and Myers, 1995; McCaulley, 1990). It is thus, as indicated in Jung’s theory, the tension that arises from opposites and the striving for balance that creates the dynamic interplay between these opposites that subsequently also leads to growth.

The function of **Perceiving** is the processes of becoming aware of things, people, occurrences and ideas. There are two types of perception viz **sensing** and **intuition**. The process of making a decision and coming to conclusion about what has been perceived is that of **Judging**. There are also two types of judging viz **thinking** and **feeling**. Thus, perception and judgment which makes up a large portion of people’s total mental activity, will therefore determine what people see in a situation and what they decide to do about it. Subsequently basic differences in perception or judgment should result in corresponding differences in behaviour (Myers & Myers, 1995).
3.4 Attitudes and Functions

3.4.1 The Attitudes: Orientations to the world

3.4.1.2 Extraversion and Introversion (EI)

Jung described the attitudes of *Extraversion* and *Introversion* as directions of energy flow. Extraversion-introversion describes universal aspects of personality (McCaulley, 1990).

In the **Extraverted** attitude (E) there is a preference that relates to gathering energy from the world of action and interaction. Attention seems to be drawn out, to the objects and people of the environment. There is a desire to act on the environment, to affirm its importance, to increase its effect. Such persons are aware of the environment, they rely on it for stimulation and guidance. They tend to have a breadth of interests and to keep an active involvement with people and things. Extraverts talk about what is on their minds and it is said that if one wants to know what an extravert is thinking, just listen! Some characteristics of extraverts are: action-oriented, a sometimes impulsive way of meeting life, frankness, ease of communication and sociable (Van Rooyen & de Beer 1995; Hirsh & Kummerow, 1989).

The **Introverted** Attitude (I), according to Jung’s theory, is an important normal variant of human personality. When persons introvert, energy is drawn from the environment and is drawn inward to the world of concepts, ideas, emotions and impressions. If one wants to know what an Introvert is thinking, one needs to ask as
Introverts prefer to keep their thoughts and ideas to themselves. Characteristics associated with introversion are clarity of concepts and ideas, reliance more on enduring concepts than on transitory external events, a thoughtful, contemplative detachment and enjoyment of solitude and privacy (Van Rooyen & Partners 1995; Hirsh & Kummerow, 1989).

Extraverts appear to be the valued majority and are sanctioned by society, so that introverts often report feeling different. They are in fact, a minority group. In many correlations with personality measures, extraversion is associated with positive qualities - ego strength and emotional stability, personal integration and self-esteem. Introversion is more likely to be associated on other scales with negative qualities - anxiety, guilt and neuroticism. Some of these differences come from the extravert’s greater comfort with the environment, but some of the negative descriptions of introverts can stem from a lack of appreciation of the strength of the introvert (McCaulley, 1990).

EI has been studied more than any other personality characteristic. Kummerow (1991), compared the EI definition of EI with the Strong Interest Inventory’s narrower one: wanting to work most with people (E) or with data and ideas (I). The correlation between the two measures is about 0.4 making it easy to find people who are extraverted on one and introverted on the other. Thorne and Gough (1991), concluded that the MBTI® EI scale is a measure of sociability versus detachment. According to Bayne (1997) this would result in a low ‘face validity’ of the MBTI® as the EI scale is more than a measure of sociability versus detachment because unsociable extraverts choose the sociability items as less accurate than the detached ones.
However, Thorne and Gough's (1991), (in Bayne, 1997) data on observations by a panel of 5-10 people of both males and females on the EI relationship confirmed the construct validity of this scale. Qualities that were observed and described were gregarious, active, cheerful, enthusiastic, energetic and talkative for the extraverts. Conversely, introverts were described as aloof, keeping people at a distance, reserved, inhibited and shy (Bayne, 1997).

### 3.4.1.3 Judgment and Perception (JP)

Judgment (J) and perception (P) refer to the orientation to the outer (extraverted) world. It relates to how one wants to live one's life. The JP scale indicates whether extraverted behaviours are more likely to reflect the perceptive functions (sensing or intuition) or the judging functions (thinking or feeling). JP is used in two ways in the MBTI®. First, it identifies observable behaviours important in their own right. Second, JP helps identify the dynamic pattern for each type by pointing to the dominant and auxiliary functions (McCaulley, 1990).

People who prefer to use their **Judging (J)** process in the outer world tend to live in a planned, orderly way, wanting to regulate and control life. They make decisions, come to closure, and move on. Their lifestyle is structured and organized, they try to control time by being organized. They like to have things settled and sticking to a plan and schedule is very important to them. They enjoy their ability to get things done (Myers, 1993; Bayne, 1997).

People who prefer to use their **Perceiving (P)** process in the outer world tend to live in a flexible, spontaneous way, seeking to experience and understand life, rather
than control it. Plans and decisions feel confining to them; they prefer to stay open to experience and last-minute options. They enjoy and trust their resourcefulness and ability to adapt to the demands of the situation (Myers, 1993).

Thorne and Gough (1991) found that Js (both male and female) were rated by their observers as conservative, moralistic, conventional, deliberate, industrious and methodical. Ps were described as unpredictable, changeable in behaviour and attitude, rebellious, careless and nonconforming. Whilst the MBTI® descriptions are strongly supported by the Expanded Analysis report, JP has not been investigated as much as the other preferences (Bayne, 1997).

3.4.2 The Function: Building Blocks of Type

The functions or mental processes described by Jung and the MBTI® are Sensing and Intuition, which are the two ways of gathering information and refer to the two different types of Perception. Thinking and Feeling on the other hand are the two ways of making decisions or coming to conclusions and refer to the two types of judgment.

3.4.2.1 Sensing and Intuition (SN)

People who prefer Sensing (S) like to take in information through the senses and bring to awareness what is occurring in the present moment. Development of differentiated skills of sensing is expected to lead to characteristics such as realism and are likely to focus on the specifics of what actually happened. They exhibit acute powers of observation, memory for details, practical common sense and the
ability to enjoy the present moment. Sensing types are creative in a practical and adaptive way (McCaulley, 1990; Myers, 1993; Bayne, 1997).

People who prefer **Intuition** (N) like to take in information by seeing the big picture, focusing on the relationship and connection between facts. They see the intangible by way of insight - future possibilities, associations, meanings and symbolic relationships. They want to grasp patterns and are especially good at seeing new possibilities and different ways of doing things. They are creative in a novel way. Jung described intuition as “perception by way of the unconscious” (McCaulley, 1990; Myers, 1993; Bayne, 1997).

SN has the clearest relationship of any of the preferences with choice of occupation (Myers and McCaulley, 1985). Thorne and Gough (1991), found that Ns tended to be rated as unpredictable and changeable in behaviour and attitudes, they tend to be rebellious and unconforming, imaginative, ingenious and original. Ss on the other hand were described as conservative, contented, practical, self-controlled and uncomfortable with uncertainty and complexities (Bayne, 1997).

### 3.4.2.2 Thinking and Feeling (TF)

Persons who use **Thinking** (T) in decision making come to conclusions through an impersonal process of logic or cause and effect. Thinking types have been misinterpreted as ‘not having emotions’. This of course is not true as it is a general human characteristic to have emotions. Differentiation of thinking is in theory, expected to be associated with objectivity, analytical ability, critical judgment, and
concern with justice and fairness. Their strengths include figuring out what is wrong with something so they can apply the problem-solving abilities.

**Feeling** (F) persons use a rational process of coming to conclusion by weighing values and merits of people, things and ideas. They have been misinterpreted as ‘not able to be logical’. Feeling judges subjectively. Differentiation of feeling is associated with appreciation, empathy, desire for harmony and an understanding and concern for others. The distinction in psychology between “tough-minded” and “tender-minded” relates to TF differences (McCaulley, 1990; Myers, 1993).

In good type development, both T and F are used as appropriate means of coming to a decision, but with true preference giving priority. Thus, Ts may ‘factor in’ people’s feelings and viewpoints as part of the analysis which leads to a decision and Fs may examine costs and benefits as part of ‘weighing’ and feeling their way to a decision. Both can also use their less preferred function to make a better decision in appropriate circumstances or to get through an impasse (Bayne, 1997).

Thorne and Gough (1991), found that TF was less straightforward in the eyes of their observers than the other preferences. Males and Females were rated differently and value judgments stemming from gender stereotypes played a role in the observation of these two functions. Some characteristics seemed more appropriate for females as opposed to males in the F function whilst other characteristics were seen to be more appropriate for males rather than females with the T function. However, some useful relationships had been observed in both genders on the TF scales (Bayne, 1997).
The attitudes and functions combine to give sixteen possible types of the four pairs of opposite preferences which are expressed in a four letter code.

3.5 The 16 Psychological Types

Understanding the dynamics of types clarifies how a function is experienced and expressed by a particular type. Those who extravert a function use it quite differently than those who introvert the same function. Thus the preferred function is used with greater comfort and ease as it has a greater degree of differentiation than any other function (Myers & Kirby, 1994).

Each personality type is expressed in a four-letter code which indicate preferences. Types sharing common letters also share those qualities. However, in each of the sixteen types, the pattern of interests and skills associated with one preference is modified by the other three preferences, e.g. the extroverted attitude appears differently in ESTJ and in ESFJ (McCaulley, 1990).

Whilst people are born with natural preferences, external factors such as family and parental pressure may cause a person to act like their parents or other family members even though their natural preferences are different. Work may require people to act differently than they prefer. Stress can also lead to a change in behaviour. Both Jung and Myers believed that nature determined the basis of type, and nurture was important in influencing its development. However, environment is important, because families and cultures can disconfirm natural preferences and lead to “falsification” of type. Jung commented that falsification can lead to adult neurosis (McCaulley, 1990).
All types are equally important. While type preferences illustrate a style of behaviour, they do not limit people to only one style. Sometimes people need to strategise and deliberately use preferences that do not come naturally to them. During periods of growth persons may experiment with new and more difficult behaviours (Hirsh & Kummerow, 1989).

a) Extraverted Thinking Types - ESTJ and ENTJ

- Are analytical and impersonal.
- May be executive, legal, technical or interested in reform.
- Organise the facts - and everyone else within reach.
- Are decisive, logical, strong in reasoning power.
- Aim to govern their own conduct and other people’s in accordance with the thought-out conclusions.
- Value truth in the form of fact, formula and method.
- Have an emotional life that is accidental.
- Have a social life that is incidental.

ESTJ’s look at the world with sensing; hence they are most interested in the realities perceived by their five senses, so they tend to be matter-of-fact and practical, receptive and retentive of factual detail. They are tolerant of routine, deft at mechanical things, realistic and concerned with the here and now. Their thinking process is deliberate, because it often is actual thinking. They use logic and analysis as guiding principles for their lives. They are quick to decide and set a plan of action. Much of their effectiveness stems from the fact that they set out objectives well in advance and will put a lot of systematic effort in monitoring and
achieving their goals. They expect as much from themselves as they do of others, not tolerating mediocrity. They prefer the judging attitude and therefore like closure. They are at their best in situations that have some sort of structure and a code of conduct that they live by and expect others to as well.

ENTJ's look at the world with intuition rather than sensing, so they are mainly interested in the possibilities beyond the present, obvious or known. They use analytical and strategic thinking and exhibit a high level of curiosity about new ideas and a tolerance for theory. They take charge quickly and deal directly with problems, especially in situations that involve confusion and inefficiency. They are apt at solving complex problems showing insight and vision. They are concerned about long range possibilities and consequences. ENTJ's provide structure to the organization that they belong and have the ability to see the broader picture. Intuition heightens their intellectual interests and show a keenness for gaining new knowledge.

b) Introverted Thinking Types - ISTP and INTP

- Are analytical and impersonal.
- Are interested in the underlying principles.
- Are organised in relation to concepts and ideas (INTP) or facts (ISTP) - but not people or situations, unless of necessity.
- Are perceptive, not dominating, as the decisiveness of the thinking usually shows only in intellectual matters.
- Are outwardly quiet, reserved, detached perhaps even aloof except with intimates.
- Are outwardly absorbed in the current analysis of the problem.
• Are inclined towards shyness, especially when young, as the chief interests of the introverted thinking are little help in small or social talk.

ESTP’s are realists who apply expediency and reasoning as they manage and adapt to situations. They are aware of what is going on in the environment and are able to respond quickly to the actual facts, making sure the odds of success are in their favour. They use general principles to bring order out of confused data and meaning out of unorganised facts. They are able to anticipate immediate, practical needs in situations and to present a logical straightforward plan for meeting those needs. They have a vested interest in practical and applied science and sensing provides for the greatest understanding of the visible and tangible properties of matter and how it behaves.

INTP’s are known for their quest for logical purity, which motivates them to examine invested truths and principles. They make scholars, theorists and abstract thinkers in such fields as science, mathematics, economics and philosophy. They are perhaps the most intellectually profound of all types. Intuition brings a deeper insight than is granted to thinking alone. They are intellectually curious and show a quickness of understanding, ingenuity and fertility of ideas in dealing with problems. They do not like to deal with the obvious and are unwilling to accept what everyone else regards as the truth. They value facts only as evidence or as examples for a theory, never for their own sake.

c) Extraverted Feeling Types - ESFJ and ENFJ
• Value, above all, harmonious human contacts.
• Are best at jobs dealing with people and in situations where needed co-
operation can be won by good will.

- Are friendly, tactful, sympathetic, able almost always to express the feelings appropriate to the moment.
- Are sensitive to praise and criticism, and anxious to conform to all legitimate expectations.
- Possess outwardly directed judgment, which likes to have things decided and settled.
- Are persevering, conscientious, orderly, even in small matters, and inclined to insist that others be the same.
- Are idealistic and loyal, capable of great devotion to a loved person or institution or cause.
- May use thinking judgment occasionally to help in appreciating and adapting to points made by a thinker, but thinking is never permitted to oppose feeling aims.

**ESFJ’s** are matter of fact, practical and conventional. They follow through on their commitments paying attention to completing tasks in a timely and accurate way. They are helpful to others and are primarily concerned with the details of direct experience - their own, that of their friends and acquaintances, even the experience of strangers whose lives happen to touch theirs. They are conversational and draw a great deal of pleasure in communicating feelings to others. They like closure and prefer structured, organized situations in which warmth and compassion are shown.

**ENFJ’s** tend to have curiosity for new ideas. They show a taste for books and academic interests, tolerance for theory, vision and insight, and imagination for new possibilities beyond what is present or obvious or known. They are lively and enthusiastic facilitators who apply warmth and vision to helping people and meeting
their needs. They are aware of people's aspirations and develop plans of action to make those aspirations into reality. The NF combination of warmth and insight makes the ENFJ tolerant and appreciative of others, seeking involvement with them in life tasks. They are able communicators who are liberal in showing appreciation for others. They generally do well in fields such as teaching, clergy, career and personal counselors and psychiatrists.

d) Introverted Feeling Types - ISFP and INFP

- Value, above all, harmony in the inner life of feeling.
- Are best at individual work involving personal values - in art, literature, science, psychology or the perception of needs.
- Have feelings that are deep but seldom expressed, because inner tenderness and passionate conviction are both masked by reserve and repose.
- Maintain independence from the judgment of others, being bound by inner moral law.
- Direct judgment inwardly toward keeping all lesser values subordinate to the greater.
- Have a strong sense of duty and faithfulness to obligations, but no desire to impress or influence others.
- Are idealistic and loyal, capable of great devotions to a loved person, purpose or cause.
- Many use thinking judgment occasionally to help in winning a thinker's support of feeling aims, but is never permitted to oppose those aims.

ISFP's are gentle and compassionate, open and flexible. They see the realities - the needs of the moment - and try to meet them. They are considerate of others and do
not force their views and opinions on them. They are modest and generally underestimate and understate themselves. They often focus on meeting others’ needs, especially those who are less fortunate. They avoid disagreements and seek harmony with people as well as with nature. They are at their best ensuring others’ well-being.

**INFP’s** focus deeply on their values, and they devote their lives to pursuing the ideal. They excel in fields with possibilities for people such as counseling, teaching, literature, art, science, research and psychology. They often draw people together around a common purpose and work to find a place for each person within the group. They are creative and seek new ideas and possibilities. They usually have a gift for languages. Their reserved nature prefers communicating feelings through the written word rather than making personal contact. They quietly push what is important to them, and they rarely give up. While they have a gentleness about them and a delightful sense of humour, they may be somewhat difficult to get to know and may be overlooked by others.

e) **Extraverted Sensing Types - ESTP and ESFP**

- Are realistic.
- Are matter-of-fact and practical.
- Are adaptable, usually easy going, very much at home in the world, tolerant of others and of themselves.
- Are endowed with a great capacity for enjoying life and a zest for experience of all kinds.
- Are fond of concrete facts and good at details.
- Are apt to learn most and best from experience, making a better showing in
life than in school.
- Are usually conservative, valuing custom and convention, and liking things as they are.
- Are able to absorb an immense number of facts, like them, remember them and profit by them.

**ESTP’s** are pragmatic, outgoing and realistic people. They exhibit an attitude of friendly readiness to do almost any pleasurable thing. They make decisions with thinking and therefore are aware of the logical consequences of an act or decision. They are apt at grasping underlying principles and are therefore comfortable with mathematics and theory. Characteristically they are direct with their comments, they are action oriented, pragmatic outgoing and realistic people. In situations that require resourcefulness they use their quickness and flexibility to find the most efficient route to accomplishing whatever needs to be done.

**ESFP’s** make decisions with feeling and thus they tend to center interest and observation on people, giving rise to friendliness, tact, and ease in handling human contacts. They are fun loving, enthusiastic and exuberant and are usually well liked by others. They are sympathetic toward people and generous with their time and money. They are able to realistically meet human and situational needs in a fun and lively way.

**f) Introverted Sensing Types - ISTJ and ISFJ**
- Are systematic, painstaking and thorough.
- Carry responsibility especially well.
- Are very hard working, they are the most practical of the introverted types.
• Are outwardly matter-of-fact, inwardly entertained by extremely individual reactions to their sense impressions.
• Are conspicuous for patient and willing application to detail.
• Make an excellent adaptation to routine.
• Absorb and enjoy using an immense number of facts.

**ISTJ**'s emphasize logic, analysis and decisiveness. They are systematic, painstaking, thorough and hardworking. They get the job done and complete it on schedule. They are serious and sincere in whatever they do. They work well within a structure, follow the hierarchy, and are particularly strong and careful in keeping track of facts and details. They make thorough lawyers, able executives and fine accountants.

**ISFJ**'s are generally sympathetic, loyal, considerate and conscientious. They will go to any amount of trouble when it makes sense to them, to help those in need. They operate most comfortably in situations where the rules are well defined and where traditions are to be upheld. They focus on providing practical help and services for others and for the organization they serve. They are often self-effacing in getting the job done, and they are willing to make necessary sacrifices, especially for their families. This type is particularly well-suited to medicine and nursing.

g) Extraverted Intuitive Types - ENTP and ENFP

• Are alert to all possibilities.
• Are original, individual, independent, but also extremely perceptive of the views of others.
• Are strong in initiative and creative impulse, but not so strong in completing
projects.
• Have lives that are likely to be a succession of projects.
• Are stimulated by difficulties and most ingenious in solving them.
• Operate by impulsive energy rather than concentrated willpower.
• Are tireless at what interests them, but find it hard to get other things going.
• Hate routine.
• Value inspiration above everything else and follow it confidently into all manner of opportunities, enterprises, ventures and adventures, explorations, researchers, mechanical inventions, promotions and projects.
• Are versatile, often startling clever, enthusiastic, easy with people and full of ideas.
• At their best, are gifted with insight amounting to wisdom and with the power to inspire.

