

**THE PREVALENCE AND MAGNITUDE OF  
COGNITIVE DISSONANCE IN POST-PURCHASE  
EVALUATION**

*by*

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## ABSTRACT

This study examines the prevalence and magnitude of cognitive dissonance in post-purchase evaluation, with specific reference to the purchase of a brand new motor vehicle. The research was undertaken in a major and leading motor manufacturing company. All customers who purchased their vehicle from dealerships, of the concerned company, in Kwa-Zulu Natal had an equal probability of being selected into the sample. A sample of 400 consumers was drawn by means of the proportionate stratified random sampling technique. Stratified samples were selected on the basis on four controls, namely, range of motor vehicle purchased, gender, age of buyer and month of purchases. Data was collected by means of a self-developed questionnaire, distributed through mail. Results were obtained by using numerous parametric and non-parametric statistics. Qualitative analyses were undertaken, and an econometric model was applied to determine consumer choice.

The findings indicate, the majority of motor vehicle consumers base their purchases on the fulfilment of functional needs. With regards to their perceptions of personal decision-making, a substantial proportion of consumers displayed confidence in the decisions they make, reflected their ability to engage in high quality decisions and to be able to accomplish very good deals and indicated their decision-making is influenced by external others. Furthermore, a large segment reported anxiety experienced when engaging in complex decision-making, like the purchases of a motor vehicle. Significant correlations were noted between the factors impacting on decision-making and post-purchase evaluation.

The results indicate, during motor vehicle purchases the magnitude of cognitive dissonance experienced is higher when there exists a substantial degree of cognitive overlap between decision alternatives, the alternatives have similar and equally attractive features, the buyer feels overly confident about the purchase decision, the purchaser lacks product related information, the salesperson is persuasive, the motor vehicle is expensive and involves a tremendous amount of capital outlay, there exists incongruence between the selected motor vehicle and the individual's self-concept, the purchase is of psychological importance, the consumer feels anxious about the purchase, the consumers are extremely aware of their expectations, and the buyer engages in a tremendous amount of effort in search and evaluation. Dissonance arousal is a direct function of these factors. Furthermore, during post-purchase evaluation the greater the magnitude of cognitive dissonance experienced, the smaller the degree of justification of purchases, post-purchase selective exposure, trivialization of foregone features of unselected alternatives, post-purchase attitude change in favour of the selected vehicle, the level of reported satisfaction and perceptions of 'good' quality service. Consumers do adopt dissonance reduction strategies, although selective advertisement readership behaviour was only reflected to a small extent. Profile analyses based on biographical and motor vehicle specific data, were analysed. Significant differences were noted in the level of cognitive dissonance experienced among consumers who purchased varying ranges of motor vehicle.

The application of the econometric model showed, when faced with a set of options, consumers choose that option thought to deliver the highest level of perceived gratification or utility. This reflects the use of evaluative criteria in rational decision-making. Qualitative analyses confirmed consumers seek 'good value for money', quality service and are willing to stay with 'the tried and tested', hence displaying the potential for brand loyalty.

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# **CHAPTER 1**

## **INTRODUCTION AND OVERVIEW OF THE STUDY**

### **1.1 INTRODUCTION**

The emergence and development of the marketing concept has diverted the focus from the product to the consumer. Marketing researchers have modified and applied a variety of behavioural science theories in order to better understand consumer decision-making and purchasing processes. Hence, much of the focus and research evidence concerned the decision-making process, thereby neglecting an exploration into the psychological consequences of buying decisions. Since little has been done to study the consumer after the purchase, there is a lack of knowledge about consumers' reactions and behaviour once a decision is made.

However, marketing managers today are becoming keenly interested in how the new purchaser feels after buying, mainly because customer satisfaction after the purchase is a key factor in repeat purchase intentions, post-purchase attitudes and brand loyalty. One approach to understanding and predicting buyer behaviour is to analyse the various needs, motivations and goals underlying consumption patterns and habits. A key need underlying, and having a significant effect on the consumer's actions and decision-making is the need for cognitive consistency.

### **1.2 FOCUS OF THE STUDY**

The consumer strives towards consistency within by establishing internal harmony of congruity amongst opinions, attitudes and values. When inconsistencies arise individuals try to rationalise them. But rationalisation and attempts to achieve consistency may fail. Thus, inconsistency may persist, thereby causing a psychological discomfort or dissonance. Dissonance, the existence of incongruent relations among cognitions arises when a person, after purchases, recognises the positive cognitions of the rejected alternatives and the negative cognitions of the chosen alternatives. Furthermore, a consumer may learn information which is dissonant with his current behaviour. Dissonance in itself is a motivating factor that leads to activity favourable to dissonance reduction by changing behaviour, changing knowledge by reducing the importance of the dissonant cognitions and/or acquiring new and favourable

knowledge. Mills (1965) found, when attempting to reduce dissonance consumers avoid dissonant information and tend to seek out consonant information. Often the easiest way to reduce post-choice dissonance is to change one's attitude so as to increase the probability of repeating a choice. The extent of attitude change depends on the magnitude of the dissonance. Greater dissonance results in greater attitude shift which will promote repeat purchases. This line of reasoning emphasizes the value of the theory of cognitive dissonance on consumers' buying decisions and brand loyalty. Holloway (1967) identified factors affecting dissonance. He found, there appears to be greater possibility of dissonance when buyers purchase without a need and without sufficient information and when alternatives are similar to the point of making the decision difficult. But the literature review indicates, not much is known about the relative power of the various factors to produce dissonance or whether any interrelationships exist between these factors. This research aims to shed some light in this arena. Furthermore, whilst many studies on cognitive dissonance have been undertaken, early dissonance theory researchers failed to apply the psychological conditions necessary for dissonance arousal, namely, effort, personal responsibility for the purchase and commitment. This study aims to take cognisance of these factors.

Furthermore, this study aims to determine whether the argument, brand loyalty is a function of the magnitude of dissonance experienced at the time of purchase, has any weight. Whilst Mittelstaedt (1966) confirmed the relevance and impact of dissonance theory to brand loyalty, he recognises his results may be in doubt because the dependent variable, that is, the use of choice behaviour, had not been employed before. In addition, whilst Holloway (1967) identified dissonance-producing factors, no attempt was made to establish a relationship between these factors and certain marketing variables, for example, price. Therefore, the value of the theory of cognitive dissonance to marketing, still remains to be established.

The results of the study may assist in applying the theory of cognitive dissonance to marketing situations. Furthermore, it enhances our knowledge of consumer cognitions, behaviour and affect as well as the consumer decision-making process, an understanding of which is imperative to the success of any marketing program, nationally and abroad. It may also lead to the development of better marketing strategies, locally and internationally, which will ensure an increase in consumer satisfaction and profitability.

### 1.3 OBJECTIVES OF THE STUDY

The aims of the study are as follows:-

- To examine automobile consumers' motivation (functional versus symbolic needs) to purchase.
- To analyse the number of alternative makes of cars consumers considered when making their purchase decision.
- To investigate the level of importance consumers attach to the various car attributes (price, style, economy, performance, roominess, popularity, colour and speed) when evaluating alternatives to make a decision.
- To establish the extent to which individuals choose that option which they perceive maximizes the utility function defined across the information set.
- To analyse the extent to which consumers of motor vehicle purchases experienced unconfirmed expectations, anxiety, damage to their self-concepts, persuasibility by the salesperson and lack of information.
- To determine the impact of psychological importance, effort, price, confidence, attractiveness of decision alternatives, cognitive overlap and quality of service received on the purchasing decision.
- To determine the magnitude of cognitive dissonance experienced by the automobile consumers.
- To establish whether a relationship exists between the factors that potentially arouse dissonance (unconfirmed expectations, anxiety, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service) and the magnitude of cognitive dissonance experienced.
- To investigate the dissonance reduction strategies adopted by automobile consumers.
- To establish whether a relationship exists between the factors that potentially arouse dissonance (unconfirmed expectations, anxiety, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service) and reported satisfaction.

- To investigate whether a relationship exists between the key variables related to dissonance (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service, reported satisfaction, attitude change, trivialization, selective exposure, and justification) and each of the biographical variables (gender, race, marital status, age, education, occupation and income) respectively.
- To investigate whether a relationship exists between the magnitude of cognitive dissonance experienced by motor vehicle consumers and each of the biographical variables (gender, race, marital status, age, education, occupation and income) respectively.
- To determine whether a relationship exists between the magnitude of cognitive dissonance experienced by consumers and each of the motor vehicle specific variables (make, model, dealership of purchases, month purchased, range purchased) respectively.
- To investigate the impact of the number of decision alternatives on the magnitude of cognitive dissonance experienced by motor vehicle buyers.
- To analyse the post-purchase readership patterns of automobile consumers.
- To determine whether a relationship exists between fulfilment of expectations and selective exposure.
- To investigate whether a relationship exists between reported dissonance and readership patterns of automobile consumers.
- To establish whether a relationship exists between fulfilment of expectations and cognitive dissonance.
- To investigate consumers' post-purchase evaluations regarding the extent to which the selected make of car fulfilled their expectations on the various car attributes (price, style, economy, performance, roominess, popularity, colour and speed) when evaluating alternatives to make a decision.
- To investigate the impact of cognitive dissonance on future purchase behaviour.
- To determine consumers' reasons for repurchase of the same make of car.
- To analyse consumers' reasons for intentions to switch to an alternative make of car in future motor vehicle purchases.

#### 1.4 HYPOTHESES

- There is a significant relationship between the motivation to purchase a motor vehicle (functional needs, symbolic needs) and consumers' reasons to purchase, the number of alternative makes considered and the make, model and range of vehicle purchased respectively.
- There is a significant relationship between the number of alternative makes of vehicle considered and the reasons for purchase, the make, model and range of vehicle purchased respectively.
- There is a significant difference in the mean rating of consumers differentiated on the basis of gender, race, marital status, age, education, occupation, income, make, model, range of motor vehicle purchased, on the level of importance attached to the evaluative criteria (price, style, economy, performance, roominess, popularity, colour and speed) when selecting a motor vehicle.
- There is a significant relationship between the pre-purchase evaluations and post-purchase evaluations of motor vehicle consumers based on each evaluative criteria (price, style, economy, performance, roominess, popularity, colour, speed) respectively.
- There is a significant difference in the mean ratings of consumers who reported dissonance and those who did not on the level of importance of the pre-purchase evaluative criteria.
- There is a significant difference in the mean ratings of consumers who experienced cognitive dissonance and those who did not on the level of importance of the pre-purchase evaluative criteria.
- There is a significant relationship between post-purchase evaluation of fulfilment of expectations and post-purchase advertisement readership behaviour, make, model and range of motor vehicle purchased respectively.
- There is a significant difference between those consumers who reported dissonance and those who did not report dissonance on the post-purchase evaluations of the fulfilment of pre-purchase expectations on the evaluative criteria respectively.
- There is a significant difference between those consumers who experienced high levels of cognitive dissonance and those who did not on the post-purchase evaluation of the fulfilment of pre-purchase expectations.



- There is a significant relationship between post-purchases and the range of motor vehicle purchased, the dealership of purchases and consumers' intentions to engage in repeat purchases of the selected motor vehicle respectively.
- There is a significant relationship between the factors influencing the decision-making process and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification) respectively, when engaging in motor vehicle purchases.
- There is a significant relationship between the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) and each of the biographical variables (gender, race, marital status, age, education, occupation, income) respectively.
- There is a significant difference in the perceptions of consumers regarding each factor influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively with differing biographical profiles based on gender, race, marital status, age, education, occupation and income.
- There is a significant relationship between the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) and each of the motor vehicle specific data (make of motor vehicle, model, dealership, month purchased and range of motor vehicle) respectively.

- There is a significant difference in the perceptions of consumers regarding each respective factor influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) with differing motor vehicle related choices (make, model, dealership, range of motor vehicle) respectively.
- There is a significant difference in the perceptions of motor vehicle consumers with varying levels of awareness of expectations during pre-purchase and each factor influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively.
- There is a significant relationship between the level of consumer awareness of expectations of the motor vehicle during pre-purchase and each of the biographical variables (race, marital status, age, education, occupation) respectively.
- There is a significant difference in the level of consumer awareness of expectations of the motor vehicle and each of the motor vehicle specific features (make, model, range) respectively.
- There is a significant difference in the level of reported dissonance amongst consumers who varied in the number of alternative makes of motor vehicles considered before purchases.
- There is a significant difference in the post-purchase advertisement readership behaviour of consumers with varying levels of reported dissonance.
- There is a significant relationship between the level of reported dissonance amongst motor vehicle consumers and their intentions to engage in repeat purchases of the selected motor vehicle, or not.
- There is a significant relationship between after sales communication and the level of reported dissonance.

- There is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle consumers and the make of the automobile purchased.
- There is a significant difference in the magnitude of cognitive dissonance experienced amongst consumers who varied in the number of alternative makes of vehicles considered prior to purchases.
- There is a significant difference in the post-purchase advertisement readership characteristics of consumers with differing magnitudes of cognitive dissonance experienced.
- There is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle buyers and their intentions to engage in repeat purchases of the selected motor vehicle.
- There is a significant relationship between after-sales communication and the magnitude of cognitive dissonance experienced by motor vehicle consumers.
- The nineteen dimensions of cognitive dissonance (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification) significantly explain the variance in the magnitude of cognitive dissonance experienced.
- When faced with a set of options, consumers choose that option thought to deliver the highest overall value.

### **1.5 LIMITATIONS OF THE STUDY**

Although the results of the study are generally consistent with the theory and literature, the conclusions are tentative, given the limitations typical of such econometric studies. The interpretation and discussion of the findings are therefore, tempered by the following limitations.

#### **■ LENGTH OF THE QUESTIONNAIRE**

The length of the questionnaire invited an immediate negative response from the subjects. However, the problem was overcome by following up on all questionnaires mailed by means of a telephone call to establish rapport with the respondents, to emphasize the

importance of the study to themselves and society at large and to stress, the majority of the questions in the document demanded only a cross (X) response in the appropriate block. The nature and objectives of the study, together with the multitude of dimensions impacting on cognitive dissonance, demanded an instrument of such length so as to enable an empirical analysis of all the factors incorporated within the theory of cognitive dissonance.

#### ■ MAIL SURVEY

Data was collected using questionnaires which were distributed by mail. Typically mail surveys have a low and slow return rate. However, the process was speeded since the researcher telephoned every subject to confirm receipt of the questionnaire, establish rapport and encourage returns. Consequently, a 52 % response rate was achieved within five weeks.

#### ■ GEOGRAPHIC REGION

The sample was made up of motor vehicle purchasers within the geographical confines of Kwa-Zulu Natal to the exclusion of all other regions. Hence, only the client base of dealerships of the concerned manufacturing company within this region had the chance of being included into the study sample.

#### ■ COMPOSITION OF SAMPLE

Only motor vehicle buyers of one manufacturer or manufacturing brand was included in the study. However, analysis were undertaken on different makes, models and ranges of motor vehicles purchased within this auto manufacturing company.

#### ■ EVALUATIVE CRITERIA

An investigation was undertaken into the level of importance attached by motor vehicle buyers to evaluative criteria when engaging in purchases. The evaluative criteria included in this study are however restricted to style, price, economy, performance, roominess, popularity, colour and speed.

## ■ MARKETING CONDITIONS

The aim of this study was to determine the prevalence and magnitude of cognitive dissonance amongst motor vehicle purchasers. The motivation to purchase, number of alternatives considered, evaluative criteria used, perceptions of personal decision-making, range of motor vehicle purchased, post-purchase advertisement readership behaviour, perceptions of after-sales communication, interrelationships between dimensions of decision-making and post-purchase evaluation, profile analysis based on biographical and motor vehicle data, level of reported dissonance and cognitive dissonance experienced, and the extent of rational decision-making, were analysed. These were studied to determine the relevance of the dimensions of the theory of cognitive dissonance and to establish which of these impact on the magnitude of cognitive dissonance experienced by motor vehicle consumers. However, this study does not specify the marketing conditions under which dissonance theory would be most applicable.

## ■ ECONOMETRIC MODEL

The econometric model depicting the economic theory of individual choice was used to determine whether, when faced with a choice, an individual views each option as a bundle of attributes and evaluates and chooses that which is thought to deliver the highest overall value. The study confirms, consumers select those options that optimize utility function defined across the information set, that is, which maximizes gratification. However, this study does not use the econometric model as a predictive tool for purchases. Furthermore, the researcher does not expand the expression in the econometric model to include higher-order cross products among attributes.

### 1.6 STRUCTURE OF THE STUDY

A basic orientation of the study as well as the objectives and hypotheses of the research are presented in this chapter. Chapter 2 is devoted to an understanding of cognition, cognitive processes, cognitive structures and strategies. It incorporates an analysis into the structure of the mind, human learning and cognition, verbal learning, memory and human information processing abilities. Complex cognitive processes such as thinking, problem-solving, decision-making, language and cognitive development based on Piaget's theory were discussed.

Chapter 3 relates to the consumer decision-making process. It analyses econometric and psychological models of buying behaviour, the impact of the interplay between the environment, behaviour, cognition and marketing strategies, the influence of the individual and environmental variables and the effect of the level of involvement and psychological activity on consumer decision-making. Chapter 3 concludes with a cognitive processing model of consumer decision-making and reflects on the marketing implications.

Chapter 4 pertains to consumer attitudes, its components, characteristics, functions and relation to the level of involvement in decision-making. Sources of attitude development and attitude theories and models are reviewed. Attitude measurement and change and its importance in marketing are analysed.

Chapter 5 is a comprehensive review of Festinger's theory of cognitive dissonance. It incorporates an evaluation of post-purchase evaluation, dissonance arousal and dissonance reduction. An evaluation of cognitive dissonance as a motivating state is presented. An overview of consumer satisfaction, dissonance and self-concept, anxiety and action identification is displayed. The relationships between cognitive dissonance and Social Psychology and Consumer Behaviour are explained. The benefit of cognitive dissonance to marketing is enumerated. Criticisms of the theory of cognitive dissonance are presented. Chapter 5 concludes with an analysis into the future of the theory of cognitive dissonance.

The first 5 chapters therefore, provide a conceptual basis for the consequent empirical analysis. Chapter 6 outlines the methodology of the study and the research design. It incorporates the description of the sampling technique adopted and the composition of sample. Furthermore, it explains the data collection method, the description, purpose and construction of the measuring instrument and provides a theoretical account of the quantitative analysis of the questionnaire and the quantitative analysis of the data. The results of the study are reported in Chapter 7. Chapter 8 incorporates the interpretation and discussion results whilst Chapter 9 concludes the theoretical and empirical perspectives with a presentation of recommended marketing strategies and ideas for future research.

### 1.7 CONCLUSION

The change in focus from the consumer decision-making process to post-purchase evaluation incorporates an analysis into the behaviour and cognition of buyers. The act of purchase does not necessarily result in satisfaction. The outcome of the decision-making process is therefore, the result of an interplay between marketing stimuli, affection, behaviour and cognition.

## **CHAPTER 2**

### **COGNITION**

#### **2.1 INTRODUCTION**

Fundamental to any understanding of a wide range of human behaviour is the study of the basic principles of human learning, memory and cognition. During the past decade, cognitive processing has become the primary theoretical perspective for understanding and predicting human behaviour. Individuals engage in mental or cognitive activities throughout their daily lives. Whether it is managing the car in peak hour traffic, reading the newspaper, communicating with a friend, or just listening to the radio or watching television, we are attending to, comprehending and possibly recalling or remembering what we heard or saw. Whilst these cognitive activities are routine, expectantly simple and effortless, they are more sophisticated than they may seem.

Theorists who focus on the individual are likely to account for behaviour in terms of events and processes that occur within the individual. They refer to themselves as cognitive psychologists. Hence, cognitive psychology is defined partly by what it is, that is, the higher mental processes. Therefore, cognitive psychologists propose explanations based on internal structures and processes. These comprise the total set of processes by which individuals acquire, store and use information. They incorporate processes such as transformation, elaboration and recovery. Many cognitive psychologists are interested in how individuals process information including such issues as the kind of information processed, whether information processing is conscious or automatic, the importance of the selection of stimulus information, how information is transferred, the individual's storage or processing capacity, how information is organised in memory, strategies selected for processing and making decisions, and the development and active nature of cognitive processes. The focus is not on how information is stored in terms of anatomy and physiology but on how the individual selects, codes and uses information.

#### **2.2 STRUCTURE OF THE MIND**

Within all, there is the mind, "that seemingly lofty structure that is perceptive, thoughtful, and even reflective, the most mysterious of all its functions" (Eimas & Galaburda 1989: 5).



The mind is "an active interpreter" of incoming information (Perner & Davies 1991: 51). In the metaphor of the mind, "there is a functional architecture that represents the organization of cognitive structures and that determines their manner of interaction with the environment and with each other. It is this functional architecture that presumably provides a theory of the workings of the mind, that is, of cognition" (Eimas & Galaburda 1989: 5).

### 2.3 COGNITION

Cognition emphasizes "the symbolic, mental and inferred (not directly seen) processes of humans" (Ellis 1978: 3). It refers to the way people acquire, store and use knowledge. Cognition is the process of organising information in our minds to achieve some desired end state. According to Brewin (1989: 380) "cognition is commonly used to denote the representation within an organism of information about itself or its environment or, alternatively, the processes whereby incoming information is categorized, stored, integrated with knowledge that is already present, and subsequently retrieved and used". Cognitive processes include attention, encoding, attribution, thinking, reasoning, knowing, problem solving, memory storage and retrieval, conceptual learning and strategy. Strategy relates to the original formulation of objects, events and roles designed to attain a performance, end state or goal.

Reference to cognitive processes implies humans are active processors of information and play a similar role in learning situations by using strategies that will enable the proper organisation of materials in order to learn and retain them more efficiently. Learning is defined as "a relatively permanent change in behaviour potentially that occurs as a result of reinforced practice" and experience (Houston 1981: 5). This definition excludes momentary changes in behaviour, recognises the learning-performance distinction and distinguishes between latent and incidental learning, considers the possibility of extinction without reinforcement, and practice through imitation, modelling and observation. Alternatively, learning may be defined as "a relatively permanent increase in response strength that is based on previous reinforcement and that can be made specific to one out of two or more arbitrarily selected stimulus situations" (Squire 1987: 4). Hence, learning is inferred from performance changes due to experience and is thus, a hypothetical process not seen directly but inferred from behavioural changes of the individual.

Learned information may be used in the future. If data is to be applied it must be stored and be accessible when needed. Hence, memory refers to "the mental function of retaining information about stimuli, events, images, ideas ... after the original stimuli are no longer present" (Reber 1985: 429). It is "the faculty that enables us to treasure up, and preserve for future use, the knowledge we acquire" (Tulving 1985: 6). Memory encompasses three basic processes: encoding, storage and retrieval. Encoding refers to organising information so it can be placed in storage. Storage pertains to storing information in the memory system. Retrieval is the process of accessing or getting the stored material. All three processes are part of memory and hence, a failure in any one of these processes can result in a failure in memory. It is evident, one of the definitive traits of humans is memory, "the ability to encode, catalogue, and recall a vast number of facts and experiences," which also distinguishes us as individuals (Cotman & Lynch 1989: 202).

Whilst learning and memory are closely related, the latter is a consequence of the former. Learning is the process of acquiring new information, while memory relates to the persistence of learning in a form that can be accessed in the future.

The focus of cognition then, is human mental processes, mental structures and information processing; the essence of cognitive psychology.

## **2.4 COGNITIVE PSYCHOLOGY**

During the past two decades psychologists have generated new information and elaborate explanations of the mechanisms of human learning, memory and cognition. Every attempt was and is being made in explaining human learning, memory and cognition within real-world domains and analysing human behaviour from the inside, thereby spreading the wings of the cognitive approach to psychology.

### **2.4.1 THE NATURE OF COGNITIVE PSYCHOLOGY**

Cognitive psychology is "the scientific analysis of human mental processes and memory structures in order to understand human behaviour" (Mayer 1981: 1). It is scientific because it relies not on intuitions and feelings about how the mind works but psychologists devise precise analytical methods for segmenting mental activities into measurable parts. Cognitive

psychology studies human mental life and focuses on mental processes; the way people store knowledge and use it in performing some task. Cognitive psychologists believe in:-

- The importance of the choice of stimulus information, due to the volume of available data that often impinges on our limited capacities.
- The importance of choosing suitable processing strategies or techniques to match the task demands.
- The development and stabilisation of cognitive structure as an outcome of repeated applications of processing strategies.
- "The interrelated functions of the parts of the human mind as a coherent system" (Reynolds & Flagg 1983: 14).
- The perpetually active nature of cognitive processes.

The goal of cognitive psychology is "to produce a clear and accurate description of internal cognitive events and knowledge so that we can better understand human behaviour" (Mayer 1981: 2).

#### **2.4.2 THE CONCEPTUAL FRAMEWORK OF COGNITIVE PSYCHOLOGY AND ITS RELATION TO OTHER SCHOOLS OF THOUGHT**

Cognitive psychology is one branch of an extremely broad field, comprising of many different approaches to psychology. The subject of cognition is one way to distinguish cognitive psychology from other branches of the general discipline, particularly behaviourism and psychoanalytic theory. In order to understand cognitive psychology it is necessary to know how it differs from the alternative approaches, by identifying both the content and the general approach.

The typical cognitive psychologist is a scientist motivated to analyse a natural system comprising of the human higher mental processes or rational activity and consequently, understand human behaviour. The higher mental processes include memory, perception, learning, thinking, reasoning, language and understanding. A dominant paradigm for studying cognitive psychology is information processing psychology, that defines the area of study as the way individuals collect, store, modify and interpret environmental information or information already stored internally. Information-processing cognitive psychologists

believe that these activities are termed cognition and understanding of these processes are basic to an understanding of reading, speech production, comprehension and creative thought.

Behaviourists, however, emphasize the influential nature of the environment on human behaviour. They avoid speculating about the internal state of the organism, "have little interest in whether information is processed at the conscious or unconscious level, whether images or verbal codes are used in processing information, whether our knowledge is organised in a hierarchical or nonhierarchical manner in memory, or whether information is lost or simply misplaced in memory" (Wood 1983: 5). The primary goal for the behaviourist is "to discover functional relationships between input (environment) and output (behaviour)" without worrying about how individuals process information internally (Wood 1983: 5).

The major difference between behaviourism and cognitivism is their views on what constitutes the subject matter of psychology. Behaviourists argue internal mental events cannot be directly observed and thus, can never be legitimate objects of scientific study. They maintain the essence of psychology must be restricted to what can be directly observed, that is, behaviour. Cognitive psychologists believe in order to understand human behaviour it is necessary to understand the mechanisms underlying behaviour and therefore, justify the need to study mental processes and structure, that cannot be directly seen, using scientific analysis.

According to Schnaitter (1987), "the object of behaviourism is to establish the relation between behaviour and the context of its occurrence, while the object of cognitivism is to establish the internal design through whose functioning organisms are capable of behaving in context" (Overskeid 1995: 518). Catania (1992: 8) has asserted psychologists with a behavioural orientation tend "to deal with questions of function, and the cognitivist with questions of structure". This has been criticised by Paniagua (1986) who claims it is misleading because 'structure' and 'function' do mean the same to researchers in the cognitive and behavioural tradition. Medin & Ross (1992: 42) emphasizes this view by expressing " ... we are interested in models that illuminate cognitive processes". Even Lycan (1990: 8) maintains the working language of cognitive psychology is highly congenial to the functionalist, "for cognitivism thinks of human beings as systems of interconnected

functional components, interacting with each other in an efficient and productive way".

Undoubtedly, behaviourists and cognitivists tend to study different problems or take varying approaches to the same problem. However, both has as its goal the understanding of human behaviour, and both are committed to the rigorous methods of science. Hence, the distinction between the cognitive and the behaviourist psychologists should be viewed as relative rather than absolute, since both the individual and the environment are important.

The psychoanalytic approach has the same goal as the cognitivist and the behaviourist, that is, to understand human behaviour. They also attempt to use scientific methods. Like the cognitive approach, the psychoanalysts focus on the study of internal mechanisms underlying behaviour. However, whilst the former studies "the rational, intellectual side of mental life, the latter emphasizes feelings, emotions and desires" (Mayer 1981: 4). It is evident a complete psychology of humans demands that all three dimensions, namely, behaviour, cognition and affect, be clearly understood and related to one another. The aim is, as psychology progresses, the best characteristics of each approach will collaborate into a unified science.

#### 2.4.3 THE HISTORY OF COGNITIVE PSYCHOLOGY

During the 1970s the cognitive revolution came to influence all branches of psychology. In human experimental psychology, the cognitive approach began to dominate the way we understand how humans perceive, learn, remember and reason. In developmental psychology, the cognitive development of individuals has become the focal point, with an influx of studies concerning the changes in cognitive processes and cognitive representation of knowledge that accompanies growth. Even in behaviourism, new work is underway in the study of cognitive and memory processes. "What has been called the 'cognitive revolution' is more than the overthrow of behaviourism by mentalist concepts. The cognitive revolution did more than revive the mental; it has changed what the mental means, often dramatically" (Gigerenzer 1991: 256).

Whilst cognitive psychology may be a new discipline in its own right, it undoubtedly, may be traced to the origins of psychology, only today emphasizing the application of new

techniques of cognitive psychology to old problems. As Hergenhahn (1994: 542) maintained, "to say ... that psychology is **becoming** more cognitively oriented is inaccurate because, with only a few exceptions, psychology has always been cognitively oriented". The early schools of psychology were all deeply concerned with cognition, for example, "Wundt's voluntarism, James & Dewey functionalism, Gestalt psychoanalysis and behaviourism (both heavily cognitive and both accepting a version of a 2-way model of brain activity and cognition), humanistic and existential theorists (for example, Rogers, Maslow and May) and Piaget's genetic epistemology" (Hergenhahn 1994: 817).

#### 2.4.4 THE TOOLS OF COGNITIVE PSYCHOLOGY

The renewed interest in cognitive processes was generated by means of four major tools:-

##### 2.4.4.1 ANALYSIS OF THE INFORMATION PROCESSING SYSTEM

The information processing model is based on the idea that humans are processors of information. The information that comes via our sense receptors are continuously evaluated and changed until an output is ready to be stored in memory or is used to trigger some behaviour. "The information processing model concerns the series of cognitive operations (or processors) that a person uses in a given situation, or to put it another way, the various organisations of information as it progresses through the system" (Mayer 1981: 11). Therefore, techniques are developed for analysing the working of the general information processing system.

##### 2.4.4.2 ANALYSIS OF COGNITIVE PROCESSES

Cognitive psychology provides specific techniques for analysing exactly what is going on in a person's head when performing a given task. This analytic technique incorporates choosing an intellectual task, observing and questioning how an individual solves it, dividing and analysing the process that has been segmented into small parts consisting of processes and decisions and then testing the consequent process model against the actual behaviour of a person. Hence, a process model is developed that represents a person's procedural knowledge, that is, of how to do something.

#### **2.4.4.3 ANALYSIS OF COGNITIVE STRUCTURES**

Verbal knowledge about some topic can also be represented using the analytic methods of cognitive psychology. These analytic techniques incorporate selecting some piece of information, administering to the subject as a passage either to be read or listened to, then asking questions about the information that requires recall. The information is evaluated into its key segments and the relations between parts. Consequently, the structure model which may be depicted as a tree diagram or as a network, is compared to the actual performance of the subject.

#### **2.4.4.4 ANALYSIS OF STRATEGIES**

The fourth major instrument of cognitive psychology relates to the evaluation of methods people use to control the numerous pieces of knowledge they have. These are called cognitive strategies. When people solve complex problems, they need some verbal knowledge, procedural knowledge and an information processing system for holding the knowledge. In addition, a strategy or plan is needed to achieve the goal. Cognitive psychologists aim to determine the strategies people use in solving complex problems. They determine the strategy used and then test the strategy model against actual performance. A major finding of the last decade of decision research is that an individual may use numerous different kinds of strategies in making a decision, contingent upon task demands (Abelson & Levi 1985; Payne 1982). The utilisation of multiple strategies triggers the primary question of how individuals decide what to do. One approach is to look at various decision strategies as having varying advantages and disadvantages, and to hypothesize that an individual might select the strategy best suited for the task. "Several factors, such as the chance of making an error, justifiability, and the avoidance of conflict can play an important role in strategy selection. However, another factor assumed to exert a major influence on strategy use, the effort (cognitive resources) is required to perform a strategy" (Bettman, Johnson & Payne 1990: 112). Todd & Benbasat (1994: 38) confirm "effort and accuracy influence strategy selection in decision making". Payne (1982) proposed a cost-benefit framework of cognition which incorporates the notion that decision makers focus on trade-offs between "accuracy" and "effort" in various decision making tasks. "According to the cost-benefit framework, the joint objectives of a decision maker are to maximise accuracy (or decision quality) and minimise effort. As these objectives often conflict, trade-offs are

made between the two" (Todd & Benbasat 1994: 39).

A well known strategy is the means-ends analysis, whereby individuals set subgoals and then try to find the means to attain them. According to Sweller (1988: 261) "the cognitive load imposed on a person using a complex problem solving strategy, such as means-ends analysis, may be an even more important factor in interfering with learning during problem solving. One price paid for efficiency may be a heavy use of limited cognitive-processing capacity." In order to use the strategy, a problem solver must simultaneously consider the current problem state, the goal state, the relation between the current problem and the goal state, the relations between problem-solving operators and finally, if subgoals are utilised, "a goal stack must be maintained" (Sweller 1988: 261).

It is interesting to evaluate how these tools of cognitive psychology may be successfully applied to real-world situations. This necessitates an analysis of the central area of cognitive psychology: learning, memory and forgetting, language, decision-making and problem-solving.

## **2.5 HUMAN LEARNING AND COGNITION**

Learning is the process by which individuals organise knowledge so that it causes a permanent change in their behaviour and can be used in subsequent purchase activities. Individuals use their perceptual processes to gather information from stimuli in their environment and then utilise the learning process to organise this knowledge for their use. Learning enables individuals continually to integrate their past experiences with information gained from current stimuli to create a useful framework to guide their activities (Wells & Prensky 1996: 287). Cognitive learning theories posit, "learning occurs when an individual processes information using conscious mental processes" (Wells & Prensky 1996: 296).

### **2.5.1 THE NATURE OF HUMAN LEARNING**

Learning may be defined as "any permanent change in behaviour resulting from experience, and the psychology, or science, of learning seeks to determine the conditions and principles which govern such changes" (Tighe 1982: 3). It is possible to observe the process of learning by inferring from observation of changes in a subject's performance and by inferring



from a comparison of the person's behaviour before and after experiences of one kind or another. Learning is central to intelligent reasoning systems that perform realistic reasoning tasks, such as understanding natural language stories or solving complex problems. Learning manifests itself in humans with multiple strategies over a multitude of learning problems" (Ram, Narayanan & Cox 1995: 291).

Human behaviour is instigated and is often expressed in terms of "a stimulus (S) acting upon an organism (O) to bring about a response (R)" (McCormick & Ilgen 1985: 211). Therefore, learning may be viewed as a formation of associations between events, in which the events are termed stimuli and responses. Similarly, Shanks (1995: 257) maintains that "learning allows us to conceptualize, control, and make informed predictions about the world. We are able to predict and control events in the world because we learn about its 'causal' texture, the complex web of associations that exist between events, and the world has a 'structural' texture. A relationship is structural when an organism learns to predict one feature or attribute of an object or event from the presence of other features that regularly co-occur with it". A stimulus-response association is formed if we learn when and/or where to execute a response. Alternatively, learning may be viewed as an association between stimuli themselves. The notion that a stimulus-stimulus association is learned means "that we learn to expect a particular stimulus whenever a particular stimulus event occurs" (Ellis 1978: 6). Hence, we learn the significance of stimuli rather than learn to make specific responses. It is evident a stimulus-response theory of learning focuses on responses whilst a stimulus-stimulus theory emphasizes the learning of ideas, knowledge and cognitions. Furthermore, the association between a response and the consequence of that response is called a "response-reinforcement relationship" (Tyson 1987: 186). The simplest form of learning is the association between two different stimuli. The learning that results from the association of two stimuli, or from the association between a stimulus and the response to that stimulus is called classical conditioning. The learning that is the outcome of the association between a response and the consequence of that response is called operant conditioning.

### 2.5.2 CONDITIONING

Conditioning refers to two procedures for producing changes in behaviour and in the laboratory: classical conditioning and operant conditioning. Human conditioning is one

aspect of any study of human learning.

#### 2.5.2.1 CLASSICAL CONDITIONING

The systematic study of classical conditioning began in Russia with the work of Ivan Petrovich Pavlov (1849 - 1936), who was especially concerned with the connection between food in the mouth and the salivary flow. In his experimental studies on digestive and salivary functions, Pavlov induced salivation by giving meat powder to dogs and measured the salivary flow when they chewed and swallowed the food. He observed the dogs would not only salivate at the sight of the food, or when they saw the food bowl but also when they heard or saw the experimenter who had been feeding them. Pavlov was intrigued by these events and became enthusiastic to investigate this phenomenon, which he called **conditioning**. The rationale was the dogs had come to associate all these stimuli with food. Pavlov's curiosity extended to determine whether other stimuli, such as light or a tone, would also be associated with food and he thus, constructed an apparatus for his experimental animals.

The typical procedure was to first present meat powder to the hungry dog. Eating the meat powder produced salivation. Then, a stimulus light was presented, in response to which no salivation occurred. The stimuli were then paired, with the light preceding the meat powder by a few seconds. After repeating this pairing a number of times, the light alone eventually began to trigger salivation. Pavlov called the response of salivation, elucidated by the previously neutral stimulus (the light) a "**conditioned response**"(CR), or "**conditional reflex**" (Hulse, Egeth & Deese 1980: 12).

Before conditioning takes place, there is a stimulus that elicits the reflex salivation. This stimulus is the meat powder in the mouth, and is called the "**unconditioned stimulus**" (US) (Houston 1981: 10). The response to the unconditioned stimulus is called the "**unconditioned response**" (UR) or reflex (Tyson 1987: 187). The neutral stimulus, the light, did not elicit salivation before the pairing of the two stimuli. However, when the light is repeatedly paired with the meat powder, the US, it eventually elicits salivation. The neutral stimulus becomes the "**conditioned stimulus**" (CS), and salivation becomes the conditioned response (CR) or reflex (Tyson 1987: 187).

Therefore, in classical conditioning "the behaviour change is brought about by pairing a stimulus which reliably elicits a particular response with a stimulus which is neutral with respect to that behaviour" (Tighe 1982: 8).

#### 2.5.2.2 OPERANT/INSTRUMENTAL CONDITIONING

The basic assumption of operant conditioning is that behaviour is influenced by its consequences. "Unlike classical conditioning, operant conditioning does not reflect an association between a specific, antecedent stimulus and a specific response, but rather refers to the association formed between a response and the consequences evoked by that response" (Tyson 1987: 193).

Edward L. Thorndike initiated the interest in how the consequences of an organism's behaviour can affect its behaviour in the future. He concluded the "law of effect" which means "responses leading to satisfying consequences will be strengthened and are likely to be repeated, whereas responses that lead to unsatisfying consequences will be weakened and are unlikely to be repeated" (Wortman, Loftus & Marshall 1985: 137). Consequently, B.F. Skinner, a leading contemporary behaviourist proposed the primary instrument for controlling human behaviour is the principle of reinforcement. According to Leahey & Harris (1985: 77) "a reinforcer is anything that strengthens the behaviour that leads to it. More technically, a reinforcement is any event that increases the probability, that is, raises the response rate, of the operant upon which it is contingent. Between them, the setting and the reinforcer determine what behaviour will occur when." Therefore, learning either to elicit or to withhold a specific response because of its positive or negative consequences has come to be termed **operant conditioning**. The standard illustrative experiment is conditioning of bar pressing by rats. A hungry rat is placed in a small, plain box containing a movable bar which the rat is likely to accidentally depress in the course of movement. If it is planned that each depression of the bar results in the delivery of food to a point inside the box where the rat is likely to find and consume it, then bar pressing eventually becomes to be emitted at a high rate. There is thus an increase in the behaviour instrumental to the receipt of food.

Operant behaviour is therefore, influenced by some environmental factors, especially by its own consequences, which can either increase or decrease the frequency of a response. A

consequence that produces repetition of the behaviour that caused it is called **reinforcement** or reward. **Positive reinforcement** occurs "when the frequency of a response increases because that response is followed by a subjectively positive (pleasant) stimulus" (Wortman et al. 1985: 138). **Negative reinforcement** is that which "acts to increase the probability of a response by the removal of an aversive event" (Lefton 1982: 86). The reinforcement is the avoidance of a painful stimulus. Contrary to reinforcement, a consequence that produces suppression or a decrease in the frequency of the behaviour that caused it is termed **punishment**.

Hence, "in instrumental conditioning the behaviour change is produced by making a particular stimulus event contingent upon occurrence of a given behaviour" (Tighe 1982: 8).

#### 2.5.2.3 CLASSICAL VERSUS OPERANT CONDITIONING

There are two important differences between classical and operant conditioning. In classical conditioning the response is a reflex indicated by a particular stimulus that will consistently elicit a specific response. However, in operant conditioning numerous responses could occur, and that which produces a positive consequence will eventually have the greatest frequency of occurrence. In Pavlov's classical conditioning experiment the animal's response does not control outcome in that the dogs do not need to salivate to get the food; the food continuously follows the conditioned stimulus. In Skinner's operant conditioning experiment, however, food is presented only after the rat presses the bar such that the animal's behaviour is instrumental in producing the outcome of food.

