

THE ROLE OF TIME PERSPECTIVE IN THE CAREER CHOICE
OF SECONDARY SCHOOL PUPILS

by

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submitted in part fulfilment of the requirements
for the degree of

MASTER OF EDUCATION - WITH SPECIALISATION IN
GUIDANCE AND COUNSELLING

in the

DEPARTMENT OF PSYCHOLOGY OF EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

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FEBRUARY 1994

(i)

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is my own work and that all the sources that I
have used or quoted have been indicated and
acknowledged by means of complete references."


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1994-02-13
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Gregory Edward Pienaar

ACKNOWLEDGEMENTS

This work would not have been possible without the help of the following people :

- * My supervisor Prof G Bester for his constant encouragement, advice and expert guidance.
- * Dr G W Sauer for the example of complete professionalism he sets, and also for his understanding and assistance.
- * My parents for instilling in me the motivation to always strive for something more.
- * My wife for the proofreading and advice regarding grammar and style.

February 1994

(iii)

To Stephanie, my wife and best friend,
for all the love and support.



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"Yet the timeless in you is aware of life's timelessness,
And knows that yesterday is but today's memory and
tomorrow is today's dream."

Kahlil Gibran

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Degree : Master of Education
Subject : Psychology of Education
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SUMMARY

Due to the fact that many of the secondary school pupils who experience difficulty in choosing a career, also appear to have problems with their time perspective, an investigation into the possible link between these concepts was undertaken.

A literature study was done where the major dimensions of time perspective were identified : locus of control; optimism/pessimism; continuity/directionality and structure. Analyses were done on the principal factors influencing time perspective and career choice. A reliable measuring instrument was developed in order to measure the secondary school pupil's time perspective.

The results of the empirical investigation indicated that time perspective does play a significant role in the career choice of secondary school pupils. Gender and intellectual potential do not appear to have a significant bearing on time perspective.

The educational implications of the findings are discussed, and guidelines regarding methods of improving a child's time perspective are given to both teachers and parents.

KEY WORDS:

Time perspective, career choice, secondary (high) school pupil, gender, intellectual ability, locus of control, optimism/pessimism, continuity/directionality, structure, future.

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CHAPTER ONE

PROBLEM FORMULATION AND PROGRAMME OF THE RESEARCH

1.1 Awareness and statement of the problem

At some stage in every young person's life, there comes a time when he has to make a decision regarding his future career. Obviously it is not a decision to be taken lightly as his entire future depends on it.

In the South African education system, this decision normally has to be taken at the latest, around August of the matric year. This is due to the fact that entries for universities, technikons and other tertiary education institutions normally close around that date. Pupils not planning on further formal studies have a little longer to make their decision.

It has come to the author's attention in his capacity as a South African matric teacher, that the majority of secondary school pupils have not made any firm decision regarding their career, by the time the initial deadlines begin to arrive. They also appear to be unconcerned about the issue. It seems as if time is not a problem for these pupils. If they are questioned during their standard nine year or early in their matric year regarding their career choice, they will usually reply that there is more than sufficient time to make up their minds. This idea of "more than enough time" seems to remain with the pupil until it is often too late. In some instances pupils just let the deadlines pass, thereby missing out on opportunities. Others feel pressurised and make hasty decisions which they sometimes come to regret later on. Only a small percentage of matric pupils have made their decisions and are able to enter in time for their chosen courses.

Another problem which is quite evident in secondary school pupils, is that they often experience great difficulty in picturing themselves in the future. The following are some of the possible explanations for this problem :

- * It may simply be a feature of a specific type of personality.
- * It may possibly be a result of the rapidly changing circumstances and increased responsibilities which the secondary school pupil experiences at this stage of his life.
- * The fact that most of the situations or happenings of the future such as marriage, children and full-time work are completely out of the secondary school pupil's frame of reference.
- * An inability to see the future in a positive light, leading to a situation where avoidance is easier than confrontation.

It is clear that this inability to form a picture of the future adds to the difficulties experienced in choosing a career.

This unrealistic idea of time and the future is part of the concept of time perspective. Very little research has been done on time perspective, and of this research a negligible amount makes reference to career choice. Although measuring instruments such as the "Long-Term Personal Direction" scale (Wessman 1973: 106), the "Achievability of Future Goals" scale (Heimberg 1963: 27), and the "Hopelessness Scale" (Beck, Weissman, Lester and Trexler 1974: 861) were developed to measure time perspective, none of them were

relevant to secondary school pupils.

There have been many studies and investigations relating to the various factors involved in career choice. Factors such as aptitude, intelligence, interests, personality, decision making ability and socio-economic environment, have all been investigated, and although many researchers (Super & Hall, 1978; Jepsen & Dilley, 1974; Ginzberg, Ginsburg, Axelrad. & Herma, 1951), have noted the importance of time perspective in career choice, very few studies have empirically investigated the relationship between these two variables. That such a relationship exists is possible since time perspective and career choice appear to have certain aspects in common. Briefly, it would seem that a number of the factors which have an influence on career choice, are also related to time perspective :

- (i) Super (1957: 216) and Yost and Corbishley (1987: 4) are some of the researchers who have found intellectual ability to be a factor in career choice. Teahan (1958: 379) and Lessing (1968: 185) found that intelligence was also related to time perspective.
- (ii) Researchers such as Holland, Super, and Roe (all in Yost and Corbishley 1987: 7-14) found that personality was very closely related to career choice, while Gjesme (1979: 174) and Trommsdorff's (1983: 381) findings were that certain aspects of personality were related to time perspective.
- (iii) The fact that socio-economic status and environment are fundamental factors in career choice has been established by many researchers, including Super (1957: 267) and Lindhard (1974: 34). Leshan (1952: 591), Lessing (1968: 200) and O'Rand and Ellis (1974: 55), all found that socio-economic status and environment play a role in the development of time perspective.

With regard to stages of career choice, four groups of pupils are usually identified : those pupils who have already made a definite decision; those pupils who have not decided and are concerned about their indecision; the group of pupils who are undecided and who are prepared to leave the decision up to others; and finally the pupils who have not made a decision and are completely unconcerned about it. It is particularly the latter two groups which are a problem for teachers and parents. Many factors may be responsible for this situation, one of which may be the aspect of time perspective. This situation where time and the future appear to be unimportant to pupils for whom they really should be important, clearly needs further investigation.

In order to assist parents and teachers in the development of the child's time perspective, a measuring instrument designed specifically for secondary school pupils will have to be created.

In the light of the above discussion, it seems that the problem of this investigation revolves around the following questions :

- * What is understood by the concept of time perspective?
- * How does time perspective develop and which factors have an influence on it?
- * Is it possible to measure the time perspective of secondary school pupils?
- * Does time perspective play a role in career choice?

1.2 Aim of the Investigation

The aim of the investigation is to investigate whether time perspective plays a role in the career choice of secondary school pupils or not.

A literature study will be undertaken in two parts, with the goals of the first part being :

- * the definition of the concept of time perspective;
- * the investigation of the various theories regarding time perspective;
- * the identification of the dimensions of time perspective;
- * an analysis of the factors which have an influence on time perspective;
- * and the tracing of the development of time perspective.

The objectives of the second part would be to :

- * define the concept of a career;
- * and identify the major factors related to career choice.

An empirical investigation will then be conducted in order to :

- * develop a measuring instrument which will be able to quantitatively measure a secondary school pupil's time perspective.
- * establish whether time perspective plays a role in career choice, and if so, what the implications are for teachers and counsellors in their work with pupils needing to make career choices.

1.3 Programme to be Followed

The present chapter deals with the awareness of the problem, analysis of the problem, aim of the research and programme of the research.

In chapter two, an exposition of the concept of time perspective will be given. It will concentrate on the nature of time perspective, the dimensions of time perspective, factors influencing time perspective and the development of time perspective.

Chapter three will investigate the concept of career choice and the factors related to career choice.

Chapter four will deal with the selection of the sample, the development of the measuring instrument, and the procedure followed during the empirical investigation.

In chapter five the results of the empirical investigation will be discussed. Here conclusions will be reached as to the role of time perspective in career choice, and whether gender and intelligence affect time perspective or not.

Chapter six will deal with the educational implications of the research findings. Suggestions for the application of the results in the classroom and at home will be given. A brief evaluation of the research will be done, and finally, recommendations for further study and research will be given.

CHAPTER TWO

TIME PERSPECTIVE

.1 Introduction

As has already been stated in chapter one, there are many factors which play a role in the career choice of secondary school pupils. This literature review will focus on the concept of time perspective, under the following sub-sections :

- * Definitions of and theories regarding time perspective.
- * Essential characteristics of time perspective.
- * Factors influencing time perspective.
- * The development of time perspective from infancy to old age.

.2 What is Time Perspective?

In 1942 Lewin (in Blinn & Schwartz 1988: 2) defined time perspective as the totality of a person's views of, and awareness into his future and his past existing at a given time. The concept of time perspective is said to be synonymous with the terms - "temporal perspective" and "time orientation". Bortner and Hultsch (1972: 98) defined personal time perspective as "the evaluation of the past and expectancies for the future in relation to perceived status at the present time." Trommsdorff (1983: 381) puts it succinctly when she defines the study of time perspective as dealing with "the content, duration, or directionality of the subjective experience of time - of past, present and future. Future time orientation is part of time perspective."

is this latter aspect of time perspective, namely that of the future, on which this particular study focuses, as the career choice of secondary school pupils is essentially a part of the future. Wallace (1956: 240) defined future time perspective as "the timing and ordering of personalized future events". Verstraeten (1980: 178) defines future time perspective as "a cognitive dynamic orientation toward personal and social events some distance ahead of the present, and it is said to consist essentially of motivational objects such as goals, wishes, and fears with respect to the individual's future."

.3 Theories regarding time perspective

.3.1 The Philosophical point of view

The concept of time itself, possibly more than any other subject of philosophical concern, has been a perennial source of puzzlement and perplexity (Gale 1968: vii). The first serious attempt to analyze the concept of time occurs in Aristotle's "Physics", where he raises the question "In what sense, if any, can time be said to exist?" He partially answers his own question by saying that time is made continuous by the indivisible, present now-moment, which links the past to the future by serving as the termination of the past and the beginning of the future (Gale 1968: 2).

Of all the philosophical thinkers and writers, the existentialists seem to place the most emphasis on the concept of time. Existentialism refers to a contemporary type of thinking that emphasizes human existence. By existence, Kierkegaard (said to be the originator of existentialism), means "the striving of a person to fulfill himself. What men must strive points to a tension within their very being" (Beck 1975: 482). Kierkegaard finds this tension to be "a result of the fact that man is a spiritual being, that he is a synthesis of the temporal and eternal, the finite and infinite" (Beck 1975: 482).

Existentialists say that man is compelled to assume the responsibility of making choices. This realisation that man has complete freedom of choice, in conjunction with the thought that he is completely ignorant of the future, leads to a condition of anxiety (Flew 1984: 116). The further realisation that man's existence is finite and that "it was proceeded by and must terminate in nothingness" (Flew 1984: 116), exacerbates the problem.

Martin Heidegger, another existential philosopher, says that when an individual finds the experience of passing and anticipating time to be psychically harmful, a state of "inauthenticity" will exist, where the individual "lets time slip away and experiences it only as a passive flow of his being" (Barrett 1968: 362-363). On the other hand, the authentic man is able to regulate actions, plans, and future projects. It would seem that Heidegger and many other existential theorists are concerned with the fact that anxiety about the future leads to an interference with the progression of self toward future goals (Rappaport 1991: 75).

Melges (1982: 29) summarizes the existential point of view regarding time in the following way - "Existential writers have emphasized the relationship between the present and future as fundamental for commitment and meaning in life."

The idea that a person's current behaviour is strongly influenced by his feelings about the future, is an idea which seems to be foremost in the thinking of Rollo May, another humanistic/existential theorist. May (in Rappaport 1991: 66) states that "personality itself can be understood only as we see it on a trajectory towards the future - the person is continuously becoming, always emerging into the future." May adds that the concept of identity is tied to the notion of how a person perceives life over time and that a person's attitude towards the future will to a large extent determine how he views the present and past. May also argues that "without the development of a fluid orientation to the future, life cannot be invested with

meaning."

In summary, it may be said that many philosophers seem to agree on the point that a person's concept, ideas and feelings towards his future play a large role in his current behaviour and in his personality.

2.3.2 The Psychological point of view

Over the years many theories regarding the development of time perspective have been proposed. What follows in this section is a brief summary of the ideas of the more important contributors to our understanding of personality theory and psychotherapy.

Sigmund Freud did not have any specific ideas concerning time perspective, but any discussion of personality theories would be incomplete without any reference to his theory. Most of Freud's work was concerned with the unconscious processes underlying behaviour. He emphasised that in contrast to the awareness of time relationships in conscious processes, unconscious processes are characterised by timelessness (Melges 1982: 3). He said that the unconscious processes are not ordered temporally and have no reference to time. Freud also stated that, that which is repressed or relegated to the unconscious does not change with time. Freud's closest reference to future time perspective can be found indirectly in his observations regarding anxiety. He said that anxious people feel helpless in the face of the future (Cottle 1976: 161). He also observed that anxiety stimulated the desire for one to retrieve time and rearrange or relive the past in hopes of relieving present and future problems (Cottle 1976: 154).

Alfred Adler (in Goldberg 1990: 43) in revising Freud's theory, introduced the notion of the importance of the future in psychotherapy. He indicated that a person's conceptions of his hypothetical future would shape his behaviour in the present.

Central to Erik Erikson's psychosocial theory of personality is the fact that the development of the person is marked by a series of stages that is universal to humanity (Hjelle and Ziegler 1984:117). His theory is that a person goes through eight stages of development. Each stage in the life cycle has an optimal time in which it is dominant. When all the stages have unfolded, a fully functioning personality comes into existence. Time plays an indirect but important role in Erikson's first psychosocial stage - "Infancy-Oral Sensory". It is during this stage that the child's basic sense of trust develops. Erikson said that this general sense of trust is the cornerstone of a healthy personality (Hjelle and Ziegler 1984: 119). He goes on to say that a sense of trust "does not depend on the amount of food or the expressions of affection the infant receives; rather, it is related to the mother's ability to give her child a sense of familiarity, consistency, continuity, and sameness of experience" (Hjelle and Ziegler 1984: 120). If the mothering figure is unpredictable or unreliable the development of basic trust is deficient and the child's development of time sense is impaired (Melges 1982: 17). This is especially so during puberty and adolescence when the future becomes "increasingly tangible for the adolescent who must make choices about physical intimacy, occupation, competition and psychosocial self-definition" (Melges 1982: 17). With regard to the last aspect mentioned, Erikson stresses the fact that a lack in time perspective will have a negative effect on identity formation which has its crisis moment during adolescence. Erikson's concept of "time diffusion" will be discussed at a later stage.

B.F. Skinner rejects the traditional concept of internal personality variables as causes of behaviour (Hjelle and Ziegler 1984: 210). For Skinner, man has no freedom and is completely determined by his own conditioning history. Responsibility for the individual's actions is placed on environmental circumstances rather than the autonomous person within (Hjelle and Ziegler 1984: 194). In the light of these ideas, it is clear that the individual's time perspective is of no relevance in the Skinner frame of reference.

ordon Allport was very much against the psychoanalytic and behaviouristic conceptions of human nature (Hjelle and Ziegler 1984: 12). Allport (1955: 51) said "People, it seems, are busy leading their lives into the future, whereas psychology, for the most part, is busy tracing them into the past." Allport placed greater emphasis on the individual's present and future than his past. He felt that the motives of people must be understood as they are now rather than as they were in the past. For him an adequate theory of personality would "allow for the forward thrust or futuristic bent of personal motives that normally characterises healthy adults" (Hjelle and Ziegler 1984: 286).

Even Piaget's theory of development deals exclusively with cognitive development, beginning with the primitive reflexes and motor co-ordinations of infancy and extending to the thinking and problem solving of adolescents and adults (Mussen, Conger, Kagan and Huston 1984: 223). Piaget was not much concerned with motives, emotions, personality characteristics or social behaviour. His main theme is that the individual is "active, curious, and inventive throughout the life cycle" (Mussen et al. 1984: 223). Piaget believes that there are four major stages of intellectual development - sensorimotor or preoccupational (0-18 months), preoperational (18 months to age 7), concrete operations (age 7 to 12), and formal operations (age 12 onward). These stages are continuous, and each is built upon and derived from an earlier one. Piaget felt that no stage may be skipped, because each stage borrows from an earlier one (Muro and Linkmeyer 1980: 32). Melges (1982: 17) in discussing Piaget's ideas regarding the development of time perspective, says that it is not until about the eighth year of life that a normal child's language reflects a full understanding of past, present and future. It is also at this stage that there is a decisive increment in anticipatory processes and the child's concept of time becomes more abstract and operational. Abstract thinking involves being able to deal with that which is not here and now, particularly the capacity to consider future possibilities. It appears that when the child becomes more

capable of abstract reasoning, he is less concretely bound to present stimuli and is able to extend his thinking to future possibilities (Melges 1982: 17).

Part of George Kelly's "Cognitive theory of Personality" is that all people are motivated to anticipate the future and make plans based on expected outcomes. His theory also suggests that people are fundamentally oriented toward future rather than past or present events in their lives. He also maintained that all behaviour can be understood as anticipatory in nature. Kelly's fundamental postulate stipulates that how a person predicts future occurrences determines his behaviour (Hjelle and Ziegler 1984: 325 and 332)

Another group of psychologists which places a great amount of emphasis on future time perspective, is the existentially oriented group (cf pg. 8-9). They see anxiety as the result of living without a teleological goal. In their therapy, they apply techniques by which a patient achieves meaning and purpose for the future, thereby achieving a reduction of anxiety and the eventual attainment of hope (Goldberg 1990: 44).