ENTP’s are known for their quest for the novel and complex. They have faith in their ability to improve and to overcome challenges that they face. They are highly independent and value adaptability and innovation. They encourage and value change. ENTP’s hate routine and hierarchical and bureaucratic structures that are not functional. They need freedom for action. They tend to be independent, analytical, and impersonal in their relations with people, and they are more apt to consider how others may affect their projects than how their projects may affect others. With their entrepreneurial tendencies and broad understandings, they push against all odds to further their projects. They are effective inventors, scientists, troubleshooters, promoters or almost anything that it interests them to be.
ENFP's are more enthusiastic than ENTP's and more concerned with people and skillful in handling them. They are initiators of change who are keenly perceptive of possibilities, and who energize and stimulate through their contagious enthusiasm. They are able to anticipate the needs of others and to offer them needed help and appreciation. They bring zest, joy, liveliness and fun to all aspects of their lives. They are generally drawn to counseling, where each new person presents a fresh new problem to be solved and fresh possibilities to be communicated. ENFP's make excellent teachers, scientists, advertisers, salespeople or almost anything they want to be.

h) Introverted Intuitive Types - INTJ and INFJ
- Are driven by their inner vision of the possibilities.
- Are determined to the point of stubbornness.
- Are intensely individualistic though this shows less in INFJ's who take more pains to harmonize their individualism with their environment.
- Are stimulated by difficulties, and most ingenious in solving them.
- Are willing to concede that the impossible takes a little longer - but not much.
- Are more interested in pioneering a new road than anything to be found along the beaten path.
- Are motivated by inspiration, which they value above everything else and use confidently for their best achievements in any field they choose - science, engineering, invention, political or industrial empire-building, social reform, teaching, writing, psychology or religion.
- Are deeply discontented in a routine job that offers no scope for inspiration.
- Are gifted, at their best, with a fine insight into the deeper meanings of
things with a great deal of drive.

**INTJ’s** are the most independent of all the sixteen types and take more or less conscious pride in that independence. They seek new angles or novel ways of looking at things and enjoy coming to new understandings. They are insightful and mentally quick; however, this mental quickness may not always be outwardly apparent to others since they keep a great deal to themselves. They are very determined people who trust their vision of the possibilities, regardless of what others think. They have a tendency to ignore the views and feelings of others. They are inclined to be highly critical which can have a devastating effect. Whatever their field, they are likely to be innovators. They have an unhampered view of possibilities and are able to supply a keenly organized faculty. However, they are likely to organize themselves out of a job. They cannot continually reorganize the same thing, and a finished product has no more interest.

**INFJ’s** are future oriented, and direct their insight and inspiration toward the understanding of themselves and therefore human nature. They naturally concern themselves with people, have deep felt compassion and desire harmony with others. Their work mirrors their integrity and it needs to reflect their inner ideals. Solitude and opportunity to concentrate thoroughly on what counts most is important to them. They prefer to quietly exert their influence and their contribution for human welfare, independent of a mass movement. The individualism of the INFJ is often less conspicuous, not because their inner vision is less clear and compelling, but because they care enough about harmony to win (rather than demand) acceptance of their purpose.
The description of the sixteen specific types are the result of the various combinations of the preferences whereby each is the product of its dominant process, extraverted or introverted and is modified by the nature of the auxiliary function. The modification is especially marked in the introvert types, whose auxiliary type is mainly responsible for their outer behaviour (Myers & Myers, 1995; Hirsh & Kummerow, 1989).

Three important aspects are relevant in the descriptions of type:

i) generally people recognise their type

ii) emphasis is on positive qualities, and

iii) they are generally based on extensive experience rather than on empirical research (Bayne, 1997).

3.6 Dynamic Interaction of Preferences

Jung conceived of the psyche as active, vital and energetic. It is a dynamic system which draws vitality from sets of opposite mental processes whose interaction provides the system’s energy. Opposite mental processes cannot be used at the same time because they are diametrically different. If we tried to use two opposing processes at the same time, a blockage would prevent either process from being effective. According to both Jung and Myers, adequate differentiation is a necessity for type development. In order for a person to function effectively, the opposites must be clearly distinguishable from each other (Quenk, 1993).

A clear distinction between each pair of opposites and the development of one preference over its opposite is not the only differentiation Jung identified. Vital to
type dynamics is the notion of different levels of consciousness characterising the functions, with one of the four functions for the most part completely conscious, and one, for the most part completely unconscious.

Myers (1980), maintains that the dynamic nature of these processes provide a model for the development of individual differences over the life span. She concluded that good type development requires adequate, but not equal development of a judging process and a perceptive process, one of which predominates. Further, adequate but not equal, is a facility in using both the extraverted and introverted attitudes, with one predominating.

When both of the above are met the person’s type development is well balanced. In type theory balance does not refer to equality of two processes or of two attitudes; instead it means superior skill in one, supplemented by a supportive but not competitive skill in the other (Quenk, 1993).

Jung saw the *differentiation of opposites* as critical to consciousness. Consciousness increases as we successfully differentiate opposites. Differentiated functions and attitudes focus a person’s intentions and direction. Psychological type theory assumes a hierarchy of consciousness among the functions. One function will become more or less successfully differentiated, the *superior* function, which is capable of conscious direction at the top of the ladder. This will become the dominant function and together with extraversion or introversion a type of conscious attitude will ensue. The unconscious function, the *inferior* function, which is at the bottom end of the hierarchy, is, as Jung puts it “inaccessible to our will” (Jung, 1959, p.238). In between is a function somewhat less differentiated than the
dominant function, the *auxiliary* function which is partially differentiated, and never attains the same degree of differentiation as the main function. The *tertiary* function is somewhat more differentiated than the unconscious inferior function.

Within typology's system of opposites, it is the flow of psychic energy between and among the functions that provides its dynamic characteristic (Quenk, 1993; Myers, 1980).

### 3.6.1 The Role of the Dominant Function

Type theory assumes everyone uses sensing, intuition, thinking and feeling, but one of these will be the most preferred or dominant function.

The dominant process has been likened to a ship's captain who sets the course so that he may bring his ship safely to the desired port. Similarly people need some governing force in their make-up. They need to develop their best process to the point where it dominates and unifies their lives and provides consistency of general direction in life (Myers & Myers, 1995; McCaulley, 1990).

Individuals use their dominant function primarily in their worlds - the outer world for Extraverts and the inner world for Introverts. Thus, the dominant function can be expressed in eight distinct ways, which correspond to the eight basic mental tools. The dominant function which gives direction to the personality is the mental tool people rely on most. When a final decision needs to be made, it will generally be one that is congruent with the dominant function (Myers & Kirby, 1994).
Myers and Myers (1995), cite the example of an ENT who finds intuition more interesting than thinking, will naturally give intuition the right of way and subordinate thinking to it. Their intuition acquires an unquestioned personal validity that no other process can approach. They will enjoy, use and trust it most. Their lives will be so shaped as to give maximum freedom for the pursuit of intuitive goals. Because intuition is a perceptive process, the ENT will deal with the world in the perceptive attitude, which makes him/her an ENTP.

The phenomenon of the dominant process overshadowing the other processes and shaping personality accordingly, was empirically noted by Jung in the course of his work and became, along with the extraversion-introversion preference, the basis of his book *Psychological Types* (Myers & Myers, 1995).

Some people dislike the idea of a dominant process and prefer to think of themselves as using all four processes equally. However, Jung holds that such impartiality, where it actually exists, keeps all of the processes relatively undeveloped and produces a “primitive mentality,” because opposite ways of doing the same thing interfere with each other if neither have priority (Myers & Myers, 1995).

### 3.6.2. The Role of the Auxiliary Function

A basic, and very important principle of the auxiliary process is to provide balance. For people to be balanced, they need adequate (but not equal) development of the auxiliary process. Balance is provided in two ways. Firstly, if the dominant function is a perceiving one (Sensing or Intuition), then the auxiliary will be a
judging function (Thinking or Feeling). Likewise, if the dominant function is a judging one, then the auxiliary will be a perceiving function. Secondly, if the dominant function is extraverted then the auxiliary will be introverted, and vice versa, thus creating balance between the inner and outer worlds (McCaulley, 1990; Myers & Myers, 1995).

This mental structure ensures that people have reliable ways of taking in information and arriving at decisions, as well as trustworthy ways to interact with both the external and internal worlds (Myers & Kirby, 1994).

For all types, the dominant process becomes deeply absorbed in the world that interests them most. It is also the world that is most important to them, it is where they can do their best work and function at their best level. If the dominant process becomes deeply involved in less important matters, the main business of life will suffer. In general, therefore, the less important matters are left to the auxiliary process. The auxiliary function is easily available to consciousness when an individual needs to make use of a complementary function. In case of conflict, however, it is the dominant function that will generally win out (Myers & Myers, 1995; Myers & Kirby, 1994; Spoto, 1995).

For extraverts, the dominant process is concerned with the outer world of people and things, and the auxiliary process has to look after their inner lives, without which the extraverts would be extreme in their extraversion.

Introverts have little choice about participating in both worlds. The outer life is thrust upon them whether they want it or not. Their dominant process is engrossed
with the inner world of ideas and the auxiliary process gives them a means to adapt to the world of action and to deal with it effectively. The success of introverts’ contact with the outer world depends on the effectiveness of their auxiliary. If their auxiliary function is not adequately developed, their outer lives will be very awkward, accidental, and uncomfortable (Myers & Myers, 1995).

3.6.3 The Tertiary Function

The tertiary function is described as the opposite of the auxiliary function, but is not one of the preferred functions. The attitude (extraverted or introverted orientation) in which the tertiary function is normally used seems to be less consistent than the attitude of the other three functions. It is not included in the four type letter. It is poorly differentiated and is associated with the unconscious (Myers & Kirby, 1994).

The tertiary function influences the expression of the inferior and thus provides additional predictive and explanatory information. This is apparent in comparing manifestations of the inferior in people who have opposite auxiliary (and therefore tertiary) functions. For example, an ENFP’s inferior sensing may emerge as obsessiveness about something someone said to her at work, but if combined with her tertiary thinking, might cause her to reach illogical conclusions that she will therefore not receive a desired promotion (Quenk, 1993).

3.6.4. The Inferior Function

The inferior function is the opposite of the dominant function, it receives the least energy and attention and therefore is the least developed. According to Jungian
theory, the inferior function is the primary connection to the unconscious and the most difficult to use in one’s conscious life (Myers & Kirby, 1994).

We are all capable of using our tertiary and inferior functions when a particular task requires them. When our least preferred process is being used consciously, we might best think of it as our *fourth* or *least preferred function*. When this process is engaged unconsciously and operates outside our control, it serves as our *inferior* function.

Jung described the inferior function as follows:

“The inferior function is always associated with an archaic personality in ourselves; in the inferior function we are primitives. In our differentiated functions we are all civilized and we are supposed to have free will; but there is no such thing as free will when it comes to the inferior function. There we have an open wound, or at least an open door through which anything might enter” (Quenk, 1993, p. 20).

However, it is possible to become comfortable and skillful in using our least preferred functions. The more our life situations call for it, the easier this is and the more effective we become at using them, especially if less preferred functions serve the goals of our preferred ones. However, no matter how experienced, skilled and comfortable we may be in the *conscious* use of the least preferred function, this *does not seem to alter its eruptions as an inferior function*. So, given the right preconditions that make us vulnerable to being “taken over by the other side,” we will likely fall into our inferior modes or into the grip of our hidden personality.
The transfer of energy from the more conscious and developed functions to the relatively unconscious inferior function is likely to occur under such circumstances as fatigue, illness, stress, the intake of alcohol or other mind-altering drugs which lowers one’s level of consciousness. Under such circumstances the individual may exhibit the following predictable features which are characteristic expressions of the inferior function.

a) **Tunnel vision** is what makes whatever is being experienced real and believable. When we focus on a limited piece of reality, what we perceive or conclude may certainly be true, logical, valid and real. But it’s impact is likely to be out of proportion because all the information that lies outside the tunnel is not available to us. This larger body of data or thought usually tempers the perception or judgment made within the tunnel. The issue on which we focus when in the grip may appropriately be seen as trivial or without substance when viewed in a broader context.

b) **Loss of sense of humour.** All types generally report losing their sense of humour when in the grip of their inferior. To see anything humourous in our exaggerated, atypical behaviour, we would have to be standing outside of it.

c) **All-or-none statements.** The unconscious has a black-and-white notion of the world. It is non discriminating; the shades of grey characteristic of conscious and differentiated psychological functioning are absent. When someone starts making categorical statements, all-or-none statements, chances are statements come from the person’s unconscious.
Jung (1976b, in Myers 1980), believed that it was not possible to differentiate all four functions as this would render perfect people who would be God-like. The auxiliary and tertiary functions could achieve some degree of differentiation, but it is necessary that the inferior function remain outside conscious control. It is through the inferior function, which is the weakest, that we remain connected to the unconscious. In this form it is able to provide access to the vital contents of the unconscious (which Jung refers to as the lower world of instincts), the source of growth and development of the personality.

Myers (1980), however, expresses a more positive approach to the inferior function. With her primary focus on conscious adaptation through type development she seemed to describe the possibility of increasing the degree of conscious control over one’s functions and of learning to call them into play at will. Myers (1980), pays attention to the ability of the inferior function to play a complementary role in the personality as opposed to the compensatory role as described by Jung. She likens the inferior function to the youngest member of a family. Whilst the differentiated functions are developing, the inferior functions are somewhat neglected and therefore immature. “Given the opportunity to express itself as one would give a child, it will learn to use its gifts and grow steadily wiser and the quality of its contribution will steadily improve” (Myers, 1980, p. 202).

If it were possible to make the unconscious inferior conscious, its compensatory role as a safety valve for the psyche would be eliminated. When we are too comfortable and secure in our conscious approach, when we believe that we are fully defined by our dominant and auxiliary processes, or when we are excessive or one-sided in any way, we risk overconfidence, rigidity and stagnation. We need to uncover new
information about ourselves and find a different perspective. This perspective may be waiting access through the inferior function. For example the inferior function may reveal itself in some forceful way, such as a projection of some deeper buried anger or hurt, onto another. Such inappropriate behaviour forces the individual to stand back and take stock of the situation (Quenk, 1993).

The inferior serves as a signaling device in the psyche, warning that something important is out of alignment, in need of attention, or is being misperceived. It helps reorient us and provides alternative points of view. And it does so in such a forceful and dramatic manner that it cannot be ignored, dismissed or permanently transferred to someone else.

A major consequence of being in the grip of the inferior function is a loss of confidence in what is familiar, valued or taken for granted. The “flip” into the opposite has shock value - it makes us take a different look at ourselves and acknowledge things previously ignored or rejected. The inferior function experience thus expands consciousness in an adaptive manner (Quenk, 1993).

3.7 Identifying Type Dynamics

The letter combination and sequence of these letters determine the dynamic relationship within each of the sixteen four-letter MBTI® types.

The first letter designates a person’s preferred attitude or orientation of energy which is either extraversion (E) or introversion (I).
The second letter identifies how a person typically gathers information, their preferred perceiving, which is either sensing (S) or intuition (N).

The third letter gives a person’s preferred judging function, which is either thinking (T) or feeling (F).

The fourth letter in a person’s type is the judging (J) or perceiving (P) index or attitude toward the outer world. We must remember that J points to a person’s preferred judging function shown in the third letter of a person’s type (T or F), while P points to a person’s preferred function shown in the second letter of a type (S or N).

3.8 Determining the Hierachy of Type

The four-letter MBTI® type not only suggests one’s preference, it also is hierarchically arranged in terms of the order that the mental functions will develop. In any given type one needs to first look at the last letter of the four-letter type, which will either be a J or a P and this points to the basic mental tool that this type uses in the external world.

- If the last letter is J, that type uses its preferred judging function (Thinking or Feeling) to organize the external environment, liking closure, clarity and structure.
- If the last letter is P, that type uses its preferred perceiving function (Sensing or Intuition) to remain open to experience in the external environment, liking flexibility and spontaneity.
Types direct their dominant function toward the world in which they feel most comfortable and are most adept. Thus, types that prefer extraversion (the four-letter types beginning with E) use their dominant function most often to the external world; types that prefer Introversion (the types beginning with I) will use their dominant function primarily internally.

Since JP points to the function used in the external world, this will be the dominant function for those who prefer Extraversion, but will be the auxiliary function for those who prefer Introversion. Types starting with the letter “I” have as the dominant function the other middle letter of their type, the function that is used internally. For example an INFJ has feeling as the most overt aspect of their personalities as it is how they deal with the external world. This is, however, the auxiliary function. The dominant function is the introverted Intuition, which is the most trusted and is not visible to others. The tertiary function is opposite to the auxiliary function which would therefore be extraverted to introverted Thinking. Finally, the inferior function which is opposite to the dominant function will be extraverted Sensing.

An ENFJ, on the other hand, has J as the last letter and therefore has a preferred judging function, namely, Feeling. This is used in the external world and is the dominant function. The auxiliary function is Intuition. It is used internally and therefore is introverted providing balance between Extraversion and Introversion and is a reliable way of perceiving. The tertiary function which is opposite to the auxiliary function will be Sensing, the inferior function which is opposite to the dominant function will be extraverted thinking.
One is able to see how each type has an important function that is not shown to the outer world. The dynamics of the four mental functions differ in each type even if two types share common symbols. For example, both ISTJ and ISFJ types are both dominant introverted sensing types that internally select and store a wealth of personally relevant data. A difference develops, however, because of their auxiliary function. ISTJ’s (auxiliary extraverted thinking) typically select and store information about what has actually happened within their environment. ISFJ’s (auxiliary extraverted feeling), on the other hand, tend to store specific information about people who are important to them, their likes, dislikes, facial expressions, body language and vocal tones.

Further, those who extravert a function use it quite differently to those who introvert the same function. For example, ISTJ’s and ESTP’s are very different from each other, though they share the same dominant Sensing function and auxiliary Thinking. Each of these types use their dominant and auxiliary function in opposite attitudes (Myers & Kirby, 1997).

When scoring the MBTI® a numerical value is given to the symbols of each type. These scores give emphasis to the preference that the individual has shown. Too often it is assumed that the larger score implies excellence. It is not true to say that a person with a score of N47 has a better command of intuition than a person with an N19 score. The larger score simply means that the respondent, when forced to choose, is more clear about what he or she prefers. Scores were designed to show the direction of preference, not its intensity.

Scores can sometimes provide information on:
a) the likelihood that the preference has been correctly reported, and
b) the importance of the preference to the respondent (Van Rooyen & De Beer, 1995).

3.9 Type Development

Jung viewed individual development as a lifelong process. This process, together with type dynamics, provides a strong counterargument to the criticism that it 'puts people into boxes' (Bayne, 1997, p. 77). Jung believed that human beings have an innate urge toward growth and have within themselves everything they need to become effective, healthy people. Within his model, psychological type is viewed as the compass direction of this growth, suggesting the probable course of development for each type. Isabel Myers called this the "16 paths to excellence" (Myers & Kirby, 1994, p. 18).

Youth is the time of specialization and energy is devoted to developing the preferred dominant functions and their behaviour reflects this, e.g. an introverted feeling child will be a quiet observer, with a seemingly instinctive sense of other’s feelings; an extroverted intuitive child will be actively exploring the variety of the surrounding world. Children develop skills in their dominant function and trust in using them well, which enhances their confidence and self-esteem. They also develop some characteristic personality patterns associated with their dominant function.

The focus of energy and attention then shifts to the auxiliary function and the development of skill and trust in it. This development works in a complimentary fashion with the dominant function.
The primary task of type development in the first part of life is to establish the leadership provided by a trustworthy dominant function, balanced by the healthy development of the auxiliary function. The development of these functions give the personality a sufficient degree of consistency, predictability and effectiveness.

Mid-life gives the opportunity to develop the less-preferred function, aspects of the individual’s personality and potential that have yet to be explored. This redirection of energy during the mid-life transition was seen by Jung as the gateway to later life development and satisfaction. The journey toward wholeness seeks individuation - loyalty to one’s own type preference, with increased balance and flexibility to move from one preference to another with ease and skill as the situation demands. It allows the individual to experience new sources of energy and an increased sense of satisfaction (McCaulley, 1990; Myers & Kirby, 1994).

Every individual has the potential to develop his or her type as there is an inherent ability to do so. However, if a true preference is actively discouraged for long enough then a false type develops. Jung referred to this as ‘falsification of type’ (Bayne, 1997, p. 63).

Type development can also be influenced by a variety of factors, some will either support a person’s development whilst others may inhibit it.

- **The influence of Cultural Values and Gender**
In the United States it has been noted that the mainstream culture supports the development of extraverted behaviours and skills. For example, introverted children
who prefer to play alone or engage in private fantasies create concern for both their parents and teacher. A consequence to type development is that introverts often find they have directed more energy and attention toward their extraverted auxiliary function than their introverted dominant function. As a result their extraverted auxiliary function is more developed (Myers & Kirby, 1994).

Social values associated with gender appropriate behaviour can also have an effect on development. This can become particularly troublesome for girls who have a natural preference for Thinking and for boys who have a natural preference for Feeling.

• The Influence of Family
Cultural values and social expectations are initially learnt by the child in the family context. The influences of parents’ expectations, parents and siblings’ type preferences, as well as family roles and values, can influence the child’s ability to use, express, and develop natural type preferences.

Whilst it is noted that extraversion is generally supported, extraverted children growing up in an introverted family may find themselves isolated, disapproved of and discouraged from developing their extraverted function (Myers & Kirby, 1994).