#### 2.5.2.4 BASIC PRINCIPLES OF CONDITIONING

Several basic principles are observable in the various forms of conditioning and may be viewed as primary empirical generalisations about conditioning phenomena:-

##### ■ ACQUISITION

Each paired presentation of the conditioned stimulus (CS) and the unconditioned stimulus is a **trial** and with successive trials, the CR increases gradually until it reaches the maximal level. Successive pairings of the CS and the US strengthen the CR. Conditioning is cumulative as each trial builds upon the strength achieved by the

previous one until it reaches the maximal level, at which stage the CS will consistently elicit the CR. Thus, the CS acquires the capacity to elicit the CR.

#### ■ **EXTINCTION**

Extinction refers to "the weakening of a learned response that occurs when there is no reinforcement" (Tyson 1987: 200). It is brought about by withholding reinforcement, resulting in the gradual disappearance of the conditioned response.

#### ■ **SPONTANEOUS RECOVERY**

A response that has undergone extinction may be subject to spontaneous recovery. "If an animal is reintroduced to the conditioning situation some time after extinction of the conditioned response, the response is likely to immediately reappear in considerable strength, a phenomenon known as spontaneous recovery" (Tighe 1982: 13).

#### ■ **STIMULUS GENERALISATION**

Learning in one context may be generalised to another. Once conditioning has occurred, the subject will respond not only to the conditioned stimulus, but also to stimuli similar to it although they have never been paired with the unconditioned stimulus. Pavlov called this phenomenon stimulus generalisation. The primary principle of stimulus generalisation is "whenever a response is learned in one stimulus situation, other stimuli similar to those in the training situation acquire some tendency to produce that response" (Ellis 1978: 29).

#### ■ **STIMULUS DISCRIMINATION**

Whilst generalisation is a reaction to similarities between stimuli, discrimination is a reaction to differences between them. The process of learning to respond differently to similar stimuli or to make a specific response only to a specific stimulus is called stimulus discrimination.

#### ■ **DIFFERENTIATION**

Individuals learn not only to discriminate among stimulus events but also to differentiate among responses. "Response differentiation refers to the process whereby somewhat

similar responses are differentially reinforced. In this fashion one response becomes strengthened and others are gradually weakened" (Ellis 1978: 32). This process emphasizes that responses can become shaped or more precise during learning.

It is evident the early behaviourists such as Thorndike and Skinner explained the process of learning in a rather mechanistic manner. They maintained when an organism makes a response to a particular stimulus and that response is reinforced, a stimulus-response association forms in the brain, which when continuously repeated will eventually cause behaviour to always occur in the presence of the controlling stimulus. However, many contemporary psychologists reject this argument because it ignores the mental activity internal to the organism. They argue in almost any learned connection important thought processes intervene between the stimulus and the response. This view is termed the cognitive approach to learning.

### 2.5.3 THE COGNITIVE APPROACH TO LEARNING

Edward Tolman was one of the earliest proponents of the cognitive view. Essentially he maintained organisation, purpose and cognition manifest throughout behaviour and therefore need to be understood. This view implies:-

- "What an organism will initially do in any learning situation, what behaviour acts appear, depends upon what purposes (demands) and cognitions the organism brings to that situation" (Tighe 1982: 55 - 56).
- Behaviour throughout the process of learning will be the outcome of the working out of these purposes and cognitions in relation to the given external situations.
- The critical changes which take place in learning are changes in purposes and particularly cognitions, which develop fundamentally through repetition of external sequences.

It is evident, the determinants of behaviour and learning are purpose and cognition. Consequently, the view to learning maintains the human is an active processor of information rather than a passive organism in which associations become indoctrinated by means of repetition. Mental processes such as abstraction, reasoning, organising, problem-solving, attention, thinking and retrieving from one's memory are seen as primary cognitive processes

which are not simply reduced to associations. The vast majority of problem solving research investigates the ability of individuals "to consciously develop a mental representation of the problem, formulate strategies, and test alternative hypotheses for task performance" (DeShon & Alexander 1996: 19). According to this perspective, referred to as explicit learning, the first step in the solution of any problem is the development of an internal representation of the problem which consists of "the perceived initial state of the problem, a goal state, allowable transformation (strategies or task specific plans) for achieving the goal, and boundary conditions for solution" (Deshon & Alexander 1996: 19). Individuals are also capable of learning complex rules of system behaviour unconsciously. This type of learning, referred to as implicit learning, is defined as "the acquisition of knowledge concerning stimulus covariation learned through repeated exposure to problem exemplars without intention or awareness" (DeShon & Alexander 1996: 19). Learning is depicted by improved task performance which appear to require thinking even though the learner may be incapable of verbalising the rules adopted. Modern cognitive psychology views the study of learning as one of how we acquire knowledge and skills and not how we attain associations. Cognitive psychologists also maintain much of human learning does not depend on overt rewards or punishments. Two examples include "latent learning (learning that occurs but is not demonstrated until there is an incentive) and observational learning (learning that results simply from observation of other people's behaviour)" (Wortman et al. 1985: 155).

All learning discussed thus far are common to humans and animals. However, verbal learning pertains only to humans learning and plays a significant role in experimental psychology since much of human knowledge is expressed in the form of words.

## 2.6 VERBAL LEARNING

The systematic study of human learning originated with verbal learning and the fundamental issue was the formulation and retention of verbal associations. Associations are relations and hence, the basic method of the learning laboratory is to teach subjects the relationships among elements of different sorts. The primary principle in all learning is association by contiguity, which means "one element comes to be related to another - or the one comes to be able to elicit the other - simply because they have been perceived together", for example, table and chair (Hulse et al. 1980: 269).

### 2.6.1 THE NATURE OF VERBAL LEARNING

Verbal learning is "any learning situation in which the task requires the learner to respond to verbal material such as words or to respond with verbal responses" (Ellis 1978: 44). It incorporates a wide array of learning situations ranging from the association of nonsense verbal materials, which are devoid of associations, to the solution of complex verbal problems such as problem solving, thinking and concept formation. Rather simple types of verbal learning include the memorisation of serial lists, lists of pairs of verbal materials, free recall learning and recognition learning. In serial or sequential learning, the verbal units are presented in the identical order from one trial to another, for example, learning the letters of the alphabet. In paired-associate, learning subjects are required to learn to associate or pair together, two items. The stimuli and responses may be anything including words, syllables, shapes, numbers and colours. The pairs in the paired-associate list are rearranged from trial to trial to prevent the subject from learning the responses in a serial manner and totally ignoring the stimulus components. The subject, in free recall, is given a list of verbal items and is then asked to recall the items in any order. In recognition learning, the subject is presented with the items in a study phase and is then tested for recognition on subsequent trials. In essence, recognition learning enables one to distinguish familiar from unfamiliar events in our environment.

Learning generally involves an attempt by the subject to use certain strategies, to organise or group the verbal materials in specific ways, or to code the materials, for example, by the use of mnemonics. Newport (1990: 11) maintains that there are constraints on learning required to explain the acquisition of language, in particular, maturational constraints. Normal learning occurs only when exposure to the language begins early in life. With regards to maturational changes Newport (1990) found:-

- "Constraints on learning particular to language acquisition undergo maturational decay;
- Language learning abilities decline because of the expansion of nonlinguistic cognitive abilities.

Furthermore, four important cognitive traits that influence learning and memory are intelligence, cognitive styles, learning strategies and memory ability. Therefore, verbal learning involves cognitive activities.



### 2.6.2 THE COGNITIVE APPROACH TO VERBAL LEARNING

Associationism views learning as the acquisition of associations or relations between stimuli and responses. The triggering of a response theoretically is dependent upon the strength of the associative link, which is determined by frequency, contiguity and/or reinforcement. However, during the associationistic and behaviouristic era (1925 - 1955) the concept of memory played a minor role. Memory was viewed as a process secondary to the principles of learning. Instead, any interest in memory focused on forgetting, which was regarded as the loss of associative strength during some retention period.

People do not passively register information but rather actively think about material they are trying to learn. Individuals use various strategies to master some particular task:

- Incidental learning, that is, learning without deliberate intent.
- Organisation in learning, which refers to organising random input to achieve a meaningful output.
- Subjective organisation, whereby humans impose organisation on new material when no evident structure exists.
- Coding, which means individuals do not simply learn associations by rote among the items physically presented to them but these items are transformed or coded, for example, by means of coding operations ie. natural-language mediation.
- Mental imagery - The ability of humans to use mental imagery is a powerful facilitator in verbal language. Mental images means the kind of pictorial representation or arrangement which humans construct on the basis of their subjective self-instructions or on the instructions of another.

These strategies emphasize contiguity and frequency of experience are important as they allow for the operation of organisational processes. In addition, learning occurs as a result of associations being formed on the basis of mental images. According to Anderson & Bower (1980: 197) "the explicit use of mental images or pictures to represent verbal materials enhances people's memory for the material". Furthermore, learning and memory are active processes. Whilst the former involves an active person using images, strategies and organisational processes, the latter relates to coding and retrieval processes. The development of memory enables concept learning, language, thinking and problem solving,

attention and perceptual learning and motor skills learning.

## **2.7 MEMORY: COGNITIVE PSYCHOLOGY AND THE INFORMATION PROCESSING APPROACH**

An old and yet still viable approach to the study of memory is the stimulus-response (S-R) theory or associationism. According to the S-R approach, the ability to remember depends on the formation of associations or links between stimuli and responses such that the strength of these links determine the ability to remember. Associationists argue the S-R theory may explain more subtle and complex human behaviours. They maintain there exists internal stimuli and responses which are not directly observable such that unobserved S-R chains exist and enable complex mental events to occur into the framework of the S-R theory.

Whilst cognitive psychologists manipulate and measure stimuli and responses, their approach to these entities differs from that of the associationists. Associationists have focused on "the contingencies between stimuli and responses and on the principles of conditioning" but cognitive psychologists focus on the internal activities that intervene between these observable entities (Klatzky 1980: 2). The focus of a cognitive theory is how knowledge is acquired, modified, manipulated, utilised, stored and processed by the human organism. Although difficult to precisely define, information refers to "representations derived by a person from environmental stimulation or from processing that influences selections among alternative choices for belief or action. Information processing refers to how the information is modified so that it eventually has its observed influence" (Massaro & Cowan 1993: 384). In other words, information processing relates to the individual's mental processing activities that occur between a stimulus and a response.

"The information-processing approach to cognition is not so much concerned with absolute or intrinsic properties of the human information processor, but with what can be called its relative or differential properties" (Van der Heijden & Stebbins 1990: 197). The following are characteristics of the information-processing (IP) approach as defined by Massaro & Cowan (1993: 384 - 385):-

- "An informational description means that the environment and mental processing can be described in terms of the amount and types of information.

- Recursive decomposition or hierarchical decomposition denotes the breaking down of one stage of processing into substages, for example, a memory stage can be broken down into acquisition, retention, and retrieval stages.
- The flow continuity principle states that information is transmitted forward in time. All inputs necessary to complete one operation are available from the outputs that flow into it.
- Central to the IP approach, as well, is the principle of flow dynamics, asserting that each stage or operation takes some time (ie. that a mental process cannot be instantaneous).
- Finally, the physical embodiment principle is the assumption that information processing occurs in a physical system. Information is embedded in states of the system called representations, and operations used to transform the representations are called processes."

Cognitive psychologists view the characteristics of the information processing approach to include:-

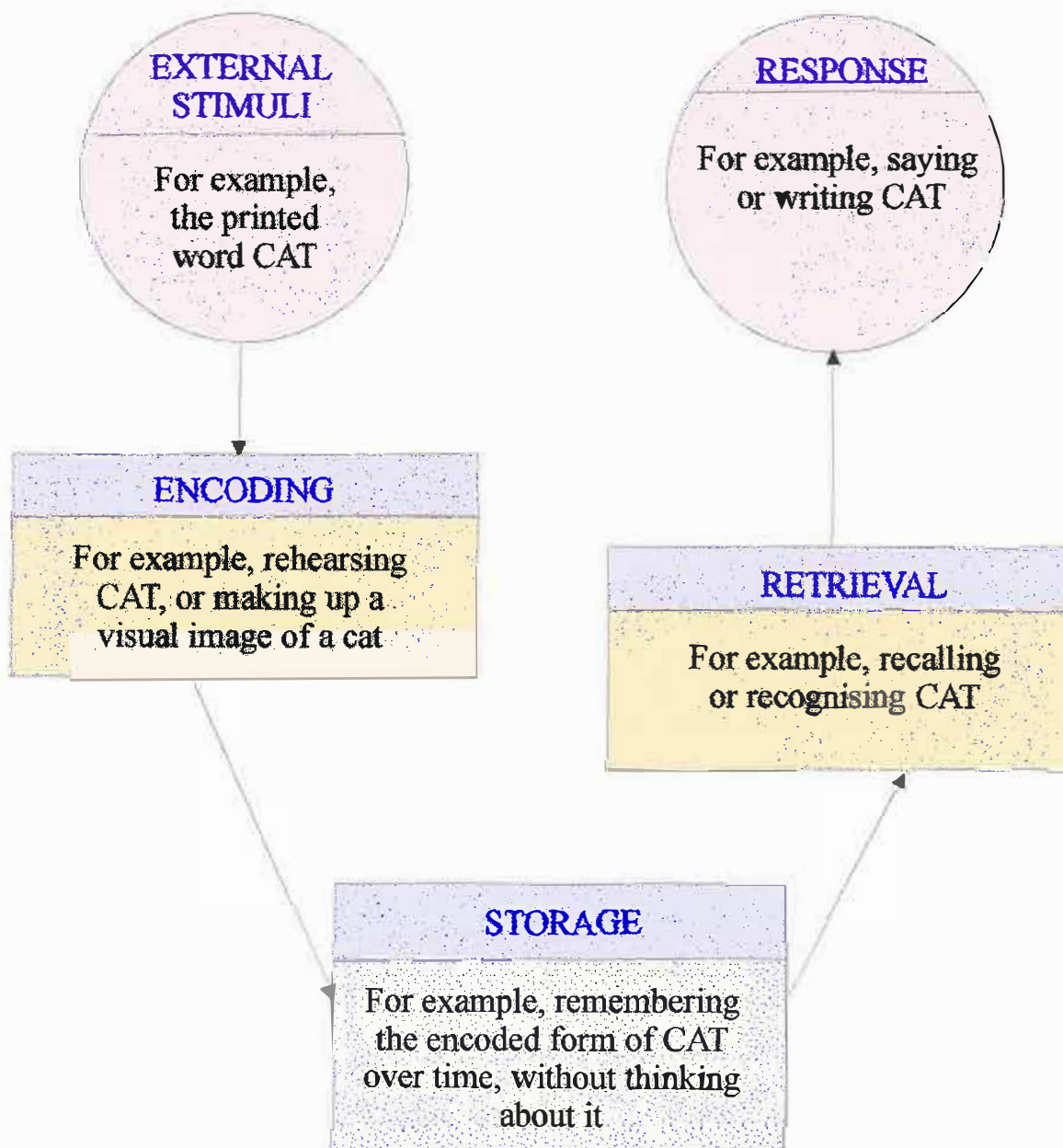
- Processing of information can be divided into a series of subprocesses or stages such that a postulated sequence of events, namely, a model exists between the stimulus and the response.
- Memory systems are divided into three areas: encoding, storage and retrieval.
- Human memory is viewed in the most diverse sense to include dimensions as perceiving, remembering, imagery, and problem solving since all are regarded as facets of the complex memory system.

The cognitivists therefore view the human organism as an active seeker of knowledge and processor of information. Their focus has been the flow of information through the human, commencing with the registration of incoming information via the sense organs, through the encoding and storing of this information to the consequent retrieval and utilisation of the information. According to this approach memory involves the encoding, or classification, storage and retrieval of information.

### 2.7.1 **THE NATURE OF MEMORY**

Memory is the capacity for storing and retrieving information when needed. Lefton (1982: 106) defines memory as "the ability to recall or remember information, events, or skills learned in the past". He maintains humans can remember previous learning over long periods of time. "Human memory is not a single unitary function like the heart or the liver. It consists rather of a whole series of complex interconnected systems which serve different purposes and behaviour in very different ways" (Baddeley 1982: 11). According to Hunter (1988: 287) "human memory is the ability to bring previous experiences to bear on new situations. It is our memories that allow us to recognise and refine categories of objects or events, or to focus attention on salient aspects of the environment". The relationships among the components of memory, namely, encoding, storage and retrieval may be pictorially represented (Figure 2.1).

**FIGURE 2.1**  
**GENERAL FORM OF ENCODING, STORAGE AND RETRIEVAL IN MEMORY**



Houston, J.P. 1981. **Fundamentals of Learning and Memory 2E**. Second Edition. New York: Academic Press. p. 331.

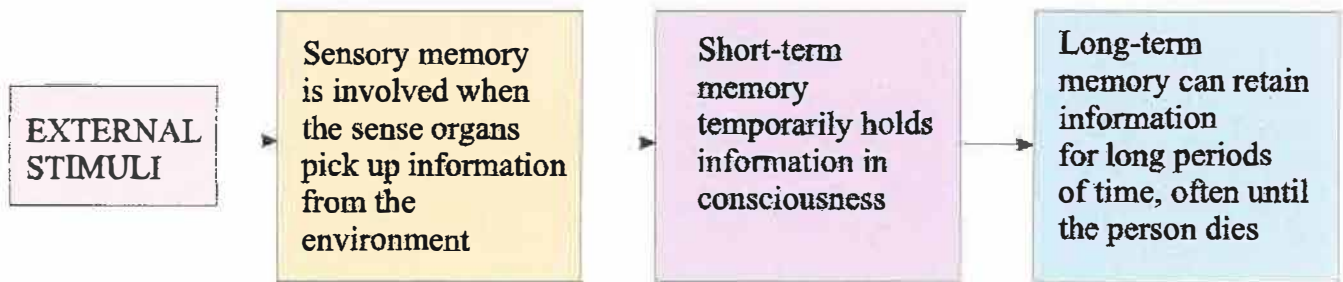
Storage is distinct from retrieval. Information may be stored but may not be immediately accessible for any number of reasons. Before stored information can be produced as a response, it must be searched out or located within the store. Several techniques have

identified for distinguishing retrieval from storage processes, the most prominent being recall and recognition. Recall involves both storage and retrieval processes because in order to recall something we must have stored it previously and must be able to retrieve it. There is a higher recall of items at the beginning of a list (primacy effect) than at the end of the list (recency effect) than in the middle of the list (Louw & Edwards 1993: 287). However, Baddeley & Hitch (1993: 146) maintain "when subjects are presented with a list of words for immediate free recall, the last few words presented tend to be recalled very well, the phenomenon being known as the recency effect". Gati & Tversky (1987: 97) found "components encoded as common are recalled relatively better than components encoded as distinctive, and the difference in recall is significantly greater in verbal than in pictorial stimuli". Wagenaar (1988: 277) found the relation between recall, accuracy and confidence is good in the case of direct retrieval but poor in the case of reconstruction. Recognition does not incorporate the retrieval process because when requested to recognise an item there is no need for searching but a set of items will be provided. "Explicit measures of human memory, such as recall or recognition, reflect conscious recollection of the past. Implicit tests of retention measure transfer (or priming) from past experience on tasks that do not require conscious recollection of recent experiences for their performance" (Roediger III 1990: 1043). Past research suggests "the relation between recall, accuracy and confidence is good in the case of direct retrieval but poor in the case of reconstruction" (Wagenaar 1988: 277). In order for information to become firmly embedded in memory, it must pass through the stages of processing.

### 2.7.2 THE STAGES OF MEMORY

Human memory can be divided into three major systems that interact with each other and can each be classified into subsystems, namely, sensory memory, short-term memory and long-term memory (Figure 2.2).

**FIGURE 2.2**  
**THE THREE STAGES OF MEMORY**



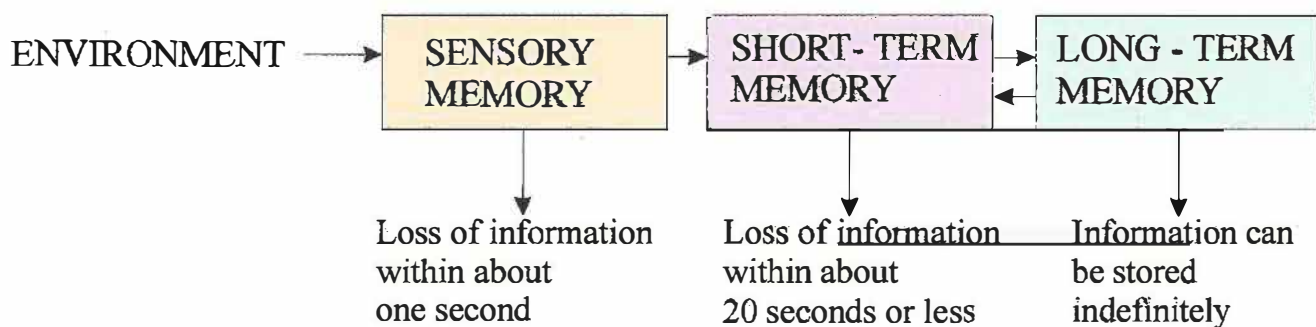
Bernstein, D.A., Roy, E.J., Srull, T.K. & Wickens, C.D. 1988. **Psychology**. Boston: Houghton Mifflin Company. p. 286.

Sensory memory is "the momentary lingering of sensory information after a stimulus has been removed" (Wortman et al. 1985: 157). In sensory memory, following stimulus presentation, a certain amount of information about the stimulus is registered or entered into the system. The site of that registration is the sensory register because the information enters the system by one or more of the five senses and is held briefly in sensory form. There is a sensory register for each sense and information can remain in a register only for a brief period of time; the longer it stays, the weaker it gets consequently depicting decay.

Information in the sensory registers may be attended to, analysed and encoded or classified as a meaningful pattern, a process called perception. If the information in sensory memory is perceived it can enter the short-term memory stage. Unlike a sensory register, short-term memory does not store information in a raw, sensory form. Furthermore, information in sensory memory may only be retained for less than a second. However, in short-term memory information can be retained and decay prevented by means of a holding process, rehearsal. It must be noted short-term memory has a memory span that accommodates only about seven items and information, if not rehearsed, will disappear within 20 seconds (Figure 2.3). Thus, if too many stimuli exist in short-term memory, some will get lost, thereby bringing about forgetting.

If information is further processed in short-term memory, it may be coded into long-term memory, a rather permanent storehouse for information (Figure 2.3).

**FIGURE 2.3**  
**CAPACITY OF THE COMPONENTS IN THE HUMAN MEMORY SYSTEM**



Wortman, C.B., Loftus, E.F. & Marshall, M.E. 1985. **Psychology**. Second Edition. New York: Alfred A. Knof. p. 157.

The three stages of memory are declared distinct because they "have different operating characteristics, acquire different kinds of knowledge, and depend on different brain structures and connections for their operation" (Howe, Rabinowitz & Grant 1993: 737). They differ in specific ways that necessitate a discussion of each in terms of the encoding, storage and retrieval processes. However, the memory system should not be viewed as "a chain of fancy recorders that passively called what the world presents. Instead, memory ... is an active process in which the three stages interact," such that what is already stored in long-term memory constantly influences how new information is encoded" (Bernstein et al. 1988: 286).

#### 2.7.2.1 SENSORY MEMORY

Sensory memory is a memory store with a very brief duration period, something like half to one second. "It is supposed to contain very basic, unelaborated impressions of the external environment, which decay rapidly unless processed on into one of the other stores", that is, short-term memory and long-term memory (Houston 1981: 341). Sensory registers therefore, play a pivotal role. In order to recognise incoming stimuli, the brain must first analyse



them and compare and contrast them with that which is already stored in long-term memory. Since this process is not instantaneous, the impact of stimuli on the senses need to be maintained for a short time. Hence, "the sensory registers hold incoming information long enough for it to be processed further" (Bernstein et al. 1988: 287). Whilst this sensory memory is very brief, it lasts long enough to link one impression to the next so individuals experience a smooth flow of information, for example, when watching a movie.

There is a sensory register for each sense. Just as a visual register exists for a stimulus entering via the sense of sight, so too there are registers for hearing, touch, smell and taste. Two registers that psychologists have analysed most are those for vision and for hearing. Sensory registers retain mental representations of visual images only for a very short period of time. These representations are called icons and the sensory register for them is termed **iconic memory**. One component of sensory visual or iconic memory depends "on the retina of the eye and is primarily influenced by the brightness of the stimulus presented" (Baddeley 1982: 15). Another component occurs at a point in the brain after information from the two eyes have been coordinated. "It is much more sensitive to pattern than to brightness, and represent the operation of a system involved in shape recognition" (Baddeley 1982: 15). Sperling showed "when exposed to a visual array for a very brief, single presentation, people can remember a great deal more than was formerly believed to be the case, at least for a brief period of time" (Houston 1981: 341). He concluded "visual sensory memory takes in a great deal of visual information in a very accurate manner, but cannot hold that information for very long" (Houston 1981: 341). Most icons last no more than one second such that "during the time it takes to report four or five items, the remaining images fade away from sensory memory" (Wortman et al. 1988: 159). Bernstein et al. (1988: 287) refers to this four or five items retained as the "span of apprehension".

Hence, incoming visual information is present as a rapidly decaying visual image, which if encoded or attended to, moves into short-term memory. While information about a stimulus is in a sensory register and prior to it being passed onto short-term memory, an important component of the system, that is, pattern recognition comes into play. Pattern recognition is "a complex process that results in contact between the information in the sensory register and previously acquired knowledge" (Klatzky 1980: 7). A pattern is recognised when its

sensory aspects are equated with meaningful concepts thereby assigning meaning to a stimulus. The sensory register for auditory sensations is called **echoic memory**. Consequently, an echo is "the mental representation of a sound in sensory memory" (Bernstein et al. 1988: 289). Unlike an icon, an echo typically lasts up to several seconds due to the physiology of the ear. However, both iconic and echoic memory have the same properties. In both, encoding is minimal and both are "very faithful reproductions of the physical stimulus, virtual copies of the information provided by the senses" (Bernstein et al. 1988: 289).

It is therefore evident that a sensory register briefly holds information about a stimulus in a "veridical form", that is, in much the same form it was initially presented, until it can be put into a new form and processed further into the system (Klatzky 1980: 10). Without processing further, icons, echoes and sensory memories decay and it is selective attention that dictates what information in sensory memory will be captured. Thus, "perception itself processes and captures the elusive impressions of sensory memory, transferring them to short-term memory" (Bernstein et al. 1988: 290).

#### 2.7.2.2 SHORT-TERM MEMORY

Short-term memory (STM) is "the system, or perhaps more appropriately, set of systems which allow [a] temporary storage of information which is essential for a brief period of time, and subsequently quite irrelevant" (Baddeley 1982: 14). Cowan (1993: 162) represents short-term memory as "a nested subset of long-term memory. Specifically, the currently activated features comprise a subset of long-term memory, and the current focus of attention is in turn a subset of this activated memory."

Short-term memory has several major characteristics:-

- It is "the source of capacity limitations, accounting for certain memory limitations and most attentional limitations" (STM has a limited capacity large enough to hold one telephone number) (Shriffrin 1993: 193).
- Whereas sensory registers generally store information for less than a second, the information in short-term memory can last from one second to more than a minute.

- Information in short-term memory may be placed in a special section of the system called the rehearsal buffer, such that it does not decay away but may be retained indefinitely by means of rehearsal.

## ■ ENCODING

When a stimulus is perceived and attended to, it enters short-term memory. Information is much more sophisticatedly encoded in short-term memory than in the sensory registers. Although various types of memory codes can be used, much of the information in short-term memory is represented by an "acoustic code", which means it is the sound of the items that are repeated and stored (Bernstein et al. 1988: 290). The term modality effect referred to the finding that, "in short-term memory tasks, auditory presentation almost always resulted in higher recall than did visual presentation" (Penney 1989: 398). Calkins (1863 - 1930) found that "the records of the recency experiments show the very striking effect of auditory recency" (Madigan & O'Hara 1992: 50). Just as later research showed the restriction of modality effects to an auditory superiority for recent items, so too Calkins found that visual and auditory series seemed essentially similar except for the influence of recency and attributed the modality effect to a storage rather than a retrieval process: "The suggestiveness, not the production seems to be increased in the auditory series" (Madigan & O'Hara 1992: 51).

Chunking demonstrates the interaction of short-term and long-term memory, whereby information being encoded in short-term memory is related to that already in long-term memory. Learning to utilise larger and larger chunks of information can improve the amount of information held in short-term memory. However, memory improvement takes many hours of practice and demands not only elaborate chunking, "but also encoding and organizing new information in terms of knowledge already stored in long-term memory" (Bernstein et al. 1988: 292).

## ■ STORAGE

The characteristics of the short-term memory allows it "to hold and manipulate limited amounts of information. It is as if the system can grasp fleeting ideas which would otherwise slip into oblivion, hold them, relate them and manipulate them for its own

purposes" (Baddeley 1982:149). The maximum number of items an individual can recall perfectly after one presentation is called the "immediate memory span" (Bernstein et al. 1988: 291). The capacity or "digit span" of short-term memory is a limit of seven plus or minus two items (Baddeley 1982: 152). It applies not to a certain number of discrete elements, but to the number of meaningful graspings of information called chunks. "The capacity of short-term memory is almost always between 5 and 9 chunks" (Bernstein et al. 1988: 291).

Items in short-term memory may be retained through rehearsal or repeating it to oneself, or else they will be lost from the short-term store. However, people generally forget information in short-term memory quickly unless they continue to rehearse it. "Unrehearsed information can be maintained in short-term memory for no more than about twenty seconds" (Bernstein et al. 1988: 293). People forget information in short-term memory due to:-

- Decay whereby the mental representation of a stimulus simply disappears gradually from the system.
- Interference from other information, such that the appearance of new information in short-term memory displaces information already in the system. "Displacement is an example of retroactive interference, in which new information placed in memory interferes with the ability to recall information already in memory" (Bernstein et al. 1988: 294). There can also be proactive interference, "when material learned earlier interferes with recall of material learned later" (Wortman et al. 1985: 181).

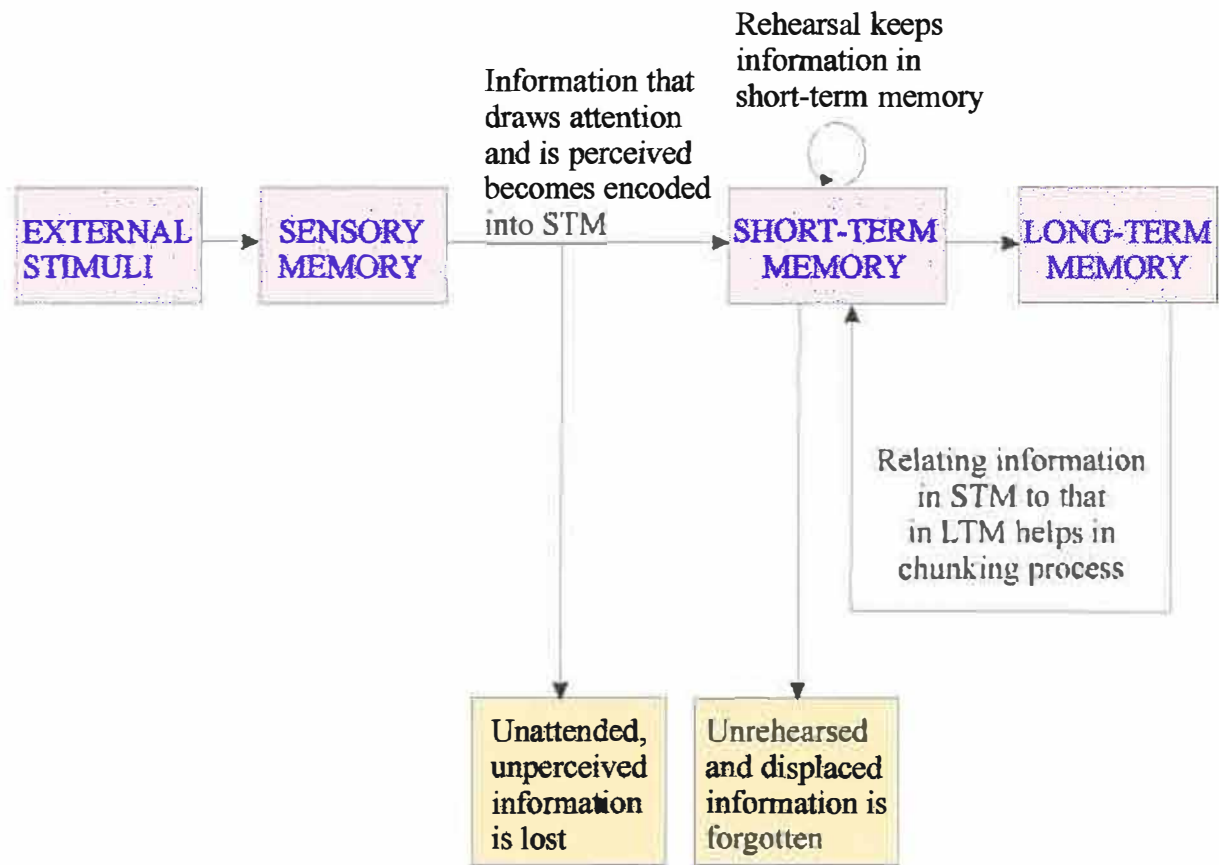
In addition to maintaining information in short-term memory, rehearsal of information may contribute to its transfer to long-term memory. The longer some particular information resides in short-term store, the more of that information can be transferred into long-term store, and become part of "permanent" memory (Houston 1981: 345).

## ■ **RETRIEVAL**

Human ability to report what is in short-term memory depends on the process of search and retrieval. Information may be retrieved by means of parallel search and serial search. In the former process, "all of the information in short-term memory is examined

in parallel, or all at once" (Bernstein et al. 1988: 295). However, in a serial search, information is analysed serially or a piece at a time. Sternberg found people retrieve information from short-term memory through an exhaustive serial search (Bernstein et al. 1988: 296). There are two kinds of retrieval, namely, spontaneous and deliberate. Deliberate retrieval often occurs after subjects are given a clue or "when the experiment simulates an instructional situation where students expect earlier material to be relevant to solving problems. Spontaneous retrieval or reminding occurs when the experimenter hides the relationship between the training and testing phases of the experiment" (Vanhehn 1996: 518). Figure 2.4 summarises much of what has been discussed about short-term memory.

**FIGURE 2.4**  
**SHORT-TERM MEMORY**

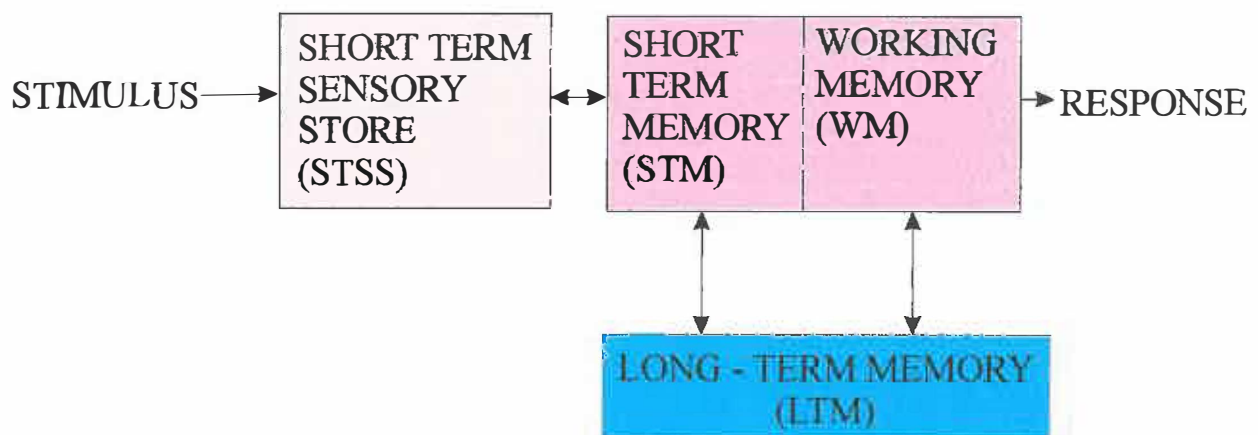


Bernstein, D.A., Roy, E.J., Srull, T.K. & Wickens, C.D. 1988. **Psychology**. Boston: Houghton Mifflin Company. p. 297.

From Figure 2.4 it can be conclusively maintained information attended to and perceived is encoded into short-term memory. If it is not rehearsed or is displaced by incoming, new information, this information will be lost. Chunking, assisted by information already stored in long-term memory, can help to hold more information in short-term memory. An appendage to short-term memory is called working memory or intermediate term memory. These terms represent the view of short-term memory as the site of what we are immediately thinking about or working on, and reflects short-term memory as being equated with consciousness. Baddeley (1982: 169) views working memory as "a system that allowed several pieces of information to be held in mind at the same time and interrelated". He adds

working memory is "a subcomponent of the overall system which holds and manipulates material that is being processed" (Baddeley 1982: 169) (Figure 2.5). A frequent assumption is "processing and storage compete for a central limited-capacity workspace or central executive" (Towse & Hitch 1995: 108). Working memory consists of "an attention control system called the central executive that integrates information from different working memory subsystems and long-term memory, allocates resources, and generally organizes working memory operations" (Service 1992: 22). Like short-term memory, this memory "has limited capacity, stores information in a form other than raw sensation, and forgets due to overloading or failure to rehearse" (Mayer 1981: 24). Hence, one fundamental limitation on human cognition is "the number of things that we can think about at a given moment in time - more specifically, the number of alternatives that can be operated upon in working memory at a given time" (Mynatt, Doherty & Dragan 1993: 760).

**FIGURE 2.5**  
**INFORMATION PROCESSING MODEL REFLECTING**  
**WORKING MEMORY**



Mayer, R.E. 1981. **The Promise of Cognitive Psychology**. San Francisco: W.H. Freeman & Company. p. 25.

Working memory capacity plays an important role in a wide variety of tasks, including "learning new information, following directions, taking notes, reasoning and problem solving" (Conway & Engle 1994: 354). It concentrates on processes involved in "the production and perception of language and on spatial processing" (Smyth & Pendleton 1989: 235). Figure 2.5 displays a modified or extended information processing model of memory to take cognisance of the role played by working memory in processing information before it can successfully be transferred to the long-term memory.

#### 2.7.2.3 LONG-TERM MEMORY

Encoding processes allow information held in short-term memory to be transferred to long-term memory. Information enters long-term memory from short-term memory by means of rehearsal. "Once information is in the long-term store, it is no longer rehearsed (unless it is brought back to the short-term store)" (Houston 1981: 345). According to Mayer (1981: 24) long-term memory "is unlimited in capacity, so it can hold vast amounts of information and does not fade with time. However, items in long-term memory may be lost through the combined effects of both decay and interference whereby new information acts as obstacles to the routes for retrieval of information from long-term memory. Therefore, long-term memory may be viewed as "an organized storehouse of information, in which each item must be found by following a search path" (Mayer 1981: 24). Hence, both the encoding and storage processes in long-term memory differ from those of short-term memory.

#### ■ ENCODING IN LONG-TERM MEMORY

In short-term memory only a limited amount of information can be stored. In long-term memory an enormous amount of material can be stored with tremendous accuracy. Sometimes information is encoded into long-term memory automatically, that is, without deliberate effort being exercised to remember the information, and sometimes encoding is more effortful. "People are particularly good at remembering the frequency and contexts of events without conscious effort, and at internalizing tasks and motor activities that are well-practised, without consciously trying to memorize them. In other instances, however, encoding requires conscious strategies and effort" (Louw & Edwards 1993: 295).



The key strategy for encoding is rehearsal, of which there are two types:-

- **Maintenance rehearsal** involves repeating an item over and over in short-term memory, but it is ineffective for encoding information into long-term memory (Bernstein et al. 1988: 300).
- **Elaborative rehearsal** is used to encode material in long-term storage. "It involves the meaningful organization of information and its integration with material already stored in long-term memory" and is much more effective than maintenance rehearsal (Louw & Edwards 1993: 296).

Maintenance rehearsal reflects shallow processing, whereas elaborative rehearsal represents a deeper level of processing, thereby facilitating the encoding of information permanently in long-term memory. Louw & Edwards (1993: 296) maintain when encoding in long-term memory "internal meaning features, rather than external acoustic and visual features, have the greater influence in terms of how much will be remembered". According to Tyson (1987: 216) "meaning or semantic coding" is more important in long-term memory as opposed to acoustic coding in short-term memory. However, according to dual coding theory, information is remembered better when both a semantic (verbal meaning) code and a visual (imaginal) code are used together rather than individually (Paivio 1986).