Abraham Maslow believed that much of human behaviour could be explained by the individual's tendency to seek personal goal states that make life rewarding and meaningful (Hjelle and Ziegler 1984: 368). It could be said that motivational processes are at the heart of his personality theory. According to Maslow, human desires or motives are innate and they are arranged in an ascending hierarchy of priority. These needs or motives are : basic physiological needs; safety needs; belongingness and love needs; self-esteem needs; and at the top of the hierarchy, self-actualisation needs. A general assumption of this theory is that the low-order needs must be at least partly satisfied before the individual can become motivated by higher-order needs. Maslow defined self-actualisation as the desire to become everything that one is capable of becoming. It is clear that future time perspective plays a significant role in the

development of a person's self-actualisation. For the self-actualiser the future is very important. In his drive for self-improvement or in his efforts to turn potential into actual reality, the individual must be able to picture the future and himself in that future.

A famous quote by Maslow (in Melges 1982: 14) regarding future time perspective "I think it is fair to say that no theory of psychology will ever be complete which does not centrally incorporate the concept that man has his future within him, dynamically active in this present moment" seems to sum up the views of most of the psychological theories regarding the development of time perspective referred to above.

2.4 Dimensions of time perspective

Many researchers have focused on some ordering or predictability of beliefs about future events, but they have disagreed as to the nature of the concept of time perspective (Blinn and Schwartz 1988: 2). Time perspective has been defined variously as a motive, a personality characteristic and as a cognitive schema. When considering the various studies on future time perspective and the measures used, it becomes clear that the same label has often been used for different aspects of what is a complex cognitive - motivational system (Trommsdorff 1983: 382).

2.4.1 Extension

Wallace (1956: 240) was the first to formulate "extension" as a variable or dimension of time perspective. He defined it as "the length of the future time span which is conceptualised." Extension has been measured in various ways. Leshan (1952: 591) used the story completion technique. The subjects were presented with unstructured story roots to complete. The time period covered in the stories was then assessed, and this was used as a measure of the subjects extension. Barndt and Johnson (1955: 344) used a story root containing an

explicit reference to time. A second measure of extension based on story completion consists of the evaluation of time spans in response to Thematic Apperception Test stimuli (Teahan 1958: 379). Wallace devised a third measure in which he requested his subjects to spontaneously produce ten possible future events and the age the subject might be at the occurrence of each. Extension was defined as the range of years between the subject's actual age and the most distant event he could conceptualize. Another method of assessing extension was utilised by Stein, Sarbin and Kulik (1968: 261). They devised the Future Events Test, which consisted of 36 items relating to expectations of the future ie. events that could happen in the future. Although this test was set up with the idea in mind of differentiating between normal and juvenile delinquent subjects, it also proved to be a good measure of socialisation.

2.4.2 Density

Kastenbaum (1961: 206) added the dimension of density to the study of time perspective. Density is seen as "the stuffing of future time perspective. It answers the question of how densely populated with possibilities does the future appear to the subject, of how many significant events the subject can anticipate" (Wolk 1970: 11). Kastenbaum first assessed density by requiring the subject to predict as many events as he could that were likely to occur in the future. The density score was the number of events listed. A second task required the subject to give as many responses as possible to the question "Who will you be?" The number of personal identifications made by the subject was then a further density score (Wolk 1970:11). Kastenbaum found a correlation coefficient of 0,61 between the two scores.

2.4.3 Structure

This is defined as "the spatial and temporal ordering of events anticipated in the future" by Blinn and Schwartz (1988: 3) in their

discussion of Nuttin's work on time perspective. This dimension is analogous to the dimension of "coherence" which was first described by Wallace (1956: 241) as being "the degree of organisation of the events in the future time span". O'Rand and Ellis (1974:56) described "sequence" as being "a measure of a respondent's ability to order his future systematically". In the opinion of the writer, structure, coherence and sequence are so similar as to be indistinguishable, and will be treated as one dimension - structure. Wallace measured this dimension by using a simple test in which the subject was required to respond with the age he might be when such events as his death, his parents' death, and the birth of his first grandchild might occur (Wolk 1970: 6). Fifteen such questions were presented, and after answering all items, the subject was presented with the same items, each on an index card, which he was to organise chronologically in terms of occurrence. Coherence was defined as "the correlation between the orders of events based upon age of occurrence associated with them, and the sequence resulting from a forced chronological ordering of the events" (Wallace 1956: 241). This test, administered on two separate occasions, yielded a reliability coefficient of 0,88. This method or slight variations of it has been used by many researchers to measure the structure dimension of time perspective.

2.4.4 Realism

Blinn and Schwartz (1988: 3) in discussing Nuttin's work, define realism as "the link one perceives between present behaviour and eventual attainment of goals". Realism is often determined by asking subjects to list present actions that they think will lead to the accomplishment of their previously stated goals. Verstraeten (1980: 179) states that Klineberg in 1967 was the first researcher to conduct studies concerning the link between realism and future time perspective. Verstraeten then continues by stating that Lessing, in 1968, noted that future time perspective was observed to change with age as regards realism. Verstraeten (1980: 181) defines realism as follows : "To be called realistic, a goal object should first be

perceived as probable by the subject. A realistic approach to a goal cannot consist of immediate fantasy-like satisfaction such as wishful thinking and daydreaming, but should instead be a rational plan that is coherently structured in time and has an impact on actual behaviour."

2.4.5 Internal-external control

Platt and Eisenman (1968: 121) stated that individuals who perceived reinforcement as being under their own control, or as being dependent upon their own behaviour (internally controlled), as opposed to being under the control of external persons or events (externally controlled), are "more likely to exhibit behaviours which are in accordance with attaining goals and setting aspirations for the future." They continue by saying that "internally oriented individuals would be more future-oriented in their time-perspectives, more capable of conceptualising segments of time, and might perceive the passage of time in a different manner than externally oriented persons." Trommsdorff, Lamm and Schmidt (1979: 142) assessed the validity of internal-external control as a component of time perspective as a part of their hypothesis that working adolescents evaluate their future as being more internally controlled than adolescents in school. In their assessment a questionnaire was used to assess the variables. The subjects had to list their hopes and fears and in order to assess the measure of internal-external control they were asked to say whether the materialisation of each hope and fear would depend more on themselves or on external circumstances. They found it to be a valid component and their hypothesis was confirmed. Wolf and Savickas (1985: 471) state that a person with a more adaptive time perspective is more likely to attribute achievement success to his own effort and ability and not to the characteristics of the task or luck, while a person displaying a less integrated time perspective tended to attribute his success or failure to circumstances beyond his control.

2.4.6 Optimism

Teahan (1958: 380) found that people with a more future-oriented time perspective also appeared to be more optimistic. He felt that the person without hope and confidence concentrates his attention on his immediate surrounds gaining whatever satisfactions he can in the present. He concluded by saying "Thus optimism, or the hope that positive changes can be expected in the future, would be intimately related to the extensiveness of a person's plans." Trommsdorff, Lamm and Schmidt (1979: 133) defined optimism as being "the hope for positive changes in the future," and the variable was then operationalized as the positive difference between the evaluation of the future and the evaluation of the present. Wolf and Savickas (1985: 478) investigated the components of what they called "an integrated time perspective." They stated that a future-oriented, integrated time perspective includes inclinations to structure the future with events and goals (temporal continuity), to evaluate the achievability of goals with positive effect (optimism), and to use present time in working towards goals (efficient time utilisation). They found a link between optimism and internal-external control of circumstances in that if a person optimistically expects many successes and few failures, then it is self-serving to be more inclined to use ability and effort attributions to take credit for outcomes. Two self-report measures have been used to measure optimism, the Achievability of Future Goals (AFG) scale (Heimberg 1963: 27), which measures affective evaluation of the future - optimism. The Hopelessness Scale (HS) also measures affective reactions to the future - pessimism.

2.4.7 Continuity

Savickas, Silling and Schwartz (1984: 261) in discussing Madison's 1984 study in which he tried to identify the best available measure of time perspective, found that the major factor he extracted was a sense of continuity between the present and future. The best measures

of continuity were the Long-Term Personal Direction Scale (LTPD) (Wessman 1973), and the Achievability of Future Goals Scale (AFG). The measurement of this particular dimension of future time perspective is not absolutely clear as the measures listed above measure different response tendencies toward the future. The LTPD assessed the inclination to structure or map the future with events, while the AFG assessed the inclination to optimistically anticipate the future. Wolf and Savickas (1985: 478) stated that "...a sense of continuity offers a schema within which actions and outcomes that are separated in time can still be linked in thought. Students with a fragmented time perspective probably experience increasing difficulty in recognising action-outcome connections as actions and outcomes are separated by longer lengths of time."

2.4.8 Directionality

Kastenbaum (1961: 206) added directionality to the dimensions of time perspective. Wolk (1970: 12) defines it as "the feeling of the subject that he is moving towards the events of his future with momentum." The concept was first suggested by Knapp and Garbutt in 1958 when they developed their Time Metaphor Test (in Wolk 1970: 12). In this test the subject rates a group of metaphors on a scale from one to five, in terms of how well the metaphors represent his subjective meaning of time. Although this dimension has proved to be valid and independent of other dimensions of time perspective, there has not been much further research concerning it.

2.4.9 Conclusion

As can be seen from the previous sections, there are several dimensions of time perspective and various ways of measuring it. All these dimensions have implications regarding career choice to a greater or lesser extent. Firstly, extension in this context would be how far into the future the individual can visualise his career stretching. This could encompass the initial study years, starting

the career and then finally the ultimate goals in the career. Closely related to extension is the dimension of density which is the number of significant future career events the individual is able to conceptualise. Structure in terms of career choice is related to whether the person is able to conceive of his future career events in a logical or systematic sequence or order. Realism with regard to career choice is fairly self-explanatory in that the individual has to be rational and realistic in the choice of both the level and specific type of career. He has to ensure that the career is suitable specifically for him. Another dimension fairly closely allied to the aforementioned is that of directionality. This is measured in terms of whether or not the person has the feeling that he is definitely moving towards his future life and career or not.

As stated in paragraph 2.4.5, individuals who perceive themselves as being in control of their own successes or failures are likely to be more future-oriented in their time-perspectives. This implies that such individuals will therefore be more concerned and focused as regards their future career choice.

The essence of paragraph 2.4.6 is that a person with a more future-oriented time perspective also appears to be more optimistic in his outlook on life. The significance of this for career choice is that if a person is positive about his future, then he will be more likely to be interested in considering and planning a career, than a person with a negative outlook on life.

Finally, having a sense of continuity implies that a person is able to project himself conceptually into a different situation in the future ie. being able to visualise himself in a certain career while still physically being a student or scholar. Therefore having a strong sense of continuity would be a major positive factor in the matter of career choice.

2.5 Factors influencing time perspective

2.5.1 Intellectual ability and academic achievement

Teahan (1958: 379) in discussing Gough's work, stated that at that stage (1957), previous studies had indicated that high academic achievers seemed to be characterised by more optimistic attitudes and a greater concern for the future. In his own research in 1957 Teahan used three types of instruments to measure time perspective. The first technique required the subject to record 25 things he had thought about in the past two weeks. The subject then rated these items according to whether, at the time he had thought or talked about them, they referred to something in the past, present, or future. The second method was the incomplete story technique, and the third was the TAT technique. Teahan's results seemed to indicate that high academic achievers were predominantly "anteverts" - they tended to look mostly to the future and they were also found to have a more extensive future time perspective than low achievers on most of the projective tests.

Lessing (1968: 185) used three different methods to measure the length of future time perspective namely : Wallace's Events Test, the Incomplete Sentences Test and the Story Completion Test. She found that longer future time perspective was related to both higher intelligence and higher academic achievement.

Gjesme (1979: 176) summarised the research done on the relationship between intellectual ability and future time perspective up to that point, and found conflicting results. He refers to the work of Lessing (mentioned above) and Siegman who found a nonsignificant correlation between individuals' future time perspective and intelligence. Siegman in another investigation found contrasting results in that his research revealed a significant positive correlation between future time perspective and a test of abstraction with general intelligence as a covariate. Gjesme's own investigation

into the relations between a number of variables and future time perspective revealed that the influence of ability on future time perspective is modest.

2.5.2 Personality

Although it seems quite clear that the individual's personality does influence his time perspective, the extent of this influence has not been clearly established by research. Limited research has been done in two specific areas, namely socialisation and achievement motivation.

2.5.2.1 Socialisation

According to Bolha (19)
 Stein, Sarbin and Kulik (1968: 259) used a modification of Stein and Craik's "Future Events Test" to test the hypothesis that more socialised individuals will show a greater extent of personal future time perspective than a less socialised sample. The hypothesis was confirmed in that the more socialised sample showed a more extended personal future time perspective than the less socialised subjects.

Trommsdorff (1983: 381) considered the relationship between future orientation and socialisation. Her research into the influence which future orientation has on socialisation, approached the issue from the reverse perspective, but the point that socialisation and future time perspective are interrelated was confirmed.

2.5.2.2 Achievement motivation

"Since the beginning of future time orientation is inherent in the individual's needs and motive system, it follows that the strength of motives is expected to be positively related to his strength of future time orientation" (Gjesme 1979: 174). According to achievement motivation theory all individuals have a motive to approach success and a motive to avoid failure, with the strengths of these motives

differing from one individual to another. These motives are defined as capacities to anticipate pleasure or pain in achievement situations. Motives are therefore directed towards future events or activities. It would seem to follow that approach-oriented individuals (high motive to approach success) are expected to have a longer future time orientation than avoidance-oriented individuals. Gjesme (1979: 184) used the Achievement Motives Scale and an extended Future Time Orientation Scale (which he based on Heimberg's Future Time Perspective Inventory) to measure the relationship between achievement motivation and future time orientation. He found that achievement motives played major roles in the pupil's future time orientation. The approach-oriented pupils had higher future time orientation than the avoidance-oriented pupils. It was also found that achievement motives were more important for boys than for girls.

2.5.3 Cultural differences

Roberts and Greene (1971: 163) studied the possible differences in the time orientation of three different cultural groups. Their findings were that the cultures examined did not show a preference for any particular temporal modality. Roberts and Greene stated that it would be incorrect to label a particular cultural group as having a specific temporal perspective as opposed to another, as this would only obscure significant differences in values and orientations.

A comparative study between the future time perspectives of adolescents in India and the United States was undertaken by Mehta, Rohila, Sundberg and Tyler (1972: 293). They found that the average time perspective scores did not differ significantly for the Indian and American samples. Marked similarities between Indian and American young people with regard to the quantitative and qualitative aspects of time perspective were in fact found.

Shannon (1975: 114) found that Anglo-American adolescents exhibited more extended futures than did Indian and Mexican-American adolescents. The explanation they offered for this was simply that by adolescence, Indian and Mexican Americans had become aware of the fact that members of disadvantaged subcultures were not likely to be big successes in the future. This obviously had a negative effect on their future perspectives.

Poole and Cooney (1987: 147) found that demographic or cultural variables did influence the orientations of adolescents to both their personal and societal futures.

2.5.4 Socio-economic status

It is generally accepted that social class or socio-economic status plays a significant role in the dimensions of an individual's future time perspective. Leshan (1952: 591) found that there are different personal time orientations in different social classes. He used a story-telling technique where children of 8 to 10 years told a story in response to the simple stimulus "Tell me a story". The time period covered in the story was then evaluated. In simple terms he found that the time span covered in the stories yielded a shorter mean future time perspective for the working-class children than for the middle-class children.

Lessing's research of 1968 also covered the link between social class and future time perspective. She found that when class differences emerge, it is always the upper socio-economic groups who demonstrate the longer future time perspective.

O'Rand and Ellis (1974: 55) used a modified version of Wallace's events-listing technique to probe class-linked differences in time perspective. O'Rand and Ellis sum up their research as follows: "Although the evidence affords additional confirmation for the commonly assumed effect of social class on the development of future

time perspectives, the reason why such differences are obtained is less readily apparent" (1974: 60).

Lamm, Schmidt and Trommsdorff (1976: 320) used the "Hopes and Fears" questionnaire in their research on the effect of social class on future orientation. Their hypotheses concerning the effects of social class on three dimensions of future orientation - density, extension and optimism/pessimism, were confirmed. It was found that middle-class adolescents were more long-term directed in their future orientation than were lower-class adolescents. As regards the optimism/pessimism dimension it was felt that the influence of class would become more evident at a later age (the subjects in this sample were between 14 and 16 years of age).

Socio-economic status could be said to incorporate educational status. Koenig (1979: 186) found that thinking about the future seemed to be far more common in individuals attending university than in individuals not attending university.

Trommsdorff (1983: 391) states "The educational and social status of the parents determine not only their own future orientation but also their behaviour toward their children. Own experience in responsible activities and long-term planning may guide their socialisation practices which in turn influence the future orientation of their children." Trommsdorff also concluded that although educational status may play a role in an individual's time perspective, it is not a pre-condition of an extended and well-structured future orientation.

Poole and Cooney (1987: 147) found that socio-demographic variables including social-class, do influence the orientations of adolescents to both their personal and societal futures.

2.5.5 Age

Wolk (1970: 13) states that in 1958 Davids and Parenti hypothesised that there is a shift to thinking about the future at the onset of adolescence.

Trommsdorff, Lamm and Schmidt (1979: 134) state that during adolescence, the repertoire of perceptual and behavioural possibilities increases. They continue by saying that the adolescent's future time orientation should also expand and reach a higher level of reality, organisation and integration. They hypothesised that with increasing age more events are included in the future time orientation and that these events are localised in a more distant future. The "Hopes and Fears" questionnaire was used in this investigation. The density and extension of the subjects future time orientation was measured in four areas of life :

- * personality and self-actualisation
- * physical well-being and appearance
- * family and interpersonal relations
- * occupation

The hypothesis could only be confirmed in the content areas of personality and occupation.