• The Influence of Individual Circumstances
An individual’s developmental course can also be influenced by life choices as well as unexpected life events. Changes in family structures, financial responsibilities, work environments that require skills in a person’s non-preferred area, may all affect and/or delay development of the dominant and auxiliary functions.
• **The Influence of Education**

The educational systems that generally prevail are not organised to support the development of different types forcing many children to work in non-preferred areas in order to succeed in school.

• **When Natural Preferences are not Supported**

Children do what is necessary to survive and receive support. In a normal, non-abusive environment, the failure to receive support for one’s natural preference is unlikely to lead to pathology. However, when a discrepancy exists between how an individual would naturally behave and how he is expected to behave, tension, confusion and self-doubt may result. Long-term negative feedback regarding one’s preferred way of doing things can devastate one’s confidence. In some cases this may lead to resentment and bitterness and such persons will not give up their preference, but instead an exaggerated dominant function may also develop, resulting in lack of flexibility and confidence in using their dominant function.

Developing trust, confidence and flexibility in the use of a particular mental function requires not only the opportunity to use and feel comfortable with it, but also to receive appropriate feedback from others when the function is expressed. Ideally, the environment will support a person’s innate preferences and also provide opportunities to experiment with and develop other aspects of that individual’s personality (Myers & Kirby, 1994).
3.10 Test Administration and Scoring

The MBTI® was designed for "normal" people and is focused specifically to identify Jung's attitudes and functions (Van Rooyen & De Beer, 1995). The following MBTI® measuring instruments are available:

- **Form F**
  This consists of 166 items and is the final version of the original research done by Katherine Briggs and Isabel Myers. This is also the first MBTI® version assessed by Educational Testing Services of the USA and subsequently published and distributed by Consulting Psychologist Press (CPP). The Form F is generally used for research purposes. Scoring is done by using a mask.

- **Form G**
  This is the standard form and consists of 126 items. Of these items 94 are scored to determine an individual's behavioural preferences and a further 32 questions are used for research. The Form G was developed for speedier completion where time restrictions are experienced. It is the most used of all the forms and is scored using a mask.

- **Form G (Self scorable)**
  This form contains 94 items through which a client's preference can be determined. It is of particular value in a one-to-one feedback session and workshops where there is less opportunity to score the MBTI ahead of time. This form consists of 94 scored items, omitting the 32 research items and it allows for instant scoring and interpretation.
• **Form K: Expanded Analysis Report (EAR)**

The Form K consists of 131 items. There are 20 sub scales allowing a counselor to explore how the client compares to others of his or her type, age and gender. This form also provides a Polarity Index.

The Polarity Index is a measure of consistency. The EAR provides an estimate of the consistency observed within each profile, rather than within a group of profiles. It tells how consistently the person’s responses to the EAR questions tended to fall at one end or the other end of the subscales of the E-I, S-N, T-F, and J-P preferences. A profile with a high Polarity Index shows that the respondent has consistently answered on the same subscale. A profile that tends to the midrange does not mean inconsistency but rather other factors may need to be considered e.g. random answering, did not understand the question, did not want to co-operate, etc. (Kummerow & Quenk, 1992).

• **Form J: Type Differentiation Indicator (TDI)**

Form F is being phased out by Form J which consists of 290 items, which includes all Form F and G questions plus all type-related and research questions used by Isabel Myers during the development of the MBTI®. It compliments the EAR by providing an analysis on 7 comfort scales indicating a client’s readiness for counseling.

Both Form K and J can only be scored with appropriate hardware (Van Rooyen & De Beer 1995; McCaulley, 1990).
The MBTI® is essentially self-administering. Instructions appear on the question booklet and instruction sheets. Procedures for individuals and groups follow standard professional and ethical practice.

The MBTI® is scored for four indices - EI, SN, TF, and JP. Each answer to each item is weighted 0, 1 or 2; weights take into account the popularity of the item, social desirability, omissions and sex differences. The first step in scoring is to sum the weights for each pole of each preference. These 8 raw score totals are called points. Letters are assigned for the pole with the highest number of points (Example: 15 points for E and 9 points for I would indicate a preference for Extraversion). A linear formula transforms the points to a preference score which takes into account the difference and direction of the two poles, and allows for breaking ties. The four preference scores are the important MBTI® scores; each consists of a letter and a number (e.g., E11, T29 etc.): the greater the difference in points between one pole and the other, the higher the preference score. Thus, the letters indicate the direction of the preference, the number indicates the strength of the preference (McCaulley, 1990; Van Rooyen & De Beer, 1995).

MBTI® theory assumes a dichotomy for each preference; thus, data are displayed on either side of a midpoint as E 19 on the one side or I 119 on the other. For research purposes, the convention is to treat the dichotomies as if there were an underlying continuum; the midpoint is set at 100 and scores are subtracted from 100 for preferences E,S,T, or J; preferences are added to 100 for preferences I,N,F and P. Thus a preference score of E 19 would appear as 81, and a preferences score of I 19 as 119 (McCaulley, 1990).
In interpreting the MBTI® results, counselors endeavor to identify the client's best-fit preferences and best-fit type. However, true preferences may have been affected through earlier life events and development which may increase the possibility of falsification. The client may even express doubts regarding his or her type and the counselor needs to take this seriously especially if the client has also been tested during a time of emotional distress (McCaulley, 1990).

Some cautionary remarks also need to be made. Type theory, whilst powerful, is not infallible. The MBTI® too often is seen as simple and counselors need to be alert to the danger of a client putting too much weight on the type and type description. It is easy for the client, and the counselor, to assume that a clear preference necessarily means high skill. If people are clear about preferences, they will be more likely to follow them and develop those skills. Factors such as lack of opportunity, competing pressures, and lack of ability can all cause a discrepancy between preferences and acquisition of the abilities of those preferences.

The validity of the MBTI® is increased by the respondent's motivation to answer honestly. The counselor needs to be alerted to environmental pressures that interfere with true responses. Such pressures are often found in organizational settings where respondents are not sure what use will be made of the information and may be motivated to answer according to what they think is the "correct" answer (McCaulley, 1990).
3.11 The MBTI® and Career Guidance

With type and Career choice, people tend to be attracted to, and have the most satisfaction in, careers that provide them with the opportunity to express and use their preferences. The combination of perception and judgment will to a large extent determine the kind of work that one will enjoy most. If perception is what comes more naturally to the individual then work that requires more perception will be better handled by such an individual. It will also be more satisfying and energizing. The type of decision making that comes more naturally to the individual, i.e. thinking or feeling, is an important consideration in the type of career choice made, as this will enhance the individual’s confidence. A further determining factor is that of the EI preference. For example, ISTJ’s like to organise facts and principles which is useful in a career such as law. On the other hand, ESTJ’s like to organise the environment (people and objects) which is useful in careers such as industry and business. Thus, whilst it is one’s natural preferences that will determine to a large extent career choice, one needs to also consider other factors when making career decisions as all types can make a contribution in every career field (Myers, 1993).

Sharf (1992) maintains that if one were to put the Myers-Briggs type system within the context of career development one should think of it as a trait and factor theory. According to trait and factor theory matching an individual’s style of judging and perceiving with the styles of judging and perceiving used by people employed in certain careers can assist an individual in finding an appropriate work environment.
Parsons maintained that to select a career an individual should have 'a clear understanding of one’s aptitude, achievements, interests, values and personality'. Whilst Myers-Briggs theory is used by career counselors for the purpose of assisting clients with career choice, rarely is the theory used without assessment of aptitudes, achievements or interests as well (Sharf, 1992).

In the MBTI® manual (Myers & McCaulley, 1995) there are listings of environments (or occupations) in which various types of people work. This information, along with knowledge of a persons’ type, enables the counselor to help a client with career selection by 'integrating information about self and the world of work' (Sharf, 1992).

Bayne (1997) acknowledges the relationship to type and choice of occupation but maintains that some occupations, e.g. good management, is not limited to any particular type as it is the style and type development that matters. Further, he maintains that whilst type theory is useful in selection, the MBTI® per se is not.

Consuelo Arbona form the University of Houston on her article 'Career Theory and Practice in a Multicultural Context' cited in Savickas & Walsh (1996), discusses the relationship between theory, research and practice. She advocates three assumptions. One, theory and research can guide practice in a number of ways. Theory contributes to practice by providing a framework from which counselors may derive a working hypothesis about clients’ issues. The second assumption is that theory, research and practice is one of reciprocal determinism. The third assumption is that to be effective, career counselors need to know more than the career theory and intervention-related research. To be of assistance to clients who
are exploring careers, counselors need to have current knowledge of the labour market and understanding the relationship between training and specific occupations.

In her observation of Hispanic children (an ethnic minority), Arbona found that career theories were useful for career guidance of middle class clients of average academic achievement. However, for those with limited access to educational resources, career theories need to be expanded to examine experiences unique to the lives and career development experiences of these groups, such as ethnic and racial identity (Savickas & Walsh, 1996).

3.12 Criticisms of the MBTI®

"Type and MBTI results are an insult to individuality"

This criticism cited in Baynes (1997), defends the complexities and richness of human personality. It argues that individuals are put into boxes, labels and stereotypes.

The counter argument is that the MBTI® results do not try to capture individuality, rather they offer a framework which helps people move towards appreciating individuality. What type does is suggest four of the most important ways in which personalities differ. People are much more complicated than type, but generalisations are made in order understand, think, and communicate.
It is acknowledged that type carries the risk of stereotyping. Categories are, however, inevitable and because of the respect for individuality it involves finding the best categories and using them flexibly, tentatively and with respect. The categories are not the person. The preferences and types are reference points, not pigeon holes, and can be experienced as very liberating.

"Behaviour is different in different situations"

People are flexible, not rigid automatons and have a rich repertoire of selves to choose from. Part of being human is choosing which self to be in each situation. The MBTI® is therefore pointless in such descriptions as ‘extravert’, as behaviour is not consistent in different situations (Bayne, 1997).

The reply to this criticism is that most people behave as though personalities exist. People choose friends, partners etc. because of certain recognizable behaviour patterns that are generally consistent.

The personality versus situation controversy has after an enormous amount of research been resolved. There is now consensus that particular behaviours are consistent over time. Further, different behaviours tend to cluster together, e.g. Small et al., (1983), found in a study of adolescents a strong relationship between different ways of being helpful. Finally, situations do have an effect. For example when someone is described as being calm, it means ‘tends to be and behave more calmly than most people’.
The broader the trait theory, the less useful it is for predicting a specific behaviour, but the more manageable it is. Bayne (1997), compares this to the distinctions between plant and animal. Preferences are a broader kind of concept than traits; they underlie clusters of traits and thus colour many aspects of each person’s life. By knowing a person’s preference (in the MBTI®), much of their experience and behaviour can be predicted most of the time.

The relationship between situations and personality have further been clarified, e.g. people seek out situations which are compatible with their personalities and actively avoid those which are not.

Kerrick and Funder (1988) provide an overview regarding the personality versus situation debate. Based on their view of research they maintain that accurate judgment of personality (and therefore accurate predictions of a person’s behaviour throughout their life) are more likely if made by someone who knows the person well, if they’re based on several sets of observations by several people and the observations are of behaviours which can be observed and which are relevant to the quality being judged (Bayne, 1997).

Conversely, accuracy is more difficult to achieve in constrained situations like funerals and job interviews, or when a single behaviour is the basis for a prediction.

However, one must not underemphasise the power of situations. Whilst behaviour does vary according to situation (or people would be rigid and robot like), we are the same person in these those situations with recognizable patterns and themes of experience or behaviour (or we would be depersonalized and empty) (Bayne, 1997).
"The descriptions are too vague and general"

The idea regarding type is that descriptions are sufficiently general for most people to see themselves in most or at least several of the descriptions.

The counter argument to this criticism is based on studies of vague personality descriptions (taken from a news-stand astrology book), called Barnum statements. Research on Barnum statements was done by Forer (1949) (in Bayne, 1997) using an experimental design.

Furnham and Schofield (1987), (in Bayne, 1997) found that most of the subjects who participated in the research regarding Barnum statements, noted the statements as accurate and the test personality given as effective.

One interpretation of this clear and consistent finding is that people are gullible about their own personalities. An alternative finding is that the statements are accurate, though in a general sense only. Either way when trying to distinguish one person from another they are inadequate. Further, this type of test may falsely increase the confidence of judgments made about self and others. The question that arises is whether the MBTI® has Barnum statements that may skew the results. Apparently there are insufficient which would deter adequate descriptions of type being differentially valid (Bayne, 1997).
“The MBTI® Report Form descriptions are too positive”

The argument is that the statements are both positive and flattering and people are inclined to agree with them for this reason rather than because they are accurate.

The response to this criticism is that the descriptions are not meant to capture the whole of the personality but rather some broad themes. Further, there are some ‘twists’ in some type descriptions so they are not always positive. Finally, the positive quality of the Report Form descriptions is valuable, unthreatening and has a constructive effect when dealing with oneself - a sensitive issue. Studies carried out (Carskadon, 1982; Carskadon & Cook, 1982 as in Pritchard 1994) have shown that the descriptions are accurate and their positive tone is not a problem.

“The descriptions miss out important aspects of Jung’s theory”

Spoto (1989; 1993, in Spoto 1989), based his argument on the assumption that the unconscious has a great deal more influence than is recognised. Based on Jung’s concept of the ‘extraversion-introversion’ polarity he argues that Jung did not mean simply extraverting or introverting but that it is the balance between the conscious and unconscious which affects how a person behaves. For example, an extravert will be introverted at the unconscious level and how that person behaves will be affected by the unconscious introvert as much as the conscious extravert. Therefore, Spoto (1989), concludes that the unconscious is constantly a factor and condition of the individual’s psychological type; it is therefore more difficult to determine one’s psychological type.
The counter argument presented by Bayne (1997), is that in practice, observing type is fairly accurate which infers that the unconscious is less influential than Spoto (1989), thinks. It is therefore possible to work well with type without revering the unconscious. Much research has been carried out on the MBTI® by Thorne and Gough (1991 in Bayne, 1997), yielding evidence of the validity of MBTI®.

Further, the controversy is about the relative importance of the unconscious and conscious motives in the personality. Allport’s view (1961a, p. 224) is that neurotic behaviour is often due to unconscious motives and conflict, but that most people are relatively well integrated and balanced and therefore mainly influenced by conscious purposes. Freud emphasised the use of defence mechanisms, normal persons however, are likely to use them sparingly and generally with self-insight and corrective measures (Bayne, 1997).

Finally, Allport (1961a, in Bayne, 1997), discusses the idea of ‘the mature personality’ as being one who has an accurate perception of the world and of one’s self. Key questions that arise against Spoto’s (1989), criticism of the MBTI®: (a) Are most people largely unaware of their real motives, driven primarily by a dynamic unconscious? or b) Are people relatively self-aware? Bayne argues for point (b) and therefore also Myers theory of type as outlined in Bayne (1997).
“Personality questionnaires only measure how people answer questionnaires, not how they actually behave in real life”

Bayne (1997), cites this criticism which can be interpreted in two ways: personality questionnaires are too simple, or, they are easy to fake.

The reply to this criticism is that personality questionnaires can be interpreted as indications or estimates of what the person is really like, or of the person’s self-concept, or as self presentations.

In practice it has been noted that that the major personality questionnaires work fairly well as measures of what the person is really like. Even in situations where faking would be rewarded, people tend not to fake. Costa and McCrae’s (1992), measure of the Big Five factors uses self-report for several reasons: (a) there is substantial evidence that self-reports are trustworthy, e.g. other people agree with them, (b) subtle items are less valid in practice, (c) they do not regard the use of measures ‘designed to outwit or entrap the respondent’ (p.8) as contributing to trust and rapport. They recognise that self-reports are not trustworthy sometimes - but that was a major reason for developing an observer form of the measure. Like Kernick and Funder (1988), they recommend obtaining ratings from knowledgeable informants, e.g. spouses, parents, when it seem appropriate (Bayne, 1997).
"What the number part of MBTI® results measures is at best confused and unclear" Bayne (1997, p. 90).

It is acknowledged that this is a complicated issue. The MBTI® Manual (Myers and McCaulley, 1985) is unclear about it and some of the main research studies interpret the number results wrongly.

The number results only measure how clearly the person has voted; they do not measure how much of the preference someone has, how good they are at it, or type development.

Bayne (1997), cites the example of MBTI® results for Thinking versus Feeling. If Person A has a result of T35 F3 and Person B has T3 F35, on the ‘clarity of vote’ interpretation it cannot be said with any validity that A is more highly developed in thinking than B. Nor can it be said that A is more highly developed in thinking than in feeling.

There is a problem though; the number results do make a difference to behaviour. This is illustrated by the relationships between MBTI® results expressed as continuous rather than types and other personality dimensions, e.g. the Big Five. One source of confusion is that ‘high’ results are described as ‘clear’ and ‘strong’. This implies ‘vague’ and ‘weak’ for low number results and detracts from the MBTI’s® positive and unthreatening tone. A second source of confusion which is presented in the manual is whilst the numerical value shows direction of preference, not its intensity, the manual also states that the characteristics associated with a
preference are often less apparent when the numerical portion of the preference is low.

Further the manual states that when comparing scores of the dominant and auxiliary functions, the dominant will show a clearer preference than will the auxiliary (p.58). Yet the data quoted in the manual (p.58) show clearly that dominants have a higher number score only about half the time.

McCrae and Costa (1989), replicated the finding that the dominant functions do not have higher number scores than the auxiliaries and interpret it as evidence against the MBTI® as a measure of dominant and auxiliary functions and against the idea that these are useful concepts. This is of course correct if the number scores measure development, but not if they measure clarity of vote.

Bayne (1997), concludes that it is necessary to distinguish between (1) behaving more in the way indicated by the number part of the result rather than (2) behaving in more developed and skillful ways. The number does measure (1) more than (2). Bayne (1997), resorts to ignoring the numbers for most purposes.

"The MBTI® is unnecessary and just a racket for making money. The descriptions are sufficient on their own"

This criticism cited in Bayne (1997), accuses the MBTI of being more complicated than necessary.
Bayne’s (1997), response, taken from experience and research, is that in practice, people actually are more accurate, more quickly, about their types when they start from an MBTI® result than from the Report Form or other descriptions. There are too many types to hold in mind and people are generally better at seeing consistencies in other people whom they know quite well than in themselves.

An interview with a skilled interviewer who is also knowledgeable about type would probably end up with the same result as the MBTI® but at much greater expense. Similarly, a person’s behaviour could be observed for a few days, preferably in a wide range of situations, this would also be costly.

“Type is like astrology”

Type is like astrology in some respects, but not on current evidence, in the most important ones of rationale and validity. The aims of the two theories and measures are the same and both have largely positive, constructive tone and a flexible, complicated view of personality. Both are also misrepresented on occasion. Descriptions based on astrology are often individual, not just Barnum-like. Of the several thousand studies done on astrology, none have produced good evidence of any accuracy about individual personalities (Bayne, 1997).

3.13 Chapter Review

This chapter began with a biography of Katherine Briggs and Isabel Briggs Myers, the mother-daughter team after whom the MBTI® is named. This was followed by a detailed account of the origin, aim and development of the MBTI®. The
different forms of the MBTI® measuring instruments were discussed and the administration and scoring thereof. A brief view of the role of the MBTI® in career guidance is given and finally some criticisms levelled at the MBTI® are discussed.

In the next chapter the Theory of Careers as depicted by John Holland will be examined.
Chapter 4

John Holland’s Theory of Careers

4.0 Introduction

Holland’s theory is a practical model of person-environment fit. The primary concern of Holland’s theory is to explain vocational behaviour and to suggest some practical ideas to help people select jobs, change jobs and attain vocational satisfaction. He attempts to explain the personal and environmental characteristics related to stability and career change. His aim was to provide “simple, inexpensive, practical definitions and measures” (Holland, 1985a, p.7). He describes the nature or disposition of the individual worker using six personality/interest types. He also classifies the nature of the work environments in which those individuals function using a parallel set of constructs. The interaction of certain types with specific environments predict and explain the behaviour and interactions that occur in those environments (Weinrach & Srebalus as in Savickas & Walsh, 1996; Holland, 1997).

4.1 Biographical Background

John L. Holland developed an interest in the theory of careers during his military days as an induction interviewer between 1942 and 1946. He hypothesised at that stage that people could be categorised in terms of interest into a relatively small number of types. Thus the idea of a typology resulted from the frequent observations that several broad classes account for most human interests, traits and behaviours. Holland’s experience as counselor to students at Case Western Reserve
University and his work with psychiatric patients at the Perry Point, Maryland, Veterans Administration Hospital, reinforced his hypothesis.