## ■ STORAGE IN LONG-TERM MEMORY

Whilst the capacity for storage in short-term memory is quite limited, long-term memory has an unlimited capacity. Tulving (1985) suggests we store information in two kinds of long-term memory; namely, procedural and declarative memory. **Procedural or operational memory** consists of "a huge number of perceptual-motor skills and cognitive skills" (Tulving 1985: 8). It involves doing the activity and does not incorporate "the ideas of capacity, rehearsal, and distraction in the same manner as declarative memory" (Squire 1987: 169). **Declarative memory** is the part of long-term memory that contains memories of facts. Unlike procedural memory, "declarative memory moves through both a short-term and a long-term stage and requires the medial temporal region and its associated neural structures" (Squire 1987: 169). Declarative memory is further subdivided into episodic memory and semantic memory. Episodic memory relates to

remembering particular incidents such as where you were last night and hence, concerns time-dated, personal incidents, place and events. "At the time of initial coding, all the information we process can be viewed as part of episodic memory in the sense that the information is processed at a particular point in time and thus time dated" (Wood 1983: 124). Semantic memory contains generalised knowledge of the world that does not involve memory of a particular incident or episode, for example, knowing the chemical formula for salt. Semantic memory is "the primary means by which we think" and "we can deduce numerous facts that we have never stored directly because the 'organisation' of semantic memory allows us to do so" (Wood 1983: 124).

Memory in long-term storage consists of millions of pieces of information. In order for them to be efficiently retrieved and to enable us to construct events and reason systematically, they are stored in an organised rather than an arbitrary manner. "When you receive information which acts as a cue to your memory, the relevant memories in storage are activated, and via the linkage system, other memories will be activated and in this way retrieved" (Louw & Edwards 1993: 299). The **semantic network theory** explains how semantic information is meaningfully organised. The semantic network theory assumes memories are stored as **nodes** interconnected with **links**, both of which connect concepts. A primary aspect of this network is the assumption that "information about a particular class of things is stored only at the level of the hierarchy for that class" (Louw & Edwards 1993: 299).

An alternative to the network model of memory organisation is the **schema theory**, which is used to explain both semantic and episodic memory. A schema is "the structure that organises information about an event or an object, and it is the schema that has an affect on the storage and retrieval" (Louw & Edwards 1993: 300). Schemas have an impact on storage of memories because we assimilate information in a form that collaborates with our pre-existing schemas. The model suggests retrieval often involves reconstruction of information based on familiar schemas. In other words, in the process of recall "we search for meaning from our long-term memory store which accounts for bias in the representation of material" (Louw & Edwards 1993: 300). According to the schema theory some degree of reconstruction and bias will exist when recalling material.

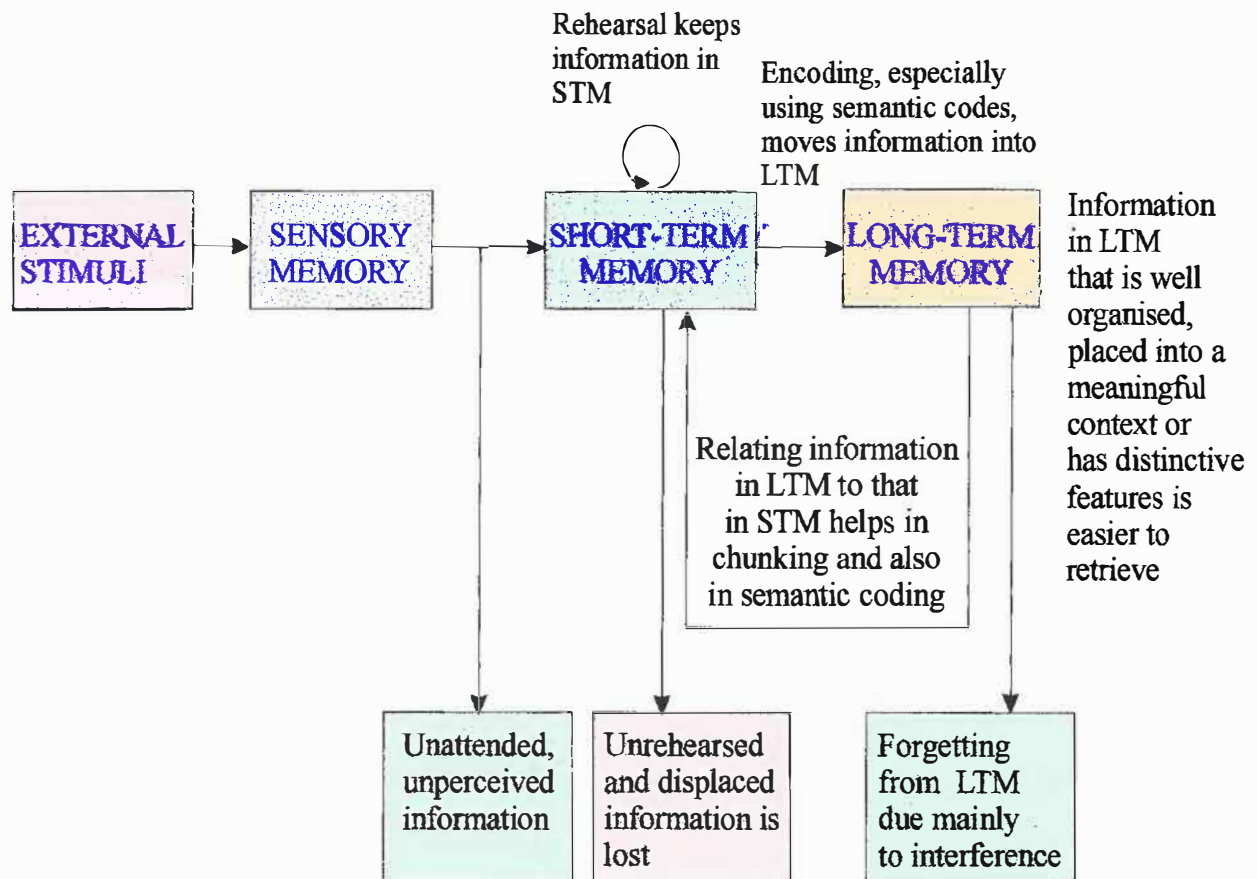
Like in short-term memory, forgetting occurs in long-term memory as a result of decay and interference. Decay theory suggests that if people do not use information in long-term memory, it gradually fades until it is lost completely. However, interference theory maintains forgetting information in long-term memory is due to the influence of other learning. It is evident, at times humans may be unable to retrieve even useful information that has been committed to memory.

## ■ **RETRIEVAL**

Interference produces forgetting mainly by creating failures of retrieval. If an individual is provided with sufficient cues, all sets of memories will be triggered. Hence, retrieval failures are more likely "when there is a poor match between the retrieval cue you have and the way in which the information you are looking for is encoded in memory" (Louw & Edwards 1993: 309). A good retrieval cue is one that is consistent with the initial encoding system used to store the material. The very rapidity with which we can retrieve information stored indicates "both that retrieval is not a haphazard, undirected process and that long-term memory must be highly organised" (Klatzky 1980: 13).

From the discussion on the three stages of memory, it is evident how sensory, short-term and long-term memory relate to one another to create a complex, yet highly organised system for encoding, storing and retrieving information (Figure 2.6).

**FIGURE 2.6**  
**THE THREE-SYSTEM MEMORY MODEL**



Louw, D.A. & Edwards, D.J.A. 1993. **Psychology: An introduction for students in Southern Africa**. Johannesburg: Lexicon Publishers. p. 290.

Figure 2.6 depicts short-term memory and long-term memory are in fact separate systems with specific characteristic differences at each stage of memory.

The three-stage information processing model initiated by Atkinson and Shrifin (1968) suggests the management involves each of the three stages of memory processing, namely, encoding, storage and retrieval (Figure 2.7).

**FIGURE 2.7**  
**THE THREE STAGES OF MEMORY**

STAGE OF MEMORY	ENCODING	STORAGE	RETRIEVAL
<b>SENSORY MEMORY</b>	Minimal; has a pure sensory quality	Great capacity but decays after a second or so	Automatic
<b>SHORT-TERM MEMORY</b>	Primarily acoustic coding	Capacity limited to $7 \pm 2$ chunks; duration about 20 seconds unless rehearsed	Serial search
<b>LONG-TERM MEMORY</b>	Primarily semantic coding	Appears to have no capacity or duration limitations	Strongly affected by how well the information is integrated with existing knowledge

Bernstein, D.A., Roy, E.J., Srull, T.K. & Wickens, C.D. 1988. **Psychology**. Boston: Houghton Mifflin Company. p. 297.

Figure 2.7 indicates the memory system is not an automatic record and play-back machine but information is encoded, stored and retrieved through sensory short-term and long-term memory processes. An important feature of human learning and memory is organisation. The cognitive approach to learning and memory assigns a key role to organisational processes and stresses the active role of the learner in processing information to be learned. What gets encoded, stored and retrieved is biased by what is already in the system or by a generalised knowledge of the world stored in long-term memory. The latter also impacts on the way information is recalled. The organisational approach to learning and memory assumes that humans attempt to organise information into a systematic and meaningful pattern and they devise strategies and plans and develop conjectural statement about information being encoded and stored in memory. People

organise new information as they receive it and use their existing knowledge to fill the gaps in that information. Hence, the concept of constructive memory suggests "what we remember is determined in part by our perceptual biases and by what we find convenient or comfortable to remember" (Bernstein et al. 1988: 309). Information stored in long-term memory is assumed to be highly organised so as to make optimum use of the available storage capacity and to facilitate the search and retrieval of material. Consequently, incoming information is generally carefully arranged so new information is integrated and made to fit in with the existing organisation in long-term memory. Atkinson & Shiffrin's "modal model" assumes information was fed from a series of sensory buffers into a limited capacity short-term store (Baddeley, Papagno & Vallar 1988: 586). Learning was assumed to involve transfer of information from the short-term to the long-term store, with the probability of long-term learning being a product of the time spent by the relevant item in the short-term store. Since the modal model assumes long-term learning depends crucially on the capacity of the short-term store, Shallice & Warrington's (1970) result from a patient with a digit span of only two items who showed normal long-term learning ability is contradictory. Therefore, "the concept of a unitary short-term memory system should be replaced by the concept of a multicomponent working memory and hence, Shallice and Warrington's patient could have had a deficit in one component of this" (Baddeley, Papagno & Vallar 1988: 586 - 587). The development of human memory enables numerous complex cognitive processes, such as thinking, problem solving, decision-making and communication through language.

## **2.8 COMPLEX COGNITIVE PROCESSES**

In order to solve a complex problem, a person must be able to think. However, before thinking about a problem, there is a need to attend to the problem, sense and perceive all its elements, recall possible solutions that have worked in the past or try out different recently learned strategies. The relationship between thought and learning is especially important since humans must learn to solve problems and essentially need to think, understand and reason. People learn efficient thinking and mental strategies for problem solving. When people do not develop cognitive strategies needed to deal with complex mental tasks, problems result. Thus, the need for cognition refers to "individuals' preferences to engage in and enjoy complex thought" (Sadowski 1993: 451). The basis of human thought and communication is language. This section aims to outline the numerous links between thought, problem solving, decision-making

and language.

### 2.8.1. THINKING

The process of thought are more complex and multidimensional than merely subvocal speech. It may take varying forms at different times and in different individuals. Despite its "ephemeral nature", thinking appears to be based largely on "the ability to form, manipulate and relate concepts" (Bernstein et al. 1988: 328). According to the information-processing model, "cognitive processes involve a transformation and manipulation of information that has been encoded and stored in short-term memory and especially in long-term memory" (Bernstein et al. 1988: 328). Thinking can thus be defined as the manipulation of mental representations. It cannot be observed and may occur without any external stimulus. Reasoning is the central activity in intelligent thinking. It is the process by which knowledge is applied to accomplish goals. Few problems can be solved by direct retrieval of a solution from memory. Most problems to be solved or decisions to be made encompass novel demands which require one to retrieve relevant information from memory and work out how best to apply it. "We make deductions - that is, we draw explicitly conclusions that were only latent in our beliefs; or make inductions - generalizations or intelligent guesses that go beyond the information given" (Evans 1993: 561). Psychological studies of human reasoning incorporate deductive, inductive and statistical reasoning. Deductive reasoning refers to "reasoning processing in which conclusions are drawn that necessarily follow from information that is already known or given" (Roberts 1993: 570). Thus, thought is "an internal (mental) representation" (Louw & Edwards 1993: 403). Thought has various elements which include concepts and concept formation, images, propositions, mental models, scripts and words. These elements are interrelated:-

#### 2.8.1.1 CONCEPTS

The formation of concepts is an integral aspect of life since concepts impact on our cognitive process and subsequently behaviour. "The basic ingredients of mental activity, the building blocks of thought, are concepts - classes or categories of objects, events, or ideas with common properties", qualities (short) and relations (such as male) whose members share certain characteristics (Bernstein et al. 1988: 328). Concepts may be concrete and visual (round, birds that fly) or abstract (truth, freedom). They may be divided into two closely related classifications, namely, logical and natural.

#### ▪ LOGICAL OR ARTIFICIAL CONCEPTS

Logical or artificial concepts are created or formed by clearly identifying certain characteristics or qualities common to all members of the concept. For example, an equilateral triangle is a concept, defined as a shape with three lines of equal length and three angles, each measuring 60 degrees.

#### ▪ NATURAL CONCEPTS

Natural concepts have "no fixed set of defining features but instead share a set of characteristics features", such that "members of the natural concept need not possess all the characteristic features" (Bernstein et al. 1988: 329). Natural concepts such as a flower, are based on "prototypes" which are the best representatives of a concept (Louw & Edwards 1993: 407).

##### 2.8.1.2 IMAGES

"Most people can form images of objects (such as a cow, a bottle or a stick), and .... these images can be manipulated in thought (rotated, turned around, turned upside down) (Louw & Edwards 1993: 407). Images can be very powerful dimensions of thought. In terms of the information-processing perspective, "mental imagery constitutes a non-verbal, short-term, working memory in which information may be pictorially represented and spatially transformed" (Evans 1983: 197 - 198).

##### 2.8.1.3 PROPOSITIONS

"A proposition is the smallest unit of knowledge that can act as an interdependent assertion", for example, 'cats have whiskers' (Louw & Edwards 1993: 407). Propositions are generally expressed in the form of a sentence but may be true or false, for example, all cats have short whiskers, is not a true proposition. Sometimes, they may relate a concept (cat) and a property of that concept (whiskers).

##### 2.8.1.4 MENTAL MODELS

Mental models are basically "large clusters of propositions that represent people's understanding of how things work and guide their interacting with these things" (Bernstein 1988: 332). These models assume "people interpret the world in terms of symbolic models" and they do so in a



"coherent fashion" (Perkins, Lochhead & Bishop 1987: 21). The models manipulate the information in a way that makes processes easier to understand and remember. They may be viewed as an internal map that divides or directs people in their relationship to the processes.

#### 2.8.1.5 SCRIPTS

Scripts are familiar patterns of activity, generally incorporating people's attitudes and behaviour that enable them to interpret situations and information. According to Woffard & Goodwin (1990: 603) a script is "a conceptual structure, held in memory, of the objects, events, roles, conditions, sentiments, and outcomes that occur in a sequential pattern in familiar tasks and situations". Scripts enable people to understand situations and guide behaviour suitable for these situations.

#### 2.8.1.6 WORDS

Words are one of the most powerful instruments we use to communicate concepts, propositions, scripts and mental models. Words expressed through speech is a vital aspect of thought although thought can take place in the absence of words. Hence, thought is an active internal "purposeful, organized process", of arranging and rearranging previously held information that we use to make sense of our world (Chaffee 1990: 34). It is evident thinking includes three basic ideas:-

- "Thinking is cognitive, but is inferred from behaviour. It occurs internally, in the mind or cognitive system, and must be inferred indirectly.
- Thinking is a process that involves some manipulation of or set of operations on knowledge in the cognitive system.
- Thinking is directed and results in behaviour that 'solves' a problem or is directed toward solution" (Mayer 1983: 7).

Thought is thus, fundamental in consumer behaviour as it is central to cognitive skill acquisition, problem solving and decision-making.

#### 2.8.2 PROBLEM-SOLVING

Thinking is often studied in the context of problem-solving. Problem-solving may be defined as "a thought process by means of which an organism processes certain given information in

order to reach a goal (the solution to the problem)" and require cognitive skill (Louw & Edwards 1993: 408). When an individual acquires the ability to solve problems in intellectual tasks, "where success is determined more by the subject's knowledge than by his or her physical prowess, the individual has acquired a cognitive skill. Cognitive skill acquisition has its historical roots in the study of problem solving" (Vanhehn 1996: 514). Watching and understanding television is a complex cognitive activity. Jacobvitz, Wood & Albin (1991: 219) reported that children use fairly sophisticated cognitive skills in attending to, and comprehending, the content of television's messages. The achievement of a goal is dependent upon the availability of resources, prevailing circumstances and actual features of the goal. An essential ingredient in problem-solving skill is the acquisition of domain specific knowledge in the form of schemata. A schema is defined as "a mental construct permitting problem solvers to categorise problems according to solution modes" (Sweller, Chandler, Tierney & Cooper 1990: 176). Unlike in concept and paired associate learning, problem-solving tasks typically allow many response alternatives, thereby making problem-solving a rather complex activity.

#### 2.8.2.1 STAGES OF PROBLEM-SOLVING

Nezu, Nezu & Perri (1990) have modified the various stages of problem-solving into the four categories, namely, problem definition and formulation, generation of alternatives, decision-making, and solution implementation and verification.

##### ■ PROBLEM DEFINITION AND FORMULATION

The main objective of the problem-solving process is to determine as accurately as possible the nature of the problem and to identify a set of attainable goals. During this stage the focus is on:-

- Seeking all available facts and information pertaining to the problems since understanding the important properties of a problem ("task environment") is imperative (Kahney 1986: 36);
- Describing these facts in a clear and unambiguous manner;
- Distinguishing between relevant and irrelevant material;
- Identifying the variables and circumstances that make the situation a problem; and

- Setting realistic problem-solving goals. Setting specific and realistic problem-solving goals also involves "the identification of a series of subgoals that provide for steps to reach the overall problem-solving goal" (Louw & Edwards 1993: 410).

In problem definition and formulation, the focus is on accuracy and clear understanding.

## ■ GENERATING ALTERNATIVES

At this stage the objective is to develop as many alternative solutions to the problem as possible. The expectation is by brainstorming more alternative ideas or strategies will be generated, thereby enhancing the probability that the most effective solution will be among those produced.

## ■ DECISION-MAKING

Effective solutions are characterised by an optimum number of positive and a minimum amount of negative consequences. This stage incorporates an evaluation of alternatives, by taking cognisance of the consequences of each course of action, if implemented, including its impact on long and short-term goals and personal and social outcomes. Personal consequences relate to emotional and physical well-being and effects on personal growth whilst social outcomes includes those consequences that impact on other individuals.

## ■ IMPLEMENTING AND VERIFYING SOLUTIONS

Once the solution is put into effect, the real-life consequences are analysed. Thus, "implementing and verifying solutions involve the performance of the chosen solution options, and the careful monitoring and evaluation of the actual solution outcomes" (Louw & Edwards 1993: 412).

Therefore, problem solving involves "understanding the problem (diagnosis), devising a plan to solve the problem, executing the plan, and evaluating the results" (Bernstein et al. 1988: 336). It is important to note not all strategies are effective solutions to problems. If a solution plan undertaken fails to rectify the problem, it becomes necessary to repeat the entire problem-solving process.

### 2.8.2.2 OBSTACLES TO PROBLEM-SOLVING

There are numerous obstacles to problem solving that occur, especially when proposing and testing hypotheses systematically.

#### ■ MULTIPLE HYPOTHESES

When people begin to solve a problem, they may have only a vague idea of which hypothesis to test. Furthermore, a difficulty may arise when required to handle more than one hypothesis at a time. Which hypotheses to be tested and the sequence of testing poses as a problem in multiple hypotheses, such that an invalid hypothesis not relating to the problem (but is easily remembered) may be tested and an important one may be ignored.

#### ■ CONFIRMATION BIAS

Researchers have a strong tendency to confirm rather than refute the hypothesis selected. Even when evidence against a hypothesis is produced, there is a tendency to ignore information inconsistent with that hypothesis. Confirmation bias may 'pose problems' when trying to 'solve problems'. "It may actually prevent the formulation or stubbornness to abandon an initial hypothesis" (Louw & Edwards 1993: 413). Such reluctance to abandon a hypothesis is related to the increased demand on mental effort (Rasmussen & Rouse 1981) and a threat to self-esteem (Fischhoff 1977).

#### ■ FUNCTIONAL FIXEDNESS

Many insight problems are hard to solve because problem solvers tend to bring to the new problem a particular mental set - a frame of mind involving "old patterns of problem solving to persist" (Bernstein et al. 1988: 337). Once people become accustomed to solving a problem using a specific strategy, they become blinded to other ways and prevent themselves from being creative. Hence, functional fixedness or persistence of set in problem-solving, the tendency to utilise the same strategies which have worked in the past whilst being oblivious of other ways of approaching the same problem, can restrict problem-solving.

### ■ IGNORING NEGATIVE EVIDENCE

Frequently, what does not happen can be as important as what does happen, yet the former is less likely to be observed. The absence of symptoms or events may be important in disconfirming or confirming an original hypothesis. For example, a headlight failure in a car may enable one to hypothesize that the battery is flat.

### ■ IGNORING BASE-RATE INFORMATION

Hypothesis testing can also be impaired by base-rate frequency or the representative heuristic, whereby people tend to ignore the overall probabilities, the base-rate frequency, and focus "on what is representative or typical of the available evidence" (Bernstein et al. 1988: 336).

### ■ SELECTIVE ATTENTION AND LIMITED COGNITIVE PROCESSING

The two related mechanisms which may be partially important when considering learning and problem solving, namely, selective attention and limited cognitive processing capacity, may sometimes be ignored. Solving a problem and acquiring schemas may demand largely unrelated cognitive processes. To solve a problem by means-end analysis, a problem solver must attend to differences between a current problem state and the desired state. "In order to acquire a schema, a problem solver must learn to recognise a problem state as belonging to a particular category of problem states that require particular moves" (Sweller 1988: 257).

Even if these obstacles to problem-solving did not exist, most people are not ideal problem solvers but can improve by systematically working through the stages of problem-solving and improving their skills.

#### 2.8.2.3 IMPROVING PROBLEM-SOLVING SKILLS

Problem-solving skills may be improved by means of:-

- Decomposition, which is a heuristic that consists of breaking down the problem into smaller elements or subsections;
- Using diagrams, like the Venn diagrams, that help by visually highlighting the elements of the problem and making relationships among them more vivid.

- Practising creativity and divergent thinking. Creativity enables the production of new ideas, original ways of perceiving, new and changing attitudes and new behaviours. Creative thinking facilitates flexibility and ensures divergent thinking. The divergent thinker originates ideas that are "unusual and innovative" and "is not limited by functional fixedness" (Louw & Edwards 1993: 416).
- Thinking critically which involves the systematic verification of the feasibility and rationality of possible solutions. Critical thinking, the opposite of divergent thinking, is necessary in the decision-making stage of problem-solving and in the process of verifying solutions.
- Incubation, which involves putting the problem aside for a while and engaging in some other mental activity while the problem 'incubates'. In this incubation or rest period the problem-solving activity continues but "without conscious attention to the problem" (Ellis & Hunt 1983: 228).
- Learning from the experts. Experts have developed problem-solving strategies or heuristics through experience:-
  - Experts process problems by looking for similarities between current and past problems and hence, use heuristics that were successful in the past without lacking innovativeness and creativity.
  - "Experts use present knowledge to assimilate and effectively organise new information.
  - Experts group together problems that can be solved using the same principles, and understand the relationship between elements within a problem" (Louw & Edwards 1993: 418).

Whilst problem solving involves inventing or discovering strategies in order to answer a complex question, other forms of thinking may involve choosing among alternatives or evaluating opportunities. Decision-making deals with how humans make these choices and judgements.

### 2.8.3 DECISION-MAKING

Business research has recently shifted toward more consideration of cognitive processes and how the human decision maker operates. However, "understanding cognitive phenomena and how they relate to decision making has not been an easy task" (Lundberg, Hartman & White 1991: 689). Problem-solving often overlaps with the critical skill of decision-making. Humans continuously make decisions, some of which are rational, clearly thought out and predetermined.

Rational decision-making requires one to consider numerous important characteristics or attributes of the alternatives and not just focus on salient characteristics. 'Decision' is a shorthand way of speaking about something "quite complex and not directly observable ie. cognitive and symbolic processes by which actors ... build and communicate models of their realities, apply them to 'cases', and use them to organize action. It is these complexities we are talking about when we speak somewhat vaguely of decision processes" (Hunt, Krzystofiak, Meindl & Abdalla 1989: 437). Hence, "decision making is a cognitive process that brings together memory, thinking, information processing, and the making of evaluative judgements. The situation in which the decision is made determines the exact nature of the process" (Zikmund & D'Amico 1986: 195). The making of decisions of any magnitude is often difficult because of uncertainty and conflict. "When faced with the need to choose, decision makers often seek and construct reasons in order to resolve the conflict and justify their choice, to themselves and to others. ... The result is that peculiar feeling of inward unrest known as indecision" (Shafir, Simonson & Tversky 1993: 13).

#### 2.8.3.1 THE COGNITIVE APPROACH TO DECISION MAKING - THE DECISION FIELD THEORY

Numerous motivational and cognitive mechanisms guide the deliberation process involved in decisions under uncertainty. Deliberation is "a time-consuming and effortful cognitive process that involves an extensive amount of information seeking, weighing of consequences, and conflict resolution" and "is manifested by indecisiveness, vacillation, inconsistency, lengthy deliberation and distress" (Busemeyer & Townsend 1993: 434).

Human decision-making behaviour has two fundamental properties:-

- Preferences are inconsistent. Since they change over time as a function of the events and benefits that define the actions involved.
- Decisions take time and the amount of time spent making a decision influences the final choice.

The psychological theory of decision-making recognizes the need for dynamic accounts of how preferences change over time. Frey, Kumpf, Irle & Gniech (1984: 447) found that with increasing time level, re-evaluation of alternatives increased when subjects made a decision

between alternatives which was irreversible and decreased under reversible conditions.

Decision field theory is built on psychological principles drawn from three different areas of psychology:-

- Early motivation theories of approach-avoidance conflict (Anderson 1962, Bower 1959),
- Later extensions of approach-avoidance ideas to decision-making (Atkinson & Birch 1970, Coombs & Avrunin 1988),
- Recent information-processing theories of choice response time (Edwards 1965, Link & Heath 1975, Ratcliff 1978, Smith 1992).

Decision field theory provides a common foundation for predicting:-

- Choice probability and the distribution of choice response times (Busemeyer & Townsend 1993),
- Buying prices, selling prices and cash equivalents (Busemeyer & Goldstein 1992),
- Approach-avoidance movement behaviour (Busemeyer & Townsend 1993).

The theory was developed "to encompass a number of fundamental properties of human decision behaviour" and focuses on the uncertain decision problem (Busemeyer & Townsend 1993: 436).

The advantages of the decision field theory are four-fold:-

- It explains a wider range of phenomena.
- Simultaneously, it provides a more detailed process orientated explanation for each phenomenon.
- It stems from a long tradition of motivation behaviour in psychology.
- Its processing assumptions coincide with modern approaches to cognition (Heath 1992, Link 1992, Smith 1992).

One of the most important ideas is that the deliberation process involves "an accumulation of information about the consequences of a decision, and the amount of attention allocated to the various consequences changes over time during deliberation" (Busemeyer & Townsend 1993: 455).



### **2.8.3.2 SOURCES OF INCORRECT AND IRRATIONAL DECISION-MAKING**

When people consider various alternatives, their preferences depend, not on simple differences between costs and benefits, but on how they judge the utility of outcomes and on whether each outcome is seen as risky or a sure thing" (Bernstein et al. 1988: 347). "Many important decisions are made under conditions where a large base of implication-rich, conditionally dependent pieces of evidence must be evaluated as a preliminary to choosing a course of action" (Pennington & Hastie 1993: 123). Pennington & Hastie (1993) propose that a model of explanation-based decision making describes behaviour under these conditions. According to the explanation-based model, "decision makers begin their decision process by constructing a causal model to explain the available facts. The decision maker is also engaged in a separate activity to learn, create, or discover a set of alternatives from which an action will be chosen. A decision is made when the causal model of the evidence is successfully matched to an alternative in the choice set." (Pennington & Hastie 1993: 123). However, incorrect or irrational decisions are made due to individuals' limited ability to evaluate possible alternatives, the limited capacity of short-term memory, biases, and fallacies in information processing.

### **■ MULTI-ATTRIBUTE DECISION-MAKING**

When making a decision, individuals typically have to choose between various options, each having one or more characteristics or attributes that need to be considered. The greater the number of attributes an alternative has, the greater the complexity in decision-making. "Acknowledging and assessing the many attributes of an option and then making a decision is known as multi-attribute decision-making" (Louw & Edwards 1993: 419). Humans tend to focus on one attribute only, perhaps due to the limited storage capacity of short-term memory that impedes our ability to take cognisance of all the various attributes of the available alternatives.

### **■ UTILITY**

Utility refers to the subjective value individuals attach to various attributes of the options. People sometimes make risky decisions in the face of uncertainty and they do this "based on expected value, that is, the maximum value or benefit that can be expected as a consequence of making a decision" (Louw & Edwards 1993: 420).

## ■ **PROBABILITY**

When engaging in decision-making, individuals calculate the probable outcome of making a specific choice. Biases in the perception of probability of outcome may lead to inappropriate decision-making. People have a tendency to overestimate rare probabilities and underestimate frequent ones (Kahneman & Tversky 1984). This explains why people gamble even though the odds are against them.

## ■ **RISK TAKING IN THE FACE OF EXPECTED LOSS AND GAIN**

Probability and utility interact to make decision-making complex. Kahneman & Tversky (1984) found when problems are framed in terms of losses, people were risk takers. When decisions were framed in terms of possible gains, they avoided risks. This can be justified by means of the prospect theory that postulates the majority of people avoid losses.

## ■ **BIASES IN DECISION-MAKING**

Incorrect or inappropriate decisions may be the outcome of emotional biases and the use of an unsuitable heuristic. Emotional conflicts or biases prevent people from engaging in intensive decision-making because emotions or stress can cause people to:-

- Ignore valuable information about potential advantages and disadvantages of alternative courses of actions.
- Accept an alternative blindly or uncritically, for example, due to peer pressure.
- Avoid decision-making by procrastination or assigning the task to another.
- Impulsively selecting a course of action that appears to bring about short term relief.

Furthermore, since algorithms, being a systematic process to solving a problem, takes a long time, people rely on heuristics, a short-cut to problem-solving. Although heuristics are capable of facilitating a process which can bring about the solution to a problem, they have the potential to lead to inaccuracies in decision-making.

It is evident thinking represents our most complex and advanced activity. This mental process is the outcome of our ability to manipulate symbols and concepts and to utilise them in innovative and varying ways in order to solve problems. Hence language, the facility that distinguishes humans from animals, is closely related to thought and other cognitive processes

such as problem-solving and decision-making.

#### 2.8.4 **LANGUAGE**

Language "is a common form of human social behaviour that allows us to communicate with others through the production of meaningful utterances and the ability to understand what people are saying to us" (Louw & Edwards 1993: 375). Therefore, language exists in a psychosocial context. Language also provides a vehicle for the mind's communication with itself. Since the knowledge required to understand and produce language is internal, it is a natural and integral dimension of interest to cognitive psychologists.

Language is the primary instrument with which humans think. It is composed of words combined according to certain rules. Words themselves depict symbols, which are composed of simple vowel and consonant sounds. Language then, represents the major system of symbols available to the human for communication.

##### 2.8.4.1 **ELEMENTS OF LANGUAGE**

Language constitutes several different elements which can be combined to create meaning:-

- "Phonemes are the units of sounds.
- Morphemes are the units of meaning.
- Syntax is the rules for combining words into larger units.
- Semantics is the meaning words convey.
- Pragmatics refers to the relationship between language and its social context" (Louw & Edwards 1993: 377).

##### 2.8.4.2 **FUNCTIONS OF LANGUAGE**

Language serves four key functions:-

- Language can be instrumental since verbal behaviour can lead directly to reward. For example, children may learn that by saying 'please' they may obtain a cookie.
- Language serves as stimuli or signals for other behaviours. In other words, language aids us in thinking and in mediating behaviours that ultimately may achieve some kind of reward" (Ellis 1978: 161).
- Language serves as a vehicle for communicating with others.

- Language conveys meaning.

Language may influence how we think about the world and can control thought. Louw & Edwards (1993: 423) expressed that thought influences our language, which in turn influences our thoughts. Language and thought are thus, two very different but interrelated cognitive activities. The developmental sequence of language, thought and problem-solving skills is depicted in Piaget's theory of cognitive development.

#### 2.8.5 COGNITIVE DEVELOPMENT

Cognitive development is "the process of intellectual growth with emphasis on language, thought, conceptual behaviour, and problem-solving skills" (Ellis 1978: 297). Reviews on cognitive development focus on the stages of cognitive development, 'early cognitive capacities in infants, cross-cultural studies in cognitive development' (Stigler, Shweder & Herdt 1990), "wisdom and late-life potential and mechanisms of cognitive change" (Wellman & Gelman 1992: 338). A cognitive-developmental mechanism is "any mental process that improves children's ability to process information. Mental processes include perceptual and linguistic processes, as well as conceptual, reasoning and problem-solving one. Neural, associative and higher-level change mechanisms are all included, because all interact to produce cognitive development." (Siegler 1989: 354). Stability in cognitive development refers to "consistency in the relative standing of individuals in a group with respect to mental status or performance over time" (Bornstein 1989: 129). Stability demonstrates that individuals who perform well at one time do so at a later time, and those who perform poorly at first, do so later. Conversely, instability suggests fluctuation in relative performance. Children make drastic advances in language and thought between the stages of infancy and adolescence. The child progresses from a toddler, barely able to put words together, to a logical and articulate individual who can speak and write paragraphs, do mathematical calculations and develop numerous other cognitive skills. They are provided with information which stimulates their knowledge of the world and which they remember and utilise to solve problems.

Many of the scholars (Piaget, Michael Cole, Jean Lave, Urie Bronfenbrenner, Robert Serpell, Patricia Greenfield, Charles Super & Sara Harkness) who have been involved in the study of culture and cognition from the 1970s have made a transformation from applying tests in different

cultures to examine the impact of culture on cognition. They developed both theory and practice, "building on the notion that cognitive development is intrinsically a cultural-historical process" (Rogoff & Chavajay 1995: 869). Geary (1995: 34) maintains the principles of evolutionary selection "are not only useful for making inferences about the evolution of perceptual and cognitive systems but might also enable a clearer demarcation between biological and cultural influences on human cognition and cognitive development".

Cognitive theory is a class of theories which deals with knowing and understanding, where emphasis is placed on the learning of rules, strategies and principles. The relationship between learning and development has changed fundamentally as a result of new conceptions of learning, induction, transfer and strategy acquisition. Learning is no longer viewed as simply the acquisition of behaviours. It also incorporates "storing knowledge about relations in the world, as well as acquiring structural representations and mental models. These models can mediate transfer within and between domains providing a basis for understanding and autonomous strategy acquisition" (Halford 1995: 296). Analogy plays a pivotal role in knowledge acquisition and transfer, particularly between domains. According to the cognitive theory of development, cognitive processes such as thought, memory and intelligence play an important role in determining an individual's behaviour. A concern of major interest to psychologists is the development of language, thought and problem-solving skills, collectively known as cognitive processes. The two most important approaches in this regard are Jean Piaget's theory and the information-processing approach.

#### **2.8.5.1 PIAGET'S THEORY**

Jean Piaget (1896 - 1980) is a theorist in the understanding of cognitive development, who had a keen interest in epistemology. He focused on the study of intellectual development and on how humans acquire knowledge. Piaget regards human cognitive functioning, which is similar to biological functioning, as a means of interacting with the environment which ensures survival. Hence, cognitive development is determined by "a complex interaction of genetic, psychological and environmental factors" (Louw & Edwards 1993: 494).

## ■ THE KEY ELEMENTS

To Piaget intellectual growth involves an interplay between children and their environment. A central concept in Piaget's theory is the "scheme", which he described "as the mental structure underlying a sequence of behaviours" (Liebert, Wicks-Nelson & Kail 1986: 179). A **schema** is the basic and most elementary cognitive unit. Schemas differ in complexity, can be combined to form larger units and apply throughout cognitive development. It comprises of an intellectual activity and a corresponding action which is outwardly observable, for example, sucking, eating and walking. An advanced cognitive (intellectual) activity is called an **operation (concept)**. It is a thinking activity that, unlike the schema, is not always outwardly observable. Piaget emphasizes operations cannot be acquired simply by telling them to a child or by letting the latter practise them. Instead, these operations are acquired when the child arrives at the insight. For this to happen the following are necessary:-

- A certain level of cognitive development,
- Sufficient relevant experiences to provide the child with the opportunity to arrive at the correct insight (du Toit 1986: 22).

Piaget distinguished three aspects of intellect, namely, contents, functions and structures. The **contents** of intelligence refer "to the behavioural products that result when a scheme is applied" (Liebert et al. 1986: 179). Since schemes change as children develop, the contents of intelligence change largely with age. **Functions** are constant throughout development and are thus called, "functional invariants", one of which is adaptation (Liebert et al. 1986: 179). To Piaget, intellectual adaptation includes the two complementary processes of assimilation and accommodation, which underly cognitive growth and development.

Assimilation refers to "the process by which a child incorporates objects or events which has never been previously experienced into his/her cognitive structure" (Ellis 1978: 191). When new material is assimilated, it is taken in and interpreted so that it makes sense and fits in with the existing cognitive structure; if it does not, the new information is modified or distorted.

Accommodation involves changing the cognitive structure itself so it can better incorporate new information. True learning cannot take place without both assimilation and accommodation. This means that a child does not display learning just by remembering something. New knowledge is only learnt and becomes valuable when the child has acquired insight, has accommodated it within the existing cognitive structure and is able to apply it in new situations. Hence, **equilibrium** arises out of a balance between assimilation and accommodation. Another functional invariant, organisation, relates to relationships among different schemas and leads to Piaget's conceptualisation of **structures**. The schemes are always organised to form integrated mental structure, which change as children develop.

Piaget maintains the initial response of a child to a new event is to interpret the experience in a way that is consistent with the existing cognitive structure. Since the process of assimilation is insufficient to deal with the experience, the child recognizes the contradiction between the perception and encoding of events and other experiences. The process of cognitive development incorporates a change in the incoming information, assimilation, and a change in the cognitive structure itself, accommodation. The balance between the two processes, "creating a state of cognitive equilibrium," provides a basis of the organism's adaptation to its environment (Liebert et al. 1986: 180). The individual can think of all kinds of possibilities, can consider several simultaneously, evaluate them against each other and draw logical conclusions. "He loses his naive idealism and egocentrism, can see and judge himself objectively, and consequently his self-concept becomes more in keeping with reality" (du Toit 1986: 33). Thus, cognitive development is seen as "a process of continuous assimilation and accommodation, with major changes in accommodation being viewed as changes in stages of cognitive development" (Ellis 1978: 191). An important part of Piaget's genetic epistemology is the explanation of the transition from one epistemic theory to another. Piaget even defines genetic epistemology as "the attempt to explain the transition from one epistemic state to another" (Niaz 1992: 444).

## ■ THE STAGES OF COGNITIVE DEVELOPMENT

Piaget has outlined four sequential stages of cognitive development. Cognition proceeds through stages of structural reorganisation. "While cognitive functions are present from birth, cognitive structures are radically different from one stage to the next" (Kohlberg

1987: 114). Each phase has its own specific characteristics and each builds upon the previous one. All children go through the phases in the same sequence, although the rate at which they progress through the phases differs. Piaget maintains the phases are not distinctly defined since "a child progresses gradually, crossing imperceptibly from one phase to another. At times a child may even be in one phase in some respects and in the next phase in others" (du Toit 1986: 24).

- **THE SENSORIMOTOR STAGE**

The sensorimotor stage operates from birth to approximately two years of age. During this stage infants start to interact with their environment, by which they learn simple motor habits and perceptions of their environment. Subsequently, the child's actions involve co-ordination of motor responses with visual perception of the environment, "develops the ability to imitate and then, between one and two years, objects in the environment begin to acquire a kind of permanence ..., that is, the child can hold a mental representation of the object" (Ellis 1978: 192). Cognitive development is dependent on sensory and motor experiences and the child selects activities in which these are prominent, for example, playing with toys that make a noise.

- **THE PREOPERATIONAL STAGE**

This stage lasts from the ages of about two to seven years. During this period there is a rapid increase in the use of language, symbols and mental imagery. The child starts to form conceptual categories, has an immature idea of time and displays reasoning behaviour based on intuition, not necessarily logically consistent. "The child must learn anew, on the level of mental representations, what he had already mastered on the sensorimotor level" (Inhelder, Caprona & Cornu-Wells 1987: 171). The child creates an internal representation of a thing, and in thoughts this replaces the actual thing. Since it is based on internal representation, thinking takes place much more quickly. Hence, the child has evolved an inner symbol system and is no longer reliant on the body for thinking as is the toddler. The world becomes more stable and the child fully understands the constancy of objects and the time frames of past, present and future. However, cognitive development is still at a rather simple and concrete level and is subject to numerous limitations preventing true cognitive operations. Furthermore, children at this age are ego-centric and "cannot understand that



other people have different perspectives from their own" (Bernstein et al. 1988: 53). Children think of themselves as playing the dominant role and cannot put themselves in another's place. Since the reasoning of children in this phase is still transductive, they cannot draw the right conclusions, or transfer the insight from one situation to another.