Verstraeten (1980: 180) tested the hypothesis that older subjects have a more extended future time perspective and their goals are more realistic in comparison with younger subjects. Verstraeten used Nuttin's Motivational Inventory, which consists of a list of generally formulated motivational areas such as "things concerning yourself, your character and your attitude; things you would like to possess; and things you would like for others." The subjects are then asked to list any goals or desires they might have in these areas or in any other area. It was found that the older subjects show a more extended future time perspective than do the younger. The older

subjects also show more planning and partial accomplishment of their goals and it is in this sense that their goals may be called more realistic.

It would seem that for the purposes of this particular study, where only adolescents are being considered, the role of age in time perspective is almost negligible.

2.5.6 Gender

Lamm, Schmidt and Trommsdorff (1976: 320) looked at particular aspects of the relationship between gender and future time perspective in their study. They hypothesised that female adolescents manifested fewer occupational but more family-related hopes and fears than do male adolescents, and further that female adolescents have a more extended future orientation in the family domain and a shorter one in the occupational domain. Although the results are not clear-cut, it seems that girls voice fewer hopes and fears in the occupational domain, and more hopes and fears in the family domain than boys do. The study was broken down further into class differences as well. Lower-class adolescent boys' future orientation was found to be more extended than that of lower class girls in the occupational area. When considering middle-class adolescents, the occupational future time perspective of boys is about as extended as that of girls, but with respect to density, boys seem to concentrate more on the occupational domain than do girls.

2.5.7 Environmental factors

Poole and Cooney (1987: 130) emphasise the distinction between a private or personal and a public or societal orientation to the future. They summarise the work of Boniecki, Borghi, Sundberg and others in their description of the specific content domains identified in public future orientation. They identified the following areas of concern :

- * Major environmental problems facing all cultures such as the nuclear threat, population explosion, depletion of nonrenewable resources and pollution.
- * The future of the world in general.
- * The future of key social dimensions and institutions such as science and technology, politics, attitudes and values, education, justice and liberty.

Poole and Cooney came to the conclusion that although adolescents are concerned with environmental factors as regards their future orientation, they view their personal and societal futures as separate. Their personal futures are more pleasant and more proximal and their public or societal futures are seen as more unpleasant and more distal.

2.5.8 Conclusion

The implications of the preceding paragraphs are quite clear - a large number of factors can influence an individual's time perspective. Firstly, it would appear that both intellectual ability and academic achievement have at least a modest influence on time perspective. A second factor which seems to have a fairly large influence on time perspective, is that of personality. Although the research in this area is somewhat scant, time perspective may even be regarded as a sub-factor of personality. The third factor discussed in paragraph 2.5.3, that of cultural differences, does not seem to play a significant role with regard to an individual's time perspective. In paragraph 2.5.4 a fourth factor, that of socio-economic status was found to have a relatively large influence on time perspective. Although age is generally thought to play a significant role in an individual's time perspective, this particular study focuses on the adolescent, so the influence of age is assumed to be insignificant. In paragraph 2.5.6, a sixth factor - gender, was

found to be significant in that male and female adolescents differed with regard to their time perspectives in different domains. Finally, certain environmental factors were discussed, but as very little research has been done in this area, the results are inconclusive.

A number of the factors discussed in this chapter not only have an influence on time perspective, but also play a much more direct role in the career choice of an individual. These factors - intellectual ability, personality, socio-economic status and environment, will therefore be discussed in greater detail in the next chapter.

2.6 The development of time perspective

The development of time sense and future time perspective occurs throughout childhood and adolescence. It also appears that future time perspective is further altered by later life stages (Melges 1982: 18). The following section will cover the development of time perspective from infancy to old age.

2.6.1 Infancy

It is theorised that the infant's first experience of duration occurs during waiting periods of unmet needs, such as hunger (Fraisie 1963: 154). Melges (1982: 17) states "According to Spitz the infant reaching out for the breast or the mother is the prototype of early temporal experience."

Erikson takes this development of the infant's concept of time a step further with his theory of "basic trust". He says that if the mother is predictable in meeting the infant's needs, then the infant develops this basic trust (Melges 1982: 17). By contrast, if the mothering figure is unpredictable or unreliable, then this basic trust does not develop and the child's development of time sense is impaired.

Piaget's first developmental stage is the sensorimotor period which covers the period from birth to 2 years. In the first few months of this phase, temporal dimensions are rudimentary - there is little recall of the past and little anticipation of the future (Gorman and Wessman 1977: 17). At the end of the first year intentionality of action and separation of means from ends can be inferred, implying that past memories and future anticipations are now a reality. In the second year object permanence and internal symbolism develop leading to understanding and effective utilisation of cause-effect sequences. The infant can envisage and execute complicated sequences of motor actions extending over a long span of time. In this way temporal perspectives appear to originate and develop during the sensorimotor period (Gorman and Wessman 1977: 18).

2.6.2 Childhood

Gjesme (1979: 174) sums up this period well by saying "The temporal perspective develops slowly through childhood." There is no specific moment when a child suddenly has a fully developed concept of time, it is a gradual process. Part of this process is being able to postpone gratification. The infant has little sense of time and anticipation and is unable to postpone gratification. In early childhood there is an increase in this capacity and the child learns to wait, expect and plan (Melges 1982: 17).

Louise Ames investigated the development of the sense of time in childhood and found that it is not until about the eighth year of life that a normal child's language reflects a full understanding of past, present and future (Melges 1982: 17; Gorman and Wessman 1977: 22).

Piaget's preoperational (2-7 years) and concrete operational (7-11 years) periods of development, cover the childhood phase of temporal development. Piaget discovered that for the young child in the preoperational phase, time is not clearly separated from notions of

distance and velocity (Gorman and Wessman 1977: 26). He also distinguished between temporal order as the simple succession of events and temporal duration as the length of the interval between events. Piaget found that a clear concept of velocity as a relationship between a distance travelled and the temporal duration does not appear until quite late in a child's development, at about 8 or 9 years of age. Piaget also felt that it is at about eight years of age that the child's concept of time becomes more abstract and operational, and that there is an increment in anticipatory processes (Melges 1982: 17).

Baruch, Bruno and Horn (1987: 3) in discussing Goldstone and Goldfarb's research, stated that the fourth grade (10 years old approximately) is the first age group where children begin demonstrating their individual time perception. They felt that at age 10 the child is better oriented to life cycle time and personal time.

2.6.3 Adolescence

According to Piaget the adolescent enters a stage of development which is characterised by formal operational thought. This stage begins at about the age of 12 and it is during this period that the adolescent becomes increasingly able to consider and imagine possibilities without being limited to the concrete and directly observable. The adolescent gradually becomes capable of hypothetical and deductive thinking (Gorman and Wessman 1977: 30). These cognitive advances strongly influence the adolescent's emerging personality characteristics and defence mechanisms. He is now able to begin thinking about planning his future educational and vocational goals, and becomes more concerned with social, political and personal values (Gorman and Wessman 1977:30).

Fraisse (1963:278) stated that a full conceptual understanding of time does not usually emerge until relatively late in adolescence, at around 15 or 16. He felt that as the adolescent becomes more aware,

he becomes more concerned with the allocation of time during his own life span. He attempts to imagine his own possible future and actually plan for it.

Erikson (in Melges 1982: 17) pointed out that the future becomes increasingly tangible for the adolescent. He must make choices about physical intimacy, occupation and about many other aspects which will have an influence on the formation of his identity. Erikson felt that adolescents who have difficulties in making choices and future commitments often experience a diffusion of identity. One of the major features of identity diffusion is time diffusion, where there is a mistrust of time itself. Time becomes diffused because it brings tension, conflict and frustration (Melges 1982: 18). The tension is usually between the familiarity of the past versus the uncertainty of the future.

Cottle and Klineberg (in Melges 1982: 18) felt that adolescents who form firm identities are more realistically future oriented than maladjusted adolescents.

Trommsdorff, Lamm and Schmidt (1979: 134) felt that during adolescence the number of behavioural options increases - the space of free movement becomes larger. The innate perceptual and behavioural possibilities increase too. In accordance with this, the "psychological" future and the future time orientation should expand and reach a higher level of reality, organisation and integration.

Anderssen, Myburgh, van Zyl and Wiid (1992: 70) investigated the time-use attitudes of high school students. They identified three specific dimensions. Firstly, Egoistic Time Orientation, where the immediate satisfaction of needs is important to the individual. Secondly, Conscientious Time Orientation where planning is essential for the individual, and a futuristic orientation is noted. The third dimension is Passive Fatalistic Orientation which is defined as "The inability to solve problems or to shape the future, a focus on

here-and-now pleasure, a passive attitude toward solving present and past problems, an unpleasant awareness of the present and future." In their research they found that grade 8 students (about 14 years of age) obtained high scores on the Passive Fatalistic dimension but that the scores became lower for the higher grades. It was also found that there is an increase in Conscientious Time Orientation from the 10th to the 12th grade. As regards the Egoistic Time Orientation, they found that there is an increase in this dimension up to grade 10 and then it stabilises. The researchers concluded :

- * adolescents' coping skills increase as they mature
- * older adolescents apparently have more control over themselves and their situation
- * when the adolescent's personal identity becomes more secure, it is expected that his egoistic time-use attitude will become less prominent

2.6.4 Adulthood

While it is generally accepted that the experience and concept of past, present and future becomes fully developed during adolescence, it appears that future time perspective is further altered by later life stages (Melges 1982: 18). The period following adolescence in a person's development, that of young adulthood is also a difficult time. The conflict between making long-term future commitments and keeping one's options open has to be resolved. Buhler's view as described by Gorman and Wessman (1977: 34) is that the phase of development between 15 and 25 is an important one as this is when one realises that one's life is one's own. Goals are conceived and the young person begins to see himself in historical perspective. In Buhler's following adult period 25 to 45, or 50, life goals are set and implemented. The person lives predominantly in the present, seeing his future tied to his present life in meaningful continuity (Gorman and Wessman 1977: 34). Buhler found that the period from 45 to 65 was the time when most people have to reorient themselves. This

includes a stocktaking of the past and revised planning for the future in the light of perceived limitations. Feelings of fulfillment or unfulfillment are prevalent during this period. Melges (1982: 18) says that during middle age a person commonly reappraises his life in terms of the time he expects to have left to live.

2.6.5 Old age

Although there are many exceptions, the older person changes his time perspective almost completely to one which lays emphasis on the past instead of the future. A form of life review is often engaged upon in order to try to appreciate the meaning of one's own life and the meaning of life in general (Melges 1982: 18).

2.6.6 Conclusion

The development of time perspective during the stages of infancy and childhood seems to have very little direct influence on career choice. The relevance of these stages lies in the fact that they are the basis for future developments, and if there is a problem during one of these stages, then it is usually very difficult to correct later on. It is the adolescent phase of time perspective development that seems to be the most important in terms of career choice. The adolescent becomes capable of hypothetical and abstract thought and begins to take more interest in his future. In time perspective development, adulthood is also a relevant phase in that the pressures on the young adult become quite intense and immediate as regards career choice and progression.

2.7 Summary

Super and Hall (in Savickas, Silling and Schwartz 1984: 258) state that an individual's perspective on time will determine how relevant the future is to his current behaviour and choices. Time perspective is therefore seen as a prime variable in vocational maturity and

career decision making.

Baruch, Bruno and Horn (1987: 3) concur with Super and Hall's view "How a student values and perceives time therefore, might provide much needed insight into his or her behaviour in the classroom and possibly their ultimate career choice." There is thus a possible link between time perspective and career choice, however very few studies have investigated this link. Savickas et al. (1984: 258) confirm this by saying, "Although models of vocational maturity and career decision making contain time perspective as a prime variable, few studies have investigated career time perspective." Their study, "Time Perspective in Vocational Maturity and Career Decision Making", in 1984 found time perspective to be a component in Attitudinal Vocational Maturity and Career Decision Making.

Although complete consensus regarding the exact nature of time perspective has not been reached, the diverse philosophical and psychological views discussed in the preceding paragraphs, provide some insight into the concept. The various dimensions all seem to have implications, in varying degrees, for career choice. There are also many factors which influence time perspective, and it would appear that factors such as intellectual ability, personality, socio-economic status and environment also seem to have a direct influence on career choice and will be discussed in chapter three. Finally, with regard to the various developmental phases of time perspective, it seems that the adolescent and young adult stages are the important ones for career choice.

CHAPTER THREE

CAREER CHOICE

3.1 Introduction

The question of why people work, would seem to have a simple answer - to earn money in order to survive. This answer is, of course, correct, but researchers have found over the years that this economic motive was not enough to answer such related questions as : Why do some people work when they don't have to? or, Why do some people work at jobs or occupations offering less pay than other jobs which they might have had? (Super 1957: 3). Obviously human motivations cannot be very easily explained, but the answer may lie in the fact that man needs fulfillment in many areas of his life, including his career or occupation. Jordaan and Heyde (1979: 1) underline the importance of an occupation : "Occupation is the principal source of social status in our society, an important means for satisfying personal interests, abilities and values, and a major determinant of life style. Work is clearly central to most people's lives."

The fact that the choice of a career usually affects the rest of a person's life, only adds to the extremely complex nature of the task. Lewis (1989: 3) singles out Frank Parsons as being the individual who first formulated vocational guidance. In 1909 Parsons stated that a wise choice of vocation involved three factors : firstly, the individual needs a clear understanding of his aptitudes, abilities, interests, ambitions, resources and limitations and their causes; secondly, a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities and prospects in different lines of work; and thirdly, true reasoning on the relationship between these two groups of facts. Since Parsons' original theory, many new and diverse theories have been developed, which to a certain extent seem to have complicated the matter.

This chapter will attempt to simplify the issue by considering the areas of overlap between the major theories under the following sub-sections :

* Definition of a career and related concepts.

* Major factors related to career choice.

3.2 What is a career?

A number of different terms such as job, position, and occupation are clearly related to work and careers, but they seem to have become synonymous or interchangeable with each other. This is unfortunate as it could lead to considerable confusion in the young person's mind.

Beginning with the simplest term, work is defined by Super (1976: 20) as being " the systematic pursuit of an objective valued by oneself (even if only for survival) and desired by others." He goes on to say that work requires the expenditure of effort and it may be paid or unpaid.

A job is defined by Super as being "a group of similar, paid positions requiring some similar attributes in a single organisation."

"A position is a set of tasks performed by one person. There are as many positions as there are workers, but there may be one or a number of persons employed in the same job" (Super 1957: 8).

Super defines an occupation as being a group of similar jobs found in various organisations. Fairly closely related to an occupation is the term vocation. A vocation is an occupation with commitment. It is meaningful to the individual as an activity, not only for its service outcome or economic rewards (Super 1976: 20).

The concept of a career would seem to be an umbrella one, sometimes covering a variety of positions or even occupations (Petrick 1986: 41). Petrick also quotes Little's definition of career - "A person's course or progress through life (or a distinct portion of life). A profession affording opportunities of advancement." Super (1976: 20), defines it as being "the sequence of major positions occupied by a person throughout his preoccupational, occupational and postoccupational life.

It is thus possible to see that the use of the term "career choice" as opposed to job- or occupational choice is probably correct. Career choice implies that the adolescent or possibly post-adolescent, has to make responsible, justifiable and long-term decisions regarding his future, not quick or snap decisions based on immediate rewards.

3.3 Major factors related to career choice

As already stated in paragraph 3.1, there seems to be little consensus between the major theorists regarding the essential factors in career choice. What follows is an attempt to isolate the more important factors.

3.3.1 Aptitude and Intelligence

Although the terms aptitude and intelligence have been grouped together in this study they are not identical concepts. There are however many similarities between the two, and these will now be fully explicated.

Super (1957: 165) explains how individual intelligence tests came into being just prior to World War I. Group intelligence tests were developed during the war. After the war the relationships between the scores made by soldiers on the Army Alpha Test were tabulated in relation to civilian occupations. Although there was considerable overlapping of occupational intelligence test scores, it was still

found for example that the average scores of engineers was high, whereas the average score for truck drivers was low, while bookkeepers were somewhat above the middle. This led the researchers to conclude that intelligence is related to placement on the occupational ladder. Since that time intelligence tests have been used for personnel selection and vocational guidance.

Intelligence may simply be defined as cognitive or mental ability. Super (1957: 202) states "intelligence may be defined as ability to use symbols, to reason with abstractions such as words, numbers, and signs." Lindhard (1974: 14) agrees with this definition : "Intelligence is now thought to consist of a number of components, of which one is verbal ability, one is numerical ability, and one is the ability to visualise in three dimensions." He adds that reasoning and memory are also included in some definitions. Petrick (1986: 52) states that a person's intelligence determines his capacity for insight and adds that qualitative assessment of an individual's intelligence merely indicates his given potential, which of course has to be actualised.

The concept of intelligence has always been related to scholastic achievement or the prediction thereof. Super (1957: 202) states that intelligence may be thought of as the ability to learn in school. In the introduction to the Senior South African Individual Scale - Revised, van Eeden (1992: 3) mentions that one of the uses of this particular intelligence test is to determine the level of general intelligence in order to predict scholastic achievement.

Fouche and Verwey (1988: 3) define aptitude as follows : "Aptitude can be regarded as the potential which a person has and which enables him to attain a specific level of ability with a given amount of training and/or practice." Chapman (1983: 6) defines aptitudes as being all the capabilities that are predictive of success or that which the individual can do or learn to do successfully. He adds that observations of aptitudes merely provide information about probabilities of various outcomes.