Holland, like most practitioners at the time, used the popular Strong Vocational Interest Blank (SVIB) and the Kuder Vocational Preference Record. He formulated the Vocational Preference Inventory (VPI) as a result of reviewing more than 30 SVIB scales. He developed the notion of assessing environment components from reading the work of Murray (1938) and Linton (1945), who suggested that a major portion of the environment is transmitted through other people. Based on Linton's idea Holland developed his typology, of which the underlying assumption stated that by calculating the distribution of types in an environment, the environment will be known. This hypothesis led to the development of the Environmental Assessment Technique (EAT; Asstn & Holland, 1961 as stated by Weinrach & Srebalus in Savickas, 1996), which was first used to describe college environments.

Whilst Holland's original theory has undergone a series of major and minor revisions, the basic theory, i.e. a typology of persons and work environment, remained constant. Holland credited many individuals for their contribution to his work, for the development of new concepts and reformulation of the relationship among concepts which further clarified and expanded his theory (Spokane as in Brown et al., 1990).

Holland and others have carefully operationalised the theory's important constructs through the development of devices that have practical as well as theoretical value. They include the Vocational Preference Inventory (VPI) (Holland, 1985b in Savickas 1996), the Self-Directed Search (SDS) (Holland, 1985c in Savickas
1996), My Vocational Situation (MVS), and the Vocational and Exploration and Insight Kit (VEIK). A major achievement has been the translation of the *Dictionary of Occupational Titles* into the *Dictionary of Holland Occupational Codes* (Savickas, 1996).

Holland's theory of careers (1973a; 1985a as discussed by Spokane in Brown et al., 1990), assumes that vocational interests or career choice represents an extension of one's personality. It also assumes that people project their views of themselves and the world of work onto occupational titles. By allowing individuals to express their preference for, or feelings against, a particular list of occupation titles, Holland assigns people to modal personal styles which have theoretical implications for personality and vocational choice (Spokane in Brown et al., 1990; Osipow, 1973).

Holland's theory is regarded as a major force in applied psychology. In his first presentation of his theory he emphasized the "searching" aspects of person-environment fit. In other words a person making a vocational choice is in a sense searching for situations which will satisfy his/her type and thus enable the individual to exercise his/her skills and natural abilities. The emphasis on person-environment fit is based on the assumption that human behaviour depends both on personality and the specific environment in which a person lives. The choice of an occupation is an expressive act which reflects the person's motivation, knowledge, personality and ability. Occupations represent a way of life, an environment rather than a set of isolated work functions or skills. By completing a Vocational Preference Inventory (VPI) it provides information of the individual's motivation, knowledge of the occupation in question, his insight and understanding of himself and his abilities (Spokane as in Brown et al., 1996; Holland, 1997).
4.2 The Theory

Before discussing the theory it must be noted that Holland has developed the theory on the notion of “other things being equal...”. This refers to characteristics of both person and/or environment such as age, gender, ethnicity, geography, social class, physical assets or liabilities, educational level attained, intelligence and influence (Holland, 1997). In this study it is possible that any one of the variables may have an influence on the development and categorisation of type.

Holland (1997) originally believed that the individual could be characterised as belonging to a single one of the six types and that each individual can therefore be categorized into one of six basic personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. The more one resembles a given type the more one is likely to manifest some of the behaviours and traits associated with that type. In his revisions of the theory, Holland (1973a, 1985a), suggests that whilst one of the six types usually predominates in people, there are also subtypes or personality patterns that provide more complete descriptions. A person’s complete profile would include characteristics of all six types - each individual having a somewhat unique self-description (Brown et al., 1996). An interest type is a theoretical organiser for understanding how individuals differ in their personality, interests and behaviours. Just as there are six types of personalities, there are six types of environments which, like personalities, can be described according to certain attributes or characteristics. The environments in which people live and work, are characterised by the people who occupy them and resemble the six model environments: Realistic, Investigative, Artistic, Social, Enterprising and
Conventional. Having knowledge of the personality type and environment enables one, in the event of combining the two, to make certain predictions and expect certain outcomes regarding vocational choice, vocational stability and achievement, educational choice and achievement, personal competence, social behaviour and susceptibility to influence (Brown et al., 1990; Holland, 1997).

The person-environment fit model also implies some change and adjustment in both people and in the environments in which they work (Holland, 1992; Spokane & Shultheis, in press). The person is perceived as a relatively stable entity (Costa, McCrae & Holland, 1994) who moves in and out of environments rationally only when the perceived fit is no longer optimal (Brown et al., 1996).

4.2.1 Basic Assumptions

Four basic assumptions underlie Holland's theory. They indicate the nature of the personality types and environmental models, how the types and models are determined, and how they interact (Holland, 1997).

1) In our culture, most persons can be categorized as one of six types: Realistic, Investigative, Artistic, Social, Enterprising or Conventional.

Each type is the result of the reciprocal influences of one's own genetic endowment, parents, social and cultural influence, as well as the physical environment. Out of these experiences the individual develops certain preferred activities which in turn lead to strong interests out of which certain competencies will develop. Finally, these preferences, interests and competencies create a particular personal disposition which leads the person to think, perceive and act in a certain way
resulting in a particular type. Each personality type has a particular way of selecting and processing information and as a result certain skills and talents will develop as well as attitudes for coping with environmental problems and tasks. Different types will actively interact with the environment as they seek environments that are fulfilling and avoid those which would be problematic.

By comparing a person's attitudes with those of each model type one can determine which type he or she most resembles. The characteristic most prominent of that type will result in a dominant personality type. However, there will also be resemblances to other types. For example, a person might resemble a Social type most, than an Enterprising type, and then the other types in descending order. The total resemblance to the six types forms a pattern of both similarity as well as dissimilarity resulting in a profile that is both unique and complex.

In viewing this assumption we need to bear in mind that the research sample of this study were predominantly black adolescents who are considered to be from a disadvantaged background. Holland (1997), has based his assumption on the Western culture, specifically in the USA. The development of preferences amongst black South Africans must be viewed in a cultural context as such aspects as cultural norms, values, expectations and prescription for behaviour will play a determining role in the development of type. Further the stage of adolescents has its particular development and identity problems (discussed in Chapter 1) which will further impact on the identification of type.
2) **There are six types of environments: Realistic, Investigative, Artistic, Social, Enterprising or Conventional.**

For the most part, each environment is dominated by individuals of the corresponding personality type. Each environment will also have characteristic physical settings which pose both special problems and opportunities. Thus, Realistic people will dominate Realistic environments, Social people will dominate Social environments, etc.

As different types have different interests, competencies and dispositions, they tend to seek out problems that are congruent with their interests and competencies. They are more likely to surround themselves with people and materials that will satisfy their particular type. People of a particular type congregate to create an environment that reflects the type they most resemble.

3) **People search for environments that will let them exercise their skills and abilities, express their attitudes and values and take on agreeable problems and roles.**

Whilst people of similar type seek out environments that will complement their type, similarly environments search for people through friendships and recruiting practices. The search for a complementary environment is a long process and it occurs in different ways and at different levels of consciousness. The different personality types are an illustration of how, in our culture, people develop and how personal development channels a person’s goals, vocational choices, and mobility.
4) *Behaviour is determined by an interaction between personality and environment.*

Knowledge of a person's personality profile and the pattern of his environment enables one to make predictions of the union between type and environment regarding such issues as career choice, job changes, vocational achievement, personal competence and educational and social achievement (Brown et al., 1990; Holland, 1997).

The four key assumptions are supplemented by several **secondary assumptions** that can be applied to both persons and environments. The secondary concepts serve to moderate or qualify predictions or explanations that are derived from the main concept.

**Consistency**

This concept applies to both personality as well as environment. Some pairs of types have more in common than other pairs, e.g. Realistic and Investigative types have more in common than Conventional and Artistic types. The hexagon is a model for defining the psychological resemblance among personality types and environments as well as their interaction. One of the main functions of the hexagon is to describe the consistency of personality and environment. The closer the types that are present in an individual's personality appear on the hexagon, the more consistent the individual is said to be. For example, the Realistic individual who also shows interests in Investigative activities is more consistent than the Realistic individual who shows interest in social activities as well. Consistency is the degree of relatedness between personality types or between environmental models.
Degrees of consistency or relatedness are assumed to affect vocational preference (Holland, 1997; Savickas et al., 1996).

**Differentiation**
Some people or environments are more clearly defined than others as they show a greater degree of resemblance to a single type and less resemblance to other types. Strong resemblance to a single type is indicative of a high degree of differentiation and are therefore more clearly defined. On the other hand when people or environments show similar or equal resemblance to several types undifferentiation occurs.

**Identity**
Personal identity is defined as the possession of a clear and stable picture of one’s goals, interests and talents. Environmental identity is present when an environment or organization have clearly integrated goals, tasks and rewards that are stable over long time intervals.

Developmentally, however, one notes that at this stage the adolescent is experiencing an identity crisis. This is characterised by confusion, questioning and exploration. He or she is actively experimenting with new roles and identities, in the process of developing an identity (Louw et al., 1998).

**Congruence**
Different types require different environments in order to flourish. Congruence occurs when individuals live or work in an environment whose type is identical or similar to their own type. When congruence is achieved opportunities and rewards
ensue. The hexagon can be used to determine the degree of congruence between an individual’s type and environment. Incongruence has occurred when a personality type lives in an environment that provides opportunities and rewards that are foreign to that person’s preferences and abilities which is likely to result in dissatisfaction.

**Calculus**

The relationship within and between personality types or environments can be ordered according to a hexagonal model in which the distance among the types or environments are inversely proportional to the theoretical relationship between them (Holland, 1997).

**4.2.2 Personality Types**

The six types as described by Holland are drawn from repeated empirical investigations (Osipow, 1973; Holland, 1997).

1) **Realistic** individuals prefer activities that entail the explicit, ordered or systematic manipulation of machinery, tools or animals. They have an aversion to educational or therapeutic activities. These tendencies result in pursuing activities that require manual, mechanical, agricultural or electrical competencies. Generally such persons lack social and educational competencies.

2) **Investigative** people tend to be analytical, curious, methodical and precise. They prefer activities that entail the observational, symbolic, systematic and creative investigation of physical, biological and cultural phenomena. They are aversive to persuasive, social and repetitive activities. They are inclined to the acquisition of
scientific and mathematical competencies and often lack persuasive or leadership skills.

3) **Artistic** individuals tend to be expressive, nonconforming, original and introspective. They prefer ambiguous, free, unsystematized activities that entail the manipulation of physical, verbal or human materials to create art forms or products. They are aversive to explicit, systematic and ordered activities. These preferences lead to the acquisition of artistic competencies, e.g. language, art, music, drama and writing. They usually lack clerical or business skills.

4) **Social** individuals enjoy activities that entail working with and helping others, manipulation of others to inform, train, develop, cure or enlighten. They have an aversion to ordered, systematic activities that involve tools, machines and material. They develop competencies of human relations, e.g. interpersonal and educational. Social types tend to lack mechanical, manual, technical and scientific abilities.

5) **Enterprising** individuals enjoy activities that entail manipulating others to attain organisational goals or economic gain, but they tend to avoid symbolic and systematic activities. Enterprising individuals tend to develop leadership, interpersonal and persuasive competencies. They often lack scientific ability.

6) **Conventional** types enjoy explicit, ordered systematic manipulation of data, filing records or reproducing materials. They tend to avoid artistic, ambiguous, free, exploratory or unsystematized activities. They exhibit good clerical, computational and business system competencies (Holland, 1997).
4.2.2.1 Development of Type

Heredity is considered to be a major contributing factor to the development of type. Holland also identifies intelligence, gender and social class as important influences for the development of personality. These factors together will yield specific interests and competencies which culminate in a disposition or propensity to act in certain predictable ways (Holland, 1992; Brown et al., 1996). To some degree he also believes that types produce types. This is especially so with parental influences which will provide both environmental opportunities as well as limitations which has to do more with parental type rather than parental attitude (Roe, 1956; Roe & Siegleman, 1964 in Brown et al., 1996). For example, Realistic parents will engage in realistic activities, will surround themselves with realistic materials, are more likely to select realistic friends exposing children to a realistic environment and experiences.

Children are also born with a particular biological endowment of physical and psychological potentials. Recent research (Besworth et al., 1994; Lykken, Bouchard, McGue, & Tellegen, 1993; Moloney, Bouchard & Segal, 1991, in Holland 1997) has shown that inheritance has a considerable influence on vocational interests. The findings suggest that inherited interests account for about 36% to 50% of the variance in vocational interests, and the environmental influences account for 50% to 64% of the variance (Holland, 1997).

Holland (1997) provides a simplified account of personality development and therefore human behaviour. A child’s biology and experiences first lead to preferences for some kinds of activities and aversion to others. This leads to long-
term interests from which the person gains both personal satisfaction and rewards. The pursuit of these interests lead to the development of more specialised competencies and to the neglect of other potential competencies. At the same time a person’s differentiation of interests with age is accompanied by a crystallization of correlated values. These events create a characteristic disposition or personality type that is predisposed to exhibit characteristic behaviour and to develop a characteristic personality.

4.2.3 Assessment of Types

Types have been given empirical definitions so that the validity of their formulations can be examined and so that the typology can be applied to everyday problems. Several related methods have been used to assess a person’s resemblance to type (Holland, 1997).

Personality type can be assessed using qualitative methods. A person may express vocational preference for, or hold employment in an occupation that is characteristic of type. He or she may express preferences for or be engaged in educational training that is characteristic of type. Persons are classified into one of the types described by Holland by comparing educational or vocational interests with vocations assumed to be typical of each personality type.

Quantitative methods are also used to assess a person’s resemblance to the types. The scales of the Vocational Preference Inventory (VPI; Holland, 1985b, in Holland, 1997), provide a simple procedure for classifying a person. A person indicates which vocations are appealing and which are not from a list of 84
occupational titles (14 occupations for each of the six scales). The six scales are then scored and profiled. The higher a person’s score on a scale, the greater the resemblance to the type that the scale represents. The highest score represents a person’s personality type; the profile of scores (obtained by ranking the scale from highest to lowest) represents the personality pattern.

The Self-Directed Search (SDS), a career guidance device explicitly derived from the theory and the correlates of the VPI, is another way to determine a person’s resemblance to types. The SDS uses a broad range of content-activities, competencies, occupations and self-ratings - to assess the person’s resemblance to each type (Holland, 1997).

4.2.4 Subtypes or Personality Patterns

Individuals may resemble one, two, or all six of the Holland types, giving each individual a somewhat unique combination. A personality pattern is the profile of resemblances of the personality types. Subtype is the name given to a particular personality pattern. The six scales of the Vocational Preference Inventory are mechanisms used to define a person’s personality pattern. For example, a computer programmer might have a full code of IRCAES. The highest three scores on the type code would be the letters IRC. A summary code or three-letter code is a diagnostic sign used for assessment, intervention, research and clinical use. Each diagnostic sign determines a person’s personality pattern and it’s relationship among types within a subtype, or the relationship between the subtype of an individual and the subtype of the environment that the individual inhabits (Brown et al., 1996; Holland, 1997).
Personality patterns are explained using the secondary concepts (described under 4.2.1). Differentiation, consistency and identity are also considered as assessment of the **tendency field** or the predictability of a person. A person with many competing interests would have a flat, inconsistent profile and a low identity score; thus any theoretical hypotheses derived from his or her profile would only occasionally hold. In contrast, a person with well-defined interests or well-defined tendency fields, would have a consistent and well defined profile and a high identity score; thus the theoretical hypotheses derived from the profile would frequently hold (Holland, 1997).

The Hexagon is a model which graphically describes the relation among types or the psychological resemblances among types. The relations are assumed to be inversely proportional to the distance among types. Each of the six types appears on one point of the hexagon. The shorter the distance between any two types the greater their similarity or psychological resemblance (Savickas in Browne et al., 1996; Holland, 1997).
Figure 4.1 The hexagonal model is used to define the psychological resemblances among personality type and environments and their interactions. The closer the type or environment is situated to another type or environment on the Hexagon the more similar the characteristic (Brown et al., 1996).

The hexagonal model serves three purposes in the theory:

1) It defines the degree of consistency in a person’s personality pattern. Using a person’s VPI or SDS profile, the two highest scale scores can be labeled as having one of three levels of consistency: (i) profile patterns composed of adjacent types on the hexagon are most consistent, e.g. Realistic-Investigative; (ii) profile patterns composed of opposite types on the hexagon are least consistent, e.g. Realistic-Social; and (iii) profile patterns composed of every other type on the hexagon form an intermediate level of consistency.
2). The hexagon defines the consistency of an environment in the same way. In this case, the percentage of types (real people) in each of the six categories is used to form an environmental profile.

3). The hexagon defines degrees of congruence between person and environment. The most congruent situation for a Social person would be within a Social environment. The most incongruent situation for a Social person would be within a Realistic environment. By using the hexagon, several intermediate degrees of congruence can be defined.

The formulations of type imply that a number of hypotheses can be formulated which present certain logical consequences. A person's resemblance to the types should predict a large portion of his or her behaviour. Hypotheses which have been presented regarding type and their behaviour include career pathways, level of aspiration, career involvement and satisfaction, job shifts and unemployment, educational behaviour, social behaviour and environmental responsiveness. However, in formulating such hypotheses, Holland cautions to observe the notion of "other things being equal" which can have an impact on the predicted behaviour hypothesised (Holland, 1997).
4.3 The Environmental Models

As human behaviour is determined by both personality and the environment in which a person lives and works, the personality type requires information regarding the environment. Six environmental models have been classified which characterise the common social and physical environments which are similar to the six personality types (Holland, 1997; Brown et al., 1996). Once again, we must bear in mind that Holland based these assumptions on the Western USA culture.

The environmental model provides descriptions of hypothetical environments which are used as a means for comparing the real environment. Holland defines an environmental model as "the situation or atmosphere created by the people who dominate a given environment" (Holland, 1997, p.41). One would therefore be most likely to see a Social environment dominated by Social types.

Personality types and environmental models share common constructs for classifying people and environments. This allows for predicting the outcome of people in specific environments. When a person is put into a particular environment in terms of the personality type and environmental model, the level of congruency or incongruency can be determined. When the personality type and environment correspond there is congruency and job satisfaction, achievement and vocational stability will ensue (Holland, 1997).
The character of any environment is largely determined by the nature of the members that occupy them. The dominant feature of the environment will reflect the typical characteristic of its members. By knowing the kind of people that make up the group, one can infer the climate that the group creates. For example, an office full of engineers will differ to that of accountants or sales people.

4.4 Formulations of the Models

1. **The Realistic Environment** is characteristically dominated by demands and opportunities that entail the explicit, ordered or systematic manipulation of objects, tools, machines and animals. It is dominated by Realistic people who are stimulated to perform realistic activities and exhibit technical competencies.

These environmental experiences lead to secondary effects; people are susceptible to pragmatic and traditional influences, they are attracted to realistic and traditional roles, are less adept in coping with others, are less open to new ideas and beliefs and consequently indulge in a narrow range of interests and a closed belief system.

2. **The Investigative Environment** is dominated by demands and opportunities that entail the observation and symbolic, systematic, creative investigation of physical, biological or cultural phenomena and by a population dominated by Investigative types.

People will tend to perform investigative activities and exhibit scientific competencies and have mathematical abilities but lack leadership abilities. They are also encouraged to see the world in complex, abstract, independent and original
ways. They are more open to new ideas and beliefs which lead, in turn, to a wide range of interests and an open belief system.

3. The Artistic Environment is characterised by demands and opportunities that entail ambiguous, free, unsystematised activities and competencies to create art form or product. It is dominated by Artistic people who receive stimulation in artistic activities and foster artistic competencies and achievements. People see themselves as expressive, original, intuitive, non conforming and independent. The environment encourages Artistic people to see the world in a complex, independent, unconventional and flexible way. In turn, Artistic people exhibit a wide range of interests and generally have an open belief system.

4. The Social Environment is dominated by demands and opportunities that entail the manipulation of others to inform, train, develop, cure or enlighten. It is populated by Social types who engage in social activities; foster social competencies; are encouraged to help and understand others, to be cooperative and sociable; and to see the world in a flexible way.

5. The Enterprising Environment is characterised by demands and opportunities that entail the manipulation of others to attain organizational or self-interest goals.