- **STAGE OF CONCRETE OPERATIONS**

This period extends from seven to eleven years of age. The child's thinking is now based on logical operations rather than on just perceptual or motor abilities. The child becomes increasingly capable of better conceptualisation due to the ability to think in words. Children become less egocentric and begin to see another's opinion. Their speech and play become more social and they are better able to work in teams. According to Piaget, the concrete operational period is characterised "by orderly thinking that gives rise to the ability to decentre and recognize transformations, an awareness that some transformations are reversible, and a grasp of the concept of conservation" (Liebert et al. 1986: 186). Conservation is the ability of the child to identify that objects and some of their features are still the same, even when viewed under different perceptual conditions. Reversibility is the ability of the child "to interrupt a sequence of thought, say, in problem-solving, and return to the beginning of the sequence" (Ellis 1978: 193). The child's understanding becomes truer to reality and the ability to distinguish between reality and fantasy is displayed. However, due to strong imagination, the child still finds exceptional satisfaction from fantasy stories. "Whereas up to this stage his logic has been transductive, he now gradually begins to be capable of inductive and deductive logical arguments. He also begins to enjoy games in which logical rules must be kept" (du Toit 1986: 32). Although logical processes of thinking have developed, this stage is called concrete operations because the logical processes are not fully abstract and the child's thinking is still closely linked to concrete examples in the physical world. The child is "not yet capable of working with hypothetical thought" (Gordon & Langmaid 1988: 191 - 192). Evidence suggests there is "a crucial, or at least a sensitive period for language acquisition, which ends around puberty. In the evolutionary model that maintains this, the language faculty is seen as adaptive, favoured by natural selection, while the critical period for language acquisition itself is not an adaptation, but arises from the interplay of genetic factors influencing life-history characters in relation to language acquisition" (Hurford 1991: 159). For Piaget, the key to successful

performance now is the mental operation.

- **THE FORMAL OPERATIONAL STAGE**

The final stage of cognitive development, the formal operational period, begins at about eleven years of age and extends through adulthood. Thinking reaches its highest level of organisation and is no longer restricted to concrete events. The cognitive system is far more complex and better organised and the child moves into the world of abstract thought characteristics of normal adults. Reasoning is based on the theoretical and hypothetical and hence, enables thinking beyond the child's experiential world. People begin to display the ability to engage in formal reasoning on an abstract level and to weigh the suitability of alternative solutions to problems. Hence, the child "is capable of all forms of thought necessary for scientific reasoning" (Gordon & Langmaid 1988: 192). Hypotheses can be developed and logical deductions made therefrom. "The individual has the ability to think in terms of formal, logical propositions which allows for the most complex adaptive behaviours. ... We maintain the cognitive skills that we learned at an earlier age and use them where they are appropriate. Hence, the cognitive development of humans is characterized by increasingly abstract abilities which allow them to deal with problems in a hypothetical tentative fashion" (Ellis 1978: 193) (Figure 2.8).

**FIGURE 2.8**  
**PIAGET'S PERIODS OF COGNITIVE DEVELOPMENT**

APPROXIMATE AGE	STAGE	SYNTHESIS
Birth - 1 year	Trust vs mistrust	Hope
1 - 2 years	Autonomy vs shame/doubt	Will-power
3 - 6 years	Initiative vs guilt	Purpose
6 - 12 years	Industry vs inferiority	Competence
Adolescence	Identity vs role confusion	Reliability
Early Adulthood	Intimacy vs isolation	Love
Middle Adulthood	Generativity vs stagnation	Care
Late Adulthood	Integrity vs despair	Wisdom

Louw, D.A. & Edwards, D.J.A. 1993. **Psychology: An introduction for students in Southern Africa.** Johannesburg: Lexicon Publishers. p. 493.

From Figure 2.8 it is evident that each period of children's cognitive development is characterised by a predictable set of features. It is this progression in cognitive development which enables us to adapt to the complexities of our daily lives.

### ■ CRITICISMS OF PIAGET'S THEORY

Piaget's theory has been criticised on numerous issues:-

- Deriving specific predictions from the theory is difficult.
- Children in the preoperational period are quite capable of taking cognisance of another's perspective and cannot be labelled as being egocentric.

- "The theory predicts that thinking within a particular stage should be relatively similar on all tasks, but researchers often find that a child will show considerable diversity in thinking across tasks" (Liebert et al. 1986: 202).
- Developmental psychologists have found "children correctly answer questions about classes and subclasses earlier than Piaget reported" and thus questioned Piaget's tests of children's understanding of classes and subclasses (Bernstein et al. 1988: 55).
- Children can learn individual Piagetian concepts with relatively brief training and hence such changes do not necessarily occur spontaneously following states of disequilibrium.

Despite these criticisms, Piaget's explanations of development helps to predict and consider the differences in the thinking of children in the various periods. His work is the most comprehensive and complex available. His proposals in the description of cognitive development are 'notable', 'thought-provoking' and the theory's great assets are its substantial content and its form. "The theory has a simplicity and a unity that gives it considerable aesthetic appeal" (Gold 1987: 151).

#### 2.8.5.2 THE INFORMATION-PROCESSING APPROACH

The information-processing approach attempts to determine ways in which people process information from the moment that perception takes place until it is used. Supporters of this theory are concerned with how children take in information, remember or forget it, and use it. They aim to describe the cognitive activities that go on inside the child's head. They focus on "quantitative changes in children's mental capacities, rather than on qualitative advances or stages, as Piaget did" (Bernstein et al. 1988: 55 - 56). Information-processing researchers try to understand the mental operations children use as they encode and organise material so it can be stored in memory and retrieved for use at a future time. Thus, they are especially interested in aspects such as memory, intelligence, attention, perception and problem-solving. These theorists show that children gradually get better at doing things as they get older because:-

- Their attention spans lengthen with age,
- The speeds with which children can take in sensory images increase.
- They become more efficient in changing their focus of attention.
- There are marked improvements in memory with age.

Information-processing theorists frequently use the computer as a model for the brain. "The organic structures and cells of the brain represent the hardware while the strategies that we use to process information are regarded as the software" (Louw & Edwards 1993: 494).

It must be noted, however, that cognitive development theorists have often been accused of socio-cultural bias. The argument has been that "the stage-sequences described by developmental theorists do not lend to universally valid higher forms of cognition but to developmental end states reflecting the norms and values of particular socio-cultural contexts" (Chapman 1988: 92). Piaget has been severely criticized in this regard. The concept of "developmental niche" is used as a framework for organising and directing cognitive developmental research in relation to cultural goals and values (Gauvain 1995: 25). What is needed is a multidirectional model of cognitive development, whereby development can proceed in different directions and in different socio-cultural contexts whilst being characterised as being progressive within each context (Chapman 1988: 93).

#### **2.8.5.3 THE RELATIONSHIP BETWEEN AFFECTIVE, COGNITIVE AND COGNITIVE AND SOCIAL-COGNITIVE SKILLS**

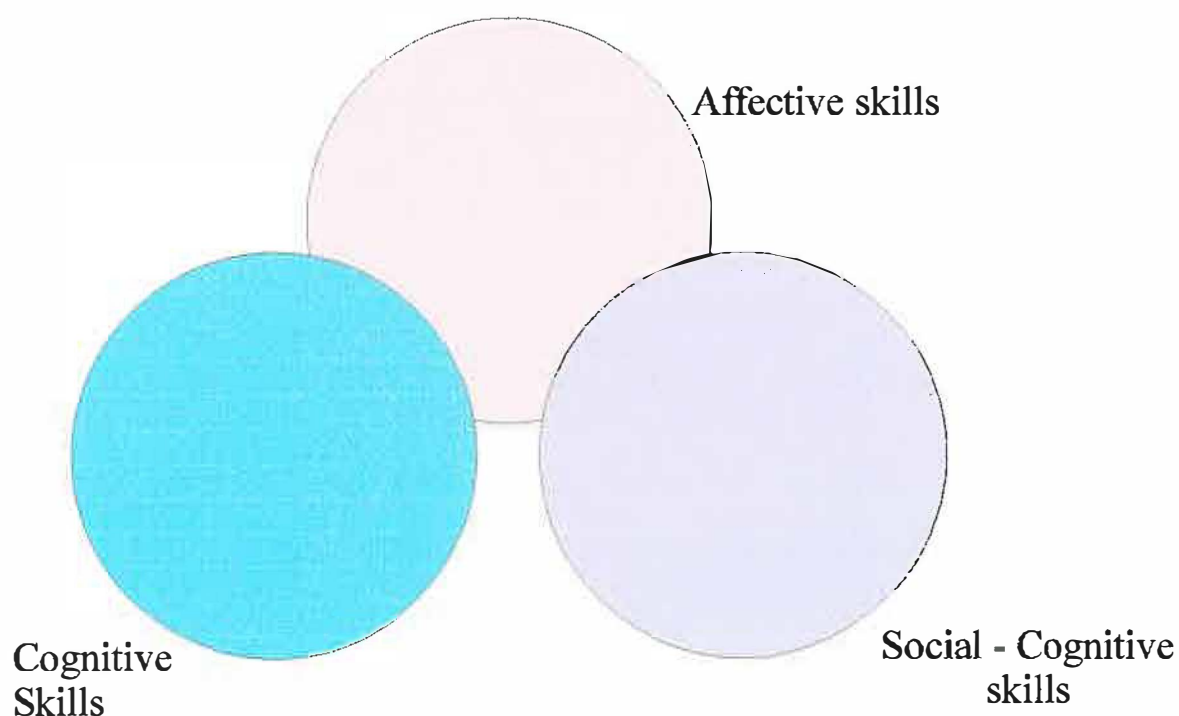
Affect and cognition exert a mutually causal impact on one another (Greenberg & Safran 1984, Maccoby & Martin 1983, Mitchell & Madigan 1984) operate in a complementary manner and are not truly differentiable. Cognitive-behavioural literature and developmental psychology do not take cognisance of social cognition when discussing the relationship between affect and cognition. Social cognition refers to one's understanding of the world of relationships and social behaviour and is thus an important dimension of any relationship between affect and cognition. Social-cognitive competence is considered an essential ingredient to children's healthy development, alongside cognitive and emotional development (Katz 1987, Weikart 1987). Social-cognitive skills are a key determinant of social adjustment throughout one's lifespan (Spivack, Platt & Shure 1976) and are imperative for effective interpersonal problem-solving. These include:-

- "Understanding interpersonal situations, other people's perspectives and having a goal,
- Expecting that one can have a positive impact on situations and that one can through one's initiative, influence situational outcomes,

- Being able to generate many alternative courses of action and to consider their possible consequences,
- Coming up with a series of planning steps, once having chosen a course of action, and
- Looking ahead and considering any obstacles or over-coming obstacles to successful resolution" (Branden-Muller, Gara & Schneider 1992: 274).

Branden-Muller et al. (1992: 283) found that social-cognitive and affective skills that are most related are "the understanding that people can have different reactions to the same event, the realization that people can control their emotional displays, the ability to do means-end cognitive problem solving under obstacle conditions, the holding of positive primary expectancies . . . ., and the holding of negative expectancies when faced with an obstacle to problem resolution". Furthermore, social-cognitive skills and cognitive skills are both related to affective skills, but neither mediates the other's relationship and contribution to affect (Branden-Muller et al. 1992: 284) (Figure 2.9).

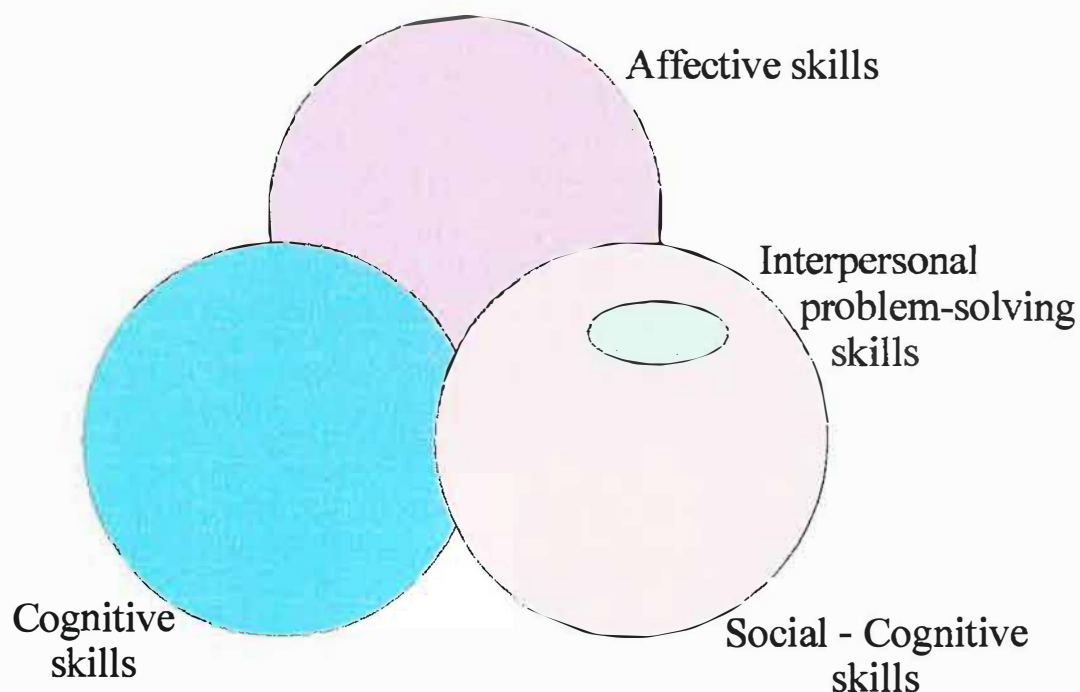
**FIGURE 2.9**  
**THE RELATIONSHIP AND CONTRIBUTION OF SOCIAL-COGNITIVE AND**  
**COGNITIVE SOCIAL SKILLS TO AFFECTIVE SKILL**



Branden-Muller, L.R., Gara, M.A. & Schneider, K. 1992 (Jul - Sept). The Development and Interrelationship of Affective, Cognitive and Social-Cognitive Skills in Children: Theoretical Implications. **Journal of Applied Developmental Psychology**, Vol. 13, No. 3, p. 285.

However, Branden-Muller et al. (1992: 287) emphasize that "affective, cognitive and social-cognitive skills may interrelate if interpersonal problem-solving skills are considered just one part of social-cognitive skills" (Figure 2.10).

**FIGURE 2.10**  
**THE INTERRELATIONSHIP AMONG AFFECTIVE, COGNITIVE AND SOCIAL-  
COGNITIVE SKILLS IN INTERPERSONAL PROBLEM-SOLVING**



Branden-Muller, L.R., Gara, M.A. & Schneider, K. 1992 (Jul - Sept). The Development and Interrelationship of Affective, Cognitive and Social-Cognitive Skills in Children: Theoretical Implications. **Journal of Applied Developmental Psychology**, Vol. 13, No. 3, p. 287.

## 2.9 CONCLUSION

Cognition refers to the mental processes of knowing, perceiving and judging which enables individuals to interpret persons, objects and events in their environment. People respond to stimuli on the basis of their perceptions. Their view of the world surrounding them stems from their environments and frames of reference.



Humans are active processors of information. The information that comes through our sense receptors are continuously evaluated and changed until an output is ready to be stored in memory or is used to initiate some behaviour. The focus of cognition is human mental processes, mental structures and information processing. Therefore, the central dimensions of cognitive psychology incorporate learning, memory and forgetting, language, decision-making and problem-solving. The developmental sequence of language, thought and problem-solving skills is illustrated in Piaget's theory of cognitive development. He focused on the study of intellectual development (an interplay between children and their environment) and on how humans acquire knowledge through four sequential stages of cognitive development. Piaget maintains that cognitive development is a complex combination of genetic, psychological and environmental factors. However, information processing theorists aim to understand the mental operations children use as they encode and organise material so it can be stored in memory and retrieved for use at a later time. They are particularly interested in aspects of memory, intelligence, attention, perception and problem-solving. These theorists maintain that children gradually get better at doing things as they get older because their attention span lengthens, they take in sensory images quicker, they can change their focus of attention more efficiently and their memory improves markedly.

Both Piaget and information processing theorists have been criticised of socio-cultural bias. A multi-directional model of cognitive development is requested since social-cognitive competence is considered an essential ingredient to a child's healthy development, together with cognitive and emotional growth. "The cognitive map of the individual will reflect, therefore, a subjective view of the world; but, to the individual, these beliefs are valid and form the core of his personal orientation towards life in general and may profoundly affect his personal relationships" and activities, for example, cultural and social activities, political and religious affiliations (Chisnall 1981:10). Social-cognitive skills and cognitive skills are both related to affective skills, "but neither mediates the other's relationship and contribution to affect" (Branden-Muller et al. 1992: 284). Hence, cognitive skills influence attitudes since attitudes are composed of the cognitive, affective and behavioural components. Diverse forms of behaviour are generated by the beliefs, attitudes and value systems held by people. The environment in which individuals operate is complex and dynamic with a multitude of stimuli and activity. The individual attempts to build some cognitive structure of these stimuli and

activities thereby enabling a meaningful interpretation of the world. It is evident that cognitive processes include attention, encoding, attribution, thinking, reasoning, language, knowing, memory storage and retrieval, conceptual learning and strategy and problem-solving. Hence, an individual's cognitions impact on consumer decision-making and thereby, influences consumption patterns and habits.

## **CHAPTER 3**

### **THE CONSUMER DECISION-MAKING PROCESS**

#### **3.1 INTRODUCTION**

The success of any business organisation is dependent upon the development of effective marketing strategies. Since marketing focuses on target markets, which are composed of people with certain patterns of behaviour, the realisation of the latter necessitates an analysis and understanding of the complex activities, both physical and mental, that consumers engage in. Hence, consumer analysis incorporates an evaluation of the four interrelated dimensions, namely, cognition, behaviour, environment and marketing strategies aimed at obtaining a profile on the target market. Whilst cognition refers to the psychological processes that lie internal to consumers, behaviour represents the overt actions that they perform. The stimuli external to consumers that influence their cognitions and behaviours are referred to as the environment. Marketing strategy depicts the processes by which marketing stimuli, for example, advertisements, price, products, stores, are created and located in the consumer environments. These stimuli together with limited disposable income, forces consumers to weigh the pros and cons of available alternatives in order to obtain maximum utility from scarce resources. Consequently, consumer behaviour can be analysed as a decision-making process whereby the former is viewed as problem-solving behaviour. This process is not a single activity or step. Rather, consumers need to identify and evaluate choices, explore the results of particular actions, and analyse the consequences of their behaviour within a post-purchase time period. This is imperative since consumers do not just buy objects but solutions to problems. Furthermore, consumer decision-making is influenced by numerous individual and environmental variables. The former encompasses variables that control internal thought processes whilst the latter refers to influences external to the consumer. An understanding of consumer behaviour and the decision-making process is thus, a critical element when designing managerial decisions to affect the frequency of exchanges in order to achieve marketing objectives. Such an analysis enables the marketer to know, serve and influence the consumer.

It is therefore, logical to initially analyse the interrelationship amongst the individual and environmental variables that impact of consumption behaviour, whilst focusing on the

cognitive approach to consumer behaviour. The progression from the conceptual framework of consumer behaviour into the stages of consumer decision-making will emphasize the role of cognitive thinking.

### **3.2 A CONCEPTUAL FRAMEWORK OF CONSUMER BEHAVIOUR**

Consumer behaviour may be defined as "the activities that people engage in when selecting, purchasing, and using products and services so as to satisfy needs and desires" (Wilkie 1990: 12). Such activities incorporate mental and emotional processes as well as physical actions. Consumer behaviour is a product of the impact of numerous individual and environmental influencing variables, inter alia, cognition, affect and marketing strategies. The interrelationship between these variables can be logically represented in models of buyer behaviour, since they establish a conceptual framework within which components of buying behaviour can be visually depicted.

#### **3.2.1 MODELS OF BUYING BEHAVIOUR**

A model represents "a theoretical construction of phenomena which are thought to be interrelated and significant in influencing the outcome of a specific situational problem; in this particular instance, the buying process" (Chisnall 1975: 210). Models are "simplified replicas of buying decision-making phenomena" and endeavour to clarify relationships between inputs into the buying situation (duPlessis, Rousseau & Blem 1990: 18). Essentially, economic models of buying behaviour are extended flow charts of behavioural processes.

##### **3.2.1.1 ECONOMETRIC MODELS**

The aim of economic and market analyses is to identify and describe the influences underlying market activities. Such an understanding has predictive value in terms of future trends. Furthermore, the success of any marketing programme is dependent upon the deeper knowledge of the behaviour of consumers during the various stages of buying. In marketing, models of buying behaviour, differing in complexity and focus, have been developed with an aim to construct profiles of customers which will include a comprehensive analysis of the buying situation.

## ■ THE ECONOMIC THEORY OF INDIVIDUAL CHOICE - THE CONSUMER AS A RANDOM UTILITY MAXIMIZER

A simple behavioural postulate on consumer choice is that "when faced with a set of options, consumers choose that option that is thought to deliver the highest level of perceived gratification or utility" (Robertson & Kassarian 1991: 88).

When faced with a choice, an individual views each option as a bundle of attributes. He/she then forms an overall assessment of each alternative such that the chosen one has the highest overall evaluation. Estimates of the probability that each option will be chosen is depicted in random utility models.

Let  $X_i$  be a vector of the measured attributes of choice option  $i$ , and let  $V_i(X_i)$  be a preference mapping which links the vector  $X_i$  to a summary indicator of the overall utility or value of  $i$ .  $V$  is assumed to be a linear combination of the set of observed attributes of  $i$ :

$$V_i(X_i) = b_i + \sum_{k=1}^m b_k x_{ik} \quad (1.1)$$

where  $x_{ik}$  is the observed value of option  $i$  on attribute  $k$  (such as price),  $k = 1, \dots, m$ , and  $b_i$  and  $b_k$ ,  $k = 1, \dots, m$  are scaling parameters. Expression (1.1) presumes an intercept  $b_i$  which is unique to each alternative, and a set of generic attribute effects  $b_k$ ,  $k = 1, \dots, m$ . The alternative-specific intercept is designed to capture the systematic constant component in the attractiveness of option  $i$  not captured by the attribute vector  $X_i$ . Expression (1.1) may be expanded to include higher-order cross products among attributes.

Presume that  $V(X_i)$  is an imperfect indicator of the true utility an individual assigns to option  $i$  at the time of choice,  $U_i$ . Specifically,  $U_i$  is assumed to be linked to  $V(X_i)$  through an independent disturbance  $\epsilon_i$ , such that:

$$U_i = V_i(X_i) + \epsilon_i, \quad (1.2)$$

where  $\epsilon_i$  reflects the observed tastes of the individual with respect to  $i$ .  $V_i(X_i)$  is called the strict utility of  $i$ , while  $\epsilon_i$  is the random utility (McFadden 1981: 230).

Given a choice Set  $A$ , the likelihood that a decision maker will choose option  $i$  from this set  $[\Pr(i/A)]$  is thus the likelihood that the latent variable  $U_i$  is the highest at the time of choice.

Hence,

$$\Pr(i/A) = \Pr(U_i > U_j \ \forall j \in A, j \neq i)$$

This expression may be rewritten in terms of (1.1) as:-

$$\Pr(i/A) = \Pr([V_i(X_i) + \epsilon_i] > [V_j(X_j) + \epsilon_j] \ \forall j \in A, j \neq i)$$

or, more conveniently,

$$\Pr(i/A) = \Pr([\epsilon_j < V_i(X_i) - V_j(X_j) + \epsilon_i] \ \forall j \in A, j \neq i)$$

The probability that  $i$  is selected is then obtained by making an assumption about the form of the distribution of the random variables  $\epsilon_i$  and  $\epsilon_j$ , and integrating (1.3) over a continuum of possible values of  $\epsilon_i$ .

Specifically,

$$\Pr(i/A) =$$

$$\int_{-\infty}^{+\infty} \Pr(\epsilon_i = \epsilon) \Pr(\epsilon_j < V_i(X_i) - V_j(X_j) + \epsilon) \ \forall j \in A, j \neq i \quad (1.4)$$

where  $\epsilon$  is a constant of integration.

The underlying assumption made about  $\epsilon_i$  and  $\epsilon_j$  is that they have independently and identically distributed Type I Extreme Value distributions, that is:-

$$\Pr(\epsilon_i \leq \epsilon) = e^{-\epsilon}$$

Under this assumption, integration of (1.4) yields the closed-form probability model,

$$\Pr(i/A) = \frac{e^{V(X_i)}}{\sum_{j \in A} e^{V(X_j)}}$$

which is the well-known multinomial logit model of choice (Robertson & Kassarian 1991: 88 - 90).

Hence, the multinomial logit model believes that individuals make choices by considering all relevant information available to the decision maker at the time of choice. Furthermore, "the individual chooses that option which maximizes some utility function defined across this information set" (Meyer & Khan 1991: 87).

Contrary to the economic models, the contemporary models of consumer behaviour placed greater emphasis on the cognitive aspects of buying behaviour prior to, during and after the purchase decision.

Microeconomic theories like the classical principle of utility or satisfaction, which asserts that the consumer acts rationally with complete knowledge of available alternatives with the aim of maximum overall satisfaction, perceives the consumer as just an 'economic man'. Such an approach fails to take cognisance of the many influences other than those incorporated into the economic theory. A more elaborate analysis that takes cognisance of incomplete knowledge, the quest for emotional and social satisfaction, the constraints of time, effort, and the degree of knowledge and commitment to the purchases, that impact on real buying situations, is necessary.

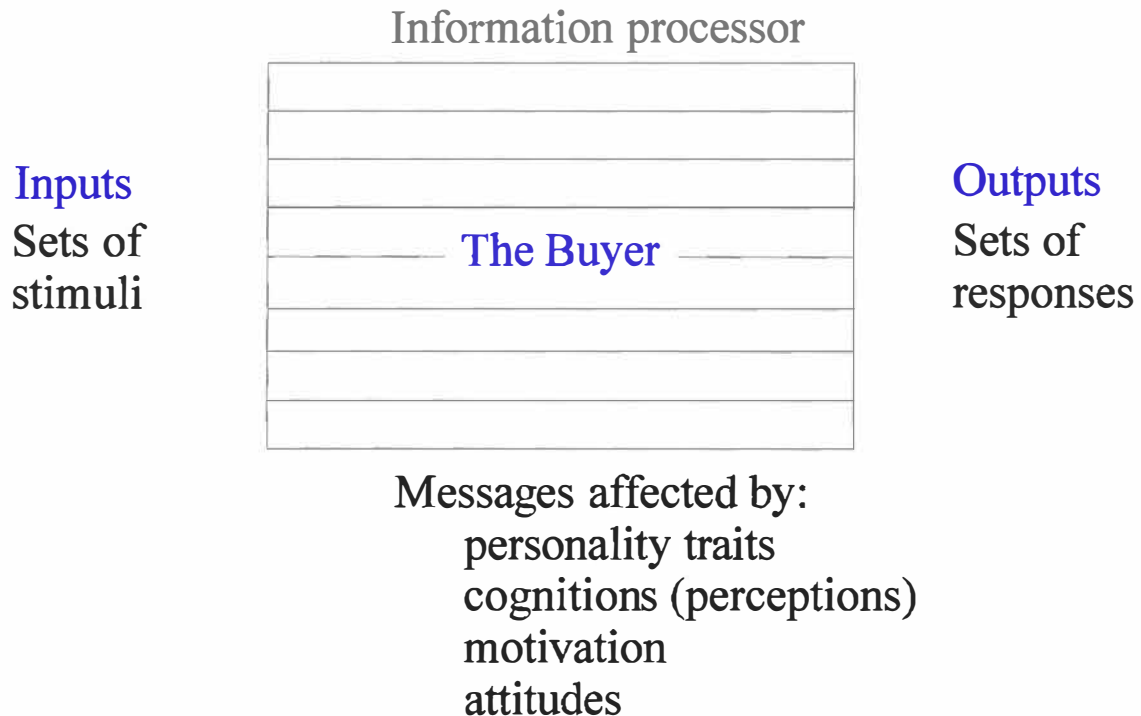
### 3.2.1.2 PSYCHOLOGICAL MODELS

Psychological (contemporary) models of buying behaviour are also extended flow charts of behavioural processes.

## ■ THE 'BLACK BOX' MODEL OF BUYING BEHAVIOUR

The 'Black box' model of buying behaviour (Figure 3.1) "is based on the psychological approach which projects the human being as the processor in a system with outputs (behaviour) which are the results of inputs" (Chisnall 1975: 211).

**FIGURE 3.1**  
**THE 'BLACK BOX' MODEL OF BUYING BEHAVIOUR**



Chisnall, P.M. 1975. **Marketing: A Behavioural Analysis**. London: McGraw-Hill Book Company (UK) Limited. p. 211.

This elementary model has led to the development of a more sophisticated study of the many variables in the decision process. Theoretical models of buying behaviour, that "endeavour to formalise the influences which affect purchase decisions and to show the extent of their interaction", have been developed (Chisnall 1975: 216). The principle and most sophisticated models include the Howard-Sheth Model, the Engel-Kollat-Blackwell (EKB) Model and the Sheth-Newman-Gross Model.

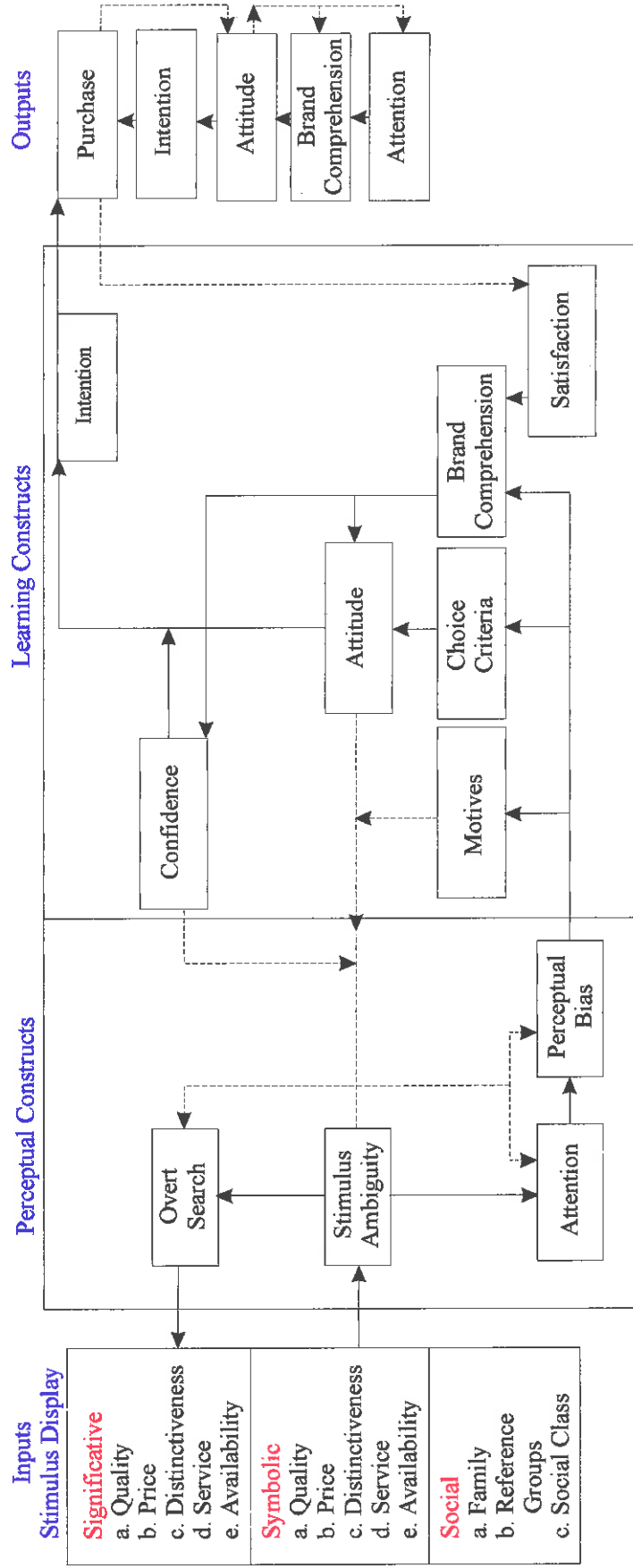


- **THE HOWARD-SHETH MODEL**

The Howard-Sheth Model (Figure 3.2) is theoretically founded on the stimulus-response theory, that is, "the way in which decision-making is provoked by stimuli, and repeated decision-making and choice-exercising on the part of the buyer leads to increased knowledge and experience" (duPlessis et al. 1990: 21).

FIGURE 3.2

# HOWARD-SHETH MODEL OF CONSUMER BEHAVIOUR



Solid lines indicate flow of information; dashed lines, feedback effects.  
A simplified description of the theory of higher behaviour.

From Figure 3.2 it is evident that the Howard-Sheth theory of buyer behaviour is "a sophisticated integration of the various social, psychological, and marketing influences on consumer choice into a coherent sequence of information processing" (Foxall 1990: 10).

Howard and Sheth identify three stages in buying behaviour, namely, extended, limited and routinised problem-solving behaviour. These three stages occur with four principal variables in the model which relate to inputs, outputs, perceptual and learning constructs. The input variables consist of three distinctive stimuli which include product characteristics, symbolic and social stimuli. Outputs refer to the variety of responses which the buyer is likely to display, progressing from attention to a stimulus to the buying action. Perceptual learning constructs depict the crux of the model and are concerned with how the consumer receives and processes the information obtained from the input stimuli and other parts of the model. Selective perception arises "when a consumer distorts or transforms the acquired information to fit the individual's set needs and experiences" (duPlessis et al. 1990: 23). Learning constructs which are the ingredients to the realisation of outputs include the objectives of the buyer, information on brand options, evaluative criteria, satisfaction, brand preference and confidence and buying intentions. The model explains how changes in these variables occur and are hence, endogenous variables. Exogenous variables are "those that influence the behaviour of buyers but for which the model offers no explanation as to how they come into existence or change" (Horton 1984: 41).

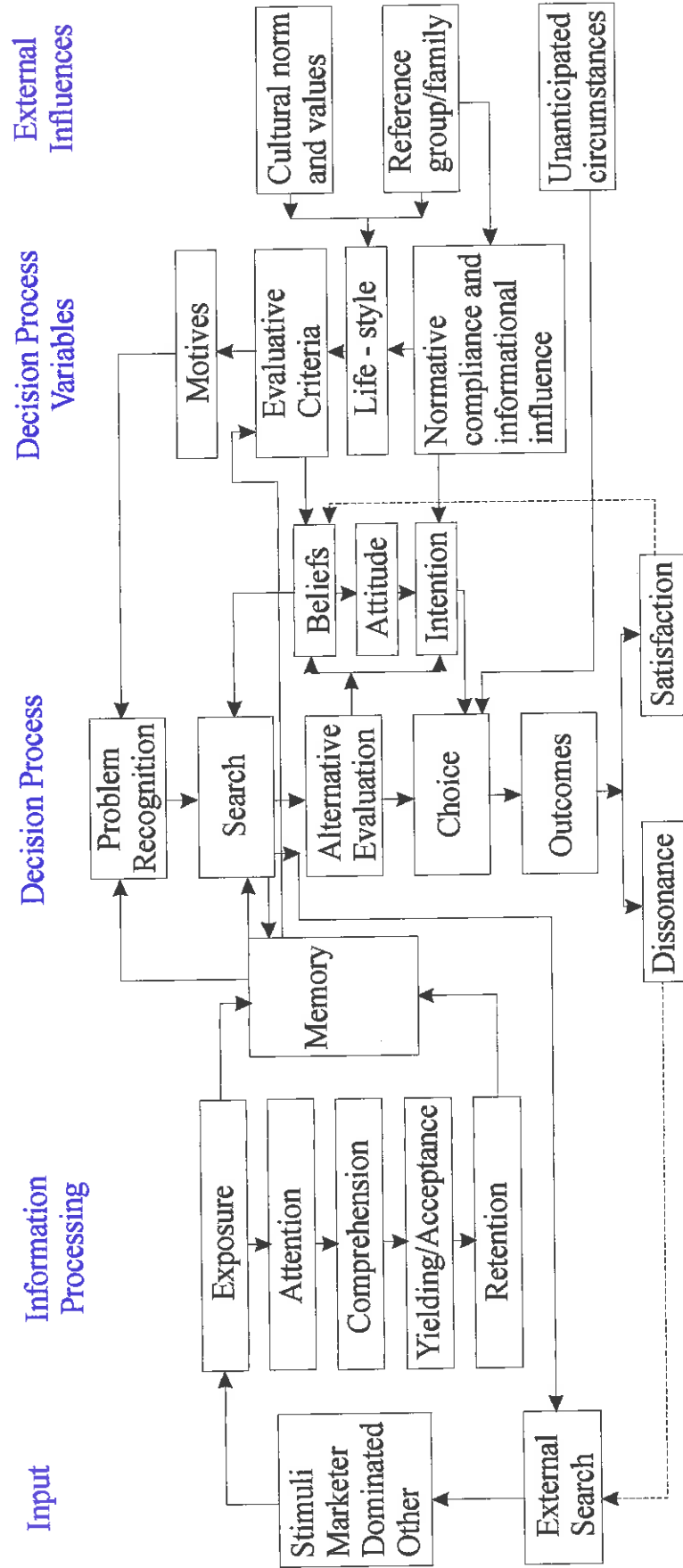
The Howard-Sheth model has attracted considerable interest because it embraces the principle determinants of behaviour, namely, "perception, communication, learning and attitudes" (Williams 1989: 63). However, this model has been criticized for being too complex to be of practical value. In addition, the model does not include a situation in which a buyer has to make a decision between two unrelated alternatives. Cognisance is also not given to the decision-making process.

- **THE ENGEL-KOLLAT-BLACKWELL (EKB) MODEL**

The Engel-Kollat-Blackwell (EKB) Model (Figure 3.3) clearly distinguishes between high and low involvement in consumer decision-making. Involvement refers to "the personal relevance or importance that a consumer perceives in a given purchase situation" (Loudon & Della Bitta 1984: 34). Low involvement incorporates a lack of high personal relevance, low perceived risk, "a minimal relationship between the results of a consumer's self-image" and a low degree of anxiety about the results of the purchase (duPlessis et al. 1990: 25). Decisions are made on the basis of existing information levels on products. High involvement however, refers to "decisions which have a great deal of relevance and pertinence for the individual" (duPlessis et al. 1994: 360). Consumers deliberately search for information and evaluate alternatives carefully. High involvement leads to extended problem solving, ranging from problem awareness to post-purchase evaluation.

FIGURE 3.3

THE ENGEL-BLACKWELL MODEL OF CONSUMER BEHAVIOUR



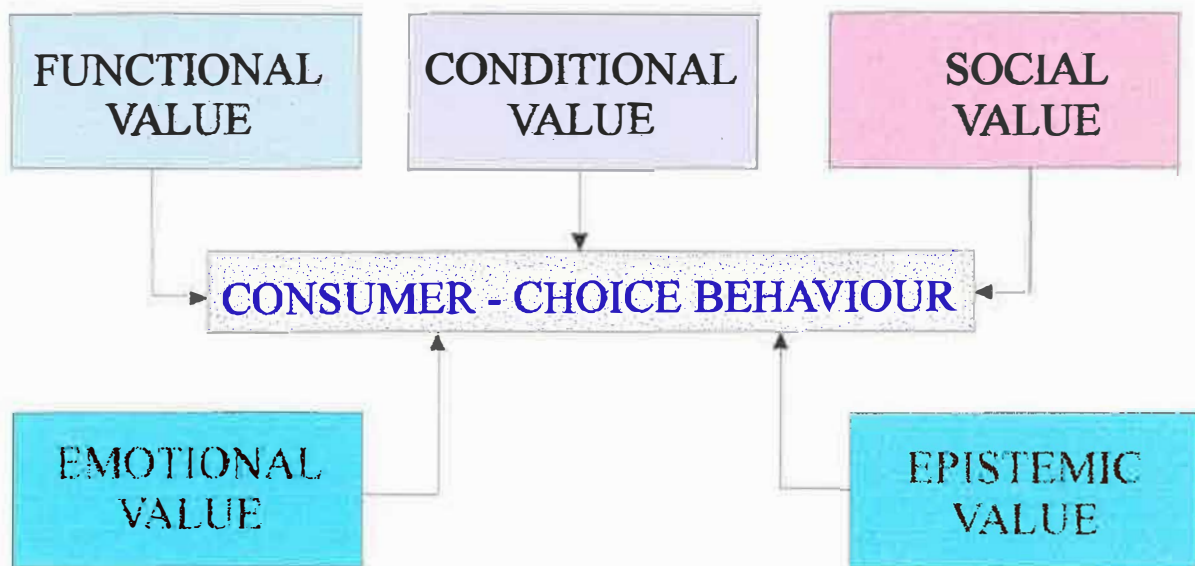
du Plessis, P.J., Rousseau, G.G. & Blem, N.J. 1990. **Consumer Behaviour: A South African Perspective.** Halfway House: Southern Book Publishers (Pty) Ltd. p. 26.