The word ability which is used as part of both the above definitions, could itself be defined as the power or capacity to perform a particular act. Lindhard (1974: 75) states that it is wrong to think of abilities as if they were solely based on intelligence . He goes one step further and presents a fairly comprehensive list of categories of ability : mental ability; practical ability; methodical ability; artistic ability; social competence and physical ability. Lindhard feels that the individual must assess himself in order to gain insight into his own capabilities. He states that past performance is the most reliable indicator of ability, "Performance is visible ability" (Lindhard and Oosthuizen 1985: 31).

It seems to be clear and generally accepted that the individual's aptitudes play a very large role in his career choice. Yost and Corbishley (1987: 4) summarised the major theories of career development and choice, and found that aptitude or ability is an integral part of most theories. Parsons's original theory which was later developed into the trait factor model, and which in turn became the basis for many current models of career choice, is based on the idea that people possess stable characteristics including special abilities and intelligence. This is then related to the fact that jobs can be differentiated in terms of their need for different skills and levels of ability. The idea is that the individual's traits must be matched up with a particular occupation which suits them specifically. Ginzberg's "tentative period" includes a phase where young people define their work-related skills and abilities and begin to make vocational decisions based partly on these facets of development. A fundamental aspect of Super's model of career choice is the self-concept, where the individual develops a view of his roles, personality and abilities. He then attempts to translate this self-concept into an occupational concept. Holland's theory of career choice is one where the individual's personality and specific work environments must be matched in order to ensure career satisfaction. A major part of Holland's definition of personality is based on the person's abilities, therefore he too places emphasis on aptitudes or

abilities in career choice.

Super (1957: 216) summarises his ideas on the role of aptitudes in career choice and development as follows : "Aptitudes may be general and far reaching in their effects on vocational development, as is true in the case of intelligence or, more specifically, reasoning; or, on the other hand, they may be specific, limited in their known effects to certain fields of work as in the case of perceptual speed and accuracy." Fouche and Verwey (1988: 3) state " Aptitudes, together with other personality characteristics such as interest, attitude and motivation as well as training and instruction, will determine the level of skill and proficiency which may be reached."

In conclusion it may be said that although aptitudes and abilities play a major role in career choice, the individual's performance is even more important. Potential and undiscovered talents are extremely difficult to assess and usually cannot be utilised at the specific moment of choice.

3.3.2 Interests

Fouche and Alberts (1989: 5) define interest as "a relatively constant, positive or negative directedness towards a specific activity and is based on the whole personality." Lindhard (1974: 20) defines interests as being those activities through which an individual achieves personal satisfaction.

The first successful vocational interest inventory or questionnaire was known as "Strong's Vocational Interest Blank" (Super 1957: 165). Strong found that an inventory of likes and dislikes could differentiate between men in one occupation and men in other types of work. This implies that people who follow the same occupation have similar interests (Bluen 1981: 23). Strong refined his inventory and found that a careful measurement of a person's interests could be useful in pointing a person in the direction of vocational success and

satisfaction.

As mentioned in paragraph 3.3.1, the trait factor theory of career choice is based on the assumption that specific personal traits can be matched to particular job characteristics. Yost and Corbishley (1987: 5) highlight the following implications of the theory "...that there exists one ideal job for each person, that people's interests and abilities do not change over time, and that these are the two factors most responsible for career choice and satisfaction."

Lindhard and Africa (1978: 76) say that identifying one's interests will help greatly in finding the field of work in which one will be happy, just as identifying one's abilities will help to find a career in which one will be competent. They continue by saying that defining one's vocational interests and deciding what they are, is normally not too difficult. It is purely a matter of deciding what one's general likes and dislikes are and applying these to different fields of work.

Lindhard (1974: 21) isolates seven fields of interest : working with people; working with ideas and words and communicating them; working with science and technology; working with facts and figures; artistic and creative work; working with one's hands; and physically active work, mostly out of doors. Lindhard adds that interests do change with age, but they tend to become stable in adulthood.

Bluen (1981: 23) summarises the research done on the link between interests and occupational choice. He found that Crites had demonstrated in 1969 that interests are strong predictors of occupational choice. He also notes that Alley in 1978 and Worthington & Dolliver in 1977 had found interests to be predictive of job satisfaction. Bluen also states that Reeves and Booth (1979) found a link between interests and occupational success. As regards feedback on interest profiles, Prediger and Noeth (in Bluen 1981: 23) state that "if people are aware of their interest profile then the probability of

there being a state of congruence between interests and occupational choice is increased." Zytowski (in Bluen 1981: 23) concurs with this in saying that if people are motivated towards receiving feedback on interest profiles they benefit from this knowledge by displaying increased certainty or satisfaction in their occupational choice.

3.3.3 Personality

The word personality comes from the Greek word persona, which is a theatrical mask. Cicero, a Roman senator used the word to describe how a person appears to others, and also to describe an assembly of human qualities (Lindhard 1974:30). Today, personality is defined in similar ways, some definitions concentrating on the person's impact on other people, while others focus on the individual in isolation. Super (1957: 225) describes the three main schools of thought regarding the nature of personality. The Trait Psychology approach assumes that personality is made up of "a constellation of traits, more or less integrated into a functioning unit." The Social-role Approach views personality as the patterning of behaviour in various types of situations, and the individual's personality can then be inferred from the roles he takes in his interaction or non-interaction with the people around him. Another school of thought is the Phenomenological Approach where the emphasis is on the way in which the individual perceives his environment and himself. The focus here is on the self. Ausubel (1958: 274) defines personality as follows "Personality includes all of the behavioural predispositions characteristic of the individual, at a given point of his life history. Thus it embraces the more peripheral, transitory and trivial as well as the more central aspects of his behavioural repertoire."

It would seem that for the purposes of this study the phenomenological approach is the most suitable as the process of career choice should be an introspective one where the person's own perceptions and values play the major role in the final decision.

Of all the theories of career choice John Holland's "theory of vocational personalities and work environments" (Yost and Corbishley 1987: 11) seems to place the most emphasis on the link between personality and career choice. His theory is that people with certain personality traits are likely to be attracted to and suited for jobs with certain specific characteristics. It therefore follows that if we know what an individual is like, we can predict what sort of occupation is most likely to produce a sense of satisfaction and achievement for him. Holland does acknowledge that both personality traits and career interests do change over time. He contends that a person's basic personality type stabilises between the ages of eighteen and thirty and the more consistent the type of personality, the more likely it is that the person will find a satisfactory job environment (Yost and Corbishley 1987: 14).

Anne Roe's theory on career choice asserts that occupational choice is the result of personality, which in turn is largely the product of early parent-child relationships. Basing her ideas on Maslow's needs hierarchy, Roe felt that an individual's need structure can best be satisfied by his or her occupation (Yost and Corbishley 1987: 9).

A fundamental aspect of Super's theory of career choice is the self-concept. Super's model is a matching one where the person organises his vocational choices to find the occupation that will best allow him to express his self-concept (Yost and Corbishley 1987: 7).

It is clear from the above that the concept of personality is an extremely diverse one and as a result much research has been done in order to confirm any possible link between specific aspects of personality and career choice. The following three dimensions of personality namely, values, self-knowledge and self-concept will be discussed in greater detail.

3.3.3.1 Values

Sauer (1984:43) states that a meaningful and organised value system is an important prerequisite for career choice. Values could be defined as a person's principles or standards or possibly as a person's judgement of what is valuable or important in life. Kluckhohn defines value as "a conception explicit or implicit, distinctive of an individual or characteristic of a group of the desirable which influences the selection from available modes, means and ends of action" (in Sauer 1984: 43).

Firstly it seems as if values indicate certain goals which are strived for. Further, it appears that people identify themselves with particular values and use these as guidelines for the choices they make in their lives. Obviously values do not exist in isolation, they have an important influence on a person's perceptions, interests and indeed also his career choice (Sauer 1984: 43). Katz (in Sauer 1984: 44) concurs with this "...values affect perceptions and these perceptions in turn are important in making a particular decision or in formulating a method of choosing." With regard to values in context of career choice, Chapman (1983: 4) states that values are the satisfactions, rewards, and preferences that an individual would like to secure or control in his choice of options.

Although a person can have different values such as religious, social economic, status, intellectual, aesthetic, and security, they do not all enjoy the same priority. This means that each person's value system contains values in a specific order of importance (Lindhard 1974: 27).

According to Moller, Van Zyl, Landman, and others (in Sauer 1984: 44), a person is only ready to make a meaningful career choice when he has a proper value system which is both objective and grounded in reality. This value system should also be free from prejudices or prescriptions imposed by family or community.

Sauer (1984:45) summarises the many links researchers have found between people's values and their choice of career. He states that in 1957 Rosenberg found that students in the education and social work fields had significantly high scores on the people-oriented dimension of personality. In 1974 Lamb found that educators and students in the education field consistently identified their religious values as being of the highest priority. Whitmore (1968) found a significant relationship between personal values and the academic study directions of university students. Super (1983: 556) states that research has led to the situation where many of the computerised career guidance systems rely heavily on values when matching individuals to specific careers.

It would seem to be clear from the above that an organised value system is an important prerequisite for responsible career choice. Pietrofesa (in Sauer 1984: 45) appears to confirm this in saying "... a very important step in learning decision-making skills is to understand and clarify values. Once values are identified a person can set goals and objectives and thus make satisfying decisions."

3.3.3.2 Self-knowledge

Self-knowledge could be defined as the individual's knowledge of himself, including knowledge of his physical and intellectual abilities, interests and attitudes (Petrick 1986: 50). Sauer (1984: 33) takes this definition a step further in saying that self-knowledge is the individual's knowledge of himself as a person, with a unique personality, body, abilities, aptitudes, interests, feelings, values and ideals.

Segal (1981: 46) states that there are three different sets of information about a person which will be of assistance to him in the making of a sensible career choice. Firstly, what he thinks he wants out of life generally and what type of work relates to these aspirations. Secondly, what assets and personal characteristics he

has and what kind of career base that would give him. Finally, what his interests are and how they might fit into his working life.

Oosthuizen (in Sauer 1984: 34) also relates the concept of self-knowledge to the identities which the individual forms with regard to himself as a future career person :

- * the individual as an economic person;
- * the individual as somebody who performs labour or delivers a service;
- * the individual as somebody who can trade properly;
- * the individual as a responsible person.

Many researchers have found self-knowledge to be of great importance in the matter of career choice. Lindhard (1974: 9) states "Until you know who you are, you will not know what you can become."

Holland (in Lindhard 1974: 40) states that persons with inaccurate self-knowledge make inaccurate choices more frequently than do persons with more adequate self-appraisals.

Sauer (1984: 35) asserts that research by himself (1980: 132), Jones and others have indicated that inadequate self-knowledge is one of the most important reasons for career choice uncertainty.

It is the opinion of Petrick (1986: 49) that self-knowledge and self-concept constitute one of the main components in the choice of a career, the other being knowledge of careers.

3.3.3.3 Self-concept

Vrey and Venter (1983: 2) define self-concept as follows : "The self-concept refers to the convictions about myself and to attitudes towards myself which are dynamic and of which I am or may become conscious."

Petrick (1986: 50) states that the self-concept is the formation of an imaginary picture, opinion or representation of oneself. It is evaluated self-knowledge.

Lindhard (1974: 7) sees self-concept as simply being the individual's own picture of his personality.

Pietrofesa (in Sauer 1984:74) defines the self-concept as being a multi-dimensional concept "...that encompasses all of the attitudes, beliefs and values about oneself in relation to the environment. It is a composite of a person's thoughts and feelings, strivings and hopes, fears and fantasies, and his view of what he has been, what he might become, and his attitudes pertaining to his worth."

The link between an individual's self-concept and his career choice would appear to be a strong one. Lindhard (1974: 7) states that becoming aware of and accepting one's self-concept is the first step in the matching of one's nature with the nature of work. Downing and Dowd (1988:152) in summarising the research done on the link between career choice and self-concept state that a number of studies seem to support the hypothesis that career choice is strongly influenced by the individual's self-concept.

Sauer (1984: 75) states that the self-concept has an important influence on career choice for the following reasons :

- * it is the initiator of interests and ideals;
- * it serves as criteria for the judgement of reality and aspects thereof such as a career and
- * it determines the feelings and attitudes of the person towards himself and the world around him.

Sauer adds that the child who is not given any help or assistance towards the development of a realistic self-concept will probably find it difficult to orientate himself in reality and to make an

independent and meaningful career choice.

Pietrofesa (in Sauer 1984: 75) sums up the link between self-concept and career choice as follows : "As the individual grows older, he integrates the various pictures he has of himself into a consistent self-concept which he strives to preserve and enhance through all his activities, but particularly through his occupational activities. He attempts to select an occupation which will be compatible with his self-concept and which will allow him to make it a reality by permitting him to play the role he wants to play."

3.3.3.4 Time perspective

In the preceding chapter the concept of time perspective was defined and its dimensions and essences described. As stated in paragraph 2.5.2, the extent of the link between time perspective and personality has not been clearly established by research, but there seem to be certain similarities between the two concepts, which would lead one to believe that there is a close link between them :

- * It appears that each person has a unique time perspective, just as each person's personality is unique to him.
- * The way an individual sees his future, whether he is concerned about it or has a laissez-faire attitude towards it, appears to be part of his innate system of attitudes and feelings. It appears that it is possible to change an individual's time perspective, just as it is possible to change aspects of an individual's personality.
- * The way a person's time perspective develops - normally influenced by factors such as environment, education, socio-economic status and possibly intelligence (refer

to paragraph 2.5), is very similar to the way many other personality traits develop.

In paragraph 2.7, it was stated that an individual's time perspective will determine how relevant the future is to his current behaviour and choices, with one important choice being the choice of a career. Time perspective, whether it is perceived as being a personality trait, or an independent factor, appears to be a possible major variable in career choice.

3.3.4 Knowledge of careers

Jacobs (in Sauer 1984: 35) states that it is just as impossible to make an independent and meaningful career choice without adequate career knowledge as it is to make that choice with inadequate self-knowledge. Lindhard and Oosthuizen (1985: 53) state that there are three main elements in the choice of a career - realistic knowledge of oneself; an ability to make decisions wisely and knowledge of career opportunities and educational facilities. Holland (in Sauer 1984: 36) states that people with inadequate occupational information make inadequate career decisions more frequently than people with more adequate occupational information. Chapman (1983: 13) puts the matter succinctly "Clearly career decision makers need information about their occupational options in order to make intelligent choices."

In the light of the fact that the link between career choice and career knowledge seems to be quite clear, it would now be appropriate to consider exactly what is meant by the term career knowledge.

According to Sauer (1984: 36) the term career knowledge refers firstly to the knowledge that is required in order to answer questions about the career such as :

- * What does a lawyer do?
- * What are the entrance and training requirements?
- * What are the working conditions like?
- * What opportunities are there for promotion?
- * What are the service and fringe benefits?

Sauer goes on to say that the term career knowledge also refers to the broader concepts of knowledge of : the work itself; the career path; the demands it makes and also of the opportunities it affords for self-actualisation.

Petrick (1986: 49) is also of the opinion that knowledge of careers is one of the two main components in the choice of a career (the other being self-knowledge and self-concept). He is in agreement with Sauer in that certain specific questions should be asked when making a study of careers. The major areas of investigation should be - the conditions of service, the career demands and opportunities and training requirements. Petrick adds that the child begins to understand careers when he has :

- * an adequate knowledge of specific careers;
- * an understanding of a particular occupation's place in society;
- * a readiness to accept the responsibilities required by the career;
- * acquired an understanding and acceptance of the training and preparation required by a specific career.

A number of researchers have also found that a definite link exists between career indecision and career knowledge. One of the results of the research of Larson, Heppner, Ham, and Dugan (1988: 444) was that the predominant reason for career indecision in their study was the lack of career information. They also report that Lucas and Epperson found similar results in their 1986 study. Holland and Holland (1977: 412) and Salamone (1982: 498) both found that a significant number of

career undecided students were simply in need of further career information or knowledge.

Garbin (1967: 117) seems to sum up the factors relating to career choice discussed thus far in the following statement : "A vital facet of the decision making process involves a consideration of requirements, rewards and duties in the several alternatives at the point of choice as balanced with consideration of personal capacities, interests and values."

3.3.5 Decision making ability

A decision can be viewed as being a choice between different solutions to a problem (Lindhard and Oosthuizen 1985: 65). In an individual's life he is constantly called upon to make decisions of varying degrees of difficulty. A person's unique characteristics are often expressed in the manner in which he approaches and makes his decisions.

Lindhard and Oosthuizen (1985: 67) state that people's personality, emotions, values, and intelligence are often expressed in their decisions. Tiedeman and O'Hara (in Carney and Wells 1991: 20) state that how realistic or efficient we are at making a decision often depends on how well we know ourselves and our environment.

Carney and Wells (1991: 22) identify three decision making strategies. Firstly the dependent decision strategy where the choice is deferred to others. This approach is useful in a situation where the individual is in a group situation where it would save time and is in the nature of a compromise, or where the individual doesn't have the necessary knowledge in order to decide for himself. This strategy could be a problem when it is used out of fear of commitment because even if the decision is referred to others, the individual would still have to cope with the consequences.

The second strategy is the intuitive decision strategy. In this strategy the person relies mostly on his own feelings and reactions in a situation and acts accordingly. This strategy is useful in a situation where time is important, such as when there is an emergency. The problem with this strategy is that sometimes people use it in order to avoid gathering further information or sometimes they find it difficult to remain objective.

The third strategy is the planful decision strategy which is a combination of the previous two. It involves the exploration of needs and the environment and then weighs up the alternatives. Ideally, a balanced decision would include elements of all three decision styles.