Enterprising types will engage in such activities as selling or leading others. The environment fosters enterprising competencies and achievements; it encourages people to see themselves as aggressive, popular, self-confident, sociable and as possessing leadership and speaking abilities; it encourages people to see the world
in terms of power, status and responsibility and in stereotypes, constricted and simple terms; it rewards people for the display of enterprising values and goals.

6. *The Conventional Environment* is characterised by environmental demands and opportunities that entail the explicit, ordered, systematic manipulation of data.

Conventional types dominate the environment who are stimulated to engage in conventional activities such as recording and organising data or records. The environment fosters conventional competencies and achievements; it encourages people to see themselves as conforming, orderly, and nonartistic and as having clerical competencies; the world is seen in conventional, stereotyped, constricted, simple and dependent ways; people are rewarded for displaying conventional attitudes and values (Holland, 1997).

One notes that an environment is characterised by psychological features that have been transmitted by the people that occupy them. An environment is assessed by looking at the population which makes up that environment. The Environmental Assessment Technique (EAT) was developed for assessing environments by means of taking a census of the occupations, training, educational or vocational preferences of the group. The preferences or occupations are categorized according to the criteria for class membership as belonging to one of the six environments. This classification results in a six-variable profile. Once an environment has been assessed, a pattern ensues which is depicted in code form (Holland, 1997).

Similar to type the environment is qualified using the constructs differentiation and identity.
The relations among the six kinds of environmental models are defined by the hexagonal model (Figure 4.1). The closer two environmental models are in the hexagon, the greater the similarity. The farther apart they are, the more variance in the properties of the environments.

Like the personality types, the model environments imply many hypotheses about a person's vocational behaviour, personal effectiveness, educational and social behaviours (Holland, 1997).

4.5 People in Environments

The outcome of the interaction between types and environments can be understood as follows:

- **Degrees of Congruence**
  The hexagonal model is used to assess the degree of congruence or compatibility between the individual and the environment. The most congruent or compatible would be where the personality type and environment matched. The next degree of congruence would be that of a personality type in an adjacent environment. The further apart the personality type from the environment the less congruency takes place.

  The degree of congruence that occurs between personality and environments will determine the level of satisfaction and fulfillment. Incongruent interactions result in different and negative effects. The individual’s natural tendencies are inhibited, the
demands made by the environment result in stress, dissatisfaction, poor performance and ineffective coping behaviour (Holland, 1997).

- **Degrees of Consistency**
The consistency of a personality pattern and the consistency of the environmental pattern will determine the person-environment outcome. One expects that consistent personality patterns will display an integration of similar interests, competencies, values, traits and perceptions rendering such persons more predictable as well as more resistant to influences. A consistent environment pattern represents an integration of similar demands and rewards. The more consistent the environment the more likely that pressure will be exerted on it’s inhabitants to behave in accordance with the demands made by the environment.

- **Degrees of Differentiation**
When congruency, consistency and identity are present the person-environment interaction will also be affected by the differentiation of types and environments. Holland (1997, p.57), describes differentiation in this context as “.......the magnitude of the difference between highest and lowest scores on the six variables used to determine a person’s or an environment’s degree of resemblance to a personality type or an environmental model”. The greater the difference between the highest and lowest scores, the greater the differentiation and consequently well defined, predictable forces will emerge.
• Degrees of Identity
The interaction of a person with a clear sense of identity and an environment with a limited number of behaviour situations will be more predictable than the interaction of a person and an environment with diffuse or unclear identities.

• Level of Education
Education plays a vital role in the successful interaction between individual and environment. Where the individual’s education does not correspond to the requirements of the environment and vice versa, then dissatisfaction and poor performance will occur. For example, a person that is too highly qualified or does not have the required skill for the job will result in incongruence between person and environment.

Holland (1997), maintains that knowledge of personality type, model environments and the resultant interaction enables one to trace personal development. The preferred environments and vocational choices over a person’s lifespan provide valuable information about human behaviour and environments.

People pass through a series of environments in a lifetime. With each person there are differences in individual development, family background, parenting style, parental attitudes and values, individual characteristic and life experiences. One needs to note these differences in the context of person-environment interaction as theorised by Holland, it allows for greater understanding of how and why people modify their behaviour, select or prefer certain situations and encourage some behaviours more than others.
It is also possible to predict an individual's family life, recreational activities, hobbies and retirement activities from a person's type provided that there are adequate resources and the individual is allowed to continue to express him or herself in their compatible environment (Holland, 1997).

4.6 Research

Recent research has examined how well Holland's hexagon fits people from a variety of backgrounds and cultures. Swanson (1992), found that, in general, Holland's typology fits African American female students somewhat better than African American males (Sharf, 1997).

Congruence is considered to be the most important construct as well as the most widely researched construct of Holland's theory. It is also a complex construct. Brown and Gore (1994), evaluated 10 different methods of measuring congruence between personality type and employment, and Camp and Chartrand (1992), examined 13 methods. Many studies have related congruence to other important variables such as stress, job satisfaction and personality variables. Spokane (1985), reviewed 63 studies showing a small relationship between congruence and job satisfaction. Tranberg, Slane, and Ekeberg (1993), showed a weak relationship between congruence and satisfaction, but also came to the conclusion that congruence is most important for job satisfaction in Social environments and least important in Realistic and Conventional environments. Sutherland, Fogarty and Pitchers (1995), found a small correlation between congruence and lack of stress (Sharf, 1997).
Toker and Swanson (1995), found that Holland’s six personality types fit with those of the NEO Five-Factor Inventory. The inventory measures five broad factors known as the big five: Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience. The big five supported Holland’s characterisation of six personality types, and the Openness and Extraversion factors were particularly relevant to Holland’s typology (Sharf, 1997).

Leung, Conoley, Scheel and Sonnenberg (1992), found no relationship between scores on the Vocational Identity scale of My Vocational Situation and consistency and differentiation. Holland, Gottfredson, and Baker (1990), found no relationship between vocational identity and the degree of coherence among three career choices that individuals aspired to. Gehlert, Timberlake, and Wagner (1992), (in Sharf 1997) found no relationship between vocational identity and academic achievement. However, Conneran and Hartman (1993), (in Sharf 1997) found that chronically career-undecided high school students showed lower levels of congruence and vocational identity than those who were not chronically undecided (Sharf, 1997). Thus, one can perhaps expect in such cases unrealistic career choices and career identity.

4.7 Applications of Holland’s Theory

The theory has been applied to problems in social science, education, and career counseling.

*Career assistance* is a concept used by Holland to help people of all ages to cope with vocational decisions and choices. The theory is used as a tool to explain some
common career problems, for improving career practices, for understanding the special problems of minorities, females, and other groups; and providing career assistance in business and industry (Holland, 1997).

For the counselor, Holland’s typological system is helpful in grouping occupational information. It also enables the counselor to classify clients’ experiences with the environment through the description of work experiences. It further enables the counselor to meet the career counseling needs of individuals who are predominantly of one Holland type.

From the organisational perspective, obtaining knowledge regarding a company’s culture, type of person and related experience required to fill a particular position enables the counselor/consultant to resource potential employees that will adequately fill the company’s needs. It can help in structuring departments, mobilising personnel and human resource planning within organisations (Holland, 1997; Sharf, 1997).

In education the theory can be used to organise and distribute a school’s counseling resources so that information and experience is provided that will foster the development of adaptive personal and vocational behaviour. The theory also suggests that teaching might be more effective if students were paired according to type, or if teachers could adapt teaching styles to fit student types (Holland, 1997).
4.8 Chapter Review

A brief biographical account was given on John Holland and the development of his theory. The basic assumptions and the theory was discussed at length. Some empirical research which was carried out on the theory is reported. Finally, applications of the theory of John Holland were discussed.

In the next chapter the research method will be discussed.
Chapter 5

Research Methodology

5. Research Design

Ex post facto design will be carried out to establish whether a significant relationship exists between the MBTI® and the SDS. Also referred to as descriptive research, whereby an attempt is made to describe phenomena as they exist, or reveal relationships or an association between variables, rather than manipulate variables (Westen, 1996).

The research design that was applied is a quasi-experimental design. The term quasi means ‘resembling’. It resembles an experimental research as treatments, outcome measures and sampling units are used. When using quasi-experimental designs causal conclusions cannot be drawn because of lack of control over variables. Unlike experimental designs, there is no randomization as subjects are not randomly assigned to their groups. The researcher does not have direct control of the independent variable nor can he or she manipulate the independent variable. This type of design is used when manipulation of the independent variable would be unethical, e.g. a study “...cigarette smoking causes cancer”. It would be unethical to have non-smokers smoke in order to establish whether smoking causes cancer. Subjects are at risk of being harmed. This type of study is also used when it is impossible to manipulate the independent variable, e.g. gender, age or

Unlike experimental research it is not possible to make predictions of certainty or causal inferences i.e. A causes B. It is the active manipulation of the independent variable and the principle of randomization that enables one to say that B is varying as a result of the manipulation of A. According to Kerlinger (1988), nonexperimental research has an inherent weakness due to the lack of control and manipulation of the independent variable as well as the lack of randomization.

There are a number of differences between experimental and non-experimental research.

In non-experimental research the researcher must take things as they are with no intervention, manipulation or control of variables. This means that there is no guarantee that nuisance variables or a third variable may influence the observed relationship. Three possible conclusions may be drawn:

A causes B
B causes A
C causes both A and B (Gerdes et al., 1988).

As the researcher loses control over the variables operating in a nonexperimental study, there is the danger of confounding i.e. an extraneous variable which has not been controlled for, may covary with the independent variable and could provide an alternative explanation of the results. This reduces the study’s internal validity and
a causal conclusion cannot be drawn. However, external validity is usually high as
the setting more closely resembles real life situations (Goodwin, 1995).

**External validity** pertains to the degree to which the research findings can be
generalised beyond the specific contents of the study in question.

**Internal validity** pertains to the degree that the results as measured by the
independent variable are directly associated with the independent variables and not
the result of some other uncontrollable factor (Goodwin, 1995).

Kerlinger (1988), highlights the following limitations of nonexperimental research:

- The inability to manipulate the Independent Variable.
- Lack of power to randomize.
- Risk of improper interpretation.

Whilst experimental research is guided by carefully stated hypotheses,
nonexperimental research even when guided by hypotheses may still yield weak
results because they capitalize on chance, of which many of the statistical tests may
be significant. This may give a plausible explanation, which could in fact be
incorrect. Once a plausible explanation is found and believed, it is often hard to test
and new interpretations can be found to fit the facts.

In spite of the limitations of non-experimental research it is a valuable method of
research. It is used mainly in the social sciences, e.g. psychology, sociology and
education because many research problems do not lend themselves to experimental
inquiry. Variables evaluated in the social sciences include intelligence, aptitude,
home background, social class, etc. which are not manipulable. Kerlinger (1988), says that nonexperimental research could even be more important than experimental research as most social scientific and educational problems do not lend themselves to experimentation, although many of them lend themselves to controlled inquiry of the nonexperimental kind.

Experimental research on the other hand involves establishing variables, controlling extraneous variables and measuring dependent variables, which are under the control of the researcher. The extraneous variables are factors that are of no interest to the researcher and failure to control them leads to confounding (Goodwin, 1995).

The validity of the experimental research is achieved in the following way:

- Through the use of statistics i.e. conclusions are drawn statistically.
- The Independent Variable and Dependent Variable are meaningfully defined resulting in construct validity.
- The results are generalised beyond the particular experiment, it therefore has external validity.
- It is free of confounding variables ensuring its internal validity (Goodwin, 1995).

The type of study undertaken for the purpose of this research is observational in nature and a perceived relation between variables will be described. A quantitative description of the observed relationship will be made. However, as discussed above the principles of the scientific method, i.e. control of variables and randomization, are not being applied and no causal relations will be reported.
Both descriptive and inferential statistics will be used in the study.

Descriptive statistics is a procedure which enables the researcher to turn a mass of numbers that cannot be comprehended at a glance into a small set of numbers that can be more easily understood. Examples of descriptive statistics include mean, mode, median and frequency distribution (Goodwin, 1995).

Inferential statistics endeavour to infer the truth or falsity of an hypothesis. Inferential statistics enable the researcher to make accurate conclusions that can be generalised from a sample to a population. The population to which the findings are generalised can be either to an infinite population or a specific population (Goodwin, 1995).

5.1 Purpose of the Study

The purpose of this study is to validate the Myers Briggs Type Indicator amongst a group of predominantly black South African high school children in Grades 10 and 12 respectively, in a career-counseling context. The MBTI® will be validated against the Self-Directed Search Questionnaire.

5.2 Hypothesis

The general hypothesis formulated for this study is as follows:
The Myers Briggs Type Indicator is a valid measure of personality types amongst Grade 10 and 12 high school pupils when compared against the Self Directed Search Questionnaire.

5.3 Discussion of Sample

The research group consisted of 125 pupils who were predominantly black (98%) and who attended the Rand Afrikaans University College for the Advancement of Learning and Leadership (RAUCALL). In March 1997 the pupils completed a biographical questionnaire followed by the Self-Directed Search Questionnaire and the Myers Briggs Type Indicator (Form G). Their ages ranged from 14-19 years. The percentage of females was 65.6% and 34.4% was made up of males.

The subjects were preselected on the basis of the outcome of the preliminary psychological tests. They were also self-selected on the basis of characteristics that they possess, namely school attended and grade attained. The sample can also be described as a non-probability sample as no random sampling was exercised and therefore the chances that every person in the population would be included was reduced. As a result the researcher cannot claim that the sample is representative of a larger population. A further limitation of non-probability sampling is that one is unable to generalise the research findings beyond the specific sample studied. The type of non-probability sampling used in this study is purposive sampling as there was a deliberate effort to obtain a representative sample from a typical group through the use of judgement. In this study psychological tests were used to determine the pupil’s ability to obtain a university education (Kerlinger, 1988; Bailey, 1982).
5.4 Description of Measurement Instruments

The measuring instruments used in this study are the MBTI® (Myers-Briggs & McCaulley, 1985) and the SDS (Gevers, du Toit & Harilall, 1997).

5.4.1 Biographical Questionnaire

The participants completed a biographical questionnaire, which provided information regarding the pupils’ age, sex, grades, home language and career interests. Information regarding the parents’ occupation was also given. This information allows for the control of variables and to facilitate comparisons between the different questionnaire scores. It also allows for some comparison between parents and pupils and the effects of culture.

5.4.2 The Myers Briggs Type Indicator

The MBTI®, its development, content and scoring of the questionnaire were discussed at length in Chapter 3. For the purpose of this study, Form G, which is the standard form for this test, was used. It consists of 126 items and the questions are in a forced choice format. There are questions of both phrase-type and word pairs and the individual must choose between desirable opposites. Form G was standardised and published in 1977 and is scored using a mask (McCaulley, 1990).
5.4.2.1 Reliability of the MBTI®

A measure of behaviour is said to be reliable if its results are repeatable when the behaviours are remeasured. It is the degree that a particular observation has yielded a “true” score (Goodwin, 1995; Neale & Liebert, 1986).

The reliability of the MBTI® can be examined as follows:

a) Internal Consistency Reliabilities

Myers and McCaulley (1985), have indicated that people with good command of perception and judgement are more likely to be clear about their preferences and will therefore report more consistently. Samples of older people have yielded higher reliability estimates than samples of younger. Myers proposes that since the quality of perception and judgement is often apparent by a person’s level of achievement, it is expected that in samples of comparable age levels, those with higher achievement levels will also report preferences more consistently, higher reliability will also be evidenced, than samples of lower achievers (Frazer, 1994).

b) Split-Half Correlations

The internal consistency of the MBTI® can be examined using split half correlations. McCaulley (1990), reports of large samples from the MBTI® data bank that split half reliabilities fall between .75 and .88 for E-I and .91 for S-N; .76 and .88 for T-F and .80 and .92 for J-P. Median split-half correlations reported for
smaller research samples from 7th grade through to adults are .82 for E-I, .82 for S-N, .77 for T-F, and .84 for J-P. Lower correlations come, as Myers predicted from younger, underachieving or disadvantaged scholars (De Beer, 1997).

c) Test-Retest reliabilities reported in the Manual for 38 groups with retest intervals from one week to four years showed median correlations of E-I .84, S-N .81, T-F .72, and J-P .81. Retest reliabilities showed no consistent patterns of change in the two studies with different retest conditions - mood manipulations (Howes, 1977), and career instructions (Parham, Miller & Carskadon, 1994 in McCaulley 1990).

To obtain the same MBTI® type all four letters must be the same. Thirteen studies reported in the manual showed an average of 42% the same on all four letters on retest; 78% of the composite of all samples reported three or four letters the same; less than 1% changed all four letters. Most changes occurred when the original preference score was low.

The test re-test reliabilities of individual scales are comparable to those of other personality instruments. On retest about three-fourths of a sample will come out with three or four letters the same. Most of the changes occur in one preference only, usually a preference with low scores. Changes can also be seen where peoples’ types have been falsified or where reporting type is clouded by distress (McCaulley, 1990).

De Beer (1997), reports on the importance of good temporal stability in achieving good internal consistency. It is assumed that the type preference are stable and
enduring and the type related behaviour is habitual and consistent as they are based on inborn tendencies.

The environment, the level of a person's type development, the respondent's motivation when completing the MBTI®, and the size of the sample group are factors that would influence the temporal stability of the MBTI®.

5.4.2.2 Validity of the MBTI®

A behavioural measure is considered valid if it measures what it has been designed to measure. In other words that the test scores reflect the behaviour in question (Goodwin, 1995; Neale & Liebert, 1986).

The MBTI® was designed to represent Jung’s theory of psychological types. The validity of the MBTI® is determined by its ability to demonstrate the relationship to the theory.

a) Construct validity

Construct validity has been demonstrated and reported in McCaulley (1990), in the following areas:

**Career choice.** The pattern of types selecting specific careers is consistent with predictions from type theory.
**Academic success.** The more “academic” I-N types significantly score higher on aptitude and academic achievement tests. A greater number are also more inclined to pursue graduate training.

**Learning and teaching styles.** Students and teachers report and show differences in preferred modes of learning and teaching that are consistent with type theory (Lawrence, 1984).

**Correlations with other personality and interest measures.** The Manual reports correlation of continuous scores of E-I, S-N, T-F and J-P with scales of personality and interest measures and correlations are in the predicted directions and MBTI® scales do not correlate with measures of unrelated constructs.

Bayne (1997), reports on the relationship that exists between the MBTI® and measures of the Big Five Personality factors. A great deal of research is carried out today on the Big Five (McAdams, 1992; Goldberg, 1993, in Bayne 1997), and as the relationship between these personality factors and the MBTI® is so close the MBTI® is in essence researched in a “piggyback” fashion.

**Correlations with behavioural ratings.**

Data from the Institute for Personality Assessment and Research (IPAR) at the University of California at Berkeley (Gough, 1981, in Bayne 1997), are reported in the Manual. Researchers have reported that preferences for intuition (N), and to a lesser degree for perception (P), are significantly associated with measures of creativity.
Individual agreement with MBTI® reports. Hammer and Yeakley (1987), interviewed 120 adults to identify the best-fit type; interviews ranged from same day to two years after answering the MBTI®. Eighty-five percent agreed on all four MBTI® preferences; no subjects disagreed on three or four preferences and the 15% disagreed on one preference originally reported preference scores less than seven. Carkskadon (1982), and Carkskadon & Cook (1982), as in Pritchard and Sawyer (1994), found that students chose their type descriptions at rates significantly above chance (35% $p < .001$ and 50% $p < .001$). Kummerow (1988), reported structured procedures in which 146 retail managers and 241 bank managers compared their “best fit” type to MBTI® results; 62% agreed with all four letters and 93% agreed with three or four letters.

Geer et al., as in Frazer (1994), conducted research using Jungian Types as a predictor of attendance at the Black College Day March which supported the construct validity of the MBTI®.

b) Convergent and Discriminant Validity

The MBTI®, as it was based on the theory of Jung, was so designed as to implement Jung’s theory of psychological types. Therefore its validity is determined by its ability to demonstrate relationships and outcomes predicted by the theory (De Beer, 1997).

Convergent validity refers to finding correlations with other measures with which one would expect the MBTI® to correlate and discriminate validity. This deals with
the issue of whether scales with different constructs demonstrate such a difference. In the case of the MBTI®, a great deal of correlational evidence bearing on convergent and discriminate validity has been reported and overall the evidence is supportive of the MBTI® (De Beer, 1997).

Convergence between the four primary scales of the MBTI® and the “Big Five” personality factors has been reported on by numerous researchers: Newman, 1993 & 1996; De Bruin, 1996; Bayne, 1997 (in De Beer, 1997).