The Engel and Blackwell model consists of five dimensions, namely, input stimuli, information processing, the decision-making process, the decision-making process variables and external influences. The crux of the model is the decision-making process, ranging from problem recognition to post-purchase behaviour, and how variables in the other components of the model influence or aid the process. Engel and Blackwell include various internal and external influences which may significantly affect the consumer's decision-making process. This model also incorporates the possibility of dissonance; the after-purchase doubt concerning the advantages of the product in comparison to the unchosen alternatives. Hence, the model is conceptual in nature and "manages to identify and organise many influential factors and represents the interrelationships between them logically" (duPlessis et al. 1990: 29). In comparison to the Howard-Sheth model, the Engel-Blackwell model emphatically expresses the relationship between ideas, attitudes, intentions and behaviour. Furthermore, unlike in the latter, the former does not include the concept of dissonance/dissatisfaction. In addition, the Engel-Blackwell model also places more emphasis "upon processes between attitude formation and the development of an intention to purchase" (Zaltman & Wallendorf 1983: 637). However, in these models interactions among the multitude of variables need to be clearly stated and "the method(s) of measurement of many variables have not been clearly identified" (Zaltman & Wallendorf 1983: 637).

- **THE SHETH-NEWMAN-GROSS MODEL OF CONSUMPTION VALUES**

The Sheth-Newman-Gross Model of Consumption Values (Figure 3.4) reflects why consumers make the choices they do. It has fewer component parts than the aforementioned models and emphasizes a "series of specific measurement approaches to secure the necessary consumer input required to test and apply the model" (Schiffman & Kanuk 1991: 585).

**FIGURE 3.4**  
**THE FIVE VALUES INFLUENCING CONSUMER CHOICE**  
**BEHAVIOUR**



Schiffman, L.G. & Kanuk, L.L. 1991. **Consumer Behaviour**. Fourth Edition.  
Engelwood Cliffs, New Jersey: Prentice-Hall, Inc. p. 586.

The model focuses on evaluating consumption related values that reflect why consumers:-

- Choose to buy or not to buy a particular product.
- Choose one product type over another.
- Choose one brand over another.

The Sheth-Newman-Gross Model is rooted in three central propositions:-

- "Consumer choice is a function of a small number of consumption values.
- Specific consumption values make differential contributions in any given choice situation.
- Different consumption values are independent" (Schiffman & Kanuk 1991: 586).

Five consumption values depict the core of the model, namely, functional value, social value, emotional values, epistemic value and conditional value (Figure 2.4). The **functional value** of a consumer's choice is "the perceived functional, utilitarian, or physical performance utility received from the choice's attributes" (Schiffman & Kanuk 1991: 586). It relates to the consumer-related attributes of reliability, durability and price. The perceived utility derived because of the association between one or more specific social groups and a consumer's choice is referred to as **social value**. It incorporates conspicuous goods and services that are socially shared. A choice acquires **emotional value** when associated with particular feelings or when it initiates or perpetuates these feelings. The **epistemic value** of a choice is "the perceived utility that comes from the choice's ability to foster curiosity, provide novelty, and/or satisfy a desire for knowledge" (Schiffman & Kanuk 1991: 587). The perceived utility acquired by a choice as a product of a specific situation or circumstance facing the consumer refers to **conditional values**, for example, products associated with time, like coffee at breakfast.

The model proposes that consumer choice behaviour may be the result of any or all of the five consumption values. This model focusses not only on the conceptual composition but also how the five component values may be measured in the case of different consumer-choice situations. It is amenable to real world testing and application and is thus, of significant value to marketing decision-makers interested in understanding and segmenting marketers.

All the models encompass the variables involved in decision-making, provides systematic ways of explaining buyer behaviour and supplies the marketer with a useful framework for understanding buyer behaviour. The numerous variables included in the models emphasize that consumer behaviour may be viewed as an interactive function of the environment, behaviour, cognition and marketing strategies.

### 3.2.2 ENVIRONMENT

Environment refers to "the complex of physical and social stimuli in the external world of consumers" (Peter & Olson 1987: 21). Cognisance needs to be given to environmental forces when developing theories of consumer behaviour as well as marketing strategies. This



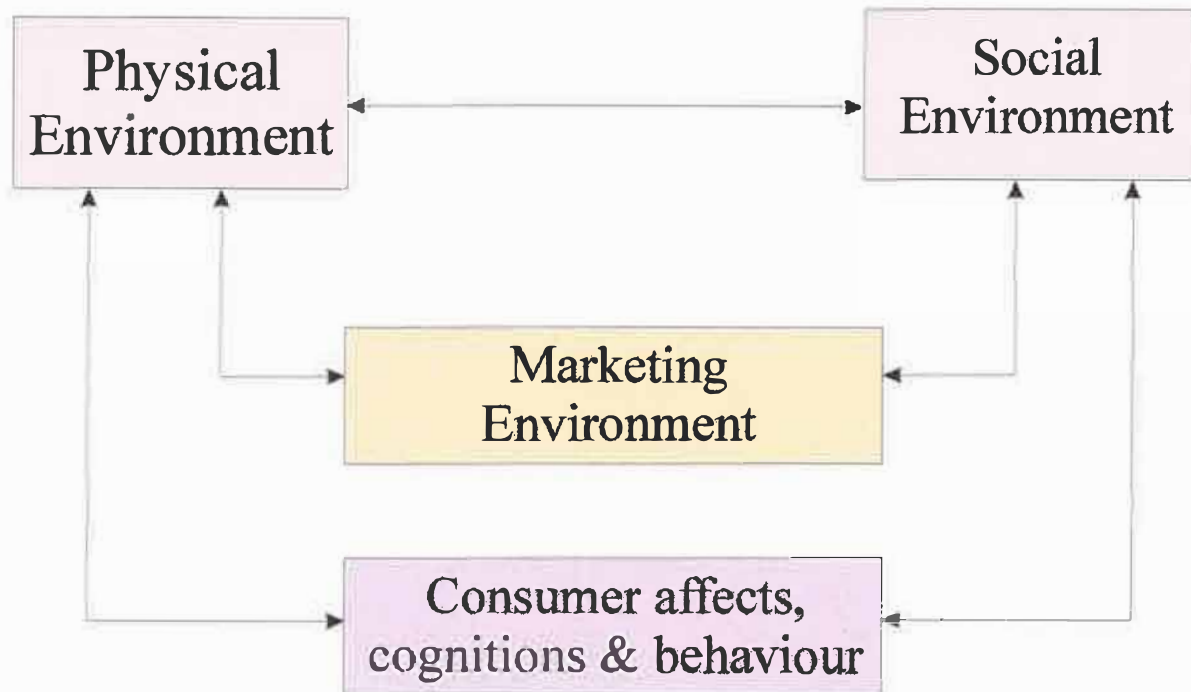
is imperative since the social, physical and marketing environments influence consumer behaviour. Three different levels of environmental analysis exist:-

- **The complete environment** refers to "the total complex of sensory stimuli available to the consumer" (Peter & Olson 1987: 382). However, consumers screen out many environmental stimuli.
- **The perceived environment** is that which is interpreted by a specific consumer, which will vary from one to another due to differences in values and backgrounds. Each consumer reacts to, responds to and acts upon the environment as he/she perceives it.
- **The consensual environment** is the view of the environment as agreed upon by a group with similar backgrounds and values. This school of thought believes that environmental factors "can only be perceived and interpreted through sense impressions and previous learning" and hence, knowledge of the environment is not objective (Peter & Olson 1987: 382). It is immaterial how the marketing manager perceives the product but how the consumer recognises its superior characteristics.

#### 3.2.2.1 MAJOR TYPES OF ENVIRONMENTAL INFLUENCES

There exists a reciprocal interaction between the social, physical and marketing environments and consumer cognitions and behaviour (Figure 3.5).

**FIGURE 3.5**  
**CATEGORIES OF ENVIRONMENTAL INFLUENCE**



Peter, J.P. & Olson, J.C. 1987. **Consumer Behaviour: Marketing Strategy**

**Perspectives.** Homewood: Illinois, IRWIN. p. 384.

These three categories of environmental influences mutually impact on each other and on consumer cognitions and behaviour.

### ■ THE SOCIAL ENVIRONMENT

The social environment incorporates all human activities and interactions, be it active or passive involvement. "People are the products of their community: as members of a particular community they accept and assimilate its language, its values, its faith, expectations, laws and customs. This culture, the sum total of the way of life of a group of people influences the individual's way of life" (Van der Walt, Strydom, Marx and Jooste 1996: 61). Much of a consumer's knowledge and opinions about products, services, stores, pricing and advertising are strongly influenced by the opinions of other people like family and peer groups. Thus, consumption cannot be explained entirely in

economic terms since cognisance needs to be given to the impact of culture and social change. Social influences on consumer behaviour include culture, subculture, social class, reference groups and family.

## ■ THE PHYSICAL ENVIRONMENT

The physical environment is "the collection of nonhuman elements that comprises the field in which consumer behaviour occurs" (Peter & Olson 1987: 388). The physical environment comprises of spatial elements, for example, cities, buildings, stores, lighting, and nonspatial elements, for example, temperature, humidity, noise level, weather and time. Environmental psychology is the study of the impact of these variables on cognitions and behaviour. These elements are important in designing retail stores since they affect behaviour.

## ■ THE MARKETING ENVIRONMENT

The marketing environment includes all stimuli and situations that affect consumer cognitions and behaviours, either directly or indirectly. It is "the sum total of the factors or variables that potentially affect the marketing of an enterprises' product or service" (Marx & Van Der Walt 1993: 35). The first component of the total marketing environment is the micro-environment or the internal which comprises of the enterprise itself, that is, the enterprises' mission and objectives, its management structure, its resources and its culture. The second component is the market environment immediately encapsulating the micro-environment. The key variables in this environment include consumers, competitors, intermediaries and suppliers. Hence the marketing environment includes elements from the social environment, for example, customer/salesperson interactions as well as the physical environment, for example, stores, products and advertisements. Hence, marketing stimuli are a large and powerful part of the social and physical environment. External to both the organisation and the market environment is the macro-environment which consists of six distinct sub-environments:-

- The **technological environment** responsible for innovation;
- The **economic environment** relating to inflation, recessions, exchange rates, and monetary and fiscal policy that influence the profitability of the enterprise and the prosperity of its community;

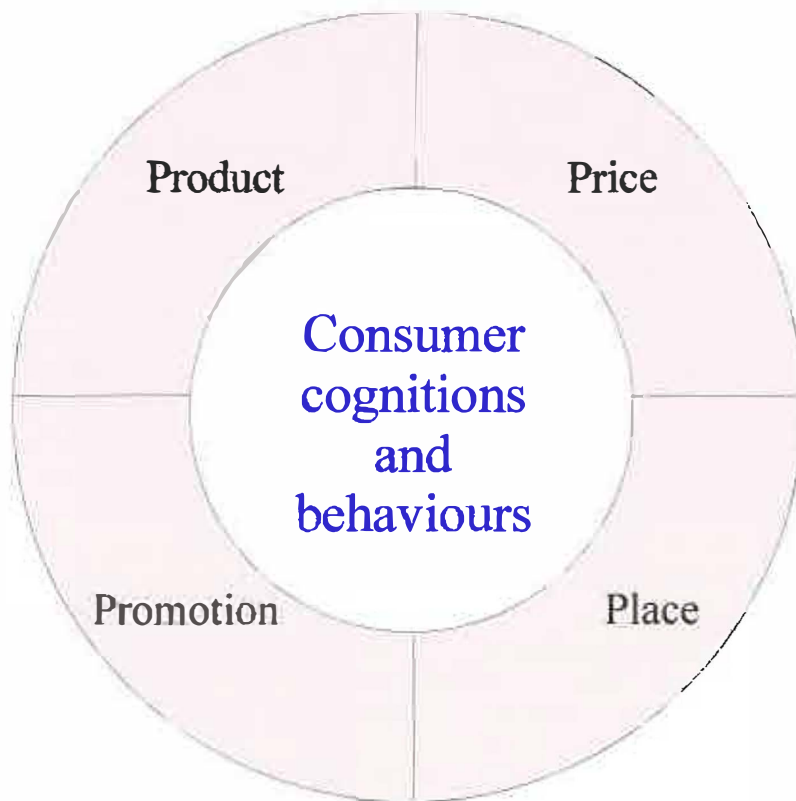
- The **social environment** which relates to consumer lifestyles, habits and values formed by culture;
- The **physical environment** which consists of natural resources and man-made improvements;
- The **institutional environment** refers to the government with its political involvement and legislation;
- The **international environment** relates to local and foreign political trends and activities that influence organisations and the market environment (Van der Walt et al. 1996: 52 - 53).

The marketing environment includes all situations in which consumer cognitions and behaviours are affected by marketing stimuli:-

- **The information environment** includes information that is available to consumers via their senses as well as that which consumers share with others.
- **The shopping environment** includes "situations in which the consumer engages in the two behaviours of store contact and product contact, as well as the two cognitive processes that occur" (Peter & Olson 1987: 393).
- **The purchasing environment** refers to the stimuli and situations involved in an actual exchange of money for products and services.
- **The consumption environment** concerns the stimuli and situations involving the actual use and disposal of products and hence relates to consumption-related behaviours and the relevant cognitive processes that occur.

The major environmental stimuli that marketing managers use to affect consumer cognitions and behaviours include the marketing mix, namely, product, promotion, price and place (Figure 3.6).

**FIGURE 3.6**  
**DIRECT MARKETING INFLUENCES ON CONSUMER COGNITIONS AND**  
**BEHAVIOUR**



Peter, J.P. & Olson, J.C. 1987. **Consumer Behaviour: Marketing Strategy Perspectives**. Homewood: Illinois, IRWIN. p. 397.

**Products and services** must be placed in the consumer's environment so that they may be purchased, used and repurchased. Product decisions refer to "all aspects of the design, materials, and quality control that are built into a particular product or service offering" (Wilkie 1990: 32). Product stimuli include the product itself, packaging, labels, brand name, colour, size, shape, texture, smell and weight.

**Promotion** consists of advertising, personal selling, sales promotion and publicity. It concerns "placing appropriate information about products and services, their prices, and places where they can be purchased, in the consumer's environment" (Peter & Olson 1987: 399). It is the chief communication link between the company and its customers. Promotion

is also used to create images of products and services. It is a powerful tool for achieving marketing objectives since it can be used to change inappropriate consumer cognitions and maintain appropriate cognitions and behaviours.

**Price** is an intangible element of the marketing mix and an important variable for positioning products because consumer perceptions of product and service quality are often influenced by price. Price perception may differ in terms of the individual's purchasing power and the value he/she places on money relative to the product or service.

**Place** decisions basically mean that products and services should be provided where they are most likely to favourably affect consumer cognitions and behaviours. It may be concluded that marketing strategies should not only be adopted to changing environmental conditions, but also play an important role in creating the environment" (Peter & Olson 1987: 399). It is beneficial to the development of marketing strategy to analyse the relationship between the environment and behaviour.

### 3.2.3 **BEHAVIOUR**

Behaviour refers to actions of consumers that can be directly observed. The behaviour approach to consumer behaviour, as opposed to the cognitive, is based on applied behaviour analysis and prefers observing behaviour that can be measured somewhat directly. Applied behaviour analysis research starts with "identifying a behaviour problem and focuses on methods to change the behaviour" (Peter & Olson 1987: 285). Behaviourists largely argue that the environment controls behaviour and since marketing stimuli is an important part of the environment, it also influences behaviour. Many marketing strategies use conditioning and modeling when analysing consumer behaviour.

#### 3.2.3.1 **RESPONDENT CONDITIONING**

Respondent conditioning is "a process through which a previously neutral stimulus, by being paired with an unconditioned stimulus, comes to elicit a response very similar to the response originally elicited by the unconditioned stimulus" (Peter & Olson 1987: 307). In this process:-

- Respondent conditioning can be accomplished not only with unconditioned stimuli but also with previously conditioned stimuli.
- Respondent behaviours are controlled by stimuli that occur before the behaviour.
- Respondent behaviours are assumed to be glandular responses that are involuntary and not consciously controlled.
- Emotions follow the principles of respondent conditioning (Peter & Olson 1987: 307).

Respondent conditioning can account for many of the responses that environmental stimuli elicit from individuals and thus has important implications for marketing and consumer behaviour. Such conditioning can influence an individual to work to obtain, to avoid or be indifferent to a wide variety of products and services. For example, when an external stimulus that elicits positive emotions is associated with a product, it may trigger behaviour and closer contact with the product leading to attending behaviour.

Hence, respondent conditioning may account for numerous consumer responses, especially when used in advertising and in-store promotions.

### 3.2.3.2 OPERANT CONDITIONING

Unlike in respondent conditioning, operant conditioning deals with behaviours that are assumed to be under the conscious control of the individual. Furthermore, operant behaviours are emitted because of the consequences that occur after the behaviour.

Processes of operant conditioning, for example, reinforcement schedules, shaping and discriminative stimuli have major implications for designing marketing strategies to influence consumer behaviour.

#### ■ REINFORCEMENT SCHEDULES

An event that has the effect of increasing the probability of the preceding behaviour is called **positive reinforcement**. **Negative reinforcement** enables the frequency of a given behaviour to be increased by removing an aversive stimulus.

When a positive reinforcer is administered at every occurrence of the behaviour, a **continuous reinforcement schedule** is adopted. When every second or nth response is reinforced, a **fixed-ratio schedule** is employed. However, when responses are randomly reinforced, a **variable ratio schedule** is being used. The ratio schedules are necessary since they produce high rates of behaviour and are suitably resistant to extinction, that is, diminishing frequency of response.

## ■ **SHAPING**

Shaping "involves a process of arranging conditions that change the probabilities of certain behaviours not as ends in themselves, but to increase the probabilities of other behaviours" (Peter & Olson 1987: 319). It usually involves the positive reinforcement of successive approximations of the desired behaviour or of actions that must be performed in order to achieve the desired response. Shaping has important implications for marketing and consumer behaviour because given the numerous alternatives available to consumers, the possibility that they will make a particular desired response may be small. Hence, shaping can be used to influence several stages in a purchase sequence.

## ■ **DISCRIMINATIVE STIMULI**

Discrimination is the converse of generalisation. It is "a process where a subject learns to exhibit a response to one stimulus, but avoids making the same response to similar stimuli" (Rice 1995: 138). Discrimination is important because marketers often want consumers to clearly differentiate their products from those of their competitors. Discrimination is generally achieved by highlighting the unique qualities, benefits or features of a product. The simple presence or absence of certain stimuli can serve to change the probabilities of behaviour. These are called discriminative stimuli, for example, store signs, store logos, brand marks.

It can be deduced that operant conditioning can be effectively used to change behaviour and may consequently increase the effectiveness of marketing strategies as well as our understanding of consumer behaviour.



### 3.2.3.3 MODELING

Modeling refers to attempts to change consumers' behaviours by having them observe the actions of other people. **Overt modeling** requires that consumers actually observe the model in person, for example, salesperson demonstrating the use of a product.

Modeling has three uses in marketing:-

- It can be used "to help observers acquire one or more new response patterns that did not previously exist in their behavioural repertoires" (Peter & Olson 1987: 328).
- It can be used to decrease or inhibit undesired behaviours.
- There is response facilitation, whereby the behaviour of others "serves merely as discriminative stimuli for the observer in facilitating the occurrence of previously learned responses" (Peter & Olson 1987: 328).

In **covert modeling** no actual behaviours or consequences are demonstrated. Instead, the individuals are told to imagine observing a model behaving in various situations and receiving particular consequences. Covert modeling "can be as effective as overt modeling in modifying behaviour" (Peter & Olson 1987: 333).

In **verbal modeling** behaviours are not demonstrated and people are not asked to imagine a model performing a behaviour. Rather, subjects are told how others similar to themselves behaved in a particular situation. This process thus sets a social norm that may impact on behaviour. Verbal modeling is easily adopted in personal selling and also contributes to the development of marketing strategies.

Modeling together with respondent and operant conditioning represents an excellent opportunity for increasing the effectiveness of current marketing strategies and for integrating the environment, behaviour and cognition.

### 3.2.4 COGNITION

Cognition broadly refers to "everything that goes on inside consumers' minds including rational, emotional and subconscious processes. It relates to "the set, cluster or constellation of knowledge, attitudes, and perceptual states that make up a particular individual's total and

integrated belief system" (Markin 1974: 110). Cognitive processing concerns "how external information in the environment is transformed into meanings or patterns of thought and how these meanings are combined to form judgements about behaviour" (Peter & Olson 1987: 45). An understanding of consumer cognitions enhances the marketers' knowledge of the cognitive processes involved in, interalia, consumer decision-making during purchase, disposing of products, watching advertisements, talking to salespersons. The intensity of consumers' cognitive processing varies widely across different consumers, environments, products and purchase situations. Hence, an understanding of consumers' cognitions and information processing is necessary for marketers when developing, selecting, implementing and evaluating marketing strategies.

### **3.2.5 MARKETING STRATEGIES**

Marketing strategies are part of the environment and consist of numerous physical and social stimuli, interalia, products and services, promotional materials, retail stores and price information. "Implementing marketing strategies involves placing these marketing stimuli in consumers' environments in order to affect their cognitions and behaviours" (Peter & Olson 1987: 26). Marketing strategy can affect each of the other elements, namely, cognition, behaviour and the environment, and also can be affected by each of these dimensions. Hence there exists a reciprocal, dynamic relationship between these three elements. The interaction amongst these dimensions is best depicted by the consumer decision-making process.

### **3.3 THE CONSUMER DECISION-MAKING PROCESS**

The consumer is continuously making decisions regarding what products and services to consume. There are two basic reasons why individuals must make decisions. Firstly, they have to satisfy their needs and desires. Secondly, in certain instances more than one choice or alternative will satisfy the individual's needs. Decisions have to be made and consumer decision-making determines what goods and services people will want, buy, own and use.

It is evident that consumer behaviour is triggered by needs. Consumer decision-making directs needs "by evaluating and selecting the actions that will satisfy them" (McNeal 1982: 161). The process of consumer decision-making, unlike consumer actions, is unobservable.

Consumer decision-making is a cognitive process, "it consists of those mental activities that determine what is actually done to remove a tension state caused by a need" (McNeal 1982: 161).

Primarily, consumer decision-making is analogous to problem-solving. A problem arises when the individual seeks a goal or end state and when uncertainty prevails with regards to the best solution to the existing problem. The unsatisfied want is the problem and the solution is the act of purchase. Consequently, "a decision or a solution is an effective response or course of action that provides a desired result to a currently perceived behavioural state of the organism" (Markin 1974: 491). This implies that problem-solving is associated with the perceptual state of the consumer. Perception is "the entire process by which an individual becomes aware of the environment and interprets it so that it will fit into his or her own frame of reference" (Walters & Bergiel 1989: 333). A problem occurs only when the consumer perceives a difference between his current state of affairs and his desired state of affairs. The consumer chooses a course of action that will achieve this desired state. However, this is not a simple cause-and-effect process but can become rather complex.

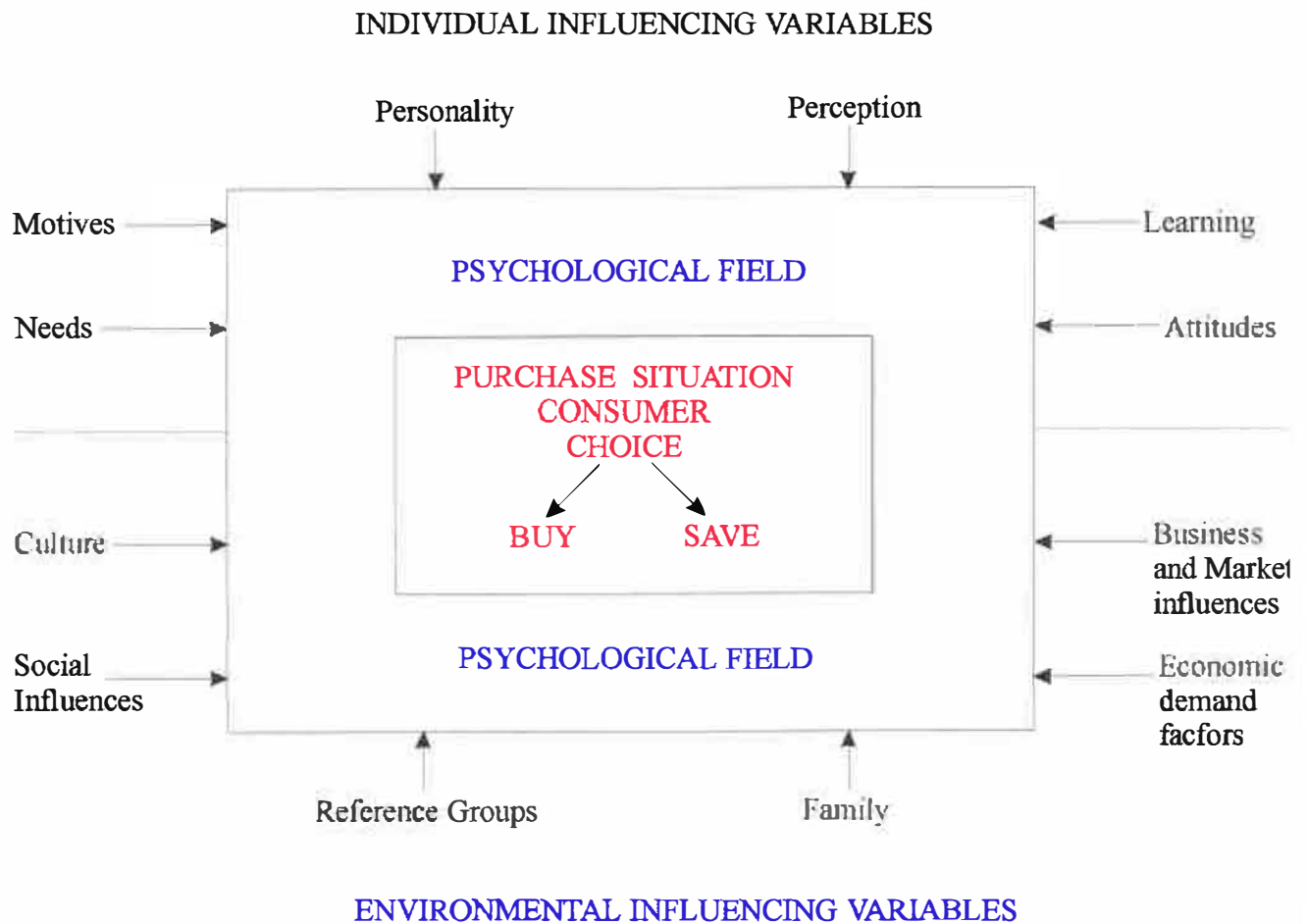
The consumer decision-making process "is a sequential and reiterative series of psychological and physical activities" ranging from problem recognition to post-purchase behaviour (Markin 1974: 503). Since the stages in the process are not necessarily linear, the consumer can launch into any stage or activity in the process and follow any order or even skip certain activities. However, the decision of the consumer is dependent upon various influencing variables that are operative at each of the conceptualized stages.

### 3.3.1 CONSUMER DECISION-MAKING: INFLUENCING VARIABLES

When focusing on the decision-making process of individual consumers, it is apparent that the basic decision made by the individual is whether to spend or to save. The outcome of the consumer's decision will depend on numerous influencing variables. This can be divided into two broad categories, namely, internal or individual influencing variables and external or environmental influencing variables (Figure 3.7).

**FIGURE 3.7**

**CONSUMER DECISION-MAKING: INFLUENCING VARIABLES**



du Plessis, P.J., Rousseau, G.G. & Blem, N.H. 1994. Buyer Behaviour: Strategic Marketing Applications. Halfway House: Southern Book Publishers (Pty) Ltd. p. 45.

### 3.3.1.1 INDIVIDUAL INFLUENCING VARIABLES

The following individual influencing variables control internal thought processes:

**Needs** are "forces directed to specific goals that can be achieved by purchase behaviour" (du Plessis et al. 1990: 43). McNeal (1982: 26) defines a need as "a lack of something required for optimum life conditions". A distinction can be made between functional, symbolic and experiential needs. **Functional needs** motivate the quest for items that resolve problems related to consumption. **Symbolic needs** are desires for products that satisfy inner needs for enhancement of self, role position, group membership or ego-identification. **Experiential needs** are "desires for products that provide sensory pleasure, variety and/or cognitive stimulation" (Park, Jaworski & MacInnis 1986: 136).

Motivation is "the driving force within an individual which impels action in order to attain a certain objective. This driving force is the result of an unfulfilled need" (Van der Walt et al. 1996: 78). **Motives** are inner states "that energize, direct and shape a particular pattern of purchase and consumption behaviour" (Hawkins, Best & Coney 1986: 32). Motives are important in influencing various aspects of consumer behaviour since it "is a construct representing an unobservable inner force that stimulates and compels a behavioural response and provides specific direction to that response" (Hawkins, Best & Coney 1986: 179).

**Personality** is a "combination of unique individual characteristics or traits which reflect consistent and enduring patterns of behaviour" (du Plessis et al. 1990: 43). Whilst motives direct the individual's behaviour towards his objectives, personality relates to characteristic patterns of behaviour. Personality can be referred to as the "consistent responses to environmental stimuli" (Engel, Blackwell & Miniard 1990: 327). Hence, personality may be defined as "those psychological characteristics of people which both determine and reflect their reaction to environmental influences" (Van der Walt et al. 1996: 82). The personality of an individual provides for orderly and logically related experiences and behaviour. It also relates to the specific patterns of organization that makes the person unique and different from other people. The consistency of responses is derived from the understanding that "personality is based upon rather enduring, inner psychological characteristics" (Engel, Blackwell & Miniard 1990: 328).

**Perception** is the process by which "sensory input" is selected, organized and interpreted into a meaningful and logical picture (McNeal 1982: 141). Perception involves seeing, hearing, feeling, tasting and smelling. These sensory stimuli cause certain sensations which can influence a consumer into purchases or not to buy. The stimuli are transmitted through the senses and conveyed to the brain, where they are interpreted. Reaction to this interpretation is not always based on objective reality since subjective factors play a significant role in perception. "The experiences, values and prejudices of an individual colour his perceptions" (Van der Walt et al. 1996: 80). According to Park, Gardner & Thukral (1988: 401) "the level of perceived knowledge affects the comprehension and use of interrelationship among new pieces of information in subjects' choice-decision task". It also influences the consumers assessment of the importance of old and new information.

**Learning** is "any change in the context or organization of long-term memory" and is thus, the outcome of information processing (Hawkins, Best & Coney 1986: 342). It is the process by which "experience leads to changes in knowledge, attitude and/or behaviour" (Engel, Blackwell & Miniard 1990: 50). The consumer's ability to learn influences consumption behaviour. For example, the individual needs to learn which product attributes relate to which brand, where it can be purchased and how to identify the packaging.

**Attitude** can be defined as "an overall evaluation that enables one to respond in a consistently favourable or unfavourable manner with respect to a given object or alternative" (Engel, Blackwell & Miniard 1990: 46 - 47). Alternatively, it can be stated that an attitude is "the amount of affect for or against some object" (Lastovicka & Bonfield 1982: 59). They are composed of "cognitive (beliefs), affective (feelings), and behavioural (response tendencies) components which tend to be consistent with one another" (Hawkins, Best & Coney 1986: 33). Attitudes are often considered to be "relatively stable and enduring predispositions to behave" (Mitchell & Olson 1981: 318). Attitudes are learned as a result of experience. They influence consumption behaviour patterns since consumers develop attitudes towards products, services, stores and advertising messages. Furthermore, a positive attitude to a product promotes brand loyalty. Consequently, the marketer tries to enhance positive attitudes held by consumers and to change neutral and negative attitudes to encourage purchases.

**Lifestyle** refers to the way of living of individuals or families. It provides descriptions of behaviour and consumption patterns, particularly the manner in which people spend their time and money. Lifestyle is influenced by personality, motives and attitudes. The AIO classification describes lifestyle according to the activities, interests and opinions of consumers (Figure 3.8).

**FIGURE 3.8**  
**LIFESTYLE DIMENSIONS**

ACTIVITIES	INTERESTS	OPINIONS
* Work	* Family	* About the self
* Hobbies	* Home	* Social problems
* Holidays	* Work	* Politics
* Entertainment	* Sport	* Economy
* Purchasing	* Food	* Education
* Sport	* Media	* Products
* Club Membership	* Own performance	* The future

Van der Walt, A., Strydom, J.W., Marx, S. & Jooste, C.J. 1996. **Marketing Management**. Third Edition. Republic of South Africa: Juta & Company, Ltd. p. 83.

#### 3.3.1.2 ENVIRONMENTAL INFLUENCES

There are basically six environmental influences that direct internal thought processes. In consumer behaviour **culture** refers to "the values, ideas, artifacts and other meaningful symbols that help individuals communicate, interpret, and evaluate as members of society" (Engel, Blackwell & Miniard 1990: 40). Culture is one of the most fundamental

determinants of consumer cognitions and behaviours. The cultural values, norms and symbols are created by people and transmitted from one generation to another to ensure survival and influences economic activity. Effective communication can be achieved "only if the theme of the advertising message reflects the cultural norms, values and symbols of the cultural group at which it is directed" (Van der Walt et al. 1996: 84). Within each culture, there is a **subculture** and this refers to "a segment of a culture which has its own distinguishing modes of behaviour" (McNeal 1982: 193). The influence of culture on consumer behaviour occurs mainly through social influence.

**Social influences** include the impact of culture, subculture, social class, reference groups and family influences. Much of a consumer's knowledge in general, "as well as specific opinions about products, services, stores, prices, and even advertising are strongly affected by the opinions of other people, such as family members and peer groups" (Peter & Olson 1987: 384). "People tend to internalize the criteria employed by others," and use them to justify their decisions to themselves (Simonson 1989: 159). A **reference group** is a person or group of people "that significantly influences an individual's behaviour" (Bearden & Etzel 1982: 184). Reference groups can be classified into primary and secondary groups. Whilst the former includes close friends, neighbours and family, the latter refers to student bodies, religious groups, professional associations and guilds. Models (individuals or groups to which a person aspires) are frequently used in advertisements to show potential consumers the type of person who purchases the product and the manner in which the product can be used. the advertising message aims to persuade prospective customers to follow the example set. Bearden & Etzel (1982: 185) indicate a strong relationship between reference group influence and the choice of luxury products but also a rather weak relationship in the case of necessities. Although if the necessity is highly conspicuous, the relationship is stronger.

The **family** is the primary decision-making unit "with a complex and varying pattern of roles and functions" (Engel, Blackwell & Miniard 1990: 42). Each of the family members has an influence on the consumer behaviour of the family such that there exists consultation and joint decision making. Two aspects of importance are the family life cycle and role differentiation. Various family members may assume different roles in the purchase-consumption process. The actual purchaser of an item may not be the ultimate user



or the person who made the decision to purchase.

**Economic demand factors** refer to the consumer's level of purchasing power which is determined by the availability of money or by obstacles faced by the consumer as a result of the lack of funds or ability to obtain credit. Prices, financial risk and opportunities for investment also have an impact on household income.

The **marketing environment** includes "all stimuli and situations that affect consumer cognitions and behaviour, either directly or indirectly" (Peter & Olson 1987: 391). It includes elements from the social environment which involve consumer interactions with salespersons, as well as those from the physical environment, namely, products, stores, advertisements. Marketing "is not only a very important part of the fabric of society, but also plays a significant role in shaping its values, activities, and landscape" (Peter & Olson 1987: 391). Marketing strategies are not only adapted to the changing conditions in the environment, but also play a crucial role in creating it.

#### 3.3.1.3 PURCHASE SITUATIONS

Consumers do not function in isolation but are influenced by numerous individual and environmental factors which can collectively be referred to as the "psychological field" (Engel, Blackwell & Kollat 1978: 17). These variables constantly and simultaneously interact and play a leading role in the final outcome of the consumer's choice.

In any purchasing situation individuals absorb information from their external environment and integrate or combine it with their inner needs, motives, perceptions and attitudes. The choice outcome may also be influenced by the past, the act of recalling and personality factors. The past may operate through "learned patterns of behaviour and ways of thinking, many of which are largely unconscious" (Engel, Blackwell & Kollat 1978: 17 - 18). In addition to past product experiences, anticipating future consequences of behaviour may also influence the choice outcome in a current act of purchase. A purchase situation may be defined "as a typical pattern of choice possibilities within a given context" (du Plessis et al. 1990: 45).

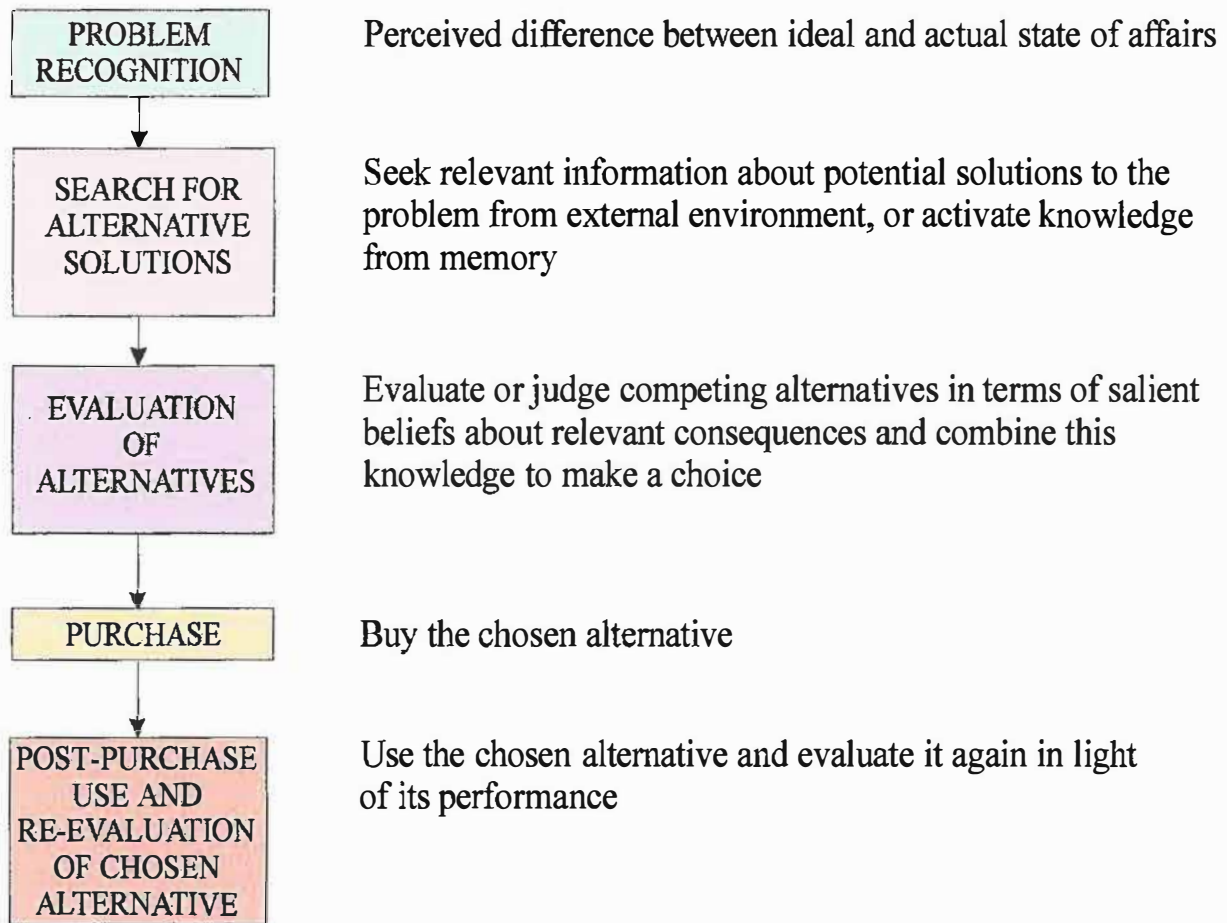
A person is also profoundly influenced by his surrounding environment. The consumer often faces family and cultural influences, peer group pressure, reference groups, economic demands and persuasive advertising. However, despite these and marketing pressures, the decision whether to buy or not in the final purchase situation "is an individual one and a key decision consumers have to make" (du Plessis et al. 1990: 46). By analysing the internal thought process of consumers as they undergo the process of decision-making, marketers can determine the criteria consumers use in purchase decisions, the dominant influencing variables as well as be able to predict future behaviour.

### **3.3.2 THE STAGES IN THE DECISION-MAKING PROCESS**

Five stages in the consumer decision-making process can be conceptualised. They are problem recognition, information search and processing, response/purchase, evaluation of alternatives and post-purchase response (Figure 3.9).