When it became clear that decision-making with regard to career choice was a major factor, much research was then carried out in this area. Phillips and Paziienza (in Walsh and Osipow 1988: 14) propose three models of the career decision-making process. The descriptive models focus on the question "How are decisions made?" The prescriptive models address the question "How are decisions best made?"

Van Matre and Cooper's research (1984: 637) found career indecision to be a complex, multi-dimensional problem composed of an undecided state and an indecisive trait. They found that problems in career decision making could be ascribed to two primary dimensions. The first dimension is that of a state of decidedness or undecidedness which refers to a transitory or momentary level of indecision. The second dimension is the trait of decisiveness or indecisiveness which refers to a more enduring and consistent personality characteristic.

Mitchell and Krumboltz (1987: 171) found that a cognitive restructuring programme was useful in helping clients with their career decision making. They simultaneously carried out a programme of decision making training with a similar group, and although this

group showed more improvement than a no-treatment control group, the cognitive restructuring group showed the most progress.

It would seem that decision-making skills do play a role in the process of career choice, and that although there are many different decision-making styles, some styles are more effective than others (Lindhard and Oosthuizen 1985: 66).

3.3.6 Socio-economic and environmental factors

Environment means the people around one, as well as the town and country in which one lives. Environment has a considerable influence on one's career choice (Lindhard 1974: 34). An environment can offer particular opportunities but it can also be the source of limitations.

Super (1957: 267) states that a fundamental factor in career choice is the individual's own socio-economic status, which is largely determined by the occupational level of the parents. Their occupational level determines the financial position of the family, which in turn determines the educational opportunities of the children in the family. On the simplest level, it would seem that if an individual's parents have enough money to send him to the best schools and possibly university, then he would have a major advantage. Conversely if there is a financial problem, then many opportunities may be lost to the person.

Another factor related to environment and career choice is the matter of mental ability. Although it can be modified by environment, it is largely an inherited characteristic (Super 1957: 267). This in turn affects the occupational level of the individual. The children of unskilled workers for example, tend on the whole to enter unskilled occupations.

The factors of parenting styles and the ordinal position of the child in the family, also appear to be important aspects of the environmental influence on career choice. Prinsloo (1987: 106) describes three different parenting styles and the different effects that these styles might have on the oldest and youngest children in a family :

- * The stricter, more autocratic style of parenting leads to the eldest child experiencing more anxiety and tension than the younger children. This would appear to limit the possible career choices to careers which do not require the individual to work under constant stress and tension (Prinsloo 1987: 107).

- * The fact that younger children are usually more exposed to a more liberal style of parenting leads to them not being as responsible as the older children and therefore they appear to achieve at a lower level in careers which require working under pressure and management skills.

- * The democratic style of parenting seems to be very effective in the two-child family, where both children appear to receive sufficient involvement, attention and particularly guidance regarding career choice from the parents. Unfortunately, in the three and four-child family, the youngest child receives the more personal and democratic style of parenting, while the eldest child is more likely to be reared under a more autocratic style. In the five-and-more child family, the parents who naturally make use of the democratic style of parenting for their first and possibly second and third children, often become "burnt out" with the other children and become less involved (Prinsloo 1987: 108).

Prinsloo (1987: 116) seems to sum up the situation well by stating that parents need to be aware of the fact that their child rearing style needs to be constant and consistent with all their children, in

order to afford them the opportunity to make a responsible career choice from the entire spectrum.

It is clear from the preceding paragraph that the ordinal position of the child can play a major role in the actualisation of the child and this in turn can play a role in the eventual career choice of the child.

Another important environmental factor is that of the social expectations which a family or community can place on an individual. An example of this would be when all the members of a family are part of a particular profession and they insist that the person follows in their footsteps.

Hannah and Kahn (1989: 174) seem to have confirmed some of the statements made in the preceding paragraphs. Their research revealed that students chose occupations in prestige levels comparable to their own socio-economic status backgrounds.

One further factor on which very little research has been done is that of the influence which the current and short-term future has on a South African at present. The future in terms of economic and political stability would seem to be bleak and people making career choices find it difficult to look beyond these problems.

The general effect of socio-economic factors is that a "vicious circle" effect is perpetuated, in that a child from a poor socio-economic background is likely to receive an inferior education which in turn leads to him earning a small income, which in turn causes the same problem for his children.

3.3.7 Conclusion

It would seem that there are many factors which are related to career choice. The degree to which they affect the actual choice in a direct

or indirect way is not completely clear. The traditional factors of aptitude, personality and interests are still clearly the major factors, but certain aspects of these global constructs need to be researched in more detail, particularly those which are related to career choice. One such aspect of personality is time perspective.

The empirical investigation which follows will attempt to establish the role of time perspective in career choice.

CHAPTER FOUR

THE METHOD OF THE EMPIRICAL INVESTIGATION

4.1 Introduction

The following chapter looks at the research design used in measuring time perspective and its relationship to other variables such as intellectual ability, gender, and most importantly, career choice. These variables were identified in the literature study.

Certain hypotheses with reference to these variables and time perspective will be formulated. A brief description of the procedures used to test these hypotheses will be given. This includes the selection of the sample, a description of the measuring instruments used, the procedure used in formulating and administering the questionnaire and finally the methods used in analysing the data.

4.2 Hypotheses

The following hypotheses, based on the literature study were formulated.

4.2.1 Hypothesis 1

There is a significant difference between the average time perspective of pupils who are at different junctures with regard to career choice.

This hypothesis was stated for each section of the TPQ as well as for the total TPQ.

Rationale

From the literature study it was found that a number of researchers referred to a possible link between time perspective and career choice (refer paragraph 2.7).

Savickas, Silling and Schwartz (1984: 258) and Baruch, Bruno and Horn (1987: 3) found time perspective to be a component in career choice, but very few studies have been conducted in order to confirm this link.

4.2.2 Hypothesis 2

There is a significant difference between boys and girls with regard to their average time perspective.

This hypothesis was stated for each dimension of the time perspective questionnaire, as well as the total score.

Rationale

According to the literature study (refer paragraph 2.5.6), Lamm, Schmidt and Trommsdorff (1976: 320) found differences in certain aspects of future time perspective between boys and girls. Although the results were not clear-cut, it would seem that the future time perspective of boys is more extended than that of girls. With regard to the density of future time perspective, boys also seemed to place greater emphasis on the occupational domain than girls did.

4.2.3 Hypothesis 3

There is a significant positive correlation between time perspective and intellectual ability.

Rationale

The literature study (refer paragraph 2.5.1) revealed that the research conducted into the relationship between intellectual ability and time perspective has yielded conflicting results. Lessing (1968: 185) found that longer

future time perspective was related to higher intelligence, while Gjesme (1979: 176) found the influence of ability on future time perspective to be modest.

4.3 Selection of the sample

The sample consisted of 286 standard nine pupils, 131 boys and 155 girls. The average age of the pupils was 16,62 with a standard deviation of 0,63. The pupils were selected from the only two english high schools in Kempton Park, and all the standard nine pupils were tested. As the city of Kempton Park is generally seen as being a middle socio-economic environment and all english speaking standard nine pupils were tested, the sample could be said to be representative of a middle class population.

4.4 Measuring instruments used in the investigation

A summary of the variables measured and the measuring instruments used to measure these variables is given in table 4.1. A detailed description of each of the instruments will follow the table.

TABLE 4.1 VARIABLES MEASURED AND THE MEASURING INSTRUMENTS

VARIABLES		MEASURING INSTRUMENTS	
1.	Time perspective	TPQ	- Time Perspective Questionnaire
2.	Intellectual ability	1.	GSAT - General Scholastic Aptitude Test
		2.	NSAGT - New South African Group Test

4.4.1 The development of a measuring instrument to measure time perspective

4.4.1.1 Introduction

It was stated in paragraph 2.7 that although certain models of vocational maturity and career decision making contained time perspective as a prime variable, few studies had investigated the link between career and time perspective as such. As a result, no time perspective questionnaire specifically directed at school children existed.

It was therefore decided that a questionnaire would be developed which would measure the secondary school pupil's time perspective.

4.4.1.2 The structure of the measuring instrument

(i) Initial considerations

When an attempt is being made to assess a pupil's time perspective, certain considerations should be taken into account when constructing the measuring instrument.

Firstly, the instrument should not be too time-consuming. The instrument would probably be used in conjunction with other questionnaires and tests and should therefore not be too lengthy.

Secondly, the instrument should be flexible in that it should be possible to use it in an individual or group test situation - once again the time factor is of importance.

Thirdly, the instrument should be of such a nature that any career guidance teacher should be able to use it without having any specific psychometric training. Therefore the administering and interpretation

of the instrument should not be too complicated.

In the light of the above reasons, it would seem that an interview or any other descriptive method would not be practical as it would be too time consuming, not conducive to a group testing situation and standardisation and objectivity would appear to be impossible.

A questionnaire which makes use of a scale would appear to be the most appropriate instrument in this instance. It would be possible to use it in a group situation and the administering and interpretation would not be too difficult. Various researchers in this field have used this particular type of questionnaire in their work (refer to paragraphs 2.4.6 and 2.4.7).

(ii) Final structure

It was thus decided to construct and use a questionnaire with the following characteristics :

- * The dimensions of time perspective as identified in paragraph 2.4 were used in the development of the questionnaire. The eight dimensions originally identified, were analysed and it was decided that for the purposes of this investigation, certain of them could either be discarded, or grouped together with one of the other dimensions to form four major dimensions. They were internal-external (locus of) control, optimism/pessimism, continuity/directionality and structure.
- * 11 specific items for each of these 4 dimensions of time perspective were developed.
- * Each item has both a positive and a negative pole with a scale of 1 to 6 ranging in-between. A scale of 6 was chosen as this makes it impossible for the pupil to choose a neutral or middle-of-the-road option.

4.4.1.3 The development of items for the measuring instrument

Other instruments which have been used by researchers in the past to measure some of the aspects of time perspective, were consulted.

Wessman's "Long-Term Personal Direction" (LTPD) scale (1973: 106) which measures the inclination to structure or map the future with events was consulted and certain items were adapted for use in the questionnaire. A number of items in the questionnaire were adapted from Heimberg's "Achievability of Future Goals" (AFG) scale (1963: 27). This scale measured affective evaluation of the future (optimism). The "Hopelessness Scale" (HS) (Beck, Weissman, Lester and Trexler 1974: 861) which also measures affective reactions to the future (pessimism) was also studied.

Certain items in the questionnaire were adapted from Rotter's "Generalized Expectancies for Internal Versus External Control of Reinforcement" (1966: 609).

As stated in paragraph 4.4.1.1, none of the previous research into time perspective had yielded a measuring instrument which would be entirely relevant to a secondary school pupil. The instrument would have to contain items which would reflect typical aspects of the life of a secondary school pupil.

(i) Dimension 1 : Locus of control

The items in this section attempt to answer the following question :

- * To what extent does the individual perceive the materialisation of his future hopes and fears as depending on himself or external circumstances?

An example of one of these items is :

- | | | | |
|----|---|-------------|--|
| 1. | One's success in the future depends on one's ability and hard work. | 6 5 4 3 2 1 | One's success in the future depends on luck. |
|----|---|-------------|--|

(ii) Dimension 2 : Optimism/Pessimism

The items in this section attempt to evaluate the pupil's level of optimism with regard to future events. An example of one of these items is :

- | | | | |
|----|--|-------------|---|
| 2. | When I plan something for the future, I expect to succeed. | 6 5 4 3 2 1 | When I plan something for the future, my expectations of success are limited. |
|----|--|-------------|---|

(iii) Dimension 3 : Continuity/Directionality

The items in this section attempt to measure the pupil's sense of a link between the present and the future and his sense of direction. An example of one of these items is :

- | | | | |
|----|-------------------------------|-------------|---|
| 3. | I have no real goals in life. | 6 5 4 3 2 1 | I plan much of my life around a few main goals. |
|----|-------------------------------|-------------|---|

(iv) Dimension 4 : Structure

The items in this section attempt to measure the pupil's ability to picture himself in the future. An example of one of these items is :

4. I have a clear picture of the person I will be ten years from now. 6 5 4 3 2 1 It is hard for me to visualise the kind of person I will be ten years from now.

As already stated in paragraph 4.4.1.3, there are 11 items for each of the four dimensions. The item numbers which pertain to each dimension are given in table 4.2.

Table 4.2

ITEM NUMBERS FOR EACH OF THE DIMENSIONS

DIMENSION	ITEM NUMBERS
Locus of control	1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41
Optimism/Pessimism	2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42
Continuity/ Directionality	3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43
Structure	4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44

4.4.1.4 Instructions accompanying the measuring instrument

The pupils selected for the sample received a questionnaire containing all the items (Refer to appendix A), and a separate answer sheet (Refer to appendix B). The pupils were then asked to follow the instructions given to them on their questionnaires as they were read out to them. The fact that they had to mark their responses on the separate answer sheet was emphasised.

4.4.1.5 Key to the measuring instrument

Each item consists of a statement and its opposite (negative). The pupil chooses a number between 1 and 6 as his response. If the pupil chooses the positive alternative he will score between 4 and 6, and if he chooses the negative alternative he will score between 1 and 3. It is therefore possible to obtain a total score for the questionnaire which is an indication of the pupil's time perspective.

A number of items were reversed (on a purely random basis) in order to prevent the pupil from being able to discover the pattern and therefore affect the validity of the results. The scoring obviously also had to be reversed.

The following items have been reversed : 3, 7, 10, 11, 13, 16, 17,
18, 22, 23, 24, 26, 29, 32,
34, 38, 41, 42, 43.

4.4.2 The measurement of intellectual ability

The intelligence quotients (IQ) of the pupils was obtained from their Ed-Lab (permanent cumulative record) cards. These IQ scores were obtained by means of a group test, either the GSAT (General Scholastic Aptitude Test) or the NSAGT (New South African Group Test). The tests were carried out during the primary school phase, normally in the standard 3, 4 or 5 year.

4.4.2.1 General Scholastic Aptitude Test (GSAT)

The GSAT is a group test constructed to measure academic intelligence or scholastic ability. It consists of seven sub-tests which determine the problem solving ability and reasoning of pupils. There are two alternate forms of the test - Forms A and B. The Scholastic Aptitude Score (SA) has a normalised standard scale with a mean of 100 and a

standard deviation of 15. There is also a normalised stanine scale. It provides standard scores from 1 to 9 with a mean of 5 and standard deviation of 1,96.

4.4.2.1.1 Reliability of the GSAT

The reliability of the GSAT using the test-retest method was determined to be 0,94 for Form A and 0,96 for Form B.

4.4.2.1.2 Validity of the GSAT

The validity of the GSAT was determined by finding the inter-correlations of the sub-tests and correlations with other intelligence tests. Although the content of the GSAT sub-tests differed, the aim of each test was to determine the testees' problem solving ability. All sub-tests were strongly correlated with one another. The correlations varied from 0,661 to 0,813. The fact that high correlations with other intelligence tests were found, can be seen as proof of the GSAT's construct validity. Table 4.3 shows the correlation of the GSAT with other intelligence tests.

TABLE 4.3 CORRELATION OF THE GSAT WITH OTHER INTELLIGENCE TESTS

OTHER INTELLIGENCE TESTS	CORRELATION
1. New South African Group Test (NSAGT)	0.81
2. Senior South African Individual Scale (SSAIS)	0.81
3. Old South African Individual Scale (old SAIS)	0.64

4.4.2.2 New South African Group Test (NSAGT)

The NSAGT was designed as a group test for academic intelligence. The aim was to provide a verbal, non-verbal and total IQ score for each testee. The assumption is made that the ability to solve problems involving figures, verbal material (words and sentences) and numbers is an important indicator of the intelligence facets important in normal school education. As with the GSAT, the NSAGT has a normalised standard scale with a mean of 100 and a standard deviation of 15.

4.4.2.2.1 Reliability of the NSAGT

The reliability coefficients (Kuder-Richardson Formula 20) were calculated for consecutive 6-month-interval age groups in the norm samples. The reliabilities for the non-verbal, verbal and total IQ scores were higher than 0,78, 0,70 and 0,84 respectively.

4.4.2.2.2 Validity of the NSAGT

Predictive validity of the NSAGT was determined by correlating the test scores with scores obtained in language and proficiency tests for the norm sample. The correlation coefficients ranged from 0,71 to 0,86.

It would appear from the above figures that both the GSAT and the NSAGT are fairly reliable and valid tests of intelligence. As there is a high correlation between the two, their results were used interchangeably in the study (only the total score, which includes the verbal and non-verbal scores was used).

4.5 Procedure followed during the empirical investigation

The initial questionnaire items were discussed with colleagues in order to judge the content validity. Many changes were suggested and a number of items were either changed or left out altogether.

When the final version was arrived at, it was submitted to the Transvaal Education Department for approval. This approval was granted and permission was given for the questionnaire to be carried out on secondary school pupils.

As stated in paragraph 4.3, all the standard nine pupils of the two english high schools were then involved in the sample. The instructions were read aloud and the pupils were given the opportunity to ask questions in order to clarify any problematic issues. The questionnaire itself took approximately thirty minutes to administer on each of the two occasions.

After the questionnaire was carried out, all the information from the Ed-Lab cards was obtained. All the results were then tabulated for processing by the computer.

4.6 Processing of the results

4.6.1 The questionnaire

An item analysis will be done for all the items in each of the four sections of the Time Perspective Questionnaire (TPQ), as well as for the questionnaire as a whole. The reliability of the measuring instrument will be determined by calculating the alpha-coefficient for each section as well as for the whole questionnaire.

The norms of the TPQ will be determined so that future researchers who might want to use the instrument, will be able to interpret their results in the light of the present study's results.