5.4.3 Self Directed Search Questionnaire

John Holland’s theory of Career Choice, discussed in Chapter 4, is operationalised by means of the SDS (Gevers et al., 1997). It was developed to assist in the practice of career guidance.

The aim of the SDS is to measure occupational interest. The questionnaire covers the broad network of career planning as it provides information about the individual’s occupational interest as well as correlating those interests with career information.

The items of the SDS have a bearing on the activities preferred by the testee, the skills they have or are familiar with, the occupations they are interested in and their assessment of their own abilities. Testees also have an opportunity to link the wide spectrum of possible occupations to an occupational classification system. The occupational classification system was developed to order the world-of-work and to
make the results of the SDS questionnaire immediately available (Gevers, et al., 1997).

In 1985 a study was carried out on pupils throughout South Africa using the 1977 version of the SDS in order to adapt the instrument for South African use. A second study was carried out in 1987 using the 1985 version. A 1990 copy issued by the Human Sciences Research Council was used for this study (Gevers et al., 1997).

5.4.3.1 Reliability of the SDS

The reliability of a test refers to the degree of accuracy and consistency with which it measures. The test-retest reliability of the coefficients of the SDS for two groups of pupils in the 1985 study were in the regions of .70 to .85 in all the fields with the exception of the S field for girls which was .57. Holland (1971 in Gevers 1997) reported reliability coefficients of .53-.87 for the different fields, thus the value concerned is acceptable (Gevers et al., 1997).

In the 1987 study the Sichel formula was used to test the reliability coefficients of the six fields of the SDS and the results ranged from .77 to .88.

5.4.3.2 Validity of the SDS

A behavioural measure is considered to be valid if it measures that which it is designed to measure (Goodwin, 1995).

The 1995 study did not involve an in-depth investigation of validity, because the original American questionnaire, of which validity had been thoroughly investigated
in the USA, had been used. However, the intercorrelation of the fields was examined. In the 1985 study the fields with low consistency showed a statistically significant correlation. Adjacent fields (EC, SE, SA, and IR) obtained high correlations while opposite fields (RS and IE) had the lowest correlations, with the exception of CA. Results concerning the structural relationship between fields confirmed Holland's definition of occupational interests, i.e. fields which have the most in common, namely RI, IA, SE, EC and CR are adjacent, while fields which have the least in common, namely RS, IE and AC, are opposites on the hexagon. This supports the validity of the theoretical structure of occupational interests as defined by Holland.

For the 1997 study the structure of the American version of the SDS was retained with only a few items retained or replaced.

The concurrent validity of the questionnaire is supported by the positive results obtained with regard to congruency in 5.5.3.5.

5.4.3.3 Consistency

Consistency is defined as the degree to which an occupational profile (environment or personality) is internally consistent (Gevers et al., 1997).

In the 1985 study high consistency (the first two letters of the SDS are adjacent) and medium consistency (the first two letters of the SDS are alternate) was revealed. Therefore a connection between interests, values and abilities was found.
5.4.3.4 Differentiation

Differentiation is regarded as the degree to which the highest scores of an individual’s interest profile or an occupation’s profile of environmental types, are spread apart i.e. how the scores differ from one another (Gevers et al., 1997).

For every individual the differentiation is calculated by subtracting the lowest field score from the highest field score. If the difference is greater than or equal to 8, it is regarded as good differentiation. The results of the study showed good differentiation of interests (96% of the boys and 99% of the girls) which indicates that interests have crystallized.

5.4.3.5 Congruency

Congruence indicates the degree of correspondence between a personality type and an occupational environment (Gevers et al., 1990).

The results of the 1985 study confirmed that there was indeed agreement between the type of occupations considered and the fields of interests shown.
5.5 Chapter Review

In this chapter a discussion of the research design was given. The purpose of the study was reported and the stating of the hypothesis followed. The research sample was discussed and a report of the measuring instruments used was given. Finally, the reliability and validity of the MBTI® and SDS was discussed.

In the next chapter the empirical data will be reported.
Chapter 6

Results

6. Introduction

In this chapter the empirical data will be reported. A discussion of the research group will be given followed by an examination of the age, gender and language distributions of the sample. Frequency scores of the MBTI® and SDS will be reviewed followed by correlational analyses in order to establish whether a relationship exists between the MBTI® and the SDS.

6.1 Frequency Distributions

A frequency distribution is a table showing various possible measurement categories, or classes, together with the number of cases falling into them. The number of cases observed in a particular category is known as the frequency for that category (Huysamen, 1987).

6.1.2 Description of the research group

There were 125 pupils in the sample of which 58 (46,4%) were in Grade 10 and 67 (53,6%) were in Grade 12. These pupils were attending the Rand Afrikaans University College for the Advancement of Learning and Leadership (RAUCALL).
at the time of testing. They shared some common factor, namely that through a process of pre-selection had been identified as having the potential for tertiary education, specifically at university level.

The distribution of the research group is depicted in Table 6.1 below.

Table 6.1

Description of the Research Group

N = 125

<table>
<thead>
<tr>
<th>Grade</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>58</td>
<td>46,4%</td>
</tr>
<tr>
<td>12</td>
<td>67</td>
<td>53,6%</td>
</tr>
</tbody>
</table>

125 100,0%
6.1.3 Age Distribution of the research group

The age distribution of the sample is reflected in Table 6.2 below.

Table 6.2

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>5</td>
<td>4,0%</td>
</tr>
<tr>
<td>15</td>
<td>46</td>
<td>36,8%</td>
</tr>
<tr>
<td>16</td>
<td>14</td>
<td>11,2%</td>
</tr>
<tr>
<td>17</td>
<td>48</td>
<td>38,4%</td>
</tr>
<tr>
<td>18</td>
<td>11</td>
<td>8,8%</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>0,8%</td>
</tr>
<tr>
<td>125</td>
<td>100,0%</td>
<td></td>
</tr>
</tbody>
</table>

The youngest pupils in the sample were 14 years of age, which contributed to 4% of the research group. There was one pupil aged 19. The age group most represented were 17 years old (38,4% of the sample), followed by 15 years of age (36,8%). The two largest age distribution, ages 15 years and 17 years, which made up of 75,2% of the sample, is the average age one would expect to find in grades 10 and 12 respectively.
6.2 Gender Distribution

This is tabulated in Table 6.3 below.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>43</td>
<td>34.4%</td>
</tr>
<tr>
<td>Female</td>
<td>82</td>
<td>65.6%</td>
</tr>
<tr>
<td></td>
<td>125</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The research group was not equally represented by both sexes. There were 39 (31.2%) more females than males.

6.3 Language Distribution

The sample was made up of eight different language groups. The number of pupils completing this section of the biographical information was 123 out of a total of 125.

The language distribution shows that Zulu was the dominant language spoken by 37.4% of the sample, followed by Sotho spoken by 29.3%. Tswana was spoken by
The language distribution shows that Zulu was the dominant language spoken by 37,4% of the sample, followed by Sotho spoken by 29,3%. Tswana was spoken by 18,7%. The other five language groups were represented by less than 15% with only one pupil speaking Pedi.

The language distribution is reflected in Table 6.4 below.

Table 6.4
Language Distribution

N = 123

<table>
<thead>
<tr>
<th>Language</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sotho</td>
<td>36</td>
<td>29,3%</td>
</tr>
<tr>
<td>Tswana</td>
<td>23</td>
<td>18,7%</td>
</tr>
<tr>
<td>Zulu</td>
<td>46</td>
<td>37,4%</td>
</tr>
<tr>
<td>Tsonga</td>
<td>2</td>
<td>1,6%</td>
</tr>
<tr>
<td>English</td>
<td>2</td>
<td>1,6%</td>
</tr>
<tr>
<td>Pedi</td>
<td>1</td>
<td>0,8%</td>
</tr>
<tr>
<td>Xhosa</td>
<td>8</td>
<td>6,5%</td>
</tr>
<tr>
<td>Venda</td>
<td>5</td>
<td>4,1%</td>
</tr>
</tbody>
</table>

123 100%
6.4 Frequency Distribution of the MBTI®

In Table 6.5 the frequency distribution scores on the dichotomous scales are shown. Of a sample of 125, a total of 118 pupils (94.4%) scored on the MBTI® scale.

On the Extravert – Introvert scale, 51.7% of the sample were extraverts and 48% were introverts. There was a larger percentage of female extraverts (34.7%) than male extraverts (16.9%). There was also a larger percentage of female introverts (30.5%) than male introverts (17.8%).

The frequency distribution across the Sensing – Intuition scale shows a dominance for Sensing as a way of perceiving (60.2%), as opposed to Intuition (39.8%). A larger percentage of females preferred Sensing (43.2%) than males (16.9%). Of the males (17.8%) as opposed to 22.0% females preferred Intuition.

Across the Thinking – Feeling scale, the processes used for making decisions is scored more highly by Thinking (69.5%) with only 30.5% scoring on the Feeling scale. There were 39.0% females who preferred Thinking and 29.7% males. On the Feeling scale a high percentage of females 26.3% showed a preference for Feeling with only 5.1% males.

Across the Judging – Perceiving scales 62.0% of the sample preferred Judging and 38.1% preferred Perception. Females showed a greater preference for Judging (40.7%) than males (21.2%). A higher percentage of females (24.6%) than males (13.6%) also preferred Perceiving.
Table 6.5
Frequency Distribution of the MBTI® Dichotomous Preferences
N = 118

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>%</th>
<th>Scale</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>T</td>
<td>61</td>
<td></td>
<td>I</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>20</td>
<td>16.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>41</td>
<td>34.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>T</td>
<td>71</td>
<td>60.2%</td>
<td>N</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>20</td>
<td>16.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>51</td>
<td>43.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>T</td>
<td>81</td>
<td>68.6%</td>
<td>F</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>35</td>
<td>29.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>46</td>
<td>39.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>T</td>
<td>73</td>
<td>62.0%</td>
<td>P</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>25</td>
<td>21.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>48</td>
<td>40.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scales: E = Extravert  I = Introvert  S = Sensing  N = Intuition
T = Thinking  F = Feeling  J = Judging  P = Perceiving

Frequencies: T = Total  M = Male  F = Female
6.5 Distribution of the MBTI® Types of the Total Research Sample

In Table 6.6, the total number of the sample that scored on the MBTI questionnaire was 118 out of a possible 125.

One notes that the ISTJ’s and the ESTJ’s are equally distributed at 13.56%.

Differences in type preferences are noted between ISFJ (6.78%) and ESFJ (7.63%), as well as INTJ (7.63%) and ENTJ (7.63%). There were more ENFJ’s (4.24%) than INFJ’s (0.85%).

Differences between Extraverts and Introverts using perception, as a preferred lifestyle, was greater for ISTP (8.47%) than ESTP (5.08%). A smaller difference is noted between ESFP (3.39%) and ISFP (1.69%). There were more INFP’s (4.24%) than ENFP’s (2.54%) and more INTP’s (5.08%) than ENTP’s (7.63%).

6.6 Distribution of the 16 MBTI® Types of Males in the Sample

In Table 6.7 the male distribution of the sample is represented. There were more ESTJ’s (14.63%) than ISTJ’s (12.2%). ISTP and ESTP were equally represented with 7.32%. There were equal percentages of ISFJ, ISFP and ESFP at 2.44%, with no representations for ESFJ. No representation occurred on the ENFP scale but an equal number of INFJ’s INFP’s and ENFJ’s occurred at 2.44%. INTJ was strongly represented at 14.63%, followed by ENTJ at 12.0%. ENTP (9.76%) exceeded INTP (7.32%).
6.7 Distribution of the 16 MBTI® Types of Females in the Sample

The female distribution made up 65.6% of the total sample, which is tabulated in Table 6.8. Unlike the male distribution, there were more ISTJ’s (14.39%) than ESTJ’s (13.0%). There were also more ESFP’s (3.39%) than ISFP’s (1.3%). ISTP is strongly represented at 9.1% compared to ESTP at 3.9%. Both ISFJ (9.1%) and ESFJ (11.79%) are strongly represented. ESFP (3.95%) exceeded ISFP (1.3%). No INFJ’s were noted whilst 3.9% ENFJ’s were recorded. There were more INFP’s (5.19%) than ENFP’s (3.9%). There were more ENTJ’s (5.19%) than INTJ’s (3.9%), there were also more ENTP’s (6.5%) than INTP’s (3.9%).

When compared with the female sample, the males predominated on the Intuitive types with thinking (43.71%) as opposed to 19.49%. However, in the case of Intuitive types with feeling, the females predominated with 12.99% compared to the males at 7.32%.

Sensing types with feeling was predominated by females at 26% compared to males at 7.32%. However, the males predominated, albeit marginally, in sensing types with thinking at 41.7% compared to females at 40.2%.

Table 6.6, 6.7 and 6.8 were modified for the purpose of this study from De Beer (1997). Jopie de Beer is an authoritative figure in South Africa on the MBTI® and has herself carried out extensive research on the MBTI®. The Jungian types have been tabulated with the MBTI® types in order to demonstrate how the Myers Briggs Type Indicator is based on the types theorised by Jung. This will however not be explored, as it does not fall into the realm of this study.
Table 6.6
Distribution of the 16 MBTI® Types of the total Research Group
N =118

<table>
<thead>
<tr>
<th>SENSING TYPES</th>
<th>INTELLIGENT TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>THINKING</td>
<td>FEELING</td>
</tr>
<tr>
<td>SENSING</td>
<td>INTUITION</td>
</tr>
<tr>
<td>THINKING</td>
<td>FEELING</td>
</tr>
<tr>
<td>N=16</td>
<td>N=8</td>
</tr>
<tr>
<td>%13,56</td>
<td>%6,78</td>
</tr>
<tr>
<td>ISTJ</td>
<td>ISFJ</td>
</tr>
<tr>
<td>N=10</td>
<td>N=2</td>
</tr>
<tr>
<td>%8,47</td>
<td>%1,69</td>
</tr>
<tr>
<td>ESTP</td>
<td>ESFP</td>
</tr>
<tr>
<td>N=6</td>
<td>N=4</td>
</tr>
<tr>
<td>%5,08</td>
<td>%3,39</td>
</tr>
<tr>
<td>Jungian Types (E)</td>
<td>Jungian Types (I)</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>E-T-J</td>
<td>25</td>
</tr>
<tr>
<td>E-F-J</td>
<td>14</td>
</tr>
<tr>
<td>E-S-P</td>
<td>10</td>
</tr>
<tr>
<td>E-N-P</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 6.7
Distribution of the 16 MBTI® Types of Males in the sample
N =41

<table>
<thead>
<tr>
<th>Sensing Types</th>
<th>Intuitive Types</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Thinking</td>
<td>With Feeling</td>
<td>with Thinking</td>
<td>with Feeling</td>
</tr>
<tr>
<td>ISTJ</td>
<td>ISFJ</td>
<td>INFJ</td>
<td>INTJ</td>
</tr>
<tr>
<td>U</td>
<td>N</td>
<td>21</td>
<td>51.2</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>2,44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISTP</td>
<td>ISFP</td>
<td>INFP</td>
<td>INTP</td>
</tr>
<tr>
<td>E</td>
<td>E</td>
<td>EP</td>
<td>8</td>
</tr>
<tr>
<td>N</td>
<td>3</td>
<td>7,32</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>2,44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESTP</td>
<td>ESFP</td>
<td>ENFP</td>
<td>ENTP</td>
</tr>
<tr>
<td>E</td>
<td>S</td>
<td>SP</td>
<td>8</td>
</tr>
<tr>
<td>N</td>
<td>3</td>
<td>7,32</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESTJ</td>
<td>ESFJ</td>
<td>ENFJ</td>
<td>ENTJ</td>
</tr>
<tr>
<td>U</td>
<td>S</td>
<td>10</td>
<td>24.4</td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td>14.63</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>2,44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Jungian Types (E)

<table>
<thead>
<tr>
<th>Jungian Types (E)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-T-J</td>
<td>11</td>
<td>26.8</td>
</tr>
<tr>
<td>E-F-J</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>E-S-P</td>
<td>4</td>
<td>9.8</td>
</tr>
<tr>
<td>E-N-P</td>
<td>4</td>
<td>9.8</td>
</tr>
</tbody>
</table>

Jungian Types (I)

<table>
<thead>
<tr>
<th>Jungian Types (I)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-TP</td>
<td>6</td>
<td>14.6</td>
</tr>
<tr>
<td>I-FP</td>
<td>2</td>
<td>14.9</td>
</tr>
<tr>
<td>IS-J</td>
<td>6</td>
<td>14.6</td>
</tr>
<tr>
<td>IN-J</td>
<td>7</td>
<td>17.1</td>
</tr>
</tbody>
</table>

Dominant Types

<table>
<thead>
<tr>
<th>Dominant Types</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>17</td>
<td>41.4</td>
</tr>
<tr>
<td>F</td>
<td>6</td>
<td>7.3</td>
</tr>
<tr>
<td>S</td>
<td>10</td>
<td>24.4</td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>26.8</td>
</tr>
</tbody>
</table>
Table 6.8
Distribution of the 16 MBTI® Types of Females in the sample
N = 77

<table>
<thead>
<tr>
<th>SENSING TYPES</th>
<th>INTUITIVE TYPES</th>
<th>N (%)</th>
<th>Dichotomous Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>THINKING</td>
<td>FEELING</td>
<td>THINKING</td>
</tr>
<tr>
<td>ISTJ</td>
<td>ISFJ</td>
<td>INFJ</td>
<td>INTJ</td>
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<td>ISTP</td>
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<td></td>
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<td>ENFJ</td>
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<td>% = 11,7</td>
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<table>
<thead>
<tr>
<th>Jungian Types (E)</th>
<th>Jungian Types (I)</th>
<th>Dominant Types</th>
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<tr>
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<td>%</td>
<td>N</td>
</tr>
<tr>
<td>E-T-J</td>
<td>14 18,2</td>
<td>T</td>
</tr>
<tr>
<td>E-F-J</td>
<td>12 15,6</td>
<td>F</td>
</tr>
<tr>
<td>E-S-P</td>
<td>6 7,8</td>
<td>S</td>
</tr>
<tr>
<td>E-N-P</td>
<td>8 10,4</td>
<td>N</td>
</tr>
</tbody>
</table>
It must be noted that N in Tables 6.6, 6.7 and 6.8 differed to the totals reported in Tables 6.1 and 6.3. The reason for this is that a number of the pupils did not complete, or only partially completed the MBTI® questionnaire.

6.8 Distribution of the Total Scores of the SDS

Although the sample was made up of 125 pupils, some discrepancies are noted in the actual number who scored. This discrepancy is the result of incomplete questionnaires or errors made by the testees.

6.8.1 Realistic Scores

The total number of pupils that scored on this scale was 123 out of a possible 125. These scores are represented in Figure 6.1.

One notes that although the maximum score of 48 is achievable, 84% of the sample scored less than 25. The highest frequency was 11, on a score of 13. Only 0.8% achieved a score of 36.

Based on the information obtained from the biographical questionnaire, of the 63 fathers recorded, 28.6% were in a Realistic occupation and of the 96 mothers 9.4% were in a Realistic occupation.
6.8.2 Investigative Scores

Figure 6.2 depicts this distribution. There were 124 out of a possible 125 pupils who scored on this scale.

Almost 60% of the frequencies were distributed between scores 19-30. Only 1% of the mothers and 3.2% of the fathers indicated that they were in investigative occupations.

6.8.3 Artistic Scores

The frequency scores are graphically represented in Figure 6.3. There were 124 pupils who scored on this scale.

The frequencies of the Artistic occupation were generally low with 63.2% scoring below 24.

Of the parents, 6.3% fathers and 3.1% mothers were in Artistic occupations.

6.8.4 Social Scores

There were 123 pupils scoring on the Social scale which is represented in Figure 6.4.

The higher frequencies (60%) occurred on scores 25 and below, an indication that the majority of the sample did not show a strong preference to Social type
occupations. This finding is in complete contrast to the occupation of the mothers of whom 52% were in social occupations.

6.8.5 Enterprising Scores

There were scores for 123 pupils on this scale and Figure 6.5 depicts the distribution.

A large number of pupils showed a strong preference for an Enterprising vocation — 57.6% scored 25 or more.

Twenty four percent of the fathers were in an Enterprising occupation.

6.8.6 Conventional Scores

Figure 6.6 represents the frequency distribution of the 124 pupils who scored on this scale.