**FIGURE 3.9**

**THE STAGES IN THE DECISION-MAKING PROCESS**



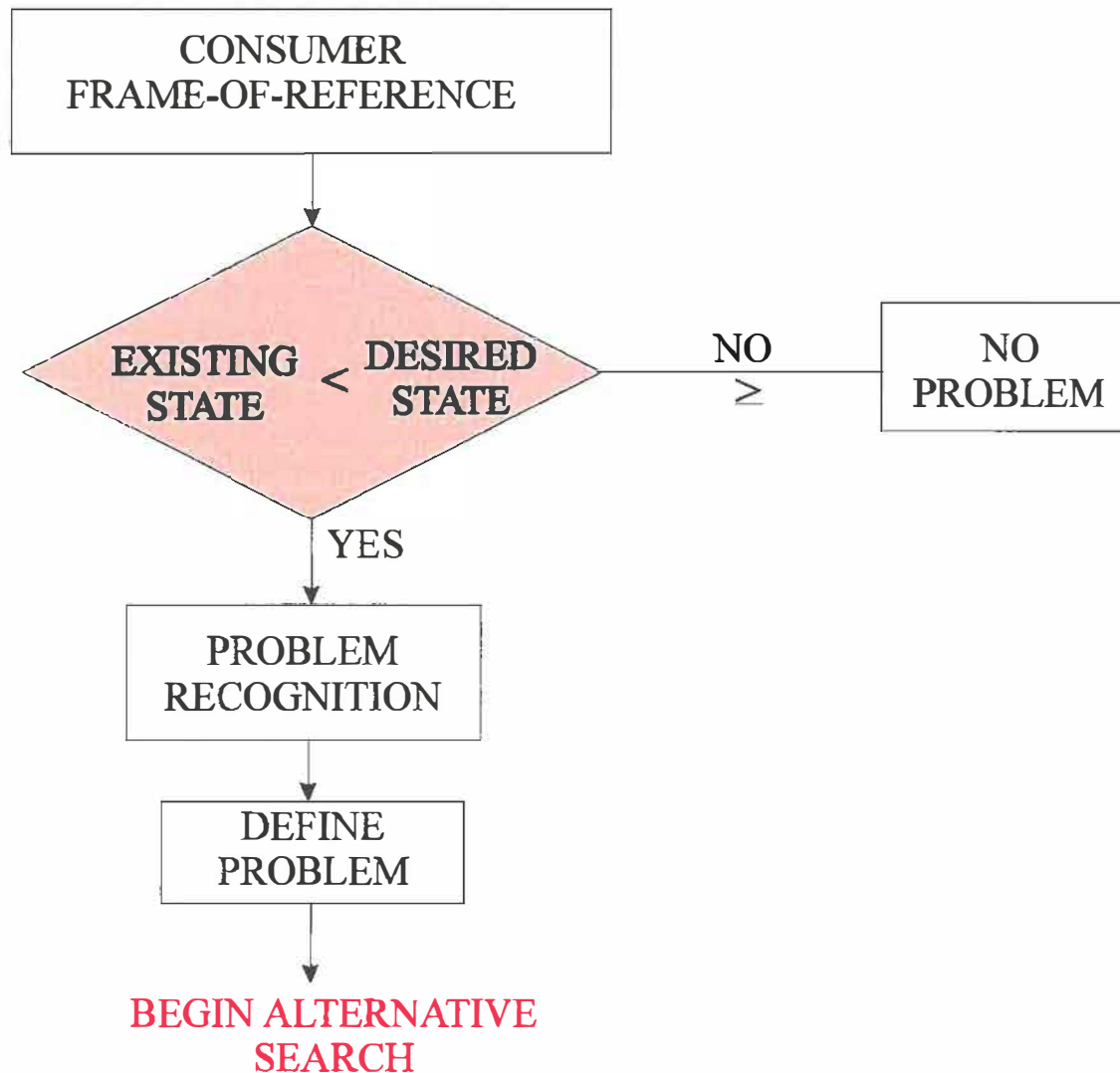
Peter, J.P. & Olson, J.C. 1987. Consumer Behaviour: Marketing Strategy Perspectives. Homewood: Illinois, IRWIN. p. 235.

**3.3.2.1 PROBLEM RECOGNITION**

The first stage in consumer decision-making is the recognition of a problem. A problem only occurs when two or more alternatives exist. A problem arises when the consumers recognise a difference between what they perceive as the current or actual state of affairs and the desired state of affairs (Figure 3.10).

FIGURE 3.10

PROBLEM RECOGNITION BY CONSUMERS



Walters, C.G. & Bergiel, B.J. 1989. Consumer Behaviour: A Decision-Making Approach. Cincinnati" South Western Publishing Company. p. 35.

From Figure 3.10 it is evident, that consumer problem recognition is "an awareness of wanting to change the existing market to conform to the desired state" (Walters & Bergiel 1989: 34). Problem recognition is predominantly a perceptual phenomenon. The incongruity between the prevailing and the desired state of affairs "triggers the onset of a state of

motivated behaviour" (Markin 1974: 509). Problem recognition implies that the consumer develops some felt need or desire where "a tensional state or some disturbance in the consumer's psychological field thus develops, and there arises motives or reasons that impel the consumer to respond" (Markin 1974: 509). With the result, a spectrum of mental activities and attitudinal reactions, which are termed cognitive processes, develop.

Problem recognition can be related to all the stages in the decision-making process, for example, problems associated with whether a product is needed (problem recognition), what product to buy or which brand to select (information search and processing), whether to buy on cash or credit or how to postpone the act of purchase (response), and whether or not to be satisfied with the selection (post-purchase behaviour). Problem recognition "is understanding that there is uncertainty about the goal, its achievement, or the outcome" (Walters & Bergiel 1989: 19).

Problem recognition may also differ, depending on the effect of the numerous influencing factors. Three determinants of need or problem recognition are information stored in memory, individual differences and environmental influences. In addition, "normative social influences can become relevant in those buying situations in which the response of others assumes importance" (Engel, Blackwell & Miniard 1990: 475). Need or problem recognition, especially in complex decision-making, is likely to be multifaceted and complex. Problem recognition is inevitable since the consumer continuously aims to satisfy the demands of his hierarchy of needs.

## ■ **SOURCES OF CONSUMER PROBLEMS**

Most consumer problems arise as a result of internal and external barriers. Du Plessis et al. (1990: 48) refer to these problems as "blocking mechanisms", which implies "the principle objection to entering into the buying process". Of the individual influences, "distorted perceptions and negative attitudes probably have the most direct effect as blocking mechanisms" (du Plessis et al 1990: 48). Apart from these internal barriers, blocking mechanisms can also arise from external barriers. The latter includes the lack of funds and of credit facilities, the unavailability of a product, the need for more

information, uncertainty about the expected outcome due to unforeseen circumstances, the inability to make a decision and the lack of criteria on which to base post-purchase assessment. Most consumer problems arise as a result of assortment inadequacies, new information, expanded desires and expanded or reduced means.

**Assortment inadequacies** implies that the consumer's stock of goods is being depleted and to ensure existence in the future, action is directed towards repurchasing and restocking. Hence, numerous consumer problems are perceived by the recognition of the need for additional goods as a result of normal depletion.

The perception of consumer problems also occurs when **new information** is captured by the psychological field of the consumer. This information "creates cognitions and states of awareness" (Markin 1974: 509). These cognitions make consumers feel the need for products and services and view them as solutions to their problems.

Human beings are continuously driven by their **desire to progress** and improve their standard of living. Individuals' soaring level of aspirations and anticipations propel their desire for new goods and services. The consumer's constantly changing roles, lifestyles, views and images are coupled with the generation of new consumer problems or needs.

Consumer problems also arise as a result of **changes in financial status and/or changes in financial expectations**. "A generally rising standard of living or state of affluence means also an expanded package of desired goods and services" (Markin 1974: 510). An increase in income, a substantial tax return, an inheritance or the expectation of any of these can stimulate the consumer to change their wants and conclude that the current state is less gratifying. The upward trend in income is therefore, likely to be accompanied by an increase in consumer expenditure. Alternatively, a financial loss can also change the needs and expectations of consumers and lead to problem recognition. "In periods of rapid inflation or declining earnings, many households are forced to cut back on extras, such as entertainment, and to purchase lower quality levels of other products, such as food" (Hawkins, Best & Coney 1986: 545). The consumer's resources are a factor in determining how much and what goods and services should be consumed.

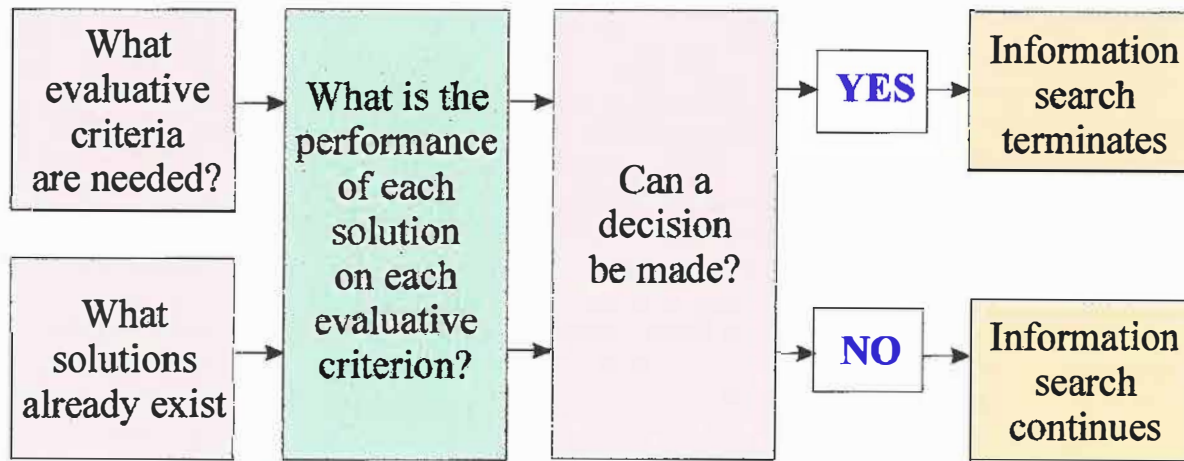
The development of consumer problems that surface primarily as a result of the four aforementioned sources require the acquisition of information in order for the consumer to make the correct choice.

#### **3.3.2.2 THE SEARCH AND PROCESSING OF INFORMATION**

The second stage in the consumer decision-making process is the search and processing of information. Information is "a combination of symbols such as colours, forms, sounds and smells" (Van der Walt et al. 1996: 88). In many buying situations when the problem is perceived, the consumer begins to seek information. Consumer search is "the mental and physical activities undertaken by consumers to provide information on recognized problems" (Walters & Bergiel 1989: 21). It is basically a learning process by which the consumer becomes aware of alternative products or brands, specific stores, specific trading centres, prices of products, terms of sale and consumer services. This search process provides information that is necessary when evaluating alternatives in order to arrive at the choice which derives maximal benefits at minimum cost. It is selective since consumers choose data that is most in keeping with their wants and which is most likely to correspond with their views, beliefs, personality and attitudes (Figure 3.11).

FIGURE 3.11

INFORMATION SEARCH IN CONSUMER DECISION MAKING



Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. Consumer Behaviour and Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 569.

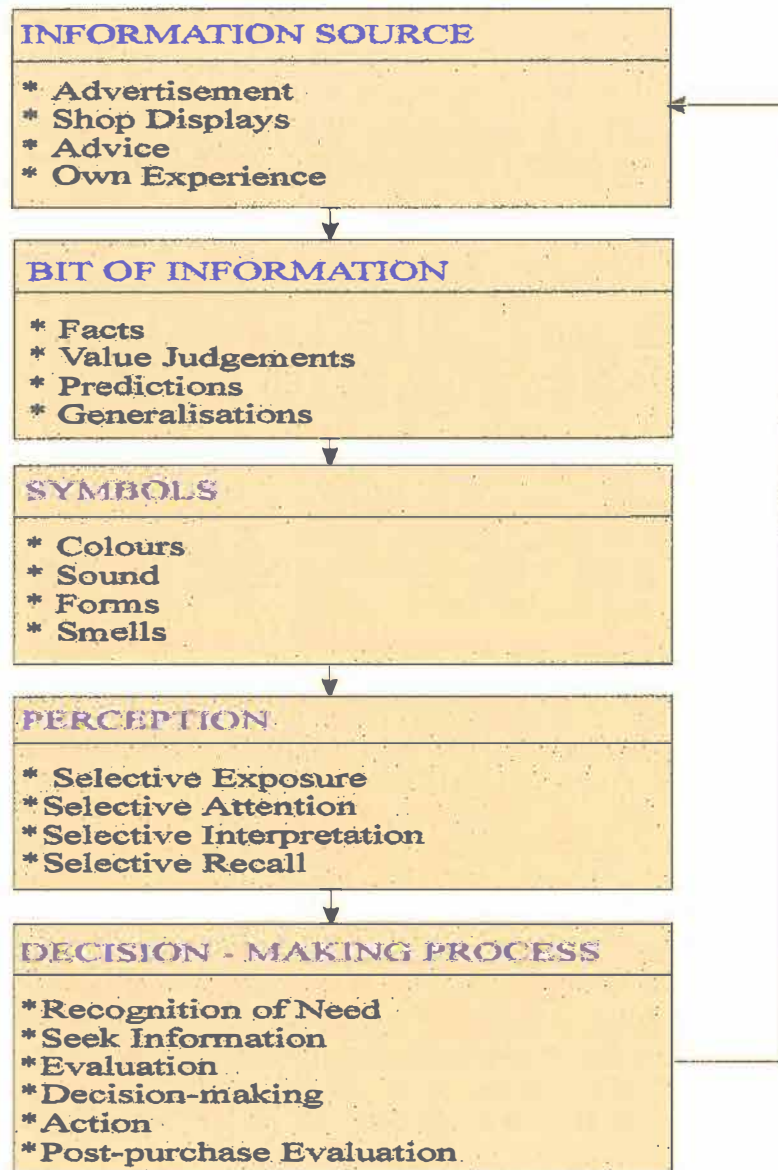
During information search the processing of information "involves exposure to various sources, paying attention to the content and being able to comprehend and retain the essence of what has been learnt in the memory" (du Plessis et al 1990: 51).

The search consumers engage in may be internal or external. The former concerns information from the consumer's experience that is reserved in memory. "Much information is literally stored in the cognitive structure of consumers, and this reservoir of knowledge may be used to shorten what might otherwise be a necessarily long and extended search process" (Markin 1974: 511). This kind of information is the outcome of the learning process. In addition to the recall of previous experiences with a product, internal search based on the process of learning includes treatment by a salesman, consumer advisory services, parking facilities, store layout, availability of items, prices paid for items and store shopping service.



Consumers do consult sources outside their own experience in order to acquire information that is imperative for decision-making. When the individual engages in external search, it "is affected by individual differences and environmental influences" (Engel, Blackwell & Miniard 1990: 477). The former includes consumer resources, motivation and involvement, knowledge, attitudes, personality, lifestyle and demographics. Environmental influences include personal information sources, business and marketing forces, neutral sources, economic, social and cultural influences. Personal information sources are represented by family, friends, neighbours and peer groups, for example, when analysing the pros and cons of known brands or store location. Business and marketing sources are depicted by advertising, in-store promotions and personal selling or sales staff. Neutral information sources such as booklets, pamphlets and brochures may also be consulted by consumers. "Expert financial advice from consultants or bank managers may also provide important information on economic demand factors" (du Plessis et al 1990: 51). Consumers who value their cultural heritage and who are concerned over the implications of their buying decisions on society, often consult cultural organisations and social groups when acquiring information. It can be deduced, information incorporates facts, value judgements, forecasts and generalisations. Whilst facts are bits of information which cannot be doubted at all, the latter are all subjective in nature. This explains why the same information about products, brands and services are perceived differently by different people. Figure 3.12 reflects the relationship between information, perception and the decision making process.

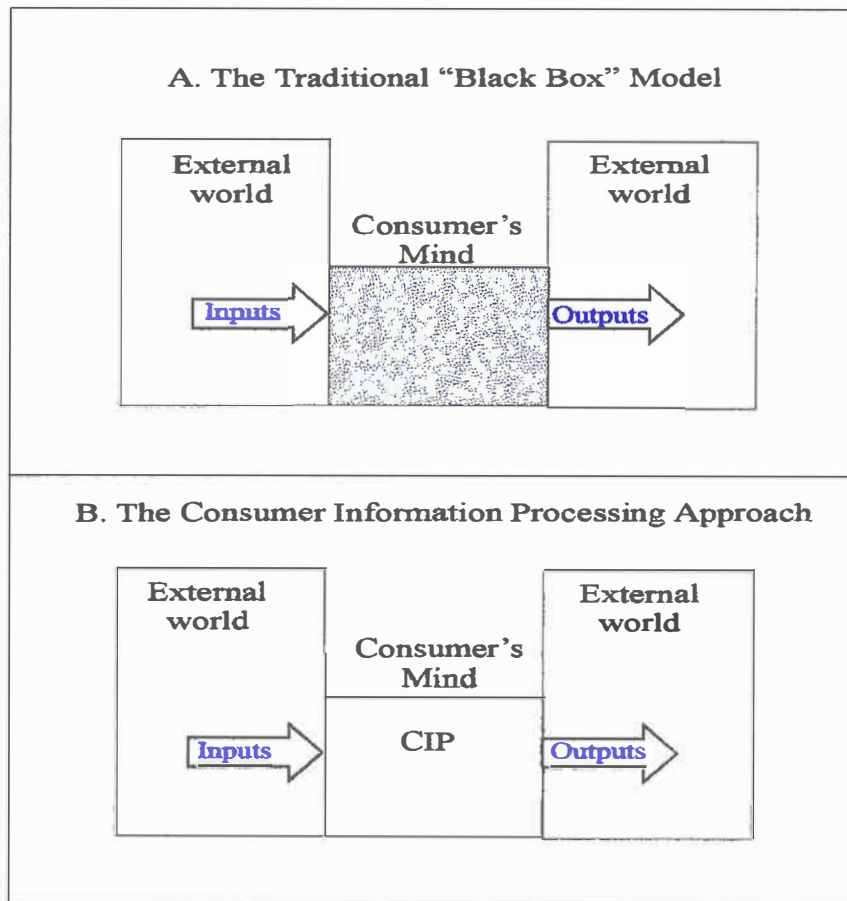
**FIGURE 3.12**  
**THE FLOW OF INFORMATION**



Van der Walt., Strydom, J.W., Marx, S. & Jooste, C.J. 1996. Marketing. Third Edition. Republic of South Africa: Juta & Company, Ltd. p. 89.

The Consumer Information Processing (CIP) Approach improves on the traditional 'Black Box Model' Approach to studying consumer behaviour (Figure 3.13).

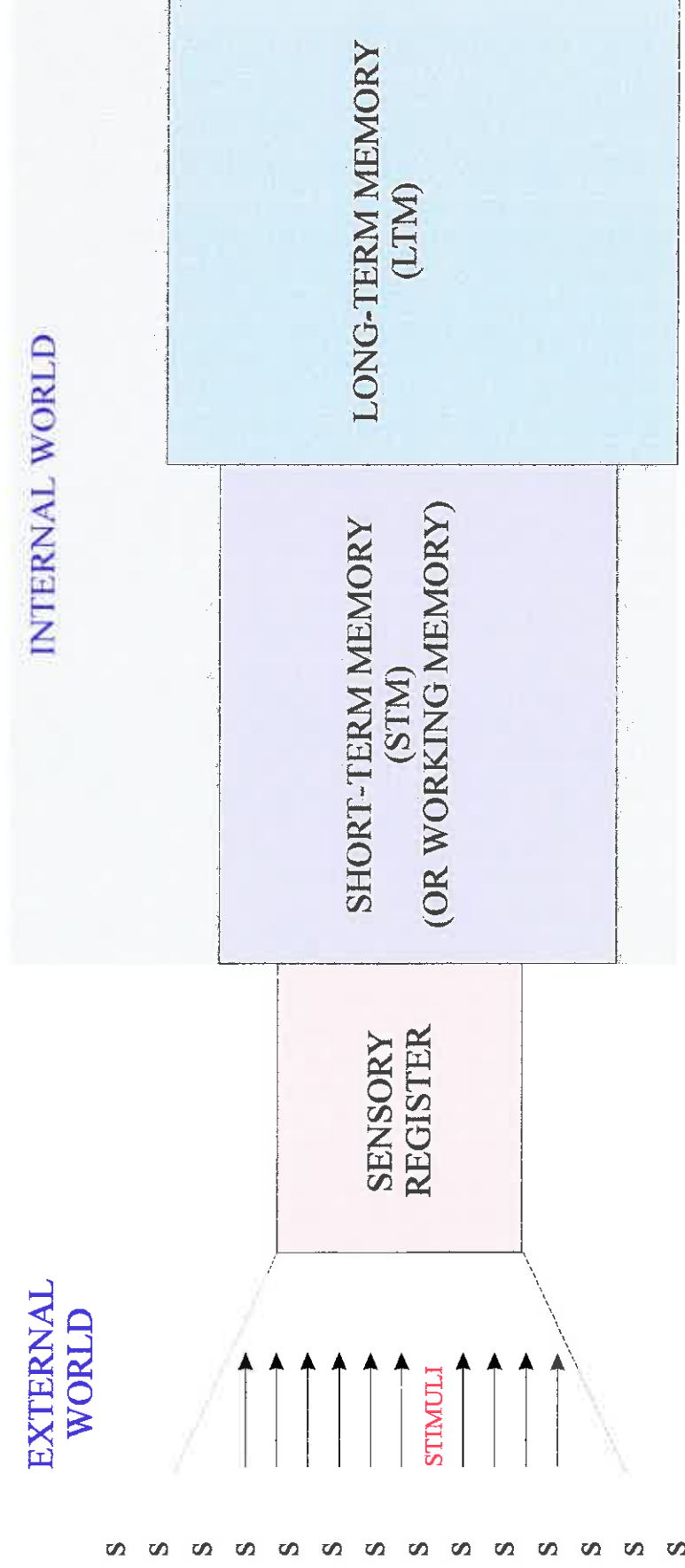
**FIGURE 3.13**  
**HOW THE CIP APPROACH IMPROVES THE 'BLACK BOX' MODEL**



Wilkie, W.L. 1990. **Consumer Behaviour**. 2nd Edition. New York: John Wiley and Sons. p. 147.

The Black Box Model concentrated on external inputs and the outputs that seemed to be generated from them. In contrast, the CIP Approach focuses on the middle of the input-output system, that is, the thoughts and reactions of consumers (Wilkie 1990: 146 - 147). Therefore, CIP involves sequences of mental activities that people use within sensory and the conceptual systems. "The sensory system refers to the operations of the five senses - sight, touch, smell, hearing and taste - the means that each of us uses to contact all aspects of our external world" (Wilkie 1990: 147). The conceptual system deals with the mental or cognitive concepts. Figure 3.14 is a functional representation of the CIP System.

**FIGURE 3.14**  
**A HYPOTHETICAL CIP SYSTEM**



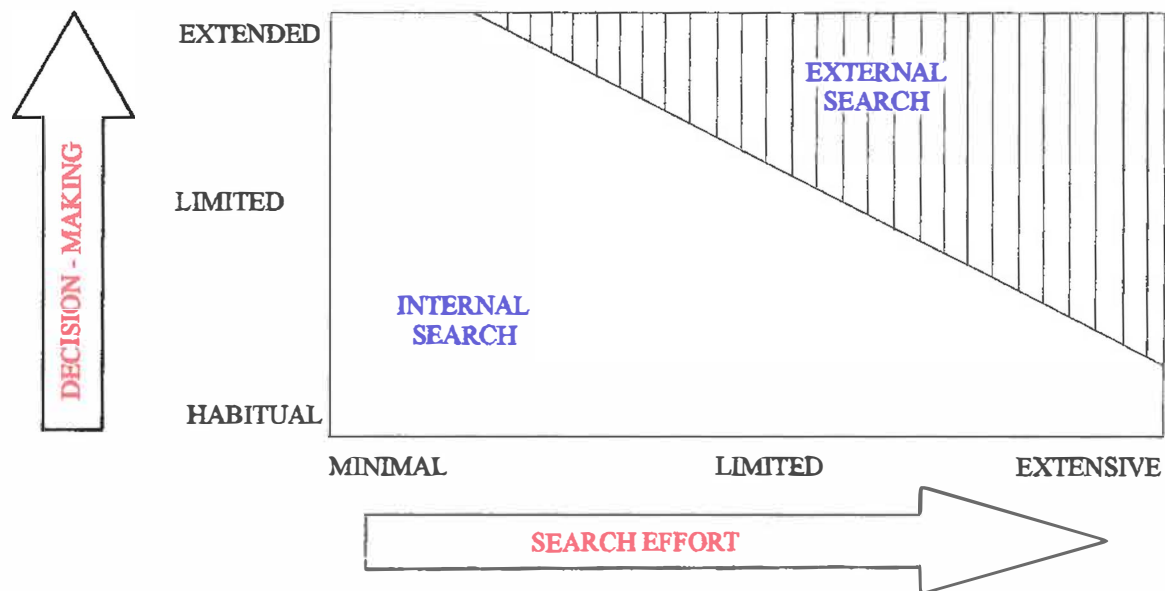
Wilkie, W.L. 1990. **Consumer Behaviour**. 2nd Edition. New York: John Wiley and Sons. p. 150.

Figure 3.14 shows the outside world (external) on the left and the inside world (internal) of the mind on the right. The realities of the external world are translated and handled in each person's inner mental world, thereby making it subjective. Furthermore, Figure 3.14 indicates the CIP system as comprising of three sectors: the sensory register, the short-term or working memory and the long-term memory. (The functions of the sensory register, that capacity limitations that operate on STM, the pivotal role of LTM within the CIP system and the network model of LTM have already been discussed in Chapter 2: Cognition). CIP relates to numerous consumer activities, namely, learning, evaluating, decision processes, purchasing strategies, utility, satisfaction and thoughts about products, services, brands and stores.

Consequently, the concepts of internal and external search implies that the type of decision-making determines the extent of **search effort**. A distinction can be made between habitual, limited and extended decision-making. **Habitual decision-making** occurs when the consumer purchases an item without considering alternatives. **Limited decision-making** takes place when the consumer engages in little alternative evaluation. The individual thoroughly evaluates multiple alternatives in **extended decision-making**. Habitual, limited and extended decision-making are respectively associated with minimal, limited and extensive **search effort** (Figure 3.15).

**FIGURE 3.15**

**TYPE OF DECISION AND NATURE OF INFORMATION SEARCH**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. *Consumer Behaviour: Implications for Marketing Strategy*. 3rd Edition. Texas: Business Publications, Inc. p. 568.

**3.3.2.3 EVALUATION OF ALTERNATIVES**

The evaluation of alternative resolutions to a problem is the third step in the consumer decision-making process. Consumer evaluation is "the activity of identifying alternative solutions to a problem and determining the relative merits of each" (Walters & Bergiel 1989: 23). When evaluating alternatives, consumers make a comparison among product features and store characteristics and pre-established criteria for evaluation. Evaluation criteria are the limits which consumers declare as being acceptable when searching for a solution to their problems. The criteria for evaluation are "the standards and specifications used by consumers to compare different products and brands" (Engel, Blackwell & Miniard 1990: 479). The evaluation criteria differ when evaluating products and stores and can change in response to the situation or prevailing environment.

Evaluative criteria are moulded and influenced by individual and environmental variables. Individual influences such as personality and attitudes have an impact on expected outcomes. This is due to the fact that consumers purchase those products towards which they hold

favourable and positive attitudes and which are in keeping with their personalities. Schiffman & Kanuk (1991: 550) identify four types of individuals involved in decision-making:-

- The **economic** individual who takes a calculated, rational decision based on complete information;
- The **passive** individual which relates to consumers who are not knowledgeable and are exposed to manipulation by the marketer. They react impulsively and irrationally;
- The **emotional** individual includes those who take consumer decisions based entirely on personal and irrational needs;
- The **cognitive** individual who bases consumer decisions on information for the environment, on social influences on personal needs, attitudes, perception and previous experience (Van der Walt et al. 1996: 93).

It is evident, the cognitive individual best depicts consumer behaviour since consumer decision-making focuses on the subsequent behaviour of cognitive consumers. "Consumer decisions are taken by individuals seeking information, driven not only by their emotions but also by rational considerations where the decision maker takes a decision after identifying the best possible choice" (Van der Walt et al. 1996: 93). Hence, the individual is also influenced by family viewpoints and group pressures like cultural and social institutions. In addition, economic demand factors and business and marketing influences shape purchasing intentions. If the consumer "can negotiate an affordable price or conclude an acceptable sales contract, the expected outcome will be more attractive for purchasing" (du Plessis et al. 1990: 52). Consequently, "evaluation brings the consumer right to the point of making a decision on a given course of action" (Markin 1974: 513).

#### 3.3.2.4 RESPONSE/THE PURCHASE DECISION

The fourth step in the decision-making process is the consumer's response or decision. Consumer decision is the outcome of evaluation and relates to "the mental process of choosing the most desirable alternative" (Walters & Bergiel 1989: 23). The most suitable choice is the one that comes closest to the evaluation criteria formulated by the consumer. It is the data obtained as a result of search activity and effort that lays the foundation for evaluation and decision. The appropriate decision is dependent upon adequate information.

Primarily, the consumer has two choices, namely, to buy and not to buy. The latter incorporates the postponement of purchases. Consumer evaluation and decision is predominantly determined by personality and attitudes. However, other internal and external variables also have an effect on the consumer's evaluation and response and their effect is felt via attitudes and personality. Needs, perceptions, learning and motives are important factors in shaping attitudes and personalities. The environmental influences also affect personality and attitudes because new and/or different information affect our needs, perceptions, learning and motives. Thus, "the external determinants provide the impetus for change in our attitudes and personality over time" (Walters & Bergiel 1989: 24). Hence, in this context, attitude and personality encompass the other variables.

The consumer's decision is also influenced by business and marketing variables. Store selection is considered an instrumental response needed to make a purchase, especially for durable goods. A great deal of alternative evaluation and choice occurs in-store. "The result is that the impact of the store environment, sales personnel, service and other in-store influences have a great bearing both on how we evaluate alternatives and where we decide to make our purchases" (Hawkins, Best & Coney 1986: 639). In the purchase of convenience or packaged products the actual act of purchasing is more important than where to purchase since the decision and purchases are almost simultaneous actions. It is evident that business and marketing variables like store-image, staff positioning and in-store promotions play a leading role in the responses of consumers. The decision can be influenced by economic demand factors such as the volume of the deposit, the period of payment and monthly instalments.

Undoubtedly, the reason for entering into the consumer decision-making process, in the first instance, was the perception of an incongruance between the desired and the existing state of affairs. The consumer therefore, engages in purchases in order to seek greater satisfaction. Hence, a crucial question from a marketing point of view, is whether the consumer is satisfied after the purchases is made.

#### **3.3.2.5 POST-PURCHASE RESPONSE**

Post-purchase response is the final stage in the consumer decision-making process. Post-purchase assessment involves the consumer's evaluation of the performance of the



product or service, in relation to the criteria, once it has been purchased. It is "the consumer's perception of the outcome of the purchase process" (Walters & Bergiel 1989: 24). The post-purchase phase involves different forms of psychological processes consumers can experience after a purchase. **Post-purchase learning** means that after a purchase is made "the consumer discusses something of objective reality about a product or service, stores this new knowledge in long term memory, modifies relevant attitudes, and is ready for the next decision process with an improved base of knowledge" (Wilkie 1990: 619). Whilst it is maintained (Walters & Bergiel 1989; Engel, Blackwell & Miniard 1990) that the result of purchasing can either be satisfaction or dissatisfaction, du Plessis et al. (1990) include another possible outcome in the form of a neutral assessment. Satisfaction/dissatisfaction refers to "an emotional response to an evaluation of a product or service consumption experience" (Wilkie 1990: 622). A positive assessment of the purchase decision results in post-purchase satisfaction. Satisfaction occurs when the outcome, which may be a product, brand or store, and the conditions surrounding its purchase, are matched with the consumer's expectations. Conversely, a negative assessment results in post-purchase dissatisfaction. Consumers experience dissatisfaction when the outcome does not match their expectations or "when the alternative is perceived as falling short in significant ways" (Engel, Blackwell & Kollat 1990: 481) and "a neutral assessment results in postpurchase indifference" (du Plessis et al. 1990: 53). Consumer satisfaction/dissatisfaction is determined by the following elements:-

- "Consumer expectations;
- Actual performance and the comparison between expectations and performance;
- Confirmation or disconfirmation of expectations, and
- The size and direction of the discrepancy score" (Wilkie 1990: 640).

Consumer responses to a dissatisfying purchase may be verbal or behavioural. Whilst a positive verbal response may cognitively reinforce purchase decisions, negative ones may result in rumours. Equally dangerous to the latter, is indifferent verbal responses or responses which can evoke suspicion among other potential consumers. The cognitive dimension recognizes that "satisfaction is part of the dynamic purchase process and influences repurchase intentions" (LaBarbera & Mazursky 1983: 393).

Positive behavioural responses usually involve repeat purchase behaviour or brand loyalty in the case of satisfaction. **Repeat purchase behaviour** occurs when a consumer continually purchases the same brand, probably because it is the only brand in stock or it is the cheapest one. **Brand loyalty** is the psychological commitment to a particular brand which results in continuous purchases of that brand.

A negative behavioural response may involve complaint behaviour or brand switching in the case of dissatisfaction. **Complaint behaviour** can be private in nature such as warning friends or switching products. In addition to private actions, consumers may take public actions such as "demanding redress from the firm involved, complaining to the firm or some other organization, or taking legal action against the firm" (Hawkins, Best & Coney 1986: 691). Management, however, generally either discourage and suppress complaints to their departments or encourage them in order to resolve dissatisfaction. Research conducted in the field of complaint behaviour showed that "increasing consumer complaint proportions leads to organizational suppression of the unit receiving the complaints, which subsequently contributes to further increase in complaints due to inaction by marketing management" (Hawkins, Best & Coney 1986: 693). Complaint management is significant since "consumers' perception of how their complaint was handled is important for repurchase behaviour" (Cohen & Chakravarti 1990: 274). **Brand switching** is one of the ways in which consumers having problems with a product or service may express their grievances" (Kasper 1988: 387). Dissatisfaction with products consumed is one of the reasons why consumers change or switch brands. In the case of dissatisfaction, the object of the switching is specifically "to alleviate or eliminate the problems with the previous purchase" (Raju 1984: 201). Brand switching can also be caused by some inner desire for novelty, change or variety. Whilst the former can be called "instrumental brand switching" the latter refers to "exploratory brand switching" (Raju 1984: 201 - 202).

A neutral behavioural response incorporates inertia or impulse buying in the case of indifference. **Inertia** means that the consumer is purchasing the same brand because "it is not worth the time and trouble to search for an alternative" (Assael 1987: 14). **Impulse buying** is a consumer purchasing pattern that is unplanned. In impulse purchases, the consumer engages in little or no deliberation and virtually no external search activity is undertaken.

Sometimes consumers undergo postpurchase conflict and question whether they made the correct decision or should have selected another alternative. The consumer may experience doubt or anxiety, especially after making a difficult, important and rather permanent decision. This type of anxiety is called "**postpurchase dissonance**" (Hawkins, Best & Coney 1986: 678). Dissonance occurs because "making a relatively permanent commitment to a chosen alternative requires one to give up the attractive features of the unchosen alternatives" (Hawkins, Best & Coney 1986: 678). In some cases consumers may try to reduce such dissonance via changes in cognition and attitudes. "They will find a balance in their psychological field by seeking supportive information or distorting information regarding the product or service" (du Plessis et al. 1990: 53 - 54). This response is termed "**cognitive dissonance**" (du Plessis et al. 1990: 54). Cognitive dissonance belongs to the family of cognitive consistency theories. Each consumer has many cognitions about himself/herself or other people and the decisions he/she makes. If these elements follow logically from the other, there exists "**consonant cognitions**" but if there is logical inconsistency, "**dissonant cognitions**" arise (Wilkie 1990: 620). Since dissonance produces unpleasant feelings, the individual will be motivated to act to reduce the amount of dissonance experienced. Dissonance is especially likely if the purchase "is financially burdensome and several attractive alternatives were rejected" (Engel, Blackwell & Kollat 1978: 31).

During the process of post-purchase evaluation, consumers encounter new information that results in learning and change in attitudes with regards to the products consumed. "Postdecision information is necessary to determine decision outcomes, evaluate decision effectiveness, and assess the decision process itself" (Peterson 1988: 25). Hence, the sequence of activities in post-purchase assessment includes product decision, dissonance, assessment, resolution and feedback" (Walters & Bergiel 1989: 474). Post-purchase responses are crucial to marketers and business firms in order to determine whether consumer attitudes towards their product or service changes negatively or positively. Undoubtedly, successful marketing strategies are confirmed in the case of positive responses. However, in the case of negative responses, "they provide guidelines for corrective action" (du Plessis et al. 1990: 54). The most significant result of post-purchase responses is the reflection of the consumer's degree of involvement with the purchase. High involvement decision-making indicates **commitment** to a brand, product or service and thus, creates the

potential for brand, product or service loyalty. Post-purchase responses are also affected by economic demand factors. This is due to the fact that the higher the price of the item, the larger will be the economic risk involved and the more intensive will be the degree of positive post-purchase response in the form of satisfaction, or negative post-purchase response indicating dissatisfaction.

Although post-purchase assessment is the final stage in the consumer decision-making process it is not necessarily the end. The information gained as a result of purchasing and post-purchase evaluation is stored in the individual's memory as part of his experience. The consumer would recall this information when entering into another purchase decision-making process. In other words, "regardless of the outcome, postpurchase evaluation is a learning process that provides feedback to the consumer and is stored as information for future reference" (Assael 1987: 29). "Thus, the purchase is, in one sense, a continual process. The end of one purchase decision is the beginning of another" (Walters & Bergiel 1989: 27).

After analysing the various stages of the consumer decision-making process, it is evident that purchases of consumer goods and major durable products are much alike. In both instances, the decision process involves problem recognition, search and processing of information, evaluation of alternatives, response and post-purchase behaviour. Irrespective of the situation, "consumer buying decisions are the consequence of rational considerations in the fitting of alternative goods and services to consumption goals" (Wiley 1984: 1). The only variation is in the emphasis the individual places on the various stages in the decision-making process. The **importance attached** by the consumer to each stage will differ in response to "the subjective preference of each consumer" (Markin 1974: 516). Furthermore, the extent of consumer decision-making will depend on the level of involvement.

### **3.3.3 THE EFFECT OF THE LEVEL OF INVOLVEMENT ON THE CONSUMER DECISION-MAKING PROCESS**

Consumer involvement is "a motivational state of arousal that a person experiences in regard to a consumption-related activity" and includes both feelings and thoughts (Wilkie 1990: 225). Product involvement "is a recognition that certain product classes may be more or less central to an individual's life, his attitudes about himself, his sense of identity and his

relationship to the rest of the world" (Traylor 1981: 51). Therefore, product involvement implies that the product is of importance to the consumer's self-identity and it can surface strong attitudes and preferences. A further implication is that "there are sufficient differences between brands in the product category to warrant self identity and strong preferences" (du Plessis et al. 1990: 57).

**Involvement** can be defined as "the degree of personal relevance, which is a function of the extent to which the product or brand is perceived to help achieve consequences and values of importance to the consumer" (Peter & Olson 1987: 127). The more important and central these desired consequences and values are to the consumer, the higher is the level of personal involvement.

Assael (1987) categorises the distinction between high and low levels of involvement in terms of beliefs, preferences and attitudes (Figure 3.16).

**FIGURE 3.16**

**THE DISTINCTION BETWEEN HIGH AND LOW INVOLVEMENT DECISIONS**

	<b>BELIEFS</b>	<b>PREFERENCES</b>	<b>ACTION TENDENCY</b>
<b>HIGH INVOLVEMENT</b>	Self-involvement	Strong commitment	Expend time and effort
<b>LOW INVOLVEMENT</b>	Little identification	No commitment	Little expenditure of time and effort

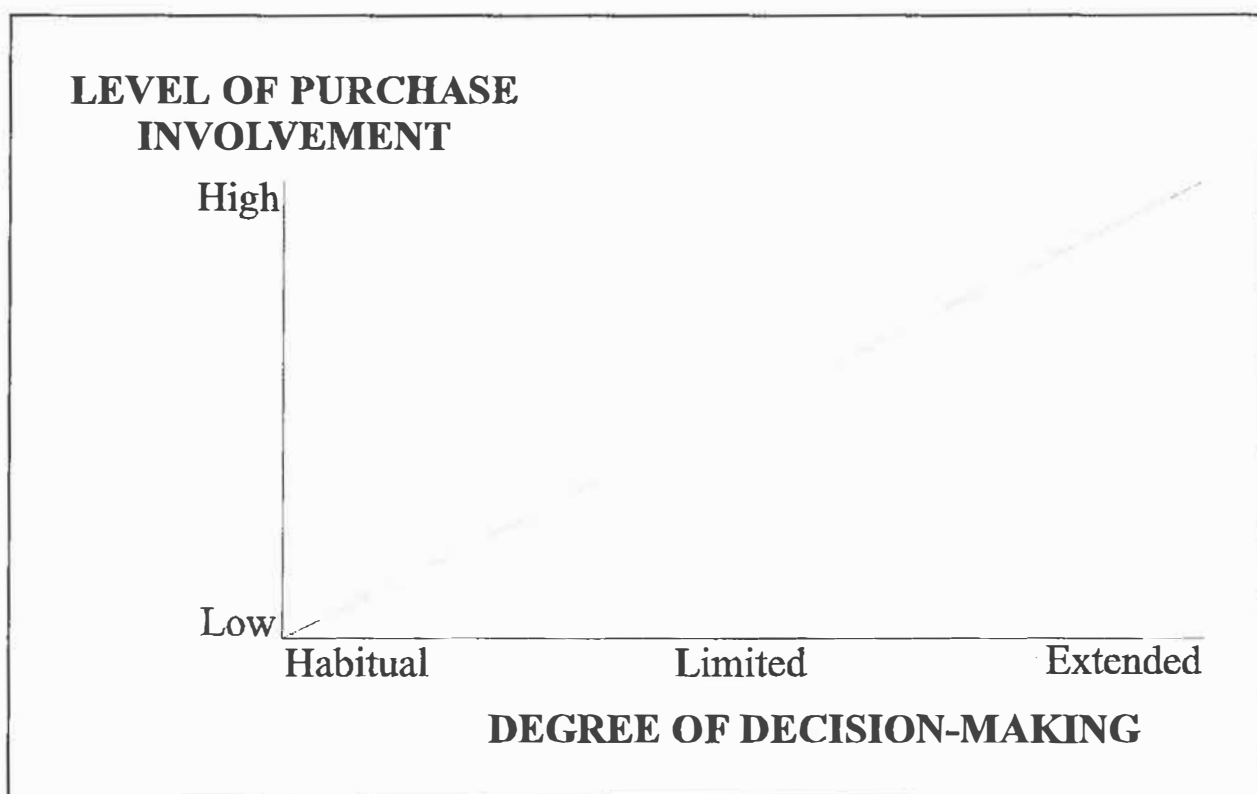
Adapted from du Plessis, P.J, Rousseau, G.G. & Blem, N.H. 1990. Consumer Behaviour: A South African Perspective. Halfway House: Southern Book Publishers (Pty) Ltd. p. 57.