4.6.2 Testing of the hypotheses

Analysis of variance (F-test) will be used to determine whether hypothesis 1 should be accepted or rejected, while the t-test will be

used to ascertain whether a significant difference exists between boys and girls with regard to their average time perspective. Pearson's Product-Moment correlation will be calculated in order to determine whether there is a significant positive correlation between time perspective and intellectual ability.

CHAPTER 5

RESULTS OF THE INVESTIGATION

5.1 Introduction

A number of dimensions of time perspective were identified in the literature study (refer to paragraph 2.4). Although many of these dimensions had formed part of previous research on time perspective, it was decided that a new instrument would be developed in order to specifically measure the secondary school pupil's time perspective. The development of the TPQ was discussed in the previous chapter (paragraph 4.4.1).

In order to test the hypotheses, the newly developed TPQ was administered to 286 pupils. Each pupil's age and gender was also obtained. A further sample of 99 pupils (out of the original 286) was then selected and their IQ scores were recorded. These data were then processed using the statistical techniques described in paragraph 4.6. The results of these calculations will be discussed in this chapter.

5.2 Item analysis of the TPQ

The TPQ consists of four sections, namely, locus of control, optimism/pessimism, continuity/directionality and structure (refer to paragraph 4.4.1.3). An item analysis was done for each section as well as for the whole questionnaire, in order to establish whether each of the items made a contribution to its particular section, and to the total of the questionnaire. In the case where an item made no contribution, or contributed negatively to the total, that item would be left out.

Another aspect of the item analysis is the Alpha reliability coefficient. The reliability coefficient is calculated for each section of the questionnaire as well as for the total questionnaire, in the event that all the items are retained. The reliability coefficient is also calculated for the case when a specific item is left out.

On the basis of the item-total correlation, and the reliability coefficient, it is then decided whether a specific item must be retained or should be left out.

Tables 5.1; 5.2; 5.3; 5.4 and 5.5 indicate firstly that all items showed a positive correlation with the total. Secondly, they indicate that the reliability coefficient of the particular section and of the total of the questionnaire, is not significantly higher if any item is left out. Therefore all the items of the particular sections were retained.

TABLE 5.1 ITEM ANALYSIS OF THE SECTION : LOCUS OF CONTROL

No. of subjects	:	286
No. of items	:	11
Alpha reliability coefficient	:	0,755
Mean	:	51,220
Standard Deviation	:	6,52
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	0,482	0,731
5	0,397	0,738
9	0,479	0,727
13	0,364	0,744
17	0,516	0,720
21	0,400	0,738
25	0,393	0,738
29	0,422	0,736
33	0,590	0,712
37	0,274	0,754
41	0,212	0,764

TABLE 5.2 ITEM ANALYSIS OF THE SECTION : OPTIMISM/PESSIMISM

No. of subjects	:	286
No. of items	:	11
Alpha reliability coefficient	:	0,733
Mean	:	46,245
Standard Deviation	:	6,78
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
2	0,272	0,727
6	0,370	0,715
10	0,276	0,728
14	0,348	0,718
18	0,425	0,708
22	0,424	0,707
26	0,442	0,705
30	0,358	0,718
34	0,361	0,716
38	0,473	0,704
42	0,440	0,704

TABLE 5.3 ITEM ANALYSIS OF THE SECTION : CONTINUITY/DIRECTIONALITY

No. of subjects	:	286
No. of items	:	11
Alpha reliability coefficient	:	0,745
Mean	:	46,370
Standard Deviation	:	7,01
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
3	0,301	0,738
7	0,243	0,748
11	0,526	0,708
15	0,410	0,724
19	0,470	0,717
23	0,240	0,748
27	0,445	0,719
31	0,422	0,722
35	0,565	0,704
39	0,240	0,746
43	0,505	0,712

TABLE 5.4 ITEM ANALYSIS OF THE SECTION : STRUCTURE

No. of subjects	:	286
No. of items	:	11
Alpha reliability coefficient	:	0,738
Mean	:	43,930
Standard Deviation	:	7,33
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
4	0,473	0,705
8	0,243	0,700
12	0,305	0,729
16	0,471	0,705
20	0,404	0,716
24	0,403	0,716
28	0,323	0,727
32	0,528	0,699
36	0,333	0,726
40	0,244	0,735
44	0,193	0,742

TABLE 5.5 ITEM ANALYSIS OF THE TPQ

No. of subjects	:	286
No. of items	:	44
Alpha reliability coefficient	:	0,908
Mean	:	187,766
Standard Deviation	:	23,52
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	0,365	0,907
2	0,322	0,907
3	0,319	0,907
4	0,456	0,906
5	0,424	0,906
6	0,482	0,905
7	0,247	0,908
8	0,483	0,905
9	0,455	0,906
10	0,255	0,908
11	0,536	0,905
12	0,350	0,907
13	0,379	0,907
14	0,353	0,907
15	0,470	0,905

TABLE 5.5 ITEM ANALYSIS OF THE TPQ (contd)

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
16	0,454	0,906
17	0,489	0,905
18	0,442	0,906
19	0,467	0,906
20	0,380	0,907
21	0,344	0,907
22	0,487	0,905
23	0,267	0,908
24	0,475	0,905
25	0,387	0,906
26	0,390	0,906
27	0,465	0,905
28	0,480	0,905
29	0,382	0,907
30	0,442	0,906
31	0,523	0,905
32	0,541	0,905
33	0,468	0,905
34	0,343	0,907
35	0,610	0,904

TABLE 5.5 ITEM ANALYSIS OF THE TPQ (contd)

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
36	0,396	0,906
37	0,138	0,909
38	0,547	0,905
39	0,262	0,908
40	0,270	0,908
41	0,405	0,906
42	0,478	0,905
43	0,500	0,905
44	0,301	0,907

5.3 Reliability of the TPQ

The closer the reliability of a measuring instrument is to 1, the smaller the difference is between the variance of the actual score and the observed score. When an instrument is developed, an attempt is made to get the reliability of the instrument as close to 1 as possible.

In the light of the fact that the TPQ could only be administered once for practical reasons, (testing a second time would influence the spontaneous responses of the testees) the test-retest method of determining the reliability of the TPQ, could not be used. The equivalent form method could also not be used as there is no equivalent form. The reliability was therefore arrived at by calculating the alpha coefficient for each of the sections as well as the total TPQ.

It can be seen from table 5.6 that the reliability coefficient for the TPQ is 0,908. This value is very close to 1 and therefore the TPQ can be considered to be a reliable measuring instrument.

TABLE 5.6 RELIABILITY OF THE TPQ

SECTION	ALPHA COEFFICIENT	NO. OF ITEMS
Locus of control	0,755	11
Optimism/ Pessimism	0,733	11
Continuity/ Directionality	0,745	11
Structure	0,738	11
TPQ in totality	0,908	44

5.4 Determining the norms of the TPQ

A norm is an objective standard whereby the scores which a testee receives on a measuring instrument, are interpreted.

Stanines (standard scores divided into nine categories as in table 5.7) were used to determine the norms. To calculate the stanines for

each of the sections of the TPQ, as well as the total TPQ, the cumulative percentages for each of the sections and the total TPQ were obtained. The stanines obtained are set out in tables 5.8 to 5.12.

TABLE 5.7 LIMITS AND AREAS OF STANINES

Stanines	Limits	% of Area
9	+ ∞ to +1,75z	4
8	+1,75z to +1,25z	7
7	+1,25z to +0,75z	12
6	+0,75z to +0,25z	17
5	+0,25z to -0,25z	20
4	-0,25z to -0,75z	17
3	-0,75z to -1,25z	12
2	-1,25z to -1,75z	7
1	-1,75z to - ∞	4

(Mulder 1989: 205)

TABLE 5.8 TRANSFORMATION OF RAW SCORES INTO STANINES

SECTION : LOCUS OF CONTROL

Raw Score	Frequency	Cumulative Percentage	Stanine
31	1	0,3	1
33	2	1,0	1
36	3	2,1	1
37	2	2,8	1
38	3	3,8	1
39	3	4,9	2
40	5	6,6	2
41	5	8,4	2
42	9	11,5	3
43	4	12,9	3
44	10	16,4	3
45	6	18,5	3
46	8	21,3	3
47	16	26,9	4
48	13	31,5	4
49	12	35,7	4
50	14	40,6	5
51	18	46,9	5
52	23	54,9	5
53	22	62,6	6
54	15	67,8	6
55	18	74,1	6
56	15	79,4	7
57	11	83,2	7
58	8	86,0	7
59	13	90,6	8
60	9	93,7	8
61	6	95,8	8
62	4	97,2	9
63	4	98,6	9
64	2	99,3	9
65	2	100,0	9

TABLE 5.9 TRANSFORMATION OF RAW SCORES INTO STANINES

SECTION : OPTIMISM/PESSIMISM

Raw Score	Frequency	Cumulative Percentage	Stanine
20	1	0,3	1
26	1	0,7	1
27	1	1,0	1
29	1	1,4	1
30	1	1,7	1
32	1	2,1	1
33	3	3,1	1
34	1	3,5	1
35	4	4,9	2
36	11	8,7	2
37	4	10,1	2
38	5	11,9	3
39	11	15,7	3
40	13	20,3	3
41	12	24,5	4
42	12	28,7	4
43	8	31,5	4
44	14	36,4	4
45	20	43,4	5
46	14	48,3	5
47	18	54,5	5
48	22	62,2	6
49	17	68,2	6
50	20	75,2	6
51	9	78,3	7
52	16	83,9	7
53	10	87,4	7
54	5	89,2	8
55	9	92,3	8
56	6	94,4	8
57	7	96,9	9
59	2	97,6	9
60	2	98,3	9
61	2	99,0	9
62	1	99,3	9
63	1	99,7	9
65	1	100,0	9

TABLE 5.10 TRANSFORMATION OF RAW SCORES INTO STANINES

SECTION : CONTINUITY/DIRECTIONALITY

Raw Score	Frequency	Cumulative Percentage	Stanine
22	1	0,3	1
26	1	0,7	1
27	1	1,0	1
28	2	1,7	1
29	1	2,1	1
30	4	3,5	1
31	2	4,2	2
33	1	4,5	2
34	1	4,9	2
35	3	5,9	2
36	1	6,3	2
37	3	7,3	2
38	11	11,2	3
39	10	14,7	3
40	10	18,2	3
41	15	23,4	4
42	9	26,6	4
43	22	34,3	4
44	20	41,3	5
45	13	45,8	5
46	9	49,0	5
47	17	54,9	5
48	14	59,8	5
49	16	65,4	6
50	15	70,6	6
51	12	74,8	6
52	10	78,3	7
53	15	83,6	7
54	6	85,7	7
55	15	90,9	8
56	10	94,4	8
57	5	96,2	9
58	5	97,9	9
59	2	98,6	9
60	3	99,7	9
61	1	100,0	9

TABLE 5.11 TRANSFORMATION OF RAW SCORES INTO STANINES

SECTION : STRUCTURE

Raw Score	Frequency	Cumulative Percentage	Stanine
22	1	0,3	1
23	1	0,7	1
24	2	1,4	1
25	1	1,7	1
29	1	2,1	1
30	3	3,1	1
31	4	4,5	2
32	6	6,6	2
33	4	8,0	2
34	11	11,9	3
35	6	14,0	3
36	8	16,8	3
37	6	18,9	3
38	7	21,3	3
39	10	24,8	4
40	17	30,8	4
41	16	36,4	4
42	15	41,6	5
43	12	45,8	5
44	20	52,8	5
45	11	56,6	5
46	8	59,4	5
47	18	65,7	6
48	16	71,3	6
49	16	76,9	6
50	14	81,8	7
51	12	86,0	7
52	11	89,9	8
53	7	92,3	8
54	4	93,7	8
55	5	95,5	8
56	4	96,9	9
57	1	97,2	9
58	2	97,9	9
59	3	99,0	9
61	1	99,3	9
62	1	99,7	9
63	1	100,0	9

TABLE 5.12 TRANSFORMATION OF RAW SCORES INTO STANINES

TOTAL TPQ

Raw Score	Frequency	Cumulative Percentage	Stanine
107	1	0,3	1
114	1	0,7	1
116	1	1,0	1
126	1	1,4	1
131	1	1,7	1
138	1	2,1	1
140	2	2,8	1
143	1	3,1	1
144	1	3,5	1
146	1	3,8	1
147	3	4,9	2
149	2	5,6	2
150	2	6,3	2
151	1	6,6	2
152	2	7,3	2
154	3	8,4	2
155	1	8,7	2
156	2	9,4	2
157	1	9,8	2
158	2	10,5	2
159	1	10,8	2
160	2	11,5	3
161	2	12,2	3
162	2	12,9	3
163	2	13,6	3
164	3	14,7	3
165	1	15,0	3
166	3	16,1	3
167	4	17,5	3
168	4	18,9	3
169	5	20,6	3
170	8	23,4	4
172	4	24,8	4
173	4	26,2	4
174	2	26,9	4
175	8	29,7	4
176	3	30,8	4
177	3	31,8	4
178	8	34,6	4
179	1	35,0	4
180	7	37,4	4
181	5	39,2	4
182	2	39,9	4

TABLE 5.12 (continued)

Raw Score	Frequency	Cumulative Percentage	Stanine
183	4	41,3	5
184	10	44,8	5
185	4	46,2	5
186	4	47,6	5
187	3	48,6	5
188	6	50,7	5
189	4	52,1	5
190	9	55,2	5
191	2	55,9	5
192	2	56,6	5
193	3	57,7	5
194	7	60,1	6
195	5	61,9	6
196	4	63,3	6
197	5	65,0	6
198	6	67,1	6
199	7	69,6	6
200	2	70,3	6
201	5	72,0	6
202	1	72,4	6
203	4	73,8	6
204	3	74,8	6
205	3	75,9	6
207	2	76,6	6
208	8	79,4	7
209	4	80,8	7
210	2	81,5	7
211	6	83,6	7
212	1	83,9	7
213	3	85,0	7
214	4	86,4	7
215	2	87,1	7
216	4	88,5	7
217	3	89,5	8
218	3	90,6	8
219	2	91,3	8
220	6	93,4	8
221	2	94,1	8
222	4	95,5	8

TABLE 5.12 (continued)

Raw Score	Frequency	Cumulative Percentage	Stanine
223	2	96,2	9
224	1	96,5	9
225	1	96,9	9
226	1	97,2	9
227	2	97,9	9
233	1	98,3	9
234	1	98,6	9
236	1	99,0	9
240	1	99,3	9
244	1	99,7	9
249	1	100,0	9

By dividing the categories up as in table 5.7, and then applying them to the four sections of the TPQ as well as the total, it is possible to establish whether an individual's time perspective is below average, average or above average. As a general rule it is understood that the bottom three stanines (1, 2 and 3) are regarded as below average, the next three stanines (4, 5 and 6) as average, and the top three stanines (7, 8 and 9) as above average (Mulder 1989: 205). The classification of the scores is given in table 5.13.

TABLE 5.13 CLASSIFICATION OF THE TPQ SCORES IN CATEGORIES

Section	Below Average	Average	Above Average
Locus of control	0 - 46	47 - 55	56 - 66
Optimism/Pessimism	0 - 40	41 - 50	51 - 66
Continuity/Directionality	0 - 40	41 - 51	52 - 66
Structure	0 - 38	39 - 49	50 - 66
Total TPQ	0 - 169	170 - 207	208 - 264

5.5 Testing of hypotheses

5.5.1 Hypothesis 1

With regard to Hypothesis 1, stated in paragraph 4.2.1, the following null hypothesis was tested :

There is no significant difference between the average time perspective of pupils who are at different junctures with regard to career choice.

This hypothesis was stated for each section of the TPQ as well as for the total TPQ.

The subjects were divided into the following four groups on the basis of their position at that stage regarding their career choice :

- * Group 1 : Those who had already decided on a career;
- * Group 2 : Those who were in the process of considering and deciding on a career;
- * Group 3 : Those who were likely to leave the decision regarding a career up to other people;
- * Group 4 : Those for whom the decision regarding a career was not a priority at that stage.

The F test was used to determine whether there is a significant difference between the average time perspective of pupils in the different groups. This was done for all four sections of the TPQ as well as for the total TPQ.

5.5.1.1 Comparison between the four groups with regard to Locus of Control

The average locus of control for each of the four groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 5.14 :

TABLE 5.14 RESULTS OF THE ANALYSIS OF VARIANCE FOR LOCUS OF CONTROL

GROUP	N	MEAN	SD
1	61	53,11	7,17
2	189	51,31	6,21
3	6	48,50	5,09
4	30	47,33	5,69

$F(3,282) = 5,92 \quad p < 0,01$

There is a significant difference between the average Locus of Control of the four groups. The null hypothesis can therefore be rejected at the 1% level of significance.

In order to determine between which groups this difference exists, the t-values were calculated. These appear in table 5.15 :

TABLE 5.15 T-TEST ANALYSIS OF THE VARIABLE LOCUS OF CONTROL

GROUPS	DIFFERENCE BETWEEN THE MEANS	t VALUE	SIGNIFICANCE
1 - 2	1,80	$t < 2,6$	$p > 0,05$
1 - 3	4,61	$t < 2,6$	$p > 0,05$
1 - 4	5,78	$t > 2,6$	$p < 0,05$
2 - 3	2,81	$t < 2,6$	$p > 0,05$
2 - 4	3,98	$t > 2,6$	$p < 0,05$
3 - 4	1,17	$t < 2,6$	$p > 0,05$

There appears to be a significant difference between groups 1 and 4, and 2 and 4. These results indicate that the pupils who have either already decided on a career (group 1), or are concerned about it (group 2), perceive the materialisation of their futures as depending on themselves, while the pupils for whom deciding on a career is not a priority (group 4), believe that their futures will be shaped by external circumstances. This is in accordance with the results of Platt and Eisenman (1968: 121), who found that individuals who perceived reinforcement as being under their own control were likely to be more future-oriented in their time perspectives, and would also

find it easier to set goals for the future. Trommsdorff, Lamm and Schmidt (1979: 142) and Wolf and Savickas (1985: 471) concur with these views (refer to paragraph 2.4.5).