Higher frequencies were noted on the higher scores, with 58% scoring between 18-30. There was also a strong representation of Conventional type occupations held by the parents, 47% of the fathers and 28% of the mothers.
Fig 6.1 Total Scores - Realistic

Fig 6.2 Total Scores - Investigative
6.9 Correlational analysis

In this study correlational analyses were computed for the purpose of establishing whether a relationship exists between the scales of the MBTI® and SDS.

Correlation refers to the joint relationship between two or more variables. A correlation is said to exist whenever two variables are associated or related in some fashion. The *Pearson product moment correlation coefficient* \((r)\) takes values between \(-1.00\) and \(+1.00\) and involves the assumption that the underlying relationship between the variables is *rectilinear*, i.e. the relationship can be represented by a straight line. Both the magnitude and direction of the relationship are reflected in the correlation coefficient. In a direct or positive correlation, the relationship is such that a high score on one variable is associated with a high score on the second variable; similarly a low score on the one relates to a low score on the second. A negative correlation on the other hand, denotes an inverse relationship. High scores on one variable are accompanied by low scores on the second variable, and vice versa (Neale, 1986; Goodwin, 1995).

In Table 6.9, the correlations between the SDS and MBTI® scales are shown. This correlation was taken a step further so as to investigate the relationship between the SDS scale and each of the dichotomous scales of the MBTI®. These were tabulated in Table 6.10 on page 175.
Table 6.9

Correlations between the MBTI® continuous scores and the SDS – Total scores

<table>
<thead>
<tr>
<th>SDS</th>
<th>( r )</th>
<th>MBTI®</th>
<th>( n )</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>.228**</td>
<td>SN</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>-.209***</td>
<td>S</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>.227***</td>
<td>N</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>-.202***</td>
<td>TF scale</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>-.228***</td>
<td>SN scale</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>-.191***</td>
<td>SN score</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>-.183***</td>
<td>JP scale</td>
<td>117</td>
</tr>
<tr>
<td>I</td>
<td>.220***</td>
<td>SN scale</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>-.228***</td>
<td>S</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>.215***</td>
<td>N</td>
<td>118</td>
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<tr>
<td>S</td>
<td>-.216***</td>
<td>I</td>
<td>117</td>
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<tr>
<td></td>
<td>.194***</td>
<td>TF scale</td>
<td>117</td>
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<td></td>
<td>-.193***</td>
<td>N</td>
<td>117</td>
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<tr>
<td>E</td>
<td>-.208***</td>
<td>I</td>
<td>117</td>
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<td></td>
<td>-.206***</td>
<td>TF scale</td>
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</tr>
<tr>
<td>C</td>
<td>-.255***</td>
<td>EI score</td>
<td>118</td>
</tr>
</tbody>
</table>

* Significant at the 0.1% level
** Significant at the 1% level
*** Significant at the 5% level

It is noted in Table 6.9, correlations between the SDS scores and those of the MBTI® were mainly negative correlations, denoting an inverse relationship between the scales of the two instruments.
A positive correlation of .228 was seen between the total Realistic scores and the S-N scale, which was significant at the 1% level. However, a negative correlation of -.209 between Realistic and Sensing was noted with a positive correlation of .227 between Realistic and Intuitive, both significant at the 5% level. Negative correlation of -.202 between Realistic and the T-F scale were shown as was Realistic and S-N scores (-.191) and finally Realistic was negatively correlated with the J-P scale (-.183), all significant at the 5% level.

A positive correlation of .220 was yielded between the Investigative type and the S-N scale, significant at the 5% level. Investigative correlated negatively with Sensing (-.228), but positively with Intuitive (.215), also significant at the 5% level.

A negative correlation occurred between Sensing and Introvert (-.216) and Sensing also correlated negatively (-.193) with Intuitive. However, a positive correlation of .194 occurred between Sensing and the T-F scale. All were significant at the 5% level.

Negative correlations are seen between Enterprising and Introvert (-.208) and Enterprising and the T-F scale (-.206) significant at the 5% level.

The Conventional type correlated negatively (-.255) with the E-I score.

Table 6.10 reveals individual correlations between the dichotomous scales of the MBTI® and the SDS.

Perception correlated negatively with Realistic (-.271) and with Sensing
(-.264) at the 5% level of significance.

Feeling correlated positively with Investigative (.273) as well as with Artistic (.271), both significant at the 5% level.

A positive correlation between Intuitive and Investigative (.331) was noted, significant at the 5% level.

A negative correlation was shown between Thinking and the Realistic type (-.385), significant at the 5% level.
### Table 6.10

**Correlations between scores of the MBTI® scales and the SDS – Total scores**

<table>
<thead>
<tr>
<th>MBTI®</th>
<th>r</th>
<th>SDS</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
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<td>R</td>
<td>55</td>
</tr>
<tr>
<td></td>
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<td>.273***</td>
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<td>.271***</td>
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</tr>
<tr>
<td>T</td>
<td>-.385**</td>
<td>R</td>
<td>60</td>
</tr>
</tbody>
</table>

* Significant at the 0.1% level  
** Significant at the 1% level  
*** Significant at the 5% level

### 6.10 Chapter Review

In this chapter the descriptive statistics were reported and discussed, followed by a report on the inferential statistics, namely the Pearson product moment correlation, in order to ascertain whether a relationship between the MBTI® and SDS does indeed exist. In the next chapter a discussion of the findings will take place.
Chapter 7

Discussion of Results

7. Introduction

In the previous chapter the descriptive and statistical analyses of the data were reported. In this chapter the results and interpretations and outcomes will be discussed in greater depth.

7.1 Discussion of the MBTI® findings

In the MBTI® frequency distributions some differences in type development and the general trends, were noted. According to De Beer (1997), one expects to see differences from country to country as well as from culture to culture. Bayne (1997), highlights such aspects as cultural values, family influences, individual circumstances, education and the lack of support for one’s natural preference, as contributing factors that will either support or hinder the development of type (discussed in Chapter 3).

In discussing the findings of this study comparisons to other studies in South Africa will be made. However, it must be noted that, although Van Heerden’s study (1996), was made up of a number of population groups, only the findings on the Coloured and Xhosa children will be mentioned as they ‘fit’ more closely to the sample of this study.
7.1.1 Dichotomous Scales

7.1.1.1 Extravert-Introvert Scale

Jung, (discussed in Chapter 2) described the attitudes of Extraversion and Introversion as directions of energy flow. In the extraverted attitude there is a preference for gathering information from the environment and to act on the environment. With the introverted attitude, energy is drawn from the environment inwards to the world of concepts, ideas, emotions and concepts (Van Rooyen & De Beer, 1995; Hirsh & Kummerow, 1989).

In this study a higher incidence of Extraverts (51,7%) than Introverts (48,0%) occurred, and there were more females (34,7%) than males on the extraversion scale. These findings are generally comparable to other studies. De Beer’s study (1997), on a sample of South African adults reported $E = 54,09\%$ and $I = 45,91\%$. In a study by Frazer (1994), Extraverts and Introverts were equally distributed, although Van Heerden (1996), reported some differences. On the Murphy Meisgeir Type Indicator on children Van Heerden found 53,7% of Coloured children to be Extraverted, but 54,3% of Xhosa speaking children to be Introverted. Van Heerden’s study was made up of four different cultural groups and therefore one can expect differences from culture to culture, although Extraverts dominated the overall findings.
7.1.1.2 Sensing-Intuitive Scale

These two functions refer to the way individuals prefer to take in information. The Sensing type likes to take in information using the senses and focus on what is actually happening. Intuitive types prefer to look at the big picture and to look at the relationships and connections between facts (Myers, 1993).

There were more Sensing (60.2%) than Intuitive types (39.8%) in this study, with more females than males showing a Sensing preference. De Beer (1997), reported more Sensing (64.88%) than Intuitive types (35.12%). Van Heerden (1996), found 79.8% coloured children to prefer Sensing and 87.0% Xhosa children also preferred Sensing. Frazer (1994), reported 54.0% of the sample as preferring Sensing. It therefore appears that Sensing does predominate in the South African population and according to De Beer (1997), these findings are also seen in most large samples on a worldwide basis.

7.1.1.3 Thinking-Feeling Scale

The Thinking-Feeling scale refers to how individuals prefer to make decisions. Thinking types will look at the logical consequences of the choice or action, whereas Feeling types prefer to look at what is important to people (Myers, 1993).

Thinking was represented by 69.5% of the sample and Feeling 30.5%. There were more females in both the Thinking and Feeling categories of this study.
De Beer (1997), reported 74.66% Thinking and 25.34% Feeling. Van Heerden (1996), reported 61.4% coloured children preferred Feeling. Of the Xhosa children, 37.8% preferred Feeling but only 29.8% preferred Thinking. In reporting on this, Van Heerden (1996), notes that most of the children fell into the category of 'unsure'.

The general trend according to Meisgeir, Murphy and Swank (1987), is a higher incident of Feeling for most sexes amongst younger pupils. In this research study the incidence of Thinking was greater than Feeling.

Whilst De Beer's (1997), findings are different to those of Frazer (1994), and Van Heerden (1996), they are however in line with results from other countries. This study, similar to De Beer (1997), shows that the majority of the sample prefer Thinking as opposed to Feeling. De Beer (1997), maintains that this discrepancy should be further explored.

Research has indicated that reliability correlations are low on the T-F scale for all age groups but in particular for economically disadvantaged younger students (De Beer, 1997). One must bear in mind that the subjects from this sample are from a disadvantaged background, they are also unique in that they have been preselected. Differences to the general trends can therefore be expected.
7.1.1.4 Judging-Perceiving Scale

The Judging-Perceiving scale indicates how people prefer to organise and live their lives. Judging types tend to live in a planned and orderly fashion, whilst Perceiving types enjoy flexibility, spontaneity and are open to experience (Myers, 1993).

The Judging attitude predominated in this study (62.0%), whilst 38.1% indicated a Perceiving attitude, although both Judging and Perceiving was preferred more by females than males.


International studies show Judging (50-60%) to be the general preference. Although studies by Casas (1990), reports higher incidences of Perceiving amongst younger groups and higher incidences of Judging amongst older sample groups, these trends are not supported in this study; the subjects are younger but a higher incidence of Judging is noted. These differences must be seen within the context of the study as cultural factors and family and social influences play an important role in type development.
7.1.2 Whole Types

7.1.2.1 Findings on the whole sample

All sixteen types were represented by the sample. The incidences of ISTJ’s and ESTJ’s were equal as well as being the highest representation of the types. STJ types, be they introverted or extraverted, exhibit a logical and practical manner and are committed to completing tasks that they have set out to do. These high incidences are confirmed in De Beer’s (1997), findings where both ESTJ and ISTJ were high amongst South Africans.

The profile least found in this study were INFJ’s with only 0,85%, followed by ISFP (1,69 %), followed by ENFP (2,54%), and ESFP (3,39%). De Beer (1997), cites ISFP as the least often found type, followed by ESFP, followed by ENFJ and INFJ. Although the percentages of the least found type of this study do not follow the same sequence as De Beer’s (1997), findings the types least found are comparable to this study. Therefore, trends seen in the general South African population are also found in this research study.

7.1.2.2 Findings on the male distribution of the sample

Amongst the male subjects ESTJ and INTJ were the profiles most found at 14,65%, followed by ISTJ (12,2%), followed by ENTJ (12,0%). De Beer’s (1997), findings indicate ESTJ as the most found profile amongst males, followed by ISTJ, followed by ENTJ, followed by INTJ. Some differences are noted between these two findings, i.e. a larger number of INTJ’s are found in this research study. This
difference could be the result of the small sample and it also so happened that more INTJ’s were in the sample. This sample is also not representative of the population. However, the similarities are greater as the four profiles most found amongst the males in this study are also found in De Beer’s (1997), study thus to a large extent the findings are confirmed.

No ESFJ’s and INFJ’s were found amongst the male subjects of this research group and 2,44% each of ISFJ, INFP, ISFP, INFP, ESFP and ENFJ are noted. De Beer’s (1997), findings show that the least found profile amongst the male population were ISFP and ESFP followed by INFJ, followed by ENFJ, followed by INFP, followed by ENFP, followed by ESFJ. With the exception of ISFJ, the findings of this study are confirmed by De Beer’s (1997), findings.

7.1.2.3 Findings on the female distribution of the sample

The profile most frequently found amongst the female subjects of this study were ISTJ’s (14,29%), followed by ESTJ (13,0%), followed by ESFJ (11,7%), followed by ISFJ (9,1%). The findings cited by De Beer (1997), amongst the female population in South Africa were ESTJ followed by ISTJ, followed by ISFJ, followed by ESFJ. Thus, similar types most frequently found in this study were also found in De Beer’s (1997), research.

There were no INFJ’s amongst the female subjects and 1,3% ESFP’s were found. There were 3,9% of each of the following types amongst the females: INTJ, INTP, ESTP, ESFP, ENTP and ENFJ. De Beer’s (1997), findings indicate that ISFP was the least found type amongst females, this was not confirmed in this study. Low
incidences of other types amongst females reported by De Beer (1997), were: INFJ, ISTP, ENFJ, ESFP, INFP, INTP and ESTP, all had less than 4% representation. Although there are some similar findings in this study to those of De Beer’s (1997), discrepancies are noted.

It must be borne in mind as the research group of this study is not a representation of the population, one does expect to find differences from general trends. Further investigations should be made so as to verify these differences.

7.2 Discussion of SDS Findings

These findings will be discussed in brief in this section, but a more in depth exploration will follow under 7.3

In discussing the findings on the SDS scores, reference will be made to the occupations of the parents as a base for observing and comparing career choices made by the children. As a large percentage of the parents were reported as either unknown to the pupils or no longer living with them, the assumptions made must be viewed conservatively within the framework of this study.

7.2.1 Realistic work environments

These include occupations that involve concrete practical activities in which machinery, tools and materials are used (Taljaard et al., 1987). The Realistic scores showed a considerably small percentage of subjects with a preference for Realistic-type occupations. Yet this type of occupation would have been more
predominant amongst the adults (specifically males) with whom these adolescents interacted both with their families and at a social level. It is known that in the apartheid era many blacks did not have the opportunity to pursue secondary and tertiary education and were often employed doing manual work. As a result of these lost opportunities it is possible that these children have been encouraged by their parents to pursue alternative careers.

7.2.2 Investigative work environments

This involves occupations that require mental and analytical activities aimed at solving problems (Taljaard et al., 1987). The Investigative scores showed that almost 60% of the sample indicated a medium to strong preference for Investigative types of occupations. This high incidence seems unrealistic when compared to the parents of whom 1% of mothers and 3.2% of fathers were in Investigative occupations.

7.2.3 Artistic work environments

This involves work which requires creative ability (Taljaard et al., 1987). A low frequency was noted for Artistic occupations and an equally low percentage of the parents worked in the Artistic field. Possible explanations for this are that the subjects have had little exposure to the arts; there is a lack of opportunity to explore this field; culture may be a strong influencing factor (discussed under 7.3).
7.2.4 Social work environment

This requires the skill of people who are able to help and support others (Taljaard et al., 1987). A high percentage of the subjects showed little interest in the Social occupations. In contrast to this, 52% of the mothers were in a Social occupation. It can be assumed that these mothers were from a poorer, disadvantaged background and were possibly domestic workers; it is therefore more than likely that the subjects were encouraged to aspire to ‘greater things’.

7.2.5 Enterprising work environment

This involves occupations where people are persuaded or influenced to achieve a common goal (Taljaard et al., 1987). More than 57.6% of the subjects showed a keen interest in the Enterprising fields. Twenty four percent of the fathers were in Enterprising occupations, which may have had a strong influence on the subjects, especially the males.

7.2.6 Conventional work environment

This involves occupations that require the use of office machines and the work is conducted in an orderly environment (Taljaard et al., 1987). A large number of subjects scored on the higher frequencies, indicating a strong preference for this type of occupation. There was a high incidence of fathers and a reasonable number of mothers in Conventional type occupations, which may have had a strong influence on career choice. Other factors, which may also have played a role, are discussed under 7.3.4.
In discussing the findings of the SDS, some of the scores reflect that many of the pupils have an unrealistic career identity. This is to be expected taking into consideration the disadvantaged economic background of the sample, the social standing of the community and the cultural background of the pupils. These factors are discussed under 7.3.

7.3 Factors affecting career identity

7.3.1 The effect of Development on Career Identity

The adolescent has developed a career or vocational identity when he or she has a clear and realistic picture regarding his or her ability, interests and achievements, which will lead to a realistic career choice.

The relevant concepts and definitions regarding this stage are discussed in Chapter 1. Briefly, however, the stage of adolescence is often clouded with uncertainty and inconsistencies in identity, which culminates in an identity crisis. This crisis is characterised by an active search for identities that will enable the individual to find a place in an adult society. Much experimentation with different roles takes place as the adolescent attempts to achieve his or her identity. Whilst the adolescent is in this state of crisis, they may visualize themselves in different roles.

Career Identity is coupled with career maturity, whereby the individual is ready to cope with the tasks of a career; he or she has the skills to do so or has obtained information regarding the particular vocation. Too often during the adolescent stage there is an insufficient understanding of the content of the career in choice. Dreyer
(1980), as in Thom (1988), developed the concept "empty occupational identity". By this he means that the label of the occupation is used without any knowledge as to what is entailed. It is essentially meaningless and an unrealistic career identity ensues. If the career choice is unrealistic then it is also not achievable.

Should the adolescent be in a state of identity diffusion he or she usually lacks direction and commitment and it is more than likely that an unrealistic career choice will be made. Similarly, the adolescent who is in a state of identity foreclosure may be influenced in making a career choice that is prescribed by the parents or community as opposed to one that is best suited to his or her needs.

7.3.2 The Influence of parents on the development of Career Identity

Louw (1998), emphasises the importance of parents in guiding and directing children in choosing careers. Fathers play a vital role in the occupational identity development of a child. An adolescent boy whose father is a strong and positive role model usually adjusts better to his occupation than when his father was absent. Girls are also influenced by their fathers in the type of careers they choose. Coats and Overman (1992) (in Louw, 1998), found that girls who chose non-traditional careers usually have fathers who encouraged them to be assertive and competitive (Louw, 1998). The fact that almost half the fathers were reported absent in the research sample could be a matter of concern in the occupational identity formation of these adolescents. Further, the chances of developing an unrealistic occupational identity is increased.
The role of the mother is equally important in the career identity of the adolescent. Conger and Petersen (1984), as in Thom (1988), maintain that where the mother of the adolescent is engaged in a career it is likely that the adolescent will also develop a sound career identity. Girls in particular will take on the role of the mother and pursue a career of their own. Carl Rogers confirms the importance of a positive role model of parents in the development of the child (Thom, 1988).

The educational level of the parents would have a great impact on the occupational identity of the adolescent. As the subjects were from a disadvantaged background it is possible that many of the parents had a low level of education and low status occupations. There were possibly limited experiences from which they could draw on in order to realistically assist their children in developing occupational identities. As such it is expected that they would be unable to provide their children with sound advice and guidance regarding careers. They themselves may have unrealistic expectations and set unrealistic goals for their children in terms of careers.

7.3.3 The effect of culture on career identity

Cultural beliefs and values are the bedrock of child development principles, which will, in adulthood, enable the individual to function optimally within the expectations and sanctions of that particular society (Vargas et al., 1992).

The individual is not passive in his development. Both nature and nurture have a strong influence in the personality development process. The individual, who is also endowed with his or her own genetic inheritance, acts on the influences of the
environment. These reciprocal influences will play a strong determining role in both the development of the young child but also the decision making process in later years (Thom, 1988).

Thom (1988), asserts that there is a relationship between culture and personality, which is embedded in the social background of the individual. The individual acts on his or her social environment both consciously and unconsciously. Whilst the individual may act on the culture, it is ultimately the influence of the culture that will determine the personality.

Culture is passed on from generation to generation. However, very often many traditions or beliefs fall by the wayside and only those aspects which are meaningful and which meet the individual needs are internalised. As a result a new culture is formed. For example, a new African culture can be seen to emerge as many black children are seen speaking English, adapting a different dress code, mannerism and behaviours that are similar to their Western counterparts. Stevens and Lockhat (1997) reported on the “Coca-Cola kids” whereby a shift in identity of the black adolescents is seen as they embrace the American ideologies (discussed under 7.3.5). This change in behaviour and values can lead to intergenerational conflict. In terms of career identity the adolescent may be aspiring towards occupations that they have perceived in the Western culture but do not fully understand. Parents on the other hand who are deeply entrenched in the traditional values may have different expectations of their children.