From Figure 3.16 it is evident that a low involvement purchase is one where "the consumer does not consider the product as sufficiently important to his belief system and does not strongly identify with the product" (du Plessis et al. 1990: 57). Low involvement decision-making implies the consumer may act without thinking. In low involvement product categories "buyers do not seem to care too particularly about brand differences" (Winter & Rossiter 1989: 561). In these situations "information is passively accepted, often stored without integration with previously acquired information, and implemented in specific purchase decisions with little, if

any, consideration of the merits of alternative choices" (Horton 1984: 15). Conversely, high involvement decision-making suggests that the individual will engage in extensive thought processes. However, East (1990) believes that the tendency to regard low involvement purchases as less soundly based than high involvement purchase may be untrue. East (1990: 12) maintains that "infrequent purchase gives little scope for trial and error so that people cannot learn from their mistakes".

It is evident that a relationship exists between the level of involvement and the degree of decision-making (Figure 3.17).

**FIGURE 3.17**  
**LEVEL OF PURCHASE INVOLVEMENT AND DEGREE OF**  
**DECISION-MAKING**



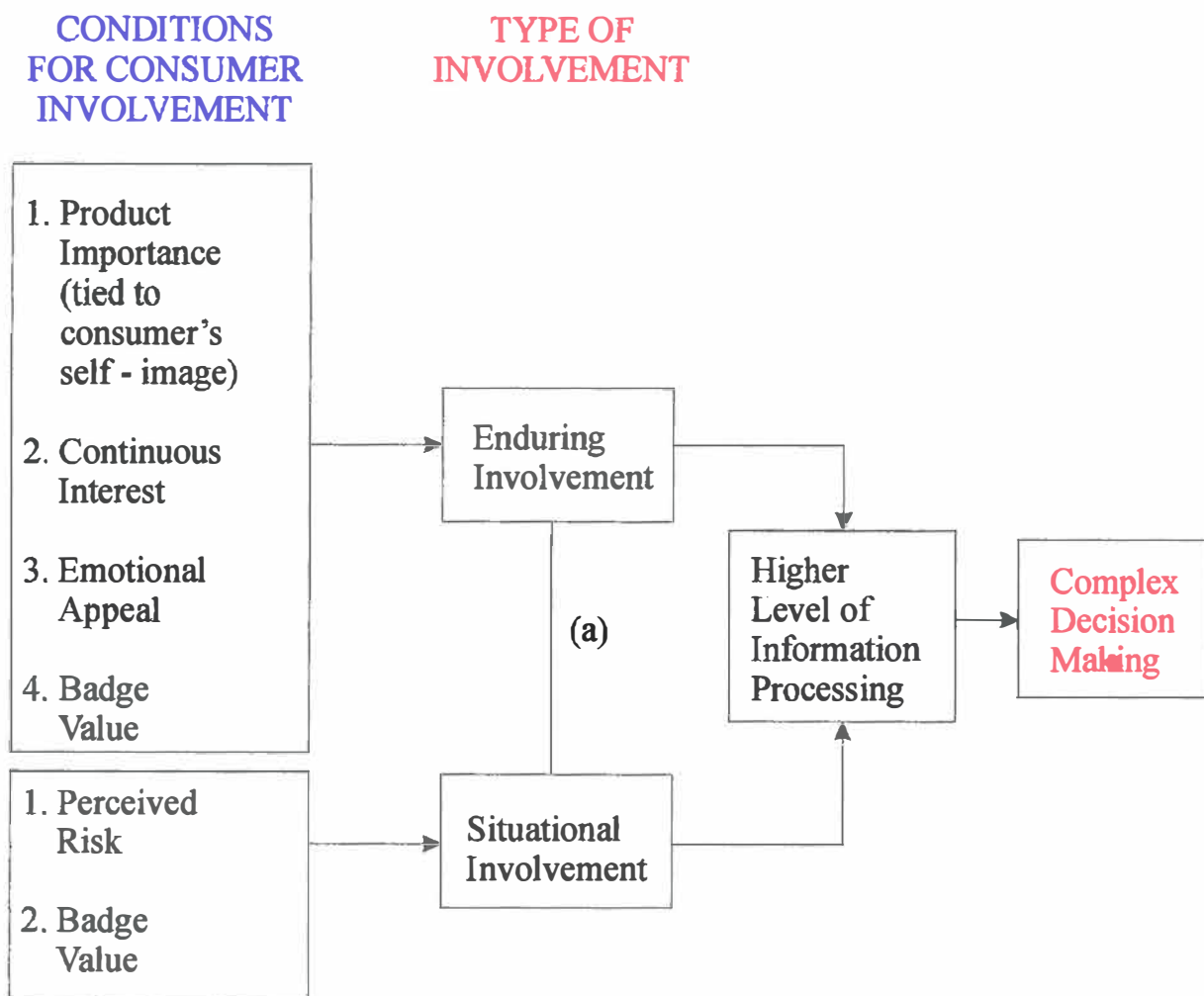
Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. Consumer Behaviour: Implications for Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 35.

Figure 3.17 indicates that the higher the level of purchase involvement, the more intensive or the greater the degree of decision-making. Increasing levels of purchase involvement is

accompanied by accelerating degrees of decision-making ranging from habitual decision-making to limited decision-making to extended decision-making.

The relationship between the level of involvement and complex decision-making is further demonstrated in Figure 3.18.

**FIGURE 3.18**  
**A MODEL OF CONSUMER INVOLVEMENT**



Assael, H. 1995. **Consumer Behaviour and Marketing Action**. Fifth Edition. Cincinnati, Ohio: South-Western College Publishing. p. 76.

Figure 3.18 indicates that the primary ingredients for **enduring involvement** are the product's importance to the self-image of the consumer, "continuous interest in the product, the product's emotional appeal and its badge value to the consumer's reference groups" (Assael 1995: 74). The basic conditions for **situational involvement** in a product are perceived risk and badge value to the reference group. Perceived risk refers to the amount of risk the consumer perceives in the purchase decision as a result of uncertainty about the decision and/or the potential consequences of a poor decision. Badge value means that a person becomes involved with a purchase because it is socially desirable.

Situational and enduring involvement may be independent but if the purchase of a product is frequent, the former may lead to the latter (see **a** in Figure 3.18). Both types of involvement lead to higher levels of information processing, which means greater information search and an evaluation of brand options on a wider set of evaluative criteria. Such information processing reflects complex decision-making.

#### 3.3.4 TYPES OF CONSUMER DECISIONS

Numerous types of consumer decision processes can be recognised on the purchase involvement continuum. Purchase involvement is "the level of concern for, or interest in, the purchase process triggered by the need to consider a particular purchase" and it is "a temporary state of an individual, family, or household unit" (Hawkins, Best & Coney 1986: 536). It is influenced by the interaction of individual traits, product and situation characteristics.

Three distinct types of consumer decision-making that can be recognised on the continuum are habitual, limited and extended decision-making. As the consumer moves from a very low level of purchase involvement, the decision-making process becomes increasingly complex. However, the types of decision processes cannot be distinctly delineated but instead they blend into each other and the purchasing process changes as purchase involvement increases.

##### 3.3.4.1 HABITUAL DECISION-MAKING

Consumer satisfaction with a product or service acquired may lead to repeat purchases and gradually to purchases based on habit. In habitual decision-making "a problem is recognised, internal search (long-term memory) provides a single preferred solution (brand), that brand is purchased, and an evaluation occurs only if the brand fails to perform as expected" (Hawkins, Best & Coney 1986: 536). Habitual buyer behaviour is a method of securing consumer

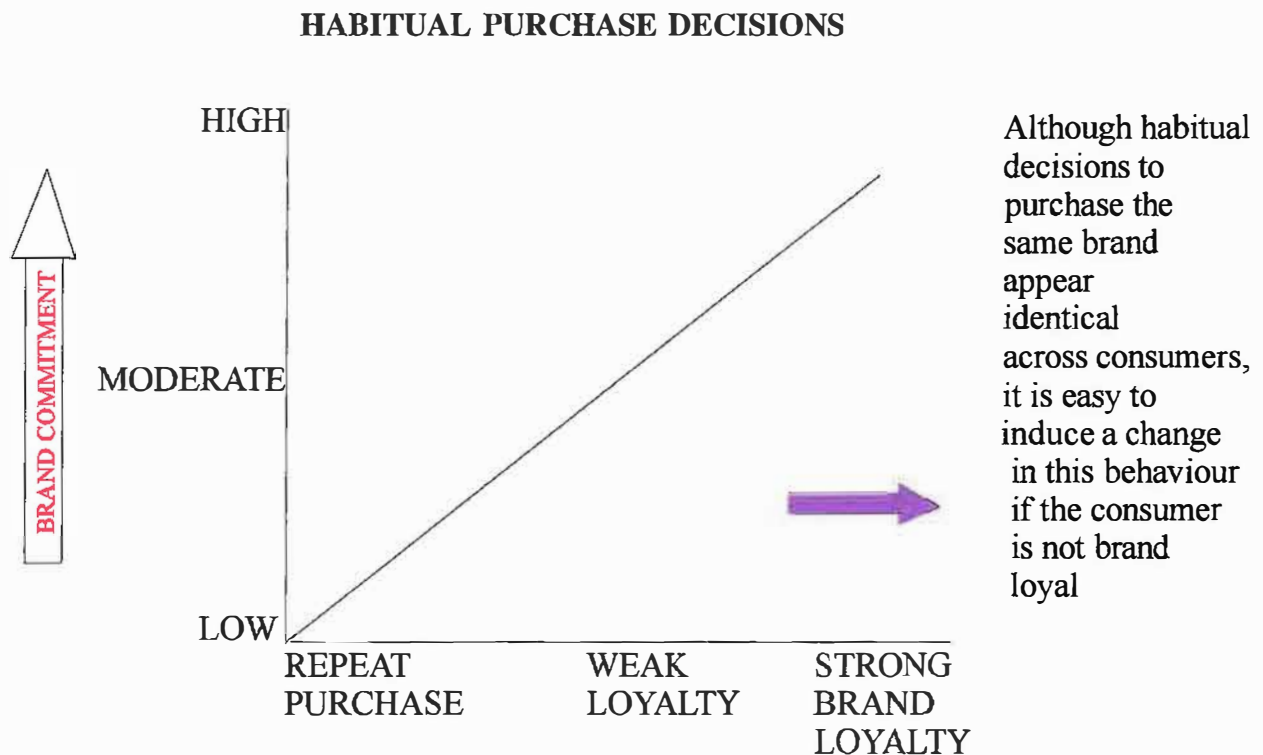


satisfaction based on previous experience and of simplifying the process of decision-making by decreasing the need for information search and evaluation of brands. Habitual decision-making exists when there is very low involvement with the purchase, and it results in repeat purchasing behaviour. Habitual decisions can be categorised into brand loyalty and repeat purchase behaviour.

Initially the consumer engages in a high degree of purchase involvement in choosing a product and in response uses an extensive decision-making approach. Having selected a brand or type of the product on the basis of complex decision-making, the consumer continues purchasing it without further consideration. Individuals become committed to the brand because they perceive that a brand meets their overall needs; the consumer becomes brand loyal. However, for a true state of **brand loyalty** to exist "there must be some degree of psychological commitment to the brand" (Horton 1984: 89).

**Repeat purchase behaviour** is often misinterpreted as being brand loyalty. However, whilst the latter implies a psychological commitment to the brand, the former simply involves the frequent repurchase of the same brand. "Brand loyalty is treated as a one-point-in-time (that is, micro) psychological disposition toward a given brand, whereas repeat purchase behaviour takes a macro perspective of brand choice" (Sirgy 1983: 176). It is therefore evident that repeat purchase behaviour simply refers to the pattern of brand choice over time (Figure 3.19).

FIGURE 3.19



Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. *Consumer Behaviour: Implications for Marketing Strategy*. 3rd Edition. Texas: Business Publications, Inc. p. 539.

#### 3.3.4.2 LIMITED DECISION-MAKING

Limited decision-making covers the middle area between habitual decision-making and extended decision-making (Figure 3.20). In its simplest form limited decision-making is very similar to habitual decision-making. This is due to the fact that in limited decision-making the consumer is not highly involved with the alternatives. The available alternatives are similar in essential features and there is less need for low involvement and evaluative buying. Under low involvement conditions most consumers "are less motivated to search extensively and engage in rigorous alternative evaluation" (Engel, Blackwell & Miniard 1990: 483).

#### 3.3.4.3 EXTENDED DECISION-MAKING

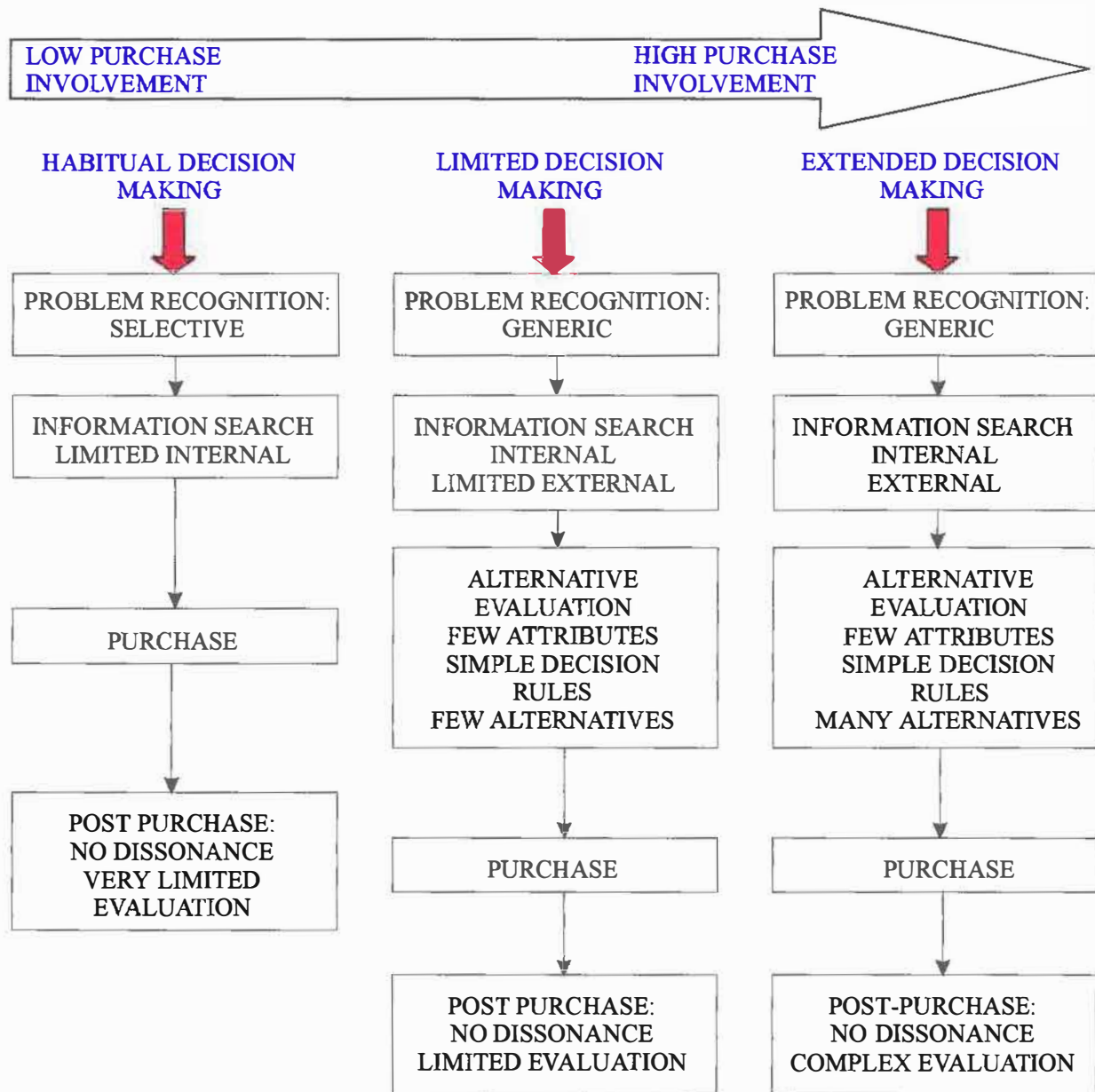
Extended decision-making is the response to a very high level of purchase involvement where "internal and external information search is followed by a complex evaluation of multiple alternatives" (Hawkins, Best & Coney 1986: 538). After the act of purchase, cognitive

dissonance is likely to occur and a detailed evaluation of the purchase is undertaken. Relatively few consumer decisions reach such an extreme level of complexity where extensive problem solving takes place. However, extended decision-making is encountered for the purchases of houses, personal computers, complex recreational items and for other high involvement purchase situations which requires the decision maker to progress relatively slowly and cautiously through all the stages of the decision-making process. Extended or real decision making "is characterised by conscious planning and occurs:-

- When durable products .... are purchased;
- When the purchase is important in terms of its cost and the purpose for which it is acquired;
- When previous experience in a similar situation resulted in disappointment;
- When the person becomes aware that his or her behaviour patterns differ drastically from that which is generally acceptable" (Van der Walt et al. 1996: 94).

The relationship between the various types of consumer decision processes and the levels of purchase involvement depicts the various stages of the consumer decision process in each type of decision (Figure 3.20).

**FIGURE 3.20**  
**INVOLVEMENT AND TYPES OF DECISION-MAKING**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. Consumer Behaviour: Implications for Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 537.

Figure 3.20 depicts the similarities and differences between the three recognised types of consumer decision-making. Habitual decision-making differs from limited and extended decision-making in that the former, unlike the latter two, excludes the alternative evaluation activity. However, the extended decision-making process and the limited decision-making

process involves the same stages, ranging from need or problem recognition to post-purchase dissonance. "The differences between the two extremes on the decision-process continuum do not lie in the stages of the process per se" (Engel, Blackwell & Miniard 1990: 475). Rather, the limited and extended decision-making processes vary in "the extent and rigor to which each stage is observed and followed" (Engel, Blackwell & Miniard 1990: 475). In limited decision-making less time and effort are devoted to external information search and alternative evaluation than in extended decision-making.

In all three types of decision-making, as individuals pass through the physical stages of activity they simultaneously experience some degree of psychological activity.

### **3.3.5 PSYCHOLOGICAL ACTIVITY IN CONSUMER DECISION-MAKING**

A feature of consumer decision-making is that the separate stages of cognition in the process are combined over time. Potential buyers presumably undergo these stages in a loose but specified order as they prepare themselves to make a decision concerning some act of consumption. The consumer decision processes are affected by three types of psychological activity. This is evident in Lavidge and Steiner's (1961: 59 - 62) cognitive-affective-conative sequence of psychological states (Figure 3.21).

**"Cognitive activity** relates to a knowledge and awareness dimension of consumer behaviour" (Markin 1974: 504). Behaviour is the outcome of knowledge, values, attitudes, ideas and images. Marketers need to provide information that enhances awareness and knowledge in order to facilitate and affect consumer decision processes.

**Affective activity** refers to the individual's emotional states. It implies that consumers must be taught to prefer one product or brand over another. When the consumer decision-making process is to be influenced "much information of an affective sort must be disseminated" (Markin 1974: 504). Consumers learn, through information processing and communication, to identify, prefer one product or brand over another and in some cases even insist on purchasing a given product, brand or service.

"**Conative activity** relates to the striving state or the motivational state of the individual" and emphasizes the tendency of consumers to treat goods and services as positive or negative goals or end states (Markin 1974: 504 - 505). The goal-striving and problem-solving features of consumer behaviour are emphasized in conative activity. Conative or motivational states encourage consumers to purchase specific products or brands or to shop at particular stores since they are forced to buy goods and services in order to satisfy their physiological and higher-order needs.

The Lavidge-Steiner hypothesis maintains that a typical consumer is expected to experience various internal psychological processes from the perception of an advertisement, personal selling, in-store promotions or some other "internalized problem recognition process" (Markin 1974: 505). Internal psychological processes include "attention, interest, desire and action; awareness, acceptance, preference, intention to buy, and provocation of sale; awareness, comprehension, conviction and action" (Markin 1974: 505).

**FIGURE 3.21**

**CONCEPTIONS OF CONSUMER DECISION PROCESSES**

	CONCEPTION			
PSYCHOLOGICAL	PROBLEM-SOLVING MODEL	"AIDA" MODEL	HIERARCHY OF EFFECTS MODEL	INNOVATION ADOPTION MODEL
Cognitive Activity	Problem recognition	Attention	Awareness Knowledge	Awareness Knowledge
Affective Activity	Search and processing of information	Interest Desire	Liking preference	Evaluation Legitimation
	Evaluation of alternatives			
Conative (motivational) Activity	Decision Post-purchase behaviour	Action	Conviction Purchase	Trial Adoption

Adapted from Markin, R.J. 1974. Consumer Behaviour: A Cognitive Orientation. New York: Macmillan Publishing Co., Inc. p. 505.

Column 2 (Figure 3.21) shows the stages of the consumer decision-making process. Problem recognition is a cognitive process. The search and processing of information and the evaluation of alternatives are affective activities whilst the consumer decision and post-purchase behaviour are conative activities.

Column 3 refers to the Attention-Interest-Desire-Action or AIDA model. AIDA represents attention, interest, desire and action. Attention is a cognitive activity. Whilst interest and desire are affective processes, action is classified as being conative or motivational.

Column 4 highlights the hierarchy of effects model of consumer decision-making since it stipulates the sequence of cognitive stages the consumer undergoes in reaching a decision to act. The psychological set incorporates two components, namely, need criteria and brand attitudes. The latter is represented by three factors which comprises of beliefs about brands, evaluation of brands and the tendency to act. "The assumption is that these components operate in sequence: needs are formulated, beliefs are formed about the brand, attitudes are developed toward the brand, and the consumer finally forms an intention to buy (or not to buy)" (Assael 1987: 33). Consumers form brand beliefs (cognitive component), evaluate brands (affective component), and make a purchase decision (behavioural or conative component). This sequence is referred to as a hierarchy of effects model of consumer decision-making since it stipulates the sequence of cognitive stages the consumer goes through. The hierarchy of effects describes "the mental processes that lead to a purchase" (Loudon & Della Bitta 1988: 390).

The innovation-adoption model requires that an individual or a group of consumers make a decision regarding a new product and is depicted in column 5. During the awareness stage the consumer becomes aware of the existence of a product but has very little information and no definite attitudes about it. The second stage depicts the consumer's knowledge and understanding of what the product is and what it can do. These first two stages, namely, awareness and knowledge, represent the recognition of a need for the product and the search for information and are cognitive activities.

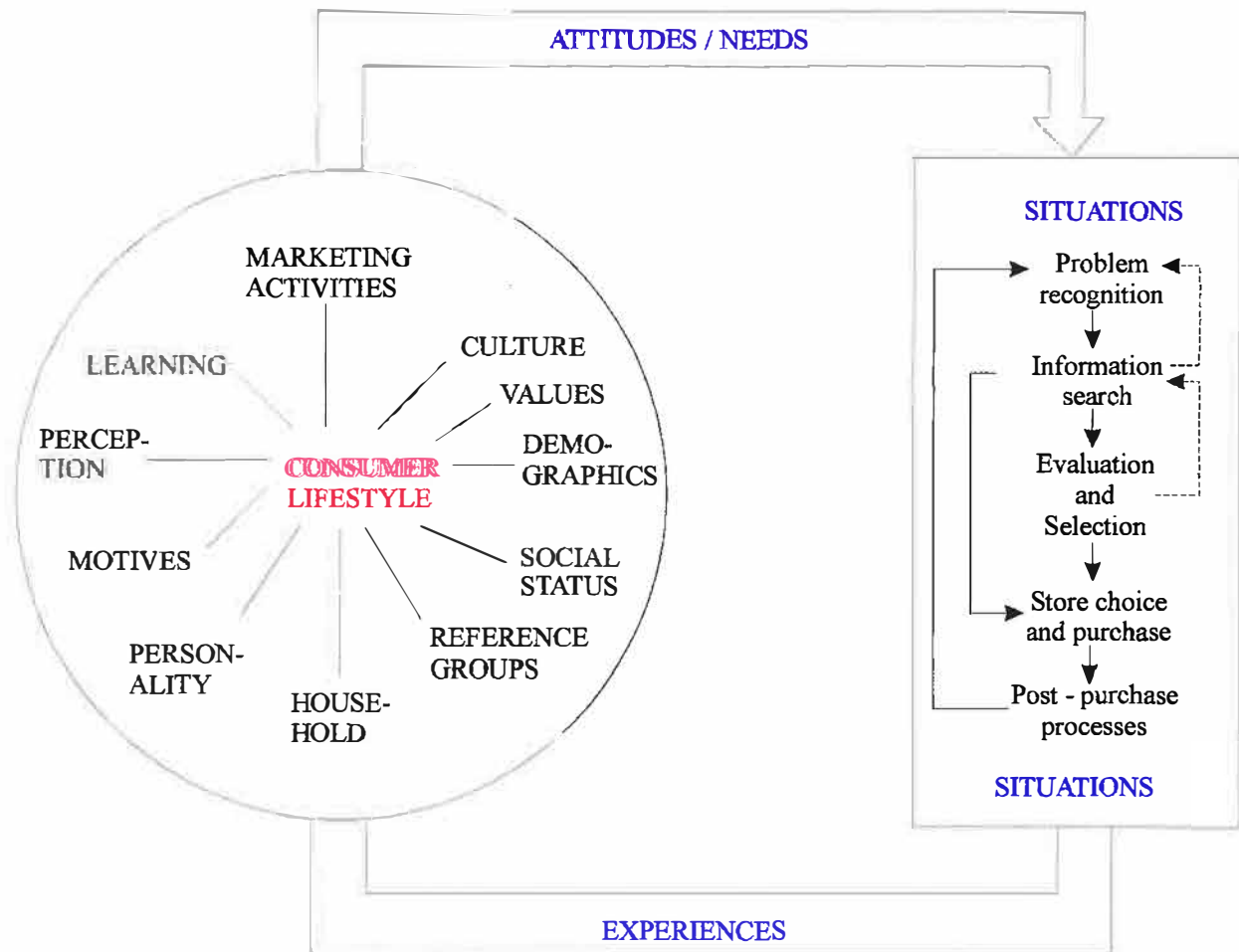
During the evaluation stage the consumer formulates an attitude or favourable or unfavourable behavioural predisposition towards the product. If attitudes are not favourable towards a product, the innovation-adoption process may end. Legitimation is a stage in which the consumer becomes convinced that the product should be adopted, and is thus based on a favourable attitude towards the product. Evaluation and legitimation are affective activities.

Conative or motivational activities include trial and adoption. In the trial stage the consumer tries the product, if possible, in order to test or determine its performance. During the adoption stage "the consumer determines whether or not to use the product in a full-scale way. Continued purchase and/or use of the item fulfills the adoption process" (Loudon & Della Bitta 1988: 333). The AIDA model, the hierarchy of effects model and the innovation-adoption model shows the consumer undergoing numerous psychological and physical sequences of activity. The most significant dimension of the entire figure is its implication that the various stages of activity "are subject to a persuasive process and that this total process is comprised of cognitive, affective and conative or motivational dimensions" (Markin 1974: 506).

The psychological activity involved in consumer decision-making implies that consumer attitudes and needs, which are influenced by marketing activities, culture, values, demographics, social status, reference groups, household, personality, motives, perception and learning, determines and shapes the consumer decision-making process. These internal and external influences are, in turn, influenced by the consumer's experience and learning, which occurs as a result of the consumer decision-making process. The cycle of influence continues and it is this cycle that depicts the model of consumer behaviour and consumer decision-making (Figure 3.22).



**FIGURE 3.22**  
**OVERALL MODEL OF CONSUMER BEHAVIOUR**

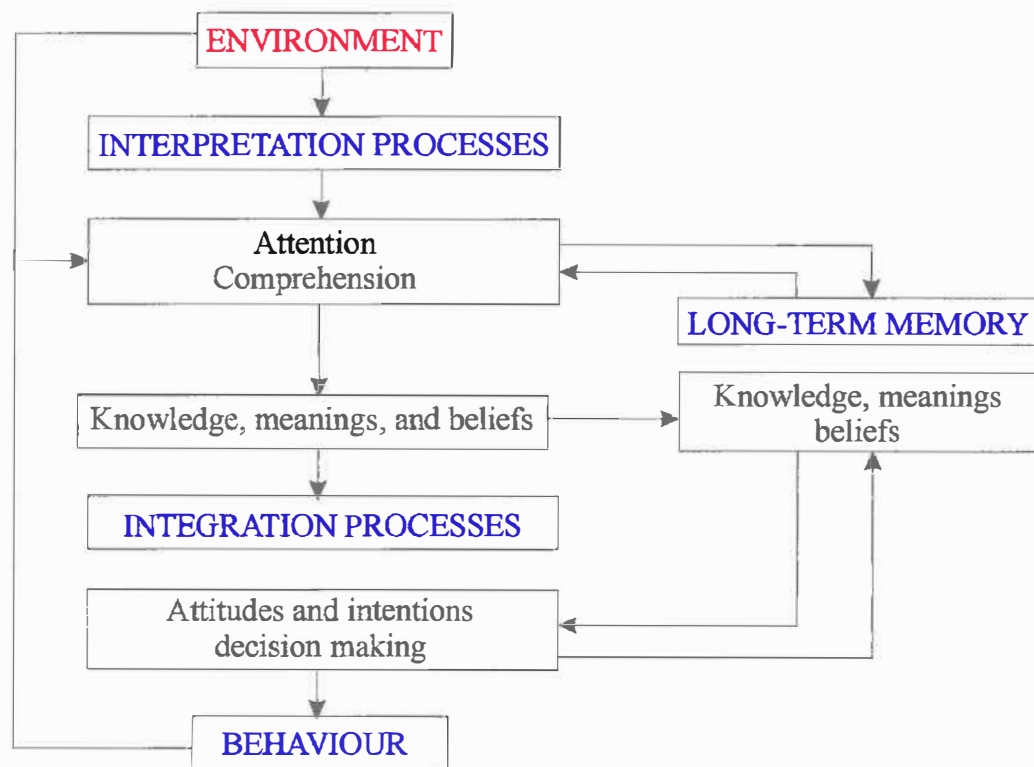


Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. Consumer Behaviour: Implications for Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 37.

Figure 3.23 illustrates that consumer decision-making is a cognitive activity.

### 3.3.6 A COGNITIVE PROCESSING MODEL OF CONSUMER DECISION-MAKING

**FIGURE 3.23**  
**A COGNITIVE PROCESSING MODEL OF CONSUMER DECISION-MAKING**



(Peter, J.P. & Olson, J.C. 1987. Consumer Behaviour: Marketing Strategy Perspectives. Homewood: Illinois, IRWIN. p. 51).

The cognitive processing model incorporates two fundamental processes that correspond to the two main functions of the system of human cognition (Figure 3.23). Interpretation processes concern how consumers translate the information they face in their physical and social environments. These processes produce "a set of subjective meaning, also called knowledge or beliefs" (Peter & Olson 1987: 51). Integration processes concern "how consumers integrate relevant knowledge, meanings, and beliefs to evaluate objects in the

environment (form attitudes) or to decide among alternative behaviours (decision-making/intention formation)" (Peter & Olson 1987: 51).

Both types of cognitive processes are tremendously influenced by knowledge, meanings and beliefs. "Interpretive processes draw on the knowledge activated from memory to recognize and perceive environmental stimuli and to create new knowledge, meanings and beliefs. Integration processes combine knowledge, meanings and beliefs from memory with new knowledge derived from the immediate environment" (Peter & Olson 1987: 51).

It is vital to analyse the interactions between the interpretation and the integration processes and activated knowledge, meanings and beliefs in order to give sufficient attention to the effects of knowledge consumers have acquired through their previous experiences.

#### 3.3.6.1 EXPOSURE TO ENVIRONMENTAL INFORMATION

Cognitive processing of information begins "when the consumer is exposed to information in the environment" (Peter & Olson 1987: 52). Since consumers are continuously exposed to such information, cognitive processes constantly occur. However, when marketers consider the effects of an actual marketing strategy, for example, an in-store product promotion, they begin their analysis of consumer cognition only when the consumer is exposed to that particular stimulus.

#### 3.3.6.2 KNOWLEDGE, MEANINGS AND BELIEFS

Consumers' cognitive systems create knowledge, meaning and beliefs that are representative of stimuli or influence in the social and physical environment and this knowledge may be retrieved or activated from memory and used in interpretive and/or integration processes" (Peter & Olson 1987: 53).

#### 3.3.6.3 INTERPRETIVE PROCESSES

When consumers are exposed to information in the environment they must interpret its meanings or implications with regards to personal interests, values and experiences. Interpretation involves two closely connected cognitive processes which include attention and comprehension. "Initial exposure to the incoming information 'automatically' activates

relevant knowledge, meanings, and beliefs in memory which then affect further attention processes" (Peter & Olson 1987: 54). As interpretive processing becomes increasingly focused on the stimulus or influence, comprehension processes arise. Hence, deeper and more conceptualised and formulated interpretations are made which results in meanings being assigned to the information obtained from the environment. The knowledge, meanings and beliefs that are activated from memory again, strongly determine and influence how the new information is interpreted or comprehended. It can be maintained that "the activated knowledge structures 'drive' the comprehension processes" (Peter & Olson 1987: 54). The knowledge, meanings and beliefs produced by the comprehension process are stored in long-term memory.

#### **3.3.6.4 INTEGRATION PROCESSES**

Knowledge, meanings and beliefs may be activated from memory at some future time and are integrated with new information obtained from the immediate environment. As a result of the existence of new and old information "the cognitive system engages in knowledge integration to accomplish some objective" (Peter & Olson 1987: 54). Two types of integration processes that are of concern include attitude formation and decision-making. Knowledge may be combined or integrated to produce an overall evaluation of a product or brand. An individual may develop a positive, negative or neutral attitude towards a product or a specific brand. Integration processes are also involved in decision-making whereby consumers integrate knowledge about the features of products or specific brands in selecting a suitable alternative such that the outcome is a choice of a product or brand. It has become recognised that yet another variable intervenes between attitudes and behaviour which refers to intentions. An intention represents "the subjective probability that a specified action will be undertaken", for example, a specific product or brand may be selected (Engel, Blackwell & Kollat 1978: 29). The outcomes of the integration processes which incorporate attitudes and intentions/decisions, are stored in long-term memory.

#### **3.3.6.5 BEHAVIOUR**

The intentions of consumers produce behaviours irrespective of whether they were formulated instantly or activated from memory. A changed intention thus, is followed by different behaviours if one considers certain environmental influences.

The cognitive processing approach to consumer decision-making implies that any single cognitive process cannot be studied or analysed in isolation. "To understand how activated knowledge affects integration processes, it would be useful to know how knowledge is activated, as well as something about the original comprehension processes that created the knowledge in the first place" (Peter & Olson 1987: 55). It must be noted that the components of the cognitive processing model are interacting, mutually inclusive and interrelated parts in a "functioning cognitive system" (Peter & Olson 1987: 55).

### 3.4 MARKETING IMPLICATIONS AND CONCLUSION

For thousands of years, marketing has been practiced in a rudimentary manner. Craftsmen and small local producers possessed an intimate personal knowledge of the needs of their customers. However, the process of industrialisation and large-scale production superseded this intimacy and products were no longer designed and made to suit individual tastes. Methods of mass production necessitated uniformity and the development of more distant markets. Hence, the gap between the producer and the consumer widened. Consequently, marketers became increasingly aware that for any organisation to succeed, knowledge about the preferences and buying habits of consumers is imperative. An analytical approach into the decision-making process became the crux of successful management. Researchers began to acquire comprehensive and reliable knowledge and sensitive insights about every aspect of consumer behaviour, including their complex and growing needs.

Behavioural and cognitive analyses were undertaken since consumer behaviour incorporates both mental and physical activities and is the outcome of the impact of numerous internal and external influencing variables. Econometric and other models of buying behaviour have been developed in order to construct profiles of consumers, which contribute to a comprehensive analysis of the buying situation. The variables incorporated into the models emphasize that consumer behaviour is an interactive function of the environment, behaviour, cognition and marketing strategies, the effect of which is clearly depicted in the stages of the consumer decision-making process, ranging from problem recognition to post-purchase evaluation. An interesting aspect about post-purchase behaviour is that the outcome is not always satisfaction. The consumer may experience doubt or anxiety, especially after making a difficult, important and rather permanent decision. Hence, the consumer experiences post-

purchase dissonance or an imbalance in his/her psychological field. Any attempts to achieve a balance is termed cognitive dissonance, a product of many factors including the degree of involvement, the extent of decision-making, and the psychological factors involved in consumer decision-making.

Whilst the overall model of consumer behaviour depicts a vivid picture of the process of decision-making and the influencing variables, the cognitive processing model of consumer decision-making emphasizes how knowledge is activated and how it affects the integration processes. It is the foundation to understanding what motivates consumers, how they formulate attitudes towards products, progress from problem recognition to post-purchase behaviour, achieve consistency amongst behaviour, cognition and affect and sometimes change attitudes.

## **CHAPTER 4**

### **ATTITUDES**

#### **4.1 INTRODUCTION**

Attitudes conceptualise consumers' evaluations of a particular product or service and can provide useful information to marketers. They are closely linked to the purchases of a brand and market share. By understanding the attitudes of consumers marketers are able to effectively develop new products and reposition existing ones, create advertising campaigns, predict consumer brand preference and consumer purchase behaviour. Furthermore, a knowledge of consumer attitudes enables the marketer to improve the marketing mix thereby improving consumers' attitudes.

#### **4.2 THE DEFINITION AND NATURE OF ATTITUDES**

The success of any marketing programme depends upon the understanding of how attitudes are developed and how they influence consumer behaviour.

##### **4.2.1 THE DEFINITION OF ATTITUDES**

An attitude is "a learned predisposition to respond in a consistently favourable or unfavourable manner in respect to a given object, subject, idea or behaviour" (Alpert, Kamins & Graham 1992: 26). The fact that attitudes are 'learned' indicates they will be the result of information received and the influences exerted upon consumers as well as consumer experiences. The notion of 'predispositions to respond' means attitudes are related to consumer's actual behaviours. Knowing a consumer's attitude towards a specific product would enable marketers to understand how that individual would react to that product in the future. Since people tend to hold particular attitudes for rather long periods of time, attitudes are consistent or relatively enduring. However, attitude change is possible.

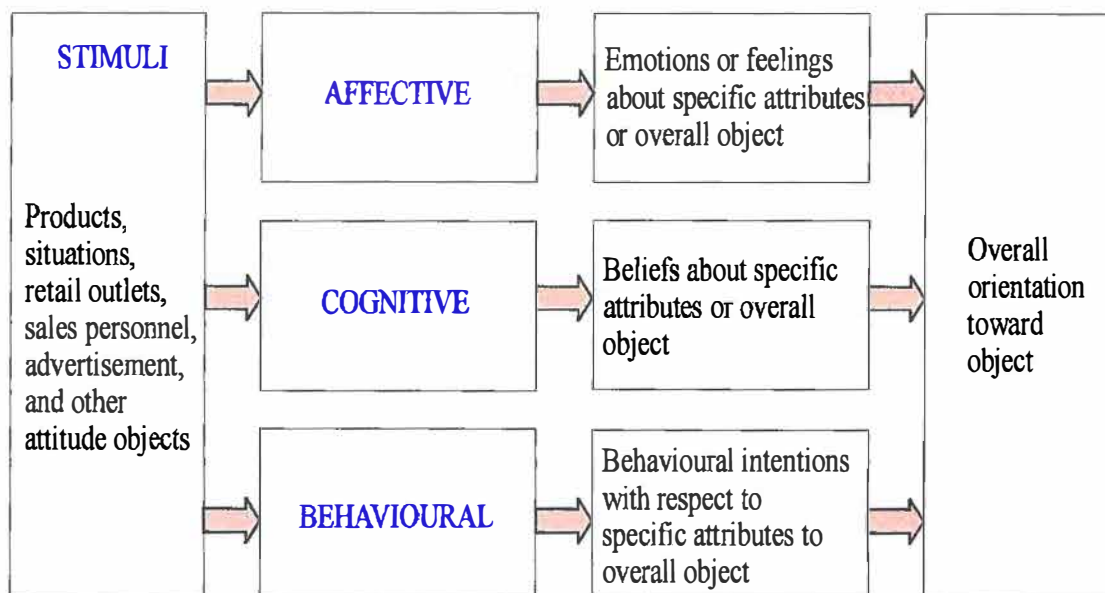
It is therefore, evident that an attitude is more than "a person's overall evaluation of a concept" (Peter & Olson 1990: 137). It is "an enduring organization of motivational, emotional, perceptual and cognitive process with respect to some aspect of the individual's world" (Loudon & Della Bitta 1988: 504). Consumers' attitudes comprises of "what consumers know or believe, how they feel or evaluate something, and how likely they are

to act on it" (Settle & Alreck 1989: 119). This definition emphasizes that attitudes are made up of components.