5.5.1.2 Comparison between the four groups with regard to optimism/pessimism

The average optimism/pessimism for each of the four groups was calculated, and an analysis of variance was carried out in order to compare them. The results appear in table 5.16 :

TABLE 5.16 RESULTS OF THE ANALYSIS OF VARIANCE FOR OPTIMISM/PESSIMISM

GROUP	N	MEAN	SD
1	61	48,62	6,88
2	189	46,21	6,41
3	6	42,67	11,79
4	30	42,33	5,89

$F(3,282) = 6,76 \quad p < 0,01$

There is a significant difference between the average Optimism/Pessimism of the 4 groups. The null hypothesis can therefore be rejected at the 1% level of significance.

In order to determine between which groups this difference exists, the t-values were calculated. These appear in table 5.17 :

TABLE 5.17 T-TEST ANALYSIS OF THE VARIABLE OPTIMISM/PESSIMISM

GROUPS	DIFFERENCE BETWEEN THE MEANS	T VALUE	SIGNIFICANCE
1 - 2	2,41	$t < 2,6$	$p > 0,05$
1 - 3	5,96	$t < 2,6$	$p > 0,05$
1 - 4	6,29	$t > 2,6$	$p < 0,05$
2 - 3	3,55	$t < 2,6$	$p > 0,05$
2 - 4	3,88	$t > 2,6$	$p < 0,05$
3 - 4	0,33	$t < 2,6$	$p > 0,05$

There is a significant difference between groups 1 and 4, and groups 2 and 4. These results indicate that the pupil who experiences less difficulty with his career choice, is likely to have a more positive

outlook on life. These findings are in accordance with the views of Teahan (1958: 380), who found that people with a more future-oriented time perspective also appeared to be more optimistic. Wolf and Savickas (1985: 478) also found a link between optimism and a more future-oriented time perspective.

5.5.1.3 Comparison between the four groups with regard to Continuity/Directionality

The average continuity/directionality for the four groups was calculated, and in order to compare them, an analysis of variance was carried out. The results appear in table 5.18 :

TABLE 5.18 RESULTS OF THE ANALYSIS OF VARIANCE FOR CONTINUITY/DIRECTIONALITY

GROUP	N	MEAN	SD
1	61	49,69	7,30
2	189	46,19	6,44
3	6	40,00	9,72
4	30	42,07	6,07

$F(3,282) = 11,07$ $p < 0,01$

There is a significant difference between the average Continuity/ Directionality of the four groups. The null hypothesis can therefore be rejected at the 1% level of significance.

In order to determine between which groups this difference exists, the t-values were calculated. These results appear in table 5.19 :

TABLE 5.19 T-TEST ANALYSIS OF THE VARIABLE CONTINUITY/
DIRECTIONALITY

GROUPS	DIFFERENCE BETWEEN THE MEANS	T VALUE	SIGNIFICANCE
1 - 2	3,50	$t > 2,6$	$p < 0,05$
1 - 3	9,69	$t > 2,6$	$p < 0,05$
1 - 4	7,62	$t > 2,6$	$p < 0,05$
2 - 3	6,19	$t < 2,6$	$p > 0,05$
2 - 4	4,12	$t > 2,6$	$p < 0,05$
4 - 3	2,07	$t < 2,6$	$p > 0,05$

The results indicate that there are significant differences between group 1 and all three of the other groups, as well as a significant difference between group 2 and group 4. These results suggest that

the pupil who is capable of making a career choice, is likely to be able to link present actions with future outcomes in his mind (group 1), while the pupil who experiences difficulty in choosing a career, has problems linking the present and the future as well (groups 2, 3, and 4). Also, it seems that the pupils who are concerned about making a career choice (group 2) have a better sense of continuity between the present and the future, than the pupils who are unconcerned about the issue (group 4). Although very little research has been done in this area, the views of Wolf and Savickas (1985: 478), appear to be in support of the research results obtained in the present study. They felt that students who had a fragmented time perspective probably experienced difficulties in recognising action-outcome connections (refer to paragraph 2.4.7).

5.5.1.4 Comparison between the four groups with regard to structure

In order to compare the averages for structure for each of the four groups, an analysis of variance was carried out. The results appear in table 5.20 :

TABLE 5.20 RESULTS OF THE ANALYSIS OF VARIANCE FOR STRUCTURE

GROUP	N	MEAN	SD
1	61	48,02	7,60
2	189	43,75	6,58
3	6	38,67	8,24
4	30	37,83	6,06

$F(3,282) = 16,66 \quad p < 0,01$

There is a significant difference between the average Structure scores between the four groups. The null hypothesis can therefore be rejected at the 1% level of significance.

In order to determine between which groups this difference exists, the t-values were calculated. These results appear in table 5.21 :

TABLE 5.21 T-TEST ANALYSIS OF THE VARIABLE STRUCTURE

GROUPS	DIFFERENCE BETWEEN THE MEANS	T VALUE	SIGNIFICANCE
1 - 2	4,27	$t > 2,6$	$p < 0,05$
1 - 3	9,35	$t > 2,6$	$p < 0,05$
1 - 4	10,18	$t > 2,6$	$p < 0,05$
2 - 4	5,91	$t > 2,6$	$p < 0,05$
2 - 3	5,08	$t < 2,6$	$p > 0,05$
3 - 4	0,83	$t < 2,6$	$p > 0,05$

There is a significant difference between group 1 and all three of the other groups, and also between group 2 and group 4. What can be inferred from this is that a pupil who is able to make a decision regarding his future career (group 1), also appears to be able to structure and order the future events of his life, while the pupil who has difficulty in choosing a career, is probably less able to picture or structure his future (groups 2, 3 and 4). These results indicate that if an individual is at least concerned about his future career (group 2), then he is probably more able to picture and order his future than the individual who is totally unconcerned about his future career (group 4).

5.5.1.5 Comparison between the four groups with regard to the total TPQ

The averages for the four groups with regard to the total TPQ were calculated. In order to compare these averages, an analysis of variance was carried out. These results appear in table 5.22 :

TABLE 5.22 RESULTS OF THE ANALYSIS OF VARIANCE FOR THE TOTAL TPQ

GROUP	N	MEAN	SD
1	61	199,44	25,43
2	189	187,46	21,06
3	6	169,83	31,83
4	30	169,57	18,79

$$F(3,282) = 13,81 \quad p < 0,01$$

There is thus a significant difference between the average total score of the TPQ for the four groups. The null hypothesis can be rejected at the 1% level of significance.

In order to establish between which groups this difference exists, the t-values were calculated. These appear in table 5.23 :

TABLE 5.23 T-TEST ANALYSIS OF THE TOTAL TPQ

GROUPS	DIFFERENCE BETWEEN THE MEANS	T VALUE	SIGNIFICANCE
1 - 2	11,99	$t > 2,6$	$p < 0,05$
1 - 3	29,61	$t > 2,6$	$p < 0,05$
1 - 4	29,88	$t > 2,6$	$p < 0,05$
2 - 4	17,89	$t > 2,6$	$p < 0,05$
2 - 3	17,62	$t < 2,6$	$p > 0,05$
3 - 4	0,27	$t < 2,6$	$p > 0,05$

There are significant differences between the average time perspective scores of the group of pupils who have made a decision regarding their careers (group 1), and all three of the groups of pupils who have not yet decided (groups 2, 3 and 4). This indicates that pupils who are more able to make a career choice have a good or well-developed time perspective, while the pupils who experience difficulty in choosing a career are likely to have a less well-developed time perspective.

There is also a significant difference between the average time perspective scores of the group of pupils who are still in the process of deciding on a career (group 2), and the group of pupils for whom a career decision is not a priority (group 4). This implies that one possible reason for the individual being unconcerned about career choice when he should be concerned about it, is that his time perspective is not as developed as it should be.

These results seem to confirm the ideas of other researchers such as Savickas, Silling and Schwartz (1984: 258), and Baruch, Bruno and Horn (1987: 3) who although they had not done any specific research in this particular area, suggested that time perspective is related to career choice.

5.5.2 Hypothesis 2

With regard to hypothesis 2 stated in paragraph 4.2.2, the following null hypothesis was tested :

There is no significant difference between boys and girls with regard to their average time perspective.

This hypothesis was stated for each section of the TPQ as well as for the total TPQ.

All 286 pupils were used in the testing of this hypothesis. Group A represents 131 males, while Group B represents 155 females. To determine whether the average time perspective of Group A differed from Group B, the mean of each group was calculated for each dimension of time perspective as defined in paragraph 4.4.1.3, as well as for the total questionnaire. The t-test was used to determine whether the means differed significantly or not. The results appear in table 5.24 :

TABLE 5.24 DIFFERENCE BETWEEN THE AVERAGE TIME PERSPECTIVE SCORES OF MALES AND FEMALES

VARIABLE	GR.	NUMBER	MEAN	STD DEV	T	DF	P
LOCUS OF CONTROL	A	131	50,24	6,72	2,3453	284	p<0,05
	B	155	52,05	6,25			
OPTIMISM/ PESSIMISM	A	131	45,73	6,94	1,1730	284	p>0,05
	B	155	46,68	6,65			
CONTINUITY DIRECTION.	A	131	45,94	7,29	0,9568	284	p>0,05
	B	155	46,74	6,77			
STRUCTURE	A	131	43,40	7,54	1,1148	284	p>0,05
	B	155	44,37	7,15			
TOTAL	A	131	185,32	24,65	1,6207	284	p>0,05
	B	155	189,83	22,40			

According to Table 5.24, a t-value of 2,3453 was obtained for the variable locus of control, with $p < 0,05$. This means that the null hypothesis can be rejected at the 5% level of significance in this case. This implies that there is a significant difference between the average time perspective of boys and girls with regard to their locus of control. Girls appear to feel that their future is more internally controlled than boys do.

Table 5.24 reveals that there is no significant difference between the mean time perspective scores of boys and girls with regard to all the dimensions (except locus of control) as well as total of the TPQ. Therefore the null hypothesis cannot be rejected in all cases except that of the dimension of locus of control. This means that in general boys and girls do not differ significantly with regard to time perspective.

The research done by Lamm, Schmidt and Trommsdorff (1976: 320), (refer to paragraph 2.5.6), on the relationship between gender and future time perspective, revealed that girls had greater time perspective with regard to the family domain than boys, while boys had greater time perspective with regard to occupation than girls. It appears then, that in general, the difference between the future time perspective of boys and girls was not significant in their research. It therefore seems that the results of this study are in accordance with those of Lamm, Schmidt and Trommsdorff.

5.5.3 Hypothesis 3

With regard to hypothesis 3 stated in paragraph 4.2.3, the following null hypothesis was tested :

There is no significant positive correlation between time perspective and intellectual ability.

To test this null hypothesis, a Pearson Product-Moment correlation was calculated between the total time perspective score and intelligence. The number of pupils used in this investigation was 99. A correlation of $-0,18$ was obtained with $p > 0,05$. The null hypothesis can therefore not be rejected. This shows that intelligence is not related to an individual's time perspective.

Previous research in this area has yielded conflicting results (refer to paragraph 2.5.1). Lessing (1968: 185) found that longer time perspective was related to higher intelligence. Siegman (in Gjesme 1979: 176) found a significant positive correlation between future time perspective and general intelligence in one of his studies, while he found a non-significant correlation in another investigation. Gjesme's own investigation (1979: 176) revealed that the influence of ability on future time perspective is modest.

5.6 Conclusion

An item analysis was carried out for each section as well as for the whole TPQ. No items were excluded from the final questionnaire.

The reliability of the TPQ was measured by calculating the alpha-coefficient. This was found to be $0,908$ for the total TPQ and therefore it can be considered to be a reliable measuring instrument.

Norms for the TPQ were arrived at by converting the raw scores to stanines.

The following conclusions were arrived at after the testing of the hypotheses :

- (i) There is a significant difference between the average time perspective of pupils who are at different junctures with regard to career choice. This applied to all the sections of the TPQ as well as for the total TPQ. With regard to the

total TPQ score, it was found that there is a significant difference between the mean time perspective scores of the group of pupils who have decided on a career and all three of the groups of pupils who have not yet decided on a career. A significant difference was also found between the group of pupils who were still deciding on a career and the pupils for whom a career decision was not a priority.

- (ii) Boys and girls do not differ significantly with regard to time perspective, with the exception of the dimension of locus of control, where it was shown that girls feel that their future is more internally controlled than boys do.
- (iii) Intelligence seems as if it is not related to an individual's time perspective.

CHAPTER 6

EDUCATIONAL IMPLICATIONS OF THE RESEARCH AND
SUGGESTIONS FOR FURTHER RESEARCH

6.1 Introduction

As stated in chapter 1, the choice of a future career is one of the most important decisions a young person is obliged to make. His future career shapes his entire future, in terms of status, life-style and self-actualisation. It is apparent that the choice of career is frequently made in a haphazard fashion, and often only at the last moment. This is clearly a problem as the employment market in South Africa, and the rest of the world, is becoming increasingly specialised and therefore limited. The job opportunities are also diminishing rapidly as a result of the population growth of this country. It would therefore appear that it is essential for a young person to consider possible future careers carefully and timeously. Unfortunately it seems that this is often not the case, and as a result the person is forced to accept a job situation which is far from ideal.

One factor which may have an influence on the process of career decision-making is that of the individual's time perspective. It seems that if a person is unable to visualise himself in the future, then he is likely to have problems choosing a future career.

It was therefore the purpose of this study to determine whether time perspective plays a significant role in an individual's career choice or not.

A literature study was done to identify the major dimensions of time perspective and the factors which have an influence on it. The major dimensions were identified as being locus of control, optimism and pessimism, continuity and directionality, and structure. Factors such as personality, socio-economic status, gender and intellectual

ability appeared to have varying levels of influence on time perspective.

An empirical investigation was carried out with the following goals :

- (i) To determine whether there is a significant difference between the average time perspective of pupils who have decided on a career and those who have not.
- (ii) To develop a measuring instrument (the TPQ) with which a secondary school pupil's time perspective could be ascertained.
- (iii) To gauge whether there is a significant difference between the time perspective of boys and girls.
- (iv) To determine whether there is a significant positive correlation between time perspective and intellectual ability.

6.2 Educational implications

6.2.1 Time perspective and its effect on career choice

Super and Hall (in Savickas, Silling and Schwartz 1984: 258) and Baruch, Bruno and Horn (1987: 3) agree that there is a possible link between time perspective and career choice. The extent or scope of this link has not been established as yet. The results of this investigation confirmed that there is a definite link between an individual's time perspective and career choice. An individual who is able to make a decision regarding his future career, is likely to have a high time perspective, in other words he is able to picture himself relatively far in his personal, public and occupational future. The converse also applies in that an individual who is unable to make a career choice, is likely to have a poor time perspective.

The implications of these findings are diverse. The factors traditionally associated with career choice (refer to paragraph 3.3) such as aptitude, interests, personality, knowledge of careers, decision making ability and socio-economic status, will have to be expanded to include time perspective. This also implies that the teachers and counsellors involved in career education in secondary schools should then incorporate aspects of time perspective in their lessons and teaching strategies.

6.2.1.1 The role of the teacher

Secondary schools are specifically mentioned in the previous paragraph because in the current South African education system, the major educational choices related to future careers and entry into further study programmes are made in the secondary school phase. Towards the end of the standard five year (seventh year of formal compulsory schooling) a major choice is made regarding the specific type of secondary schooling the pupil is suited to. This is based almost entirely on the pupil's aptitudes and performance, as it is felt that the standard five pupil's (approximately 13 years of age) interests, time perspective and possibly even personality, are not fully developed yet and will probably change over the course of the following years.

6.2.1.1.1 Practical implementation of the TPQ

The TPQ could be used during the standard seven year to good effect, in that specific problems with time perspective could be identified. The teacher then has an opportunity to try to improve the areas in which the pupil has difficulties.

The end of the standard nine year would be a good time to re-administer the TPQ in order to establish whether the pupil has made any progress in his time perspective or not. If there were still problems, the teacher would then be able to give these particular

areas the necessary extra attention.

6.2.1.1.2 Guidelines for improving time perspective

Teachers and career counsellors could base their programmes for improving secondary school pupils' time perspective on the four major dimensions - locus of control, optimism/pessimism, continuity/directionality, and structure (refer to paragraph 2.4 and 4.4.1.2).

- (i) Platt and Eisenman (1968: 121), Trommsdorff, Lamm and Schmidt (1979: 142) and Wolf and Savickas (1985:471) all agree that an individual who perceives that he is personally responsible for his successes or failures is more likely to set himself goals and generally have a better picture of his future than an individual who perceives external factors as being responsible for his successes or failures. The results of the present study were in accordance with this (refer to paragraph 5.5.1) and it should therefore be a priority of the teacher's to get pupils to believe and accept that they are the sole masters of their own fate.

The average high school pupil has very few responsibilities and it is felt that by increasing these responsibilities, the fact that success or failure is directly proportional to individual effort, would be emphasised.

Another possible method of achieving the goal is to hold a formal debate with the motion "My future is entirely in my own hands". The pupils could be divided into two groups - one group supporting the motion, and the other opposed. Pupils could be given different tasks such as doing the background research, being either a speaker or summariser, or preparing arguments which could be raised from the floor.