In a study of Pedi Adolescents, Garbers (1971), found that society did not sanction individualism and free judgement but rather the values and norms of the culture
were reinforced at all levels, with a very strong influence at school. However, Garbers (1971), also found that the influence of Western technology and the acculturation that occurred amongst the adolescents had a great impact on the adolescent’s vocational choice with the result that there were unrealistic aspirations. With the Western influence, teachers of the Pedi adolescent and pupils no longer shared a common ground which in effect contributed to adolescent development and subsequent career choice. In this study the black adolescents were exposed to ‘Westernised’ teachers who would encourage the development of independent thinking which too, could influence adolescent development and career choice, and may in some instances be in direct conflict with their culture.

In spite of the adolescents adopting different norms, values and behaviour, culture has a very strong influence in guiding the adolescent in career choice. If one were to look at the frequency scores on the Artistic scale, it is evident that Artistic potentials do exist but few indicated a strong preference for a career in this field. It is possible that there is a perception that a career in this field would be financially insecure. As the subjects were from a disadvantaged background the community or group may be dependent on its members for survival. Therefore it would make no sense to pursue a career that is not financially viable and that would threaten the continuity of the group.

Jung (discussed in Chapter 2) developed the concept *archetypes*, which refers to images or behaviour dispositions which have been transmitted to humanity through generations (Meyer et al., 1997, p. 102). The transmission of these behaviours remain inherent in the individual and therefore, in terms of this study, one can consider the possibility that the subjects who, to a large degree have inherited the
values and norms of their culture, are likely to perceive careers in a specific way. This perception may be unrealistic or distorted.

The exposure to the western culture calls for a look at the social environment of the group. In general the black tradition focuses on the development of the individual whereby decision-making processes are based on the group norms and values and the pursuit of maintaining the group is of the essence. Western cultures encourage independent thinking and autonomy with the pursuit of individual achievement and satisfaction. Some distortions and unrealistic perceptions are bound to occur as these differences conflict.

Garbers (1971, in Thom 1988), maintained that a large percentage of black adolescents (51%) indicated that they were keen on pursuing academic and professional careers. However, a large number of these students would not be able to realise their aspirations as they overestimate their abilities. One needs to bear in mind that these findings were prior to the dismantling of apartheid and opportunities and occupations were not available to most black people at the time. Although more opportunities are now open to all races, it does not remove the possibility of unrealistic career aspirations due to the differences in perception and socioeconomic factors (discussed under 7.3.4).

7.3.4 The influence of Socioeconomic factors and career identity

The effects of socioeconomic factors play a vital role in the occupational development and identity of the adolescent. As the sample are essentially from a
disadvantaged background it can be assumed that they may be attracted to vocations that will be financially rewarding.

It must be remembered that these pupils have been pre-selected on the basis of having the ability to obtain a university qualification and were therefore given the opportunity to complete their schooling in a privileged environment. They were exposed to a Western culture and perhaps a different method of teaching whereby independence and personal achievement are encouraged. It is therefore possible that they would aspire to Western values and status.

An examination of the SDS frequency scales reveals a strong leaning towards the Investigative, Enterprising and Conventional type occupations. The Realistic, Artistic and Social occupations were less popular. It is conceivable that the view taken about these types of occupations is based more on perceptions of the financial and social gains regarding the occupation without understanding the content of the occupation. For example, the Investigative type careers showed a high frequency on the higher scores. This begs the question as to the level of understanding regarding the nature of these types of careers, the vastness of the field, the depth and breadth of the disciplines and the academic abilities required. Further, the higher scores of the Enterprising occupations may also have a socioeconomic undertone. The idea of running one’s own business or being in a position where one is making the decisions may be a strong motivating factor. Once again the perception may arise out of the experience of their disadvantaged background and the true nature of the occupation is not understood. It must also be noted that a high percentage of the fathers were in an Enterprising occupation which could have an influence on career choice. A further observation was the high incidence of Conventional occupations. The titles
of these types of occupations are generally better known and may also be perceived as more secure occupations.

Mkhabela (1986), as in Thom (1988), maintains that a large portion of the black urban adolescents are from an economically impoverished background and therefore it is likely that there would be a lack of effective guidance regarding skills and academic requirements when pursuing career interests. This hampers the black adolescent in his or her quest to actualise latent potentials in a meaningful career (Thom, 1988).

Conger and Petersen (1984), as in Thom (1988), maintain that the socioeconomic status is a determining factor in career choice. The adolescent whose parents occupy a high status position is likely to aspire to a similar status. The adolescent who comes from a low status family or poorer socioeconomic background is also likely to aspire to a higher status (Thom, 1988). The question arises, under such conditions, as to the readiness and maturity of the adolescent to be able to make realistic occupational choices.

The sociological perspective raises the following issues regarding persons who come from a disadvantaged background which can contribute to an unrealistic career identity:

- Career awareness may be limited.
- The family background and level of aspiration may affect the students career choice – it may be unrealistic or too conventional.
- Lack of information or unrealistic perception of the career.
- Social and economic constraints.
• Unrealistic expectations in relation to ability and current education performance.
• Unrealistic expectations due to the exposure to a more “affluent” environment.
• Lack of understanding of the labour market.
• A shift from traditional roles and cultural beliefs which are replaced by a greater level of aspiration. The shift may be too sudden creating a gap between the parent and child as different experiences take place (Brown, et al., 1996).

7.3.5 The effects of the socio-political climate on identity development

In a study of the black adolescent identity in post-apartheid South Africa, Stevens and Lockhat (1997), have discussed a number of pertinent issues regarding the problem of identity formation, which must ultimately affect a truly realistic career identity. A discussion of this is given which will facilitate a greater understanding of the black adolescent of the “new” South Africa.

The transitions which South Africa has undergone since the dismantling of apartheid, and the rise to power of the ANC, has brought with it complexities and contradictions which are reflected in the black identity development (Stevens & Lockhat, 1997).

Bulhan (1980; 1985 in Stevens & Lockhat, 1997), proposes a theory of identity development under prolonged oppression. According to Bulhan (1979; 1985, in Stevens & Lockhat, 1997) there are three modes of psychological defenses, which occur in stages. The first stage is capitulation which involves increased assimilation into the dominant culture whilst simultaneously rejecting one’s own culture. The second stage, revitalisation, is characterised by a reactive disavowal
of the dominant culture and a concurrent romanticism of the indigenous culture. Stage three, radicalisation, consists of an unambiguous commitment towards radical change. It is therefore argued that for the oppressed to reclaim their identity after prolonged oppression, the imposition of the oppressor has to be rejected, and the system must be prevented from determining the parameters within which the identity is defined (Stevens & Lockhat, 1997).

Racism in South Africa was institutionalised in the 1948 apartheid policies. The impact of this policy was profound in that the majority of whites enjoyed capitalist economic gains whilst the black majority experienced a downward economic pressure, resulting in high levels of poverty. Coupled with this, mass relocations occurred, forced removals and complete destruction of many black communities and families. Education services also differed radically between whites and blacks with the result that few blacks were able to succeed at secondary and tertiary levels of education. It is therefore expected that these social and economic consequences must also be linked to psychological consequences, which have a host of negative effects on the development of the black adolescent.

In relation to this study it is feasible that the sample could have been exposed to these effects. For example, some of the parents may have been the victims of the inadequate education system during the apartheid era and are therefore now unable to provide proper career guidance for their own children. The poverty that ensued rendered these children as economically disadvantaged. The relocation and forced removal of families could be the result of so many of the fathers of the sample not being active in the children’s lives or unknown to the children. Some of the fathers may also have lost their lives in the political “struggle”.

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The children of this era were subjected to stress and became the passive, innocent victims, which may have had a negative effect in the healthy development of the adolescent. As noted in Erikson's (1963), theory (in Stevens & Lockhat, 1997) the primary task of the adolescent is to successfully negotiate the development of congruence between the self-image and the role expectations of the environment. This negotiation may have been hampered as contradictory role expectations had been encouraged through capitalist ideology on the one hand, and racist ideology on the other. Black adolescents have been exposed to the imagery, symbols and values that encouraged individual achievement and social mobility, but simultaneously have been refused access to any significant material resources that allowed for this. These contradictions have impeded the development of healthy self-concepts and healthy levels of independent judgement among black South African adolescents (Stevens & Lockhat, 1997).

The destruction of the black family relations may have contributed to the emotional insecurity among black adolescents and consequently difficulties related to emotional independence during and after adolescence (Letlaka-Rennert, 1990 in Stevens & Lockhat, 1997). Cooper (1990) (in Stevens & Lockhat, 1997) supports this and argues that the black family has been denuded of its ability to provide a structured, nurturing environment where the full potential of the developing child can be fostered.

Further the struggle for democracy was coupled with violence and many of the young black adolescents were drawn into the fight against the 'enemy'. A common social identity based on a shared political consciousness was formed and the 'young lions' battled against their oppressive existence. Even though apartheid was
dismantled in 1994 and equal opportunities were afforded to all, there are long-term social and economic consequences for the majority blacks, and the greatest impact of these effects are experienced by black adolescents (Alexander, 1992 as cited in Stevens & Lockhat 1997). Almost immediately they were expected to change their identities from ‘young lions’ to ‘young entrepreneurs’. They had to adapt norms and values that were almost exclusively reserved for the white capitalists. It was those very principles that caused their oppression and against which they fought which they now had to incorporate into their lives. These contradictions may well result in role confusion leaving the adolescent directionless rather than the development of identity integration (Erikson, 1963). Whilst apartheid capitalism no longer exists, “racial” capitalism is still fully entrenched (Alexander, 1992 as cited in Stevens & Lockhat 1997). What this means is that the roles that are now being described are not attainable due to the racial legacy of the South African society and the failure of such programmes as the Reconstruction and Development Programme. Whilst before there was a common identity and a reference point in the face of the oppressors there is now no longer a frame of reference which the black adolescent can define himself or herself.

Stevens and Lockhat (1997), emphasises the need for black adolescents who are exposed to a world that sanctions individualism, to develop an identity that allows them to cope with their social realities. This identity will evolve through an ideological shift from collectivism to individualism. This shift is seen in the emergence of the “Coca-Cola” culture - an influence of American individualism, competition, individual aspirations and general worldview. As the ‘new’ South Africa has failed to provide adequate programmes to allow for the development of healthy independence and judgement, this shift can be seen as a means for the black
adolescents of maintaining their material and psychological integrity and an attempt to function more optimally.

Many black adolescents are experiencing severe problems adjusting to the contradiction of rejecting collectivism on the one hand, which was necessary in the struggle, and pursuing individualism. The result being that the adolescent is experiencing psychological tension and difficulties related to social adjustments (Stevens & Lockhat, 1997).

It can therefore be assumed that as the black adolescent is attempting to adjust to the value of individualism embraced by the new socio-historical era in which they find themselves, the possibility of unrealistic aspirations and confusion regarding career identity cannot be precluded.

### 7.3.6 The effect of the mass media on career identity

Perhaps one of the most powerful influences that adolescents face today when choosing a career is that of the mass media.

Television, newspapers, magazines, film and radio have a powerful influence on how the adolescent perceives himself in an occupation. It may be that the subjects of the study are not exposed to all these influences at all times, but they are surrounded by some, most of the times. All too often advertisements regarding professions emphasise only the positive aspects of a particular career giving young people an unrealistic impression of that specific career (Louw, et al., 1998).
The images of affluent life styles, status, financial and social gains influence the adolescent into assuming a particular occupational role of which they may have very little knowledge or understanding.

7.4 Discussion of the correlational analyses of the MBTI® and SDS

Correlational analyses were computed and reported in Chapter 6. Table 6.9 provided a summary of the relationships that were found between the MBTI® and the SDS scales. These results show that both positive and inverse relationships are present between the two scales.

The hypothesis of this study states that the MBTI® is a valid measure when compared to the SDS. A discussion of these results will reveal whether this hypothesis is confirmed. As Table 6.9 provides information only between the scales of the SDS and the dichotomous pairs of the MBTI®, it will not be discussed in detail. Table 6.10 depicts the relationship that exists between the SDS scores and each one of the MBTI® scores. For this reason only table 6.10 will be discussed in depth.

The Perceiving scale was negatively correlated to the Realistic scale. In other words high scores on the perceiving scale show an inverse relationship to the Realistic scale.

Looking at the characteristics of each one of these two scales, Perceiving types are spontaneous, flexible, open to experience and adapt to the demands of the situation (Hirsh & Kummerow, 1989; Myers, 1993). Realistic types are practical minded,
they value the concrete and tangible and possess a closed system of beliefs and values (Holland, 1997). The characteristics of these two types are clearly different which one would expect in the light of the negative correlation. On the Hexagon (Chapter 4, Figure 4.1) the Social score is placed directly opposite the Realistic score. Social types are described as enjoying interpersonal situations, possess moderately open belief systems and value social and ethical activities. These characteristics are in direct contrast to Realistic types but perhaps closer to Perceptive types. As the relationship between the Perception scale and Realistic scale is a negative one, no common ground is shared but rather some characteristics of Perception may be similar to those of Social.

Perception is however also negatively correlated with the Social scale. This implies a contradiction of the findings discussed above. These findings must however be seen within the context of this study and specifically the nature of the sample. The discussion under 7.3 highlights numerous factors that may contribute to an unrealistic career identity; these very same factors may also bring about contradictions in the empirical findings. In completing the MBTI® and SDS questionnaires subjects may have not understood the questions, some of the questions may have been misunderstood or the questions were answered in a manner that the subject felt would be ‘correct’. As a result they were not ‘true to type’.

The Feeling scale was positively correlated to the Investigative scale. Feeling types are guided by personal values, enjoy harmony and recognition of individuals, exhibit understanding, compassion, are appreciative and accepting (Myers, 1993; Kummerow & Hirsh, 1989). Investigative types on the other hand, prefer thinking
rather than acting, they are not particularly sociable and avoid close interpersonal relationships. They value their own personal traits such as being intellectual, curious and open to new ideas and experiences. They are inclined to perceive other life goals of different values as less important (Holland, 1997; Osipow, 1973). The characteristics of the Investigative and Feeling type appear to share no common ground. However, Investigative is adjacent to Artistic on the Hexagon. The Artistic type enjoys relations with others, either directly or indirectly; they prefer tasks that emphasize physical skills or interactions. They express emotion, believe in equality for all, have an open belief system, and are open to ideas and feelings and to others (Holland, 1997; Osipow, 1973). One can see that the Artistic type and Feeling type share common characteristics. It is possible that the subjects of this study were in fact closer to Artistic in type rather than the Investigative type.

Feeling type also correlated positively with Artistic type, which confirms the above.

A positive correlation is noted between Intuitive and Investigative types. Intuitive types take in information by seeing the big picture, focusing on the relationship and connections between facts. They look at possibilities and underlying meanings or relationships (Myers, 1993; Hirsh & Kummerow, 1989). Investigative types are rational, pay attention to objective facts, and rely on thinking, gathering information and the careful analyses of information (Holland, 1997). The characteristics between these two scales can be regarded as similar as both rely on their own abilities and insights. Investigative is also adjacent to Artistic, both are able to see the bigger picture, are imaginative, original and intuitive. Therefore the relationship is confirmed.
Thinking was negatively correlated with Realistic. Thinking types look at logical consequences, they analyse cause and effect, are good at evaluating, looking at pros and cons, truth and falsehood (Myers, 1993; Hirsh & Kummerow, 1989). This is considerably different to the Realistic type whose focus is on the physical and tangible, which is expected as the relationship is a negative one.

The above findings do indicate that relationships do exist between the MBTI® scales and the SDS, albeit not between all the scales. Holland (1997), developed his theory based on “all things being equal” (discussed in Chapter 4). In looking at the factors that do influence the development of type, the subjects of this study do not meet all the criteria and this must be taken into consideration when looking at these correlations, or lack thereof. Falsification of type or untrue to type is a product of the influences, which have been discussed in this study, in type development. Finally, no type is absolute as different influences and experiences may render certain characteristics of different types to come to the fore under different circumstances.

7.5 Chapter Review

In this chapter the empirical findings discussed in Chapter 6 were explored. Firstly, the dichotomous scales of the MBTI® were discussed on the whole sample, followed by a discussion of the findings of the male and then female component of the sample. Thereafter, whole types were discussed in the same manner. Findings were compared to other studies, but mainly De Beer’s (1997), research on types found in the South African population. Those of De Beer (1997), confirmed most of
the findings of this study, although discrepancies were noted. Possible reasons for these discrepancies were explored.

The SDS scores were then discussed and the findings revealed that an unrealistic career identity prevailed amongst the subjects. A number of factors may have contributed to this, which were discussed.

Finally, the correlational analyses between the MBTI® and the SDS were discussed.

In the next chapter conclusion and recommendations will be given.
Chapter 8

Conclusion and Recommendation

8. Introduction

The object of this study was to validate the MBTI® against the SDS.
In this final chapter a consolidation of the findings will be given, some recommendations will be offered regarding the use of the MBTI® amongst black adolescents, specifically for the purpose of career guidance.

8.1 Consolidation of empirical findings

8.1.1 Findings on the MBTI® scores

The results of this study confirmed representation of all the 16 types described by the MBTI®. As the sample is not representative of the general population, the findings cannot be generalized, but the results yielded provided sufficient evidence, which compared positively to trends found in other studies on the MBTI®.

The research sample used in this study was small and there was an overrepresentation of female subjects. This probably impacted on the findings, limiting the results to the sample in question. As there were more female subjects, most of the types were predominated by females, which does not compare to the general trends.
8.1.2 Findings on the SDS scores

The findings on the SDS revealed a good mix of career choices across the six environments discussed by Holland. However, in taking a closer look at the types of careers chosen it appears that many of the subjects had unrealistic career identities. A comparison was made between the vocation of the parents and the career chosen by the subject and in most cases it appeared that the career of the parent had little, if any influence on the career choices made. A number of variables were discussed as possible influencing factors on the career decision process.

8.1.3 Findings on the correlational analyses

The correlational analyses that were computed between the MBTI® and SDS scores showed some positive relationships, whilst some inverse relationships were also noted. The relationships were explained in terms of the position of the SDS scales on the hexagon and how the characteristics compared to those of the MBTI®. Some common characteristics were noted between the two instruments where positive correlations were reported. In terms of negative correlations a comparison was made between the scale which was on the opposite side of the hexagon to the scale that was negatively correlated to the MBTI®. Whilst some of the results yielded suggested that the scales of the SDS and MBTI® are comparable, there were discrepancies. Once again these were explained in terms of the type and size of sample as well as the influence of other variables.
8.2 Recommendations

As mentioned above, the sample was small and there was an overrepresentation of female subjects. It is therefore recommended that a similar study be carried out on a larger sample with a more even representation of males and females.

As the subjects were in the adolescent stage of development and on the verge of leaving school to enter tertiary education, it is vital that the student has an understanding of himself and is able to make realistic career choices. Guidance is essential for the student and the MBTI® is an instrument that can be used by the counselor to provide the individual with information about himself.

Further, as the adolescent stage is also such a critical stage of development, it is recommended that research be carried out on this age group. It is strongly suggested that the research be focused specifically on the black population to explore the cultural influences and the post apartheid effects, in order to establish the extent to which these variables may play a role in the subject being ‘true to type’.

Not all the scales of the MBTI® correlated with all the scales of the SDS which may be the result of the small sample. It is therefore recommended once again that a larger sample be used for further investigation.
8.3 Conclusion

The MBTI® is an instrument used for determining psychological types that has proved to be both reliable and successful in countries all over the world. It is an instrument that was developed for the purpose of people recognising one’s own and other’s differences and to be happy with these ‘gifts’. In understanding and recognising these differing gifts a whole new world of human potentials and discoveries emerge.

The book “Gifts Differing”, co-authored by Isabel Myers and her son Peter Myers (1995, p.211), is what Peter Myers describes as a tribute to Isabel’s “lifetime appreciation for the beauty, strength, and infinite possibilities of human personality in all its fascinating varieties”.

It is of the writer’s opinion that the MBTI® continue its momentum in South Africa, particularly amongst the younger population. South Africa in its transitional stage is faced with so many complexities, diversities and misunderstandings. To enable this country to move into the new millenium and beyond, it requires a better understanding, appreciation and tolerance of each other’s differences. Further, as the adolescents of today will be the leaders of tomorrow, appropriate guidance in career choice is essential which will contribute to the creation of stability and secure the continuity of the country. The MBTI® is an instrument that will facilitate these objectives.
It is therefore recommended that continued research on the MBTI® be carried out and a greater awareness of the instrument be made to educational institutions and all who have the desire to enjoy their gifts.
BIBLIOGRAPHY


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