A further possibility would be to do a series of inter-active lessons on the theme of how certain famous people achieved their success. Aspects such as their initial goals, methods and motivations could be concentrated on.

- (ii) The present study was in accordance with Teahan (1958: 380), and Trommsdorff, Lamm and Schmidt (1979: 133) in finding that the individual who is able to make a career choice fairly easily, is likely to be the one who is optimistic about his future and will probably have a good time perspective.

Pupils often use their teacher as a role model and it is therefore possible that if the teacher presents an optimistic picture of the future, the pupils may be influenced in a positive way.

A group discussion on the general advantages of optimism as opposed to pessimism could also be beneficial in this regard.

- (iii) This study confirmed the idea that the pupil who has difficulty in choosing a career, probably has difficulty with connecting current actions with future outcomes.

The teacher has to emphasise the fact that the pupil's current actions (scholastic academic performance) will to a relatively large extent determine the limits of his future success (acceptance into institutions of further study and job applications).

Guest speakers could be invited to share their experiences of studying, applying for jobs and working their way up the ladder during their careers. They could also focus on the stages when they made their decisions and what effect these decisions had later on in their careers.

- (iv) Structure (in this context) is defined as being the ordering and sequencing of future events. This study bore out the findings of previous research in that a pupil who finds it difficult to choose a career, is likely to also be unable to structure other possible future events of his life.

In order to improve this aspect of the pupil's time perspective, the teacher will need to present a global picture of the future, including such aspects as marriage, children and long-term career.

Visits to particular places where pupils could get a good idea of the workplace in reality, would be beneficial in helping pupils to get a glimpse of their possible futures.

Pupils should also be encouraged to discuss marriage and parenthood with their teachers, parents or other important adults in their lives. Aspects such as the advantages, disadvantages and responsibilities of these situations could be concentrated on.

6.2.1.2 The role of the parents

Traditionally parents have generally been involved in the career choice of their children in one of three ways : prescribing a career to their child; total uninvolvedness - leaving it up to the school; or becoming involved at the eleventh hour. Obviously all three of these methods are far from ideal. Parents need to become more involved with the career choice of their children.

In the light of the fact that time perspective appears to play a role in career choice, the following ideas and guidelines regarding the development of the major dimensions of time perspective, may be of benefit to the parent :

(i) The idea of increasing the child's responsibilities in order to develop his time perspective was discussed in paragraph 6.2.1.1.2. It is thought that by giving the child certain responsibilities from a fairly young age, his Locus of Control could be developed. Possible examples of responsibilities would be to give the child certain chores (household or other) or to allow the child to control his own financial affairs (pocket money, savings, and possibly the applications for bursaries for further study). This would give the child an opportunity to discover first-hand that his happiness, progress and success lie squarely in his own hands.

(ii) Taking a keen interest in all of the child's activities and interests would help to build a strong sense of trust and understanding between the parent and the child. Furthermore, if the parent is always as positive and optimistic about the child's potential and abilities as possible, the child's own optimism about his future could be heightened.

(iii) Stability and constancy in the child's immediate environment - his home, is clearly a major factor in the development of his sense of continuity and directionality. It is therefore essential that parents consider this carefully before causing upheavals in the child's life such as divorce or possibly even something as seemingly minor as a change in schools.

(iv) The parent's own example can often be a powerful tool in the guidance of his child. As regards the dimension of structure, the child should be able to gain insight into such issues as marriage, family life, occupational status, and job satisfaction, merely by taking cognizance of the people and circumstances around him.

6.2.2 Time perspective and gender

Lamm, Schmidt and Trommsdorff (1976: 320) found that boys appear to have greater time perspective with regard to occupation than girls do, while girls have greater time perspective with regard to the family domain. The findings of the empirical investigation seemed to contradict this, in that no significant difference was found between the time perspective of boys and girls. One possible explanation for this is that the TPQ is of a general nature and includes aspects from both the family domain and occupation. The one area where boys differed from girls was in the locus of control dimension. Girls appear to believe that their future is more internally controlled than boys do.

The educational implications of these findings is that educators should not treat males and females differently with stereotypical sex-role characteristics. Firstly, it is as important for males to consider their future roles in all domains of life as it is for females. Secondly, the somewhat antiquated notion that females need not consider their future careers as seriously as males must be guarded against. In the modern world it seems that although the female is usually responsible for the bearing and initial rearing of the child, she will probably have to be a part of the occupational world at some stage of her life, and therefore the choice of a suitable career is of great importance. Educators should also emphasise the importance of these ideas in their teaching and counselling.

6.2.3 Time perspective and intellectual ability

The literature study revealed that researchers have come to conflicting conclusions regarding the link between time perspective and ability. For example, Lessing (1968: 185) found that longer time perspective was related to higher intelligence, while Gjesme (1979: 176) stated that the influence of ability on future time perspective

was modest.

The empirical findings of this investigation were in accordance with Gjesme's findings in that the correlation between the time perspective scores and intelligence was found to be low. The correlation of $-0,18$ is low, implying that intelligence is not related to an individual's time perspective.

Although these findings are in accordance with previous research, it is still felt that logically a pupil with greater thinking and reasoning abilities would be better equipped to consider, assess and plan his future. There are a number of possible reasons for the failure of this study to prove this expected link. Firstly, the fact that the study was limited to 99 subjects from only two secondary schools made the scope of the sample too narrow. Secondly, the fact that the two schools were ordinary academic secondary schools also limited the sample to pupils of at least average intelligence - the mean IQ score was 112,72 with a standard deviation of 11,82.

The educational implications of the results of the empirical investigation are nevertheless quite clear. Educators should treat pupils of all abilities in the same manner. The fact that some pupils will be aiming at tertiary education in order to qualify themselves for a profession, while others will be going straight on to a job with possible in-service training, should not be a factor in the educator's approach to career education. They should always consider the fact that all pupils require adequate counselling regarding their futures in order to have the opportunity to realise their unique potential.

6.3 Evaluation of the research

The principal aim of this study was to provide an answer to the problem identified in chapter 1, namely, "What role does time perspective play in the career choice of secondary school pupils?"

This paragraph considers whether this question was in fact answered, whether anything else of importance was achieved, and finally the problematic aspects of the study will be discussed.

6.3.1 "What role does time perspective play in the career choice of secondary school pupils?"

This question was fully answered in that the results of the empirical investigation confirmed that the easier it is for the individual to make a decision regarding a career, the higher or better his time perspective is.

6.3.2 Further contributions of the research

- (i) A better understanding of all relevant concepts such as time perspective, career choice, locus of control, optimism/pessimism, continuity/directionality, and structure, was arrived at.
- (ii) A measuring instrument was developed specifically to measure time perspective in secondary school pupils, as the existing measuring instruments were not entirely relevant.
- (iii) The measuring instrument was found to be reliable (0,908) and simple to administer and score.
- (iv) The measuring instrument (TPQ) can be of use to the teacher for the following reasons :
 - * problems with time perspective can be identified at an early stage (standard 7), which allows the teacher ample opportunity to try to improve the problematic areas;

* the four major dimensions of time perspective, namely locus of control, optimism/pessimism, continuity/directionality, and structure can be measured separately.

(v) The related questions of whether or not gender and intelligence play a role in time perspective, were also answered by the empirical investigation. It was found that neither seem to have any significant bearing on time perspective.

6.3.3 Problematic aspects of the study

(i) The fact that a small sample was used in the empirical investigation, tends to limit the validity of the results.

(ii) Certain standard limitations are inherent in all self-report inventories (Huysamen 1984: 98) :

* It is very difficult to assess the level of honesty with which the pupils answered the TPQ.

* It is also difficult to assess whether all the pupils interpreted all the items correctly.

* There may also have been individual pupils with other problems, such as illness on the day of testing or extreme anxiety, which may influence the results.

6.4 Recommendations for further research

(i) For practical reasons the investigation was conducted using only pupils from the Kempton Park area. A

repetition of the investigation could be done using pupils from both more rural and more urban areas, in order to establish whether environment or socio-economic status plays a role in time perspective or not.

- (ii) Although the sample contained a small percentage (approximately 10%) of non-white pupils, it is clear that the sample was not representative of the population of secondary school pupils. A further investigation could be conducted using a better cross-section of cultures and language groups.
- (iii) The investigation concerning the link between time perspective and intelligence was conducted using only 99 pupils from ordinary academic secondary schools. This research could be extended to include more subjects from various types of secondary education - commercial, technical and special schools, in order to verify the results.
- (iv) The empirical investigation was only carried out on standard nine pupils. The TPQ could be administered to other standards in order to gather some information on the development of time perspective during the secondary school years.

APPENDIX A

THE TIME PERSPECTIVE QUESTIONNAIRE (TPQ)

READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This is not a test, there are no correct or incorrect answers.
2. All the questions refer to your own personal ideas and views and therefore everyone's answers will be different.
3. Try to be as honest with yourself as possible.
4. Read each item carefully and do not leave any items out.
5. For each item the following scale is used :

6 5 4 3 2 1

You should choose the number which is closest to your own views. The choice of a 6 implies that you agree wholeheartedly with the statement on the left, while the choice of a 1 implies that you agree completely with the statement on the right. If you are not sure then you would choose a number between 6 and 1, but obviously a 3 implies a slight leaning towards the right while a 4 implies a slight leaning towards the left.

6. Work as quickly as possible.
7. Do not make any marks on the question sheets. Write the number of your choice directly onto the answer sheet.
8. If you are unsure about an item, ask the supervisor to explain it to you.
9. Thank you for your co-operation, you may begin.

READ THE TWO OPPOSING STATEMENTS AND CHOOSE A NUMBER FROM 1 TO 6 THAT BEST SUITS YOUR VIEW. REMEMBER TO WRITE THE NUMBER OF YOUR CHOICE ON THE ANSWER SHEET ONLY.

- | | | | |
|-----|---|-------------|--|
| 1. | One's success in the future depends on one's ability and hard work. | 6 5 4 3 2 1 | One's success in the future depends on luck. |
| 2. | When I plan something for the future, I expect to succeed. | 6 5 4 3 2 1 | When I plan something for the future, my expectations of success are limited. |
| 3. | I have no real goals in life. | 6 5 4 3 2 1 | I plan much of my life around a few main goals. |
| 4. | I have a clear picture of the person I will be ten years from now. | 6 5 4 3 2 1 | It is hard for me to visualise the kind of person I will be ten years from now. |
| 5. | It is my responsibility to ensure that my plans for the future will work out. | 6 5 4 3 2 1 | Circumstances and people around me will be responsible for my future plans working out. |
| 6. | I can make plans for the future with a large degree of certainty. | 6 5 4 3 2 1 | The future seems too uncertain for me to make serious plans. |
| 7. | My life seems to be a series of ups and downs. | 6 5 4 3 2 1 | I experience a sense of continuity in my life. |
| 8. | I am able to foresee what kind of work I will be doing in the future. | 6 5 4 3 2 1 | I cannot foresee what kind of work I will be doing in the future. |
| 9. | Getting a good job one day will depend on my experience and qualifications. | 6 5 4 3 2 1 | Getting a good job one day will depend on my being in the right place at the right time. |
| 10. | In general, the world of the future will not be a good place. | 6 5 4 3 2 1 | In general, the world of the future will be a good place. |
| 11. | My life is without direction. | 6 5 4 3 2 1 | My life has direction. |

- | | | |
|---|-------------|--|
| 12. The future into which we are all headed is well-defined and clear cut. | 6 5 4 3 2 1 | The future into which we are all headed, seems very vague and uncertain to me. |
| 13. I have little influence over future events in my life. | 6 5 4 3 2 1 | I have an influence over future events in my life. |
| 14. As time goes on, things will probably get better. | 6 5 4 3 2 1 | As time goes on, things will probably get worse. |
| 15. I like to plan my future carefully. | 6 5 4 3 2 1 | I like to disregard the future and just take things as they come. |
| 16. I have no idea of what my life will be like in twenty years time. | 6 5 4 3 2 1 | I have a fairly good idea of what my life will be like in twenty years time. |
| 17. Fate will play a major role in the future events of my life. | 6 5 4 3 2 1 | Careful planning and dedication will determine future events in my life. |
| 18. Things generally turn out badly in the end. | 6 5 4 3 2 1 | Things generally turn out well in the end. |
| 19. I consider it important to think of goals even if they take months or years to reach. | 6 5 4 3 2 1 | It is useless to consider goals which will take months or years to reach. |
| 20. My plans for my future are fixed and unlikely to change. | 6 5 4 3 2 1 | I expect that my plans for the future will change many times. |
| 21. What will happen in my life will mainly be a result of my own decisions. | 6 5 4 3 2 1 | What will happen in my life will mainly be decided by other people. |
| 22. One seldom becomes the person one wants to become. | 6 5 4 3 2 1 | I expect to become the person I want to be. |
| 23. I find it difficult to imagine myself having completed school. | 6 5 4 3 2 1 | I can form a clear picture of myself having completed school. |

- | | | |
|---|-------------|--|
| 24. I have never really been concerned with my personal future. | 6 5 4 3 2 1 | My personal future has always been one of my concerns. |
| 25. It is worth planning things for the future because the the role of luck or fortune is negligible. | 6 5 4 3 2 1 | It is not worth planning things for the future because things turn out to be a matter of good or bad fortune anyway. |
| 26. The future looks bleak and dismal to me. | 6 5 4 3 2 1 | I look forward to the future with hope and enthusiasm. |
| 27. I do not shy away from long-term responsibilities. | 6 5 4 3 2 1 | I shy away from long-term responsibilities. |
| 28. It is important to be concerned about the future in order to help shape that future. | 6 5 4 3 2 1 | There is no point in being concerned about the future - we can do little about it. |
| 29. Achieving something worthwhile is merely a matter of chance. | 6 5 4 3 2 1 | In order to achieve something worthwhile, one has to work hard for it. |
| 30. One should focus on the future in order to obtain maximum benefit from possible opportunities. | 6 5 4 3 2 1 | The future is too uncertain, one should focus on the present. |
| 31. I like to make definite plans and commitments for my future. | 6 5 4 3 2 1 | I like to keep my future open and uncommitted. |
| 32. My future is still a blank, open book. | 6 5 4 3 2 1 | I have already mapped out my future in some detail. |
| 33. Hard work and not luck or chance will direct my future. | 6 5 4 3 2 1 | Luck or chance will play an important role in my future. |
| 34. It is dangerous to set one's hopes on the future. | 6 5 4 3 2 1 | One should set one's hopes on the future. |
| 35. I am certain of who I am and where I'm going in the future. | 6 5 4 3 2 1 | I am very uncertain about who I am and where I'm going in the future. |

- | | | |
|--|-------------|--|
| 36. I find it fairly easy to imagine myself having a career, being married, and having children one day. | 6 5 4 3 2 1 | I cannot imagine myself having a career, being married and having children one day. |
| 37. The misfortunes I am likely to suffer in the future will be due to my own laziness, incompetence or ignorance. | 6 5 4 3 2 1 | The misfortunes that I am likely to suffer in the future will be a result of bad luck. |
| 38. Planning for the future is a waste of time. | 6 5 4 3 2 1 | Planning for the future is an essential part of the present. |
| 39. It is not a problem for me to wait patiently for my expectations to be realised. | 6 5 4 3 2 1 | I find it difficult to wait patiently for my expectations to be realised. |
| 40. One should always save money in order to make provision for the future. | 6 5 4 3 2 1 | One should rather spend one's money now while one is able to enjoy it. |
| 41. Sometimes I feel that I don't have control over the way my life is going. | 6 5 4 3 2 1 | I always feel in control over the way my life is going. |
| 42. The future holds very limited opportunities for me. | 6 5 4 3 2 1 | The future holds many opportunities for me. |
| 43. My life is moving forward in a very haphazard way. | 6 5 4 3 2 1 | My life is moving forward very smoothly. |
| 44. It is important to work hard now as part of a plan for a better future. | 6 5 4 3 2 1 | One should rather enjoy oneself now and let the future take care of itself. |

APPENDIX B

THE TPQ ANSWER SHEET

ANSWER SHEET

c 1-3

SECTION A : Biographical Details

Allotted number:

1. SURNAME : _____ INITIALS: _____

c 4

2. NAME OF SCHOOL : Sir Pierre = 1 Norken Park = 2

3. NAME OF PRIMARY SCHOOL ATTENDED DURING STD 5 :

c 5

4. GENDER : MALE = 1 FEMALE = 2.....

c 6-7

5. AGE IN YEARS :

6. CHOICE OF A POSSIBLE CAREER

Write down the number of the statement which BEST fits you and your current circumstances :

I have already made a decision regarding my career.... = 1.

I am currently considering and deciding on my career.. = 2.

c 8

I will probably leave the decision about a career up to other people..... = 3.

Deciding on a career is not a priority for me at present..... = 4.

c53-55

7. PLEASE LEAVE BLANK (GSAT, NSAGT (or equivalent) score) : ...

SECTION B : ANSWERS

	column		column
1.	(9)	23.	(31)
2.	(10)	24.	(32)
3.	(11)	25.	(33)
4.	(12)	26.	(34)
5.	(13)	27.	(35)
6.	(14)	28.	(36)
7.	(15)	29.	(37)
8.	(16)	30.	(38)
9.	(17)	31.	(39)
10.	(18)	32.	(40)
11.	(19)	33.	(41)
12.	(20)	34.	(42)
13.	(21)	35.	(43)
14.	(22)	36.	(44)
15.	(23)	37.	(45)
16.	(24)	38.	(46)
17.	(25)	39.	(47)
18.	(26)	40.	(48)
19.	(27)	41.	(49)
20.	(28)	42.	(50)
21.	(29)	43.	(51)
22.	(30)	44.	(52)

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