#### 4.2.2 THE COMPONENTS OF ATTITUDES

Since behaviour is actually a combination of mental, emotional and physical dimensions, a three component view of attitudes exists. This "tripartite model assumes that attitudes have an affective, cognitive and behavioural component, with each varying on an evaluative dimension" (Chaiken & Stangor 1987: 577) (Figure 4.1).

**FIGURE 4.1**  
**ATTITUDE COMPONENTS AND MANIFESTATIONS**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1989. *Consumer Behaviour: Implications for Marketing Strategy*. 3rd Edition. Texas: Business Publications, Inc. p. 434.

The **cognitive component** refers to "the knowledge, beliefs, and opinions the person has about the attitude object" (Wilkie 1986: 451). In order to hold an attitude toward some product or service, consumers must have some amount of information. In attempts to encourage purchases, marketers ensure that potential buyers have enough information and the data is correct.

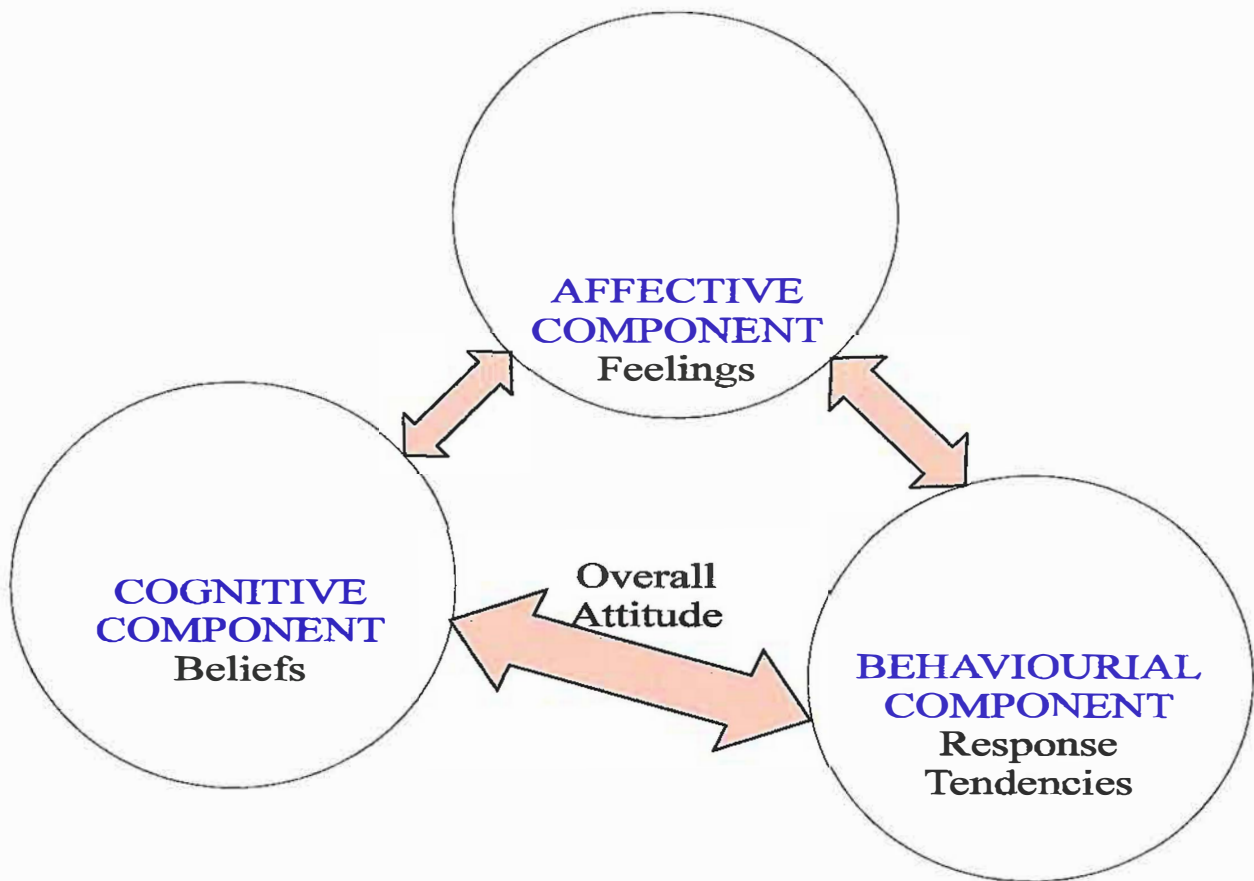


The **affective component** reflects an individual's "general feelings or emotions toward an object" (Zikmund 1989: 358). One's feelings about a product, advertisement, service or other object is associated with one's beliefs or cognitions. Feelings are often formed as a result of evaluating specific attributes of a product. However, feelings can precede and influence cognitions. An individual may develop a liking for a product through classical conditioning "without acquiring any cognitive beliefs about the product" (Hawkins, Best & Coney 1989: 438). This initial feeling can influence an individual's reaction to the product itself.

The **behavioural component** reflects "buying intentions and behavioural expectations" and represents a predisposition to act (Zikmund 1989: 358). People are more likely to act on attitudes if they are directly related to obtaining important goals, are central "to consumers' value structures" and are closely linked with other relevant attitudes (Settle & Alreck 1989: 122).

"There is a tendency for attitudes, cognitions and behaviours to be consistently related" (Thomas 1971: 26) such that "a change in one attitude component tends to produce related changes in the other components" (Hawkins, Best & Coney 1989: 438) (Figure 4.2).

**FIGURE 4.2**  
**ATTITUDE COMPONENT CONSISTENCY**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1989. Consumer Behaviour: Implications for Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 439.

The component consistency tendency is basic to much marketing strategy. Marketers aim to influence consumers. However, since it is difficult to directly impact on behaviour and cause consumers to purchase products, they aim to trigger the intended action by providing stimuli, for example, package information and advertisements, that will influence a belief or feeling concerning the product. In this manner, behaviour is indirectly influenced since the three components of attitudes are consistent with each other. However, rather than assuming that all attitudes necessarily have affective, cognitive and behavioural components, recent researchers (Zanna & Rempel 1988; Eagly & Chaiken 1992) have focused on these domains

as correlates of attitudes. Zanna & Rempel (1988) maintain that attitudes can be based upon, or developed from, affective information, cognitive information and behavioural information. Similarly, Eagly & Chaiken (1992) explain how attitudes can generate affective responses, cognitive responses and behavioural responses. Thus, "the affective-cognitive-behavioural framework provides a useful heuristic for thinking about both the antecedents and consequences of attitudes" (Olson & Zanna 1993: 120). Cognisance must be given to the consistency among affective, cognitive and behavioural correlates of attitudes. Since attitudes are a crucial ingredient in determining and planning marketing programmes, it is necessary to analyse its characteristics.

#### 4.2.3 THE CHARACTERISTICS OF ATTITUDES

Attitudes "must **have an object**" or "a focal point" (Loudon & Della Bitta 1988: 505). The object may be an abstract terminology like behaviourism; a tangible product such as a bicycle; a physical item, for example, a product, or an action which relates to purchasing a product. Furthermore, the object can be one or a group of items or a specific or a general one.

Attitudes express how individuals feel towards objects. It therefore, **depicts direction, degree and intensity**. Direction means that a person is either favourably or unfavourably disposed towards an object. Attitude strength is an important attitude attribute. Strong attitudes serve as significant sources of identity, "resist most attempts at change, and exert widespread effects on perception and behaviour" (Olson & Zanna 1993: 123). Five dimensions that reflect attitude strength include extremity, certainty, importance, knowledge and intensity (Olson & Zanna 1993: 123). Degree relates to the extent to which the individual likes or dislikes the object. Intensity refers to "the level of sureness or confidence of expression about the object, or how strongly a person feels about his or her conviction" (Loudon & Della Bitta 1988: 505).

A knowledge of the intensity of an attitude is invaluable to marketers. Firstly, it can affect "the strength of the relationship between attitudes and behaviours" (Engel, Blackwell & Miniard 1990: 302). Behaviour is generally guided by attitudes with a high level of confidence. When the level of confidence is low, consumers may feel unsafe to act upon

existing attitudes and search for further information before the act of purchases. Secondly, an understanding of the concept of intensity is required since confidence can influence an attitude's susceptibility to change. Attitudes that are held with greater confidence become more resistant to change. The direction, degree and intensity of individual's attitudes towards products provide marketers with an indication of their willingness "to act toward, or purchase, the product" (Loudon & Della Bitta 1988: 506).

Attitudes **have structure**, are organised, have "internal consistency and possess inter-attitudinal centrality" (Loudon & Della Bitta 1988: 506). Attitudes closely related to the consumer's values and self-concept have a high degree of centrality. Attitudes are not isolated but are associated with each other into a complex entity so that a certain degree of consistency must exist between them in order to prevent conflict.

Attitudes "tend to be **stable**, to have varying degrees of salience and to be generalizable" (Loudon & Della Bitta 1988: 506). Since they cluster together, they "persist over a long period of time" (LaBarbera & Mazursky 1983: 402). Furthermore, the longer attitudes are held, the stronger they tend to become and the larger is their resistance to change. This can be attributed to the fact that attitudes tend to be generalizable. Very often an individual's attitude toward a specific product tends to generalize toward a class of products. Furthermore, among all of the attributes in a person's attitudinal structure, some are more salient than others.

Attitudes **are learned** since they are formed as a result of individual's personal experiences, information acquisition and exposure to friends, salespersons, family and media. Since "learning precedes attitude formation and change" the principle of learning can assist marketing managers in developing and changing the attitudes of consumers (Loudon & Della Bitta 1988: 507).

It is evident that attitudes play a crucial role in the behaviour of consumers. Needs are the goals consumers aim for in making a purchase. Attitudes are the consumers' evaluations of the ability of alternative brands or products to fulfill these needs. Needs influence attitudes which in turn impacts on purchases. However, attitudes depend on the level of purchase

involvement.

#### **4.2.4 ATTITUDES AND THE LEVEL OF INVOLVEMENT IN DECISION-MAKING**

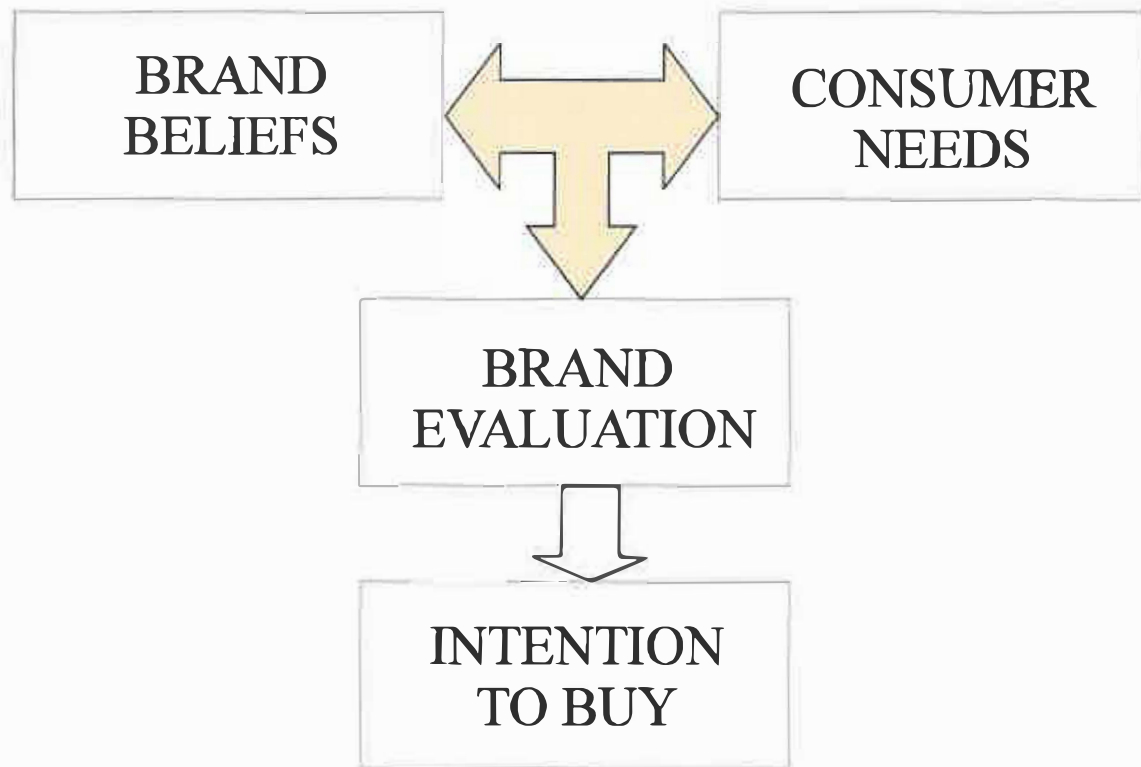
Consumer attitudes differ with the varying levels of involvement, that is, high and low, in decision-making.

##### **4.2.4.1 ATTITUDES IN HIGH INVOLVEMENT DECISIONS**

In high involvement decisions attitudes are part of a hierarchy of effects that result in a purchase decision. Consumers first form beliefs about a product or brand, evaluates it and then decides whether or not to purchase it. "Beliefs about a brand are formed based on a consumer's perceptions of the brand's attributes" (Assael 1987: 176). The extent to which the product or brand has the attributes consumers need is called "perceived instrumentality" (Assael 1987: 176). The greater the extent of perceived instrumentality, the better the probability of positive brand or product attitude. In addition, brand or product evaluation will influence the consumer's intention to buy (Figure 4.3).

**FIGURE 4.3**

**ATTITUDE AND NEED COMPONENTS IN THE PURCHASE DECISION**



Assael, H. 1987. *Consumer Behaviour and Marketing Action*. 3rd Edition. Boston, Massachusetts: Kent Publishing Company. p. 177.

Figure 4.3 illustrates the link between brand or product beliefs, brand or product evaluations and intention to buy and emphasizes that beliefs influence evaluations and the consequent intentions to buy. Hence, the cognitive-affective-conative components of attitudes.

**4.2.4.2 ATTITUDES IN LOW INVOLVEMENT DECISIONS**

"Attitudes do not have as central a role in low involvement as in high involvement decisions" (Assael 1992: 198). Consumers often purchase low involvement products without forming a definite attitude toward the brand and thus, attitudes do not have the same predictive power in low as in high involvement purchases. Beliefs are formed about a brand in a passive way.

Although attitudes may lack predictive value in low involvement decisions, they have diagnostic value. Marketers can determine the beliefs formed about the firm's brands. This information influences the firm's brand positioning and advertising strategies. Furthermore, attitudes formed after a low involvement purchases may influence future purchases, even if they are weak ones.

#### 4.3 THE FUNCTIONS OF ATTITUDES

Attitudes serve four key functions for the individual which relate to the adjustment function, the ego-defensive function, the value- expressive function, and the knowledge function. Any particular attitude may perform one or more of these functions. "Each of these functions relate to the individual's predisposition toward products, stores, or methods of purchase" (Walters & Bergiel 1989: 183).

The **adjustment function** "directs people toward pleasurable or rewarding objects and away from unpleasant, undesirable ones" (Loudon & Della Bitta 1988: 507) and is "utilitarian" in nature (Wilkie 1986: 453). It helps consumers to maximize reward and minimize punishment as they undergo the realities of their environment. Consumers' attitudes are a product of their perceptions of what is need satisfying and what causes pain.

Attitudes protect consumers' egos and self-images "from threats to their self-identities and feelings of personal warmth" (Wilkie 1986: 453). The **ego-defensive function** "aids the consumer in dealing with inner conflict by protecting the self-image from hostile elements in the environment" (Walters & Bergiel 1989: 184). The consumer develops defense mechanisms, rationalizes and prevents criticisms that damage the ego. "Advertising appeals to the ego- defensive nature of attitudes by demonstrating the benefits of product usage or the risks of nonusage" (Assael 1987: 182).

In the **value-expressive function** consumer attitudes "allow strongly held personal values to be expressed in consumer behaviour" (Wilkie 1986: 453). Attitudes express the consumers' self-concept and value system. Value-expressive attitudes give consumers an opportunity to show "how they feel about the world around them", what they stand for and "to identify the things they believe to be important in life" (Settle & Alreck 1989: 114). Thus, the theory

supporting the value-expressive function "provides a useful connection between the nature of the 'inner self' and the external world" (Wilkie 1986: 453). This can account for the fact that consumers select brands and stores which possess images corresponding with their own self-image. Promotional strategy often appeal to the value-expressive nature of attitudes by implying that the use or purchase of a particular product or service will lead to enhancement of self, achievement or independence.

The **knowledge function** of attitudes gives order, definition and meaning to the person's environment. It helps consumers organise the mass of information they are exposed to daily. Attitudes help "to organize and structure one's environment and provide a sense of understanding and consistency in one's frame of reference" (Shavitt 1989: 300). The organisation of knowledge also reduces uncertainty and confusion and assists the individual in dealing efficiently and effectively with new information. Attitudes are "storehouses of ready information about the consumer goods in the marketplace" (Settle & Alreck 1989: 116). Consumers need not reevaluate their preferences, habits, lifestyles or values for each new purchasing situation since "internal knowledge easily recalled thus simplifies our interaction with the world around us" (Walters & Bergiel 1989: 185).

It is evident that attitudes have varying functions. "The function that is served will affect the individual's overall evaluation of an object" (Assael 1987: 183). Attitudes are the source of consumer action.

#### 4.4 THE SOURCES OF ATTITUDE DEVELOPMENT

"All attitudes ultimately develop from human needs and the values that people place upon objects that satisfy those perceived needs" (Loudon & Della Bitta 1988: 508). Thus, it is advantageous to determine the sources of need realisation and need importance and how consumer's attitudes develop towards objects that fulfill desires.

##### 4.4.1 PERSONAL EXPERIENCE

Consumers constantly come in contact with existing and new objects in their environment. They evaluate new ones and re-analyse old objects. This process of evaluation assist individuals in developing attitudes toward objects. Past experiences influence attitudes and



condition future behaviour. "Our direct experiences with sales representatives, products, services and stores help to create and shape our attitudes toward those market objects" (Loudon & Della Bitta 1988: 508). However, the evaluation of such direct contacts are influenced by the individual's needs, selective perception and personality.

#### 4.4.2 GROUP ASSOCIATIONS

Individuals are influenced by the members in the groups to which they belong. Consumer attitudes are largely shaped by groups that they value and with which they associate. A person's attitude development is strongly influenced by three main groups:

The **family** is the most influential group in developing an individual's attitudes. "Parents orient a child's early thinking, and this influence on attitudes is often so strong that it carries over to adult life" (Loudon & Della Bitta 1988: 509). Despite the tendency to rebel in teenage years, "there is a high correlation between attitudes of parents and their children" (Assael 1992: 199). There also exists pervasive **peer group** influence on attitudes and buying behaviour. The norms, standards and influence of important groups in the individual's work and social life exerts a strong impact on their attitudes to various objects. Furthermore, **culture and subculture** "results in a sense of identification about who we are, and it strongly affects attitudes about a variety of objects in our environment" (Loudon & Della Bitta 1988: 509).

#### 4.4.3 INFLUENTIAL OTHERS

Influential individuals like respected friends, relatives and experts, also form and change consumers' attitudes. Opinion leaders who are admired by their followers may strongly influence the latter's attitudes and purchase behaviour. In addition, sales representatives can also positively influence consumers' attitudes, especially when they express opinions that correspond with the consumer's point of view and when they are perceived as having some degree of expertise regarding the product or service.

It is apparent that numerous sources provide customers with information and influence about products, services, stores and other objects. A better understanding of the role of attitudes in consumer behaviour can be derived from an analysis of the attitude theories and models.

#### 4.5 ATTITUDE THEORIES AND MODELS

Attitude theories are concerned with how attitudes develop and change. The key concern of marketers is the relationship between beliefs, attitudes and behaviour because it indicates the success of marketing strategies. If advertising is successful in establishing positive beliefs about a brand, the consumer is more likely to experience satisfaction with the brand which strengthens positive attitudes and increases the probability that it would be repurchased. Three theories that focus on the relationship between beliefs and brand attitudes are balance theory with specific reference to Heider's balance theory, Rosenberg's expectancy-value theory, and Fishbein's multi-attribute theory. Other attitude theories that are based upon the consistency principle which states that "the human mind strives to maintain harmony or consistency among currently perceived attitudes", include the congruity theory and the theory of cognitive dissonance (Loudon & Della Bitta 1988: 510). If the mind senses an inconsistency in its attitude structure, mental tension arises and the individual works toward a consistent structure.

##### 4.5.1 BALANCE THEORY

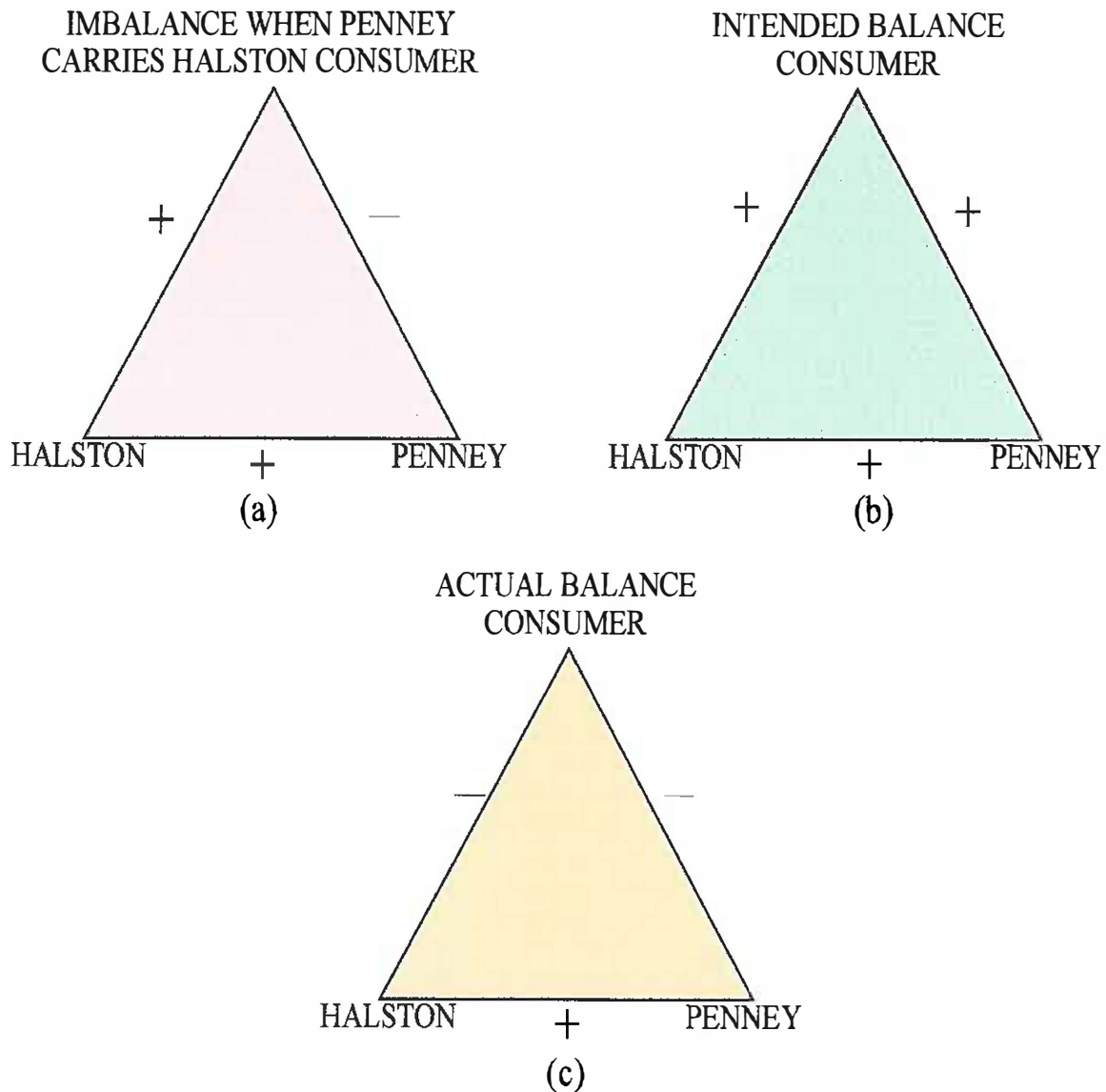
According to the balance theory, "a person perceives his or her environment in terms of traits" (Loudon & Della Bitta 1988: 512). Individuals see themselves "as being involved in a triangular relationship in which all three elements (persons, ideas, and things) have either positive (liking, favourable) or negative (disliking, unfavourable) relationships with each other" (Loudon & Della Bitta 1988: 512). This relationship is called "sentiment" (Loudon & Della Bitta 1988: 512). In the balance theory, the model is imbalanced if the multiplicative relationship among the three components is negative. Alternatively, the model is balanced if the multiplicative relationship is positive.

An imbalanced relationship produces tension for the individual. The consumer can choose to live with the tension and not act to resolve it. Alternatively, if sufficient tension is produced, it is possible that attitude change will occur concerning one element in the triad in order to restore a balanced system. "Rationalization can help to change our perceptions of relationships and thus, our attitudes" (Loudon & Della Bitta 1988: 513). This emphasizes the principle of the balance theory that "a person seeks to achieve balance between evaluations and beliefs" (Assael 1987: 186).

#### 4.5.1.1 **HEIDER'S BALANCE THEORY**

Heider's balance theory maintains a person seeks to achieve balance between cognitions (beliefs) and affect (evaluations). Assael (1992: 205) illustrates the operation of the balance theory using the example of two designer lines of clothing. J.C. Penney contracted to carry Halston's designer line of clothes in an attempt to upgrade Penney's image. Many consumers had a positive image of the former and a negative image of the latter ([a] in Figure 4.4). When Halston's began selling at Penney's (represented by + between Halston and Penney), this relationship created an imbalance (a positive object linked to a negative object). Two pluses and a minus produce a minus, leaving an imbalance in the consumer's mind. Penney hoped consumers would resolve this imbalance by developing a more favourable image of its stores ([b] in Figure 4.4). However, many consumers maintained their image of Penney and developed a more negative image of Halston ([c] in Figure 4.4). This image shift created balance in the consumer's cognitive system (two minuses and a plus produces a plus), but not the balance intended by Penney (Assael 1992: 205).

**FIGURE 4.4**  
**RESOLVING AN IMBALANCE**



Assael, H. 1992. Consumer Behaviour and Marketing Action. Fourth Edition. Boston: PWS-KENT Publishing Company. p. 12.

One of the problems with balance theory is that it presents attitudes in absolute rather than relative terms. Research confirms there exists a consistency between an individual's beliefs and evaluations. In a study of six consumer goods, Sheth & Talarzyck (1972: 8) found that brand ratings on specific attributes such as taste, price, nutrition, and packaging were closely related to overall evaluation of a brand. However, there are cases where beliefs and overall evaluations may not be related if beliefs are not relevant to a consumer's decision. This is

due to the assumption of balance theory that beliefs have to be relevant if consumers want to achieve balance.

#### **4.5.2 ROSENBERG'S EXPECTANCY-VALUE THEORY (EVT)**

Rosenberg's expectancy-value theory is also based on a balance between beliefs and evaluations. According to this theory, when evaluations and beliefs are not in balance, such "affective-cognitive inconsistency is reduced or eliminated through a general attitude reorganization" (Assael 1992: 206). Such a reorganisation occurs when a change in beliefs leads to a change in brand attitudes.

Rosenberg introduces the concept of values in attitudes. Objects are evaluated on the extent to which they help or hinder the accomplishment of these values. Rosenberg uses the concept 'perceived instrumentality' to define the degree to which a value is attained or blocked by an object. Perceived instrumentality is therefore "a belief about an object based on the consumer's values" (Assael 1992: 208). Attitudes towards a brand or company depends on the values consumers consider important and the perceived instrumentality of the object. An attitude toward a brand would be determined by a consumer's set of values.

Rosenberg's theory follows a logical progression. Consumers will purchase what they value most and avoid anything that hinders attaining their values. "It requires a consistency between the belief that a brand helps or hinders accomplishing a value (belief) and the evaluation of the brand (the brand attitude)" (Assael 1992: 208). However, the theory explains attitude formation based on deep-seated values and is therefore, not suitable in explaining many mundane consumer benefits, for example, freshness, economy and good service. Rosenberg's expectancy-value theory is hence, most applicable for high involvement purchases.

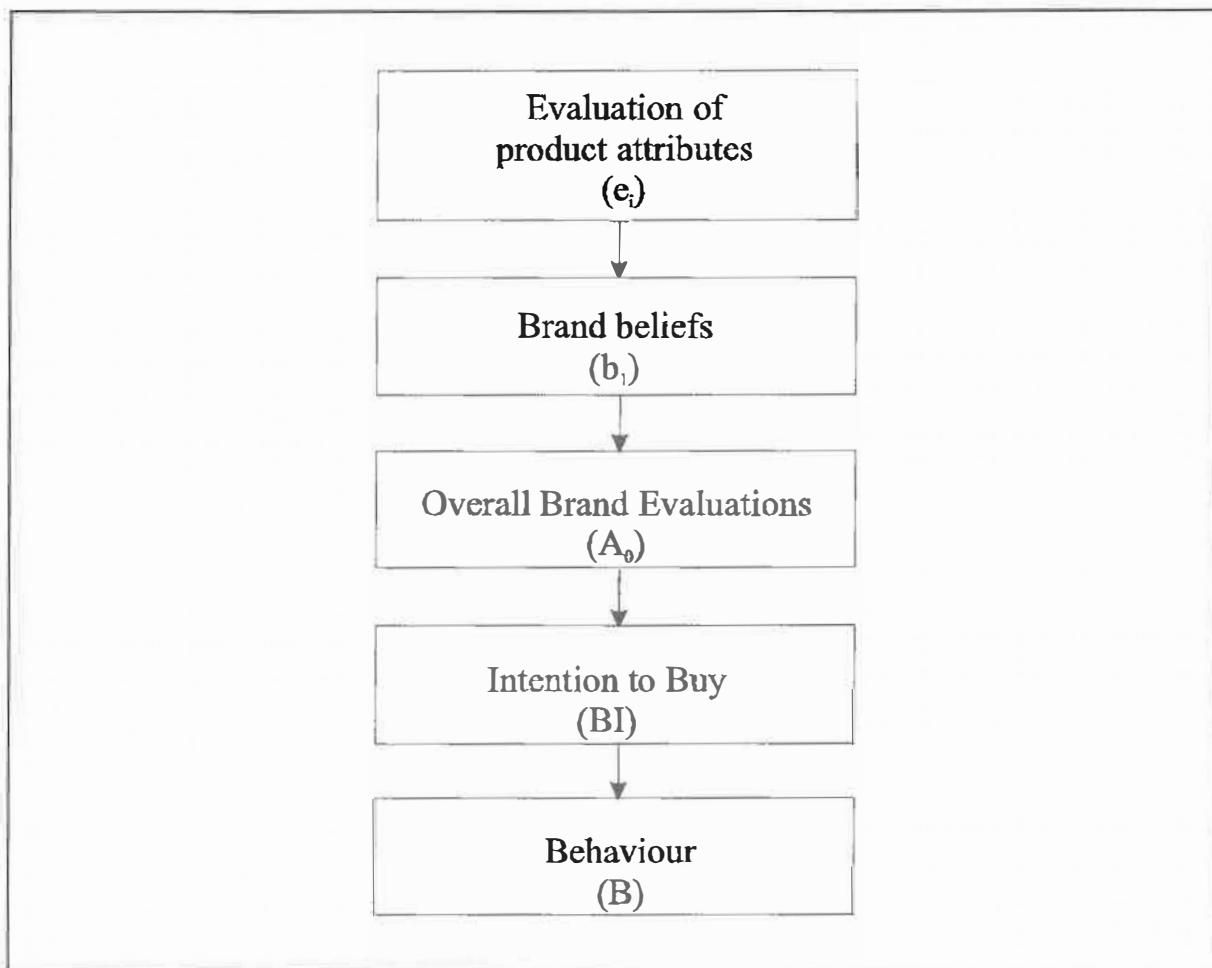
#### **4.5.3 MULTI-ATTRIBUTE ATTITUDE MODELS**

Multi-attribute models of attitudes "consider attitudes in the light of selected product attributes or beliefs" (du Plessis, Roussouw & Blem 1990: 107). The best known of these models is the Fishbein Multi-attribute Model.

#### 4.5.3.1 THE FISHBEIN MULTI-ATTRIBUTE ATTITUDE MODEL

The key proposition in Fishbein's theory is that "the evaluations of salient beliefs causes overall attitude" (Peter & Olson 1990: 143). People form attitudes towards objects "on the basis of their beliefs (perceptions and knowledge) about these objects" (Loudon & Della Bitta 1988: 515). "Salient beliefs are those activated from memory and considered by the person in a given situation" (Mitchell & Olson 1981: 318). Beliefs are formed by processing information which is derived from direct experiences with objects and from communication about them acquired from other sources. Information processing leads to cognitions or beliefs about products which in turn, result in attitudes involved in the evaluation of products. Fishbein's model is formulated such that individuals' overall attitude toward some object is derived from their beliefs and feelings about various attributes of the object. Therefore, according to this approach "an attitude is restricted to the emotional, feeling or evaluative component" (Louw & Edwards 1993: 773). In other words, Fishbein's attitude theory states that "belief formation (change) must precede attitude formation (change)" (Mitchell 1986: 13). Hence, the concept multi-attribute attitude model (Figure 4.5).

**FIGURE 4.5**  
**FISHBEIN'S MULTI-ATTRIBUTE MODEL**



Assael, H. 1992 . Consumer Behaviour and Marketing Action. Fourth Edition.  
Boston: PWS-KENT Publishing Company. p. 210.

The model includes the cognitive or belief and the affective or evaluation components of attitudes. Two major elements of Fishbein's multi-attribute model are the strengths and evaluations of the salient beliefs. Belief strength is "the perceived probability of association between an object and its relevant attributes or consequences" (Peter & Olson 1990: 144). The strength of consumers' product or brand beliefs is influenced by past experiences with the object. "Beliefs based on direct experience tend to have a greater impact on attitude" (Peter & Olson 1990: 145). Associated with each salient beliefs is an evaluation that reflects "how favourably the consumer perceives that attribute or consequence" (Peter & Olson

1990:146). The evaluations of the salient beliefs affect the overall attitude in proportion to the strength of each belief. Strong beliefs about positive attributes have greater effects of attitude than do weak ones about equally positive features. Similarly, "negative evaluation reduce the favourability of attitude in proportion to their belief weights'" (Peter & Olson 1990: 146). It is therefore evident that the overall attitude toward an object can be obtained "by multiplying the belief score by the evaluation score for each attribute and then summing across all relevant beliefs to obtain the value of attitude" (Loudon & Della Bitta 1988: 516).

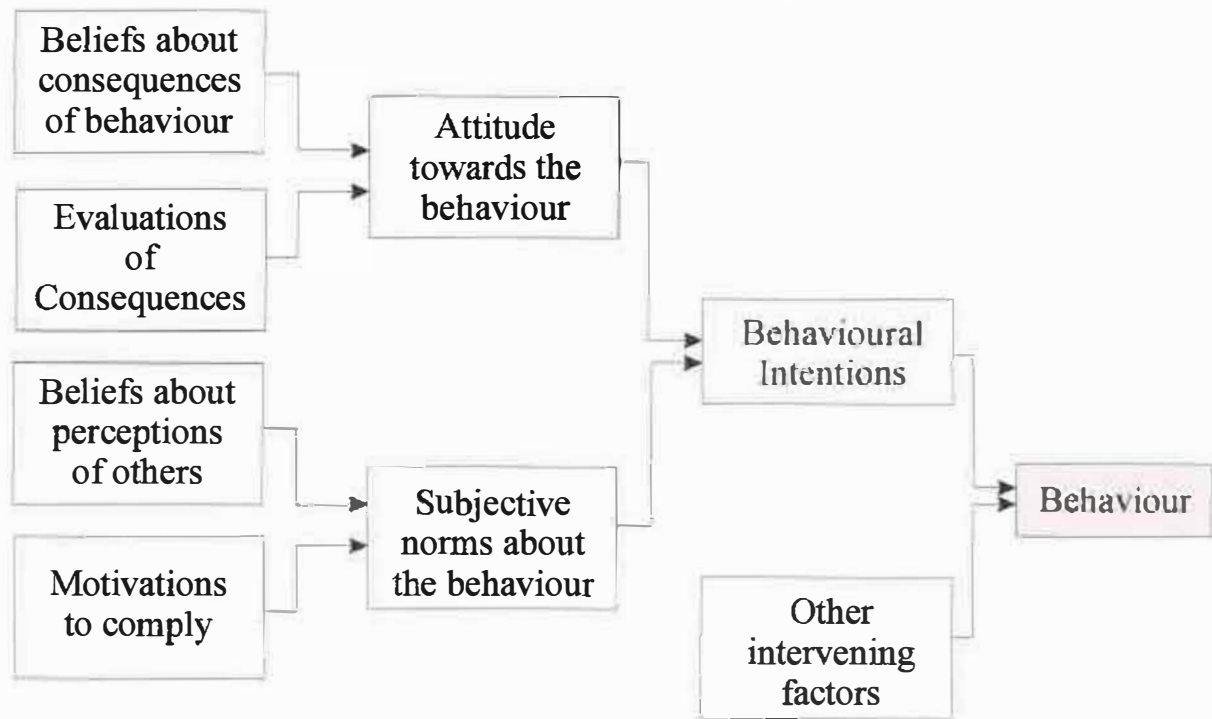
In addition to being multi-attribute in nature, Fishbein's model is also compensatory. However, this model, like other multi-attribute ones, cannot be used to successfully predict the behaviour of consumers. To rectify this problem Fishbein developed a Behavioural Intentions Model.

#### 4.5.3.2 FISHBEIN'S BEHAVIOURAL INTENTIONS MODEL

Fishbein's Behavioural Intentions Model maintains that an individual's behaviour is "a function of his intention to behave in a certain manner and other intervening factors" (Loudon & Della Bitta 1990: 519) (Figure 4.6). The intention to behave cannot perfectly predict behaviour since a favourable attitude does not necessarily imply purchase, nor does an unfavourable attitude imply non-purchase. "Many factors may intervene between the various components. These may include the price of the product, or the fact that "other more practical considerations have to be accounted for" (Chorn 1984: 14).



**FIGURE 4.6**  
**THE RELATIONSHIP OF COMPONENTS IN FISHBEIN'S BEHAVIOURAL**  
**INTENTIONS ATTITUDE MODEL**



Loudon, D. & Della Bitta, A.J. 1988. Consumer Behaviour: Concepts and Applications. New York: McGraw-Hill Book Company. p. 519.

Behavioural intentions results from "a person's attitudes toward performing the behaviour in question and the person's subjective perception of the norm concerning the behaviour" (Zaltman & Wallendorf 1983: 433). The subjective perception of a norm is the individual's perception of how others will look upon that behaviour. The exact nature of the individual's behavioural intentions will depend on the relative influence of each of these factors. For some behaviour the attitude one has toward performing that behaviour will be more important and will have more weight in determining the behavioural intention than the subjective perception of the norm with regards to that behaviour. However, for some behaviours the subjective perception of the norm will be more valuable.

Fishbein's behavioural intentions model can be distinguished from his multi-attribute model in that in the former "beliefs and evaluations are about certain actions and the consequences of these actions", unlike in the latter where it is about attributes of an object (Loudon & Della Bitta 1988: 520).

The subjective or social norm component "effects consumers' perceptions of what they think other people want them to do" (Peter & Olson 1990: 156). Subjective norms also take cognisance of how motivated a person is to comply with that reference group's norms. Consequently, "the model basically represents an attempt to combine cognitive influences with interpersonal and group influences" (Kassarjian 1982: 627).

The consumer's intention to perform a behaviour, for example, buying a product, is simply a result of the individual's attitude toward the act of going out and purchasing the item, towards all the activities and experiences incorporated into that consumption process as well as perceptions about the social desirability of purchasing or using the product. "Attitude generally affects behaviour indirectly through intentions" (Bettman 1986: 268). "Behavioural intentions involve not only attitudes and subjective norms, but the relative weights or importance of each component as well" (Zaltman & Wallendorf 1983: 436). Furthermore, this theory proposed that attitude towards the act and subjective norms combine to influence the behavioural intentions and "their relative influence varies from situation to situation" (Peter & Olson 1990: 157).

## ■ **STUDIES OF THE RELATIONSHIP OF ATTITUDES TO BEHAVIOUR**

Various studies (Achenbaum 1972; Mitchell & Olson 1981) have confirmed an association between attitudes and behaviour. They view consumer attitude as "the customer's global evaluation of a product/service offering" (Bolton & Drew 1991: 2). Achenbaum (1972: 11) studied consumer attitudes toward and consumption of nineteen brands in seven product categories and found a strong relationship between changes in beliefs, overall evaluation of the brand, and changes in a brand's market share. The study supports the hierarchy of effects since beliefs about the economy influenced brand evaluations, which in turn influenced behaviour.

A study conducted by American Express of card users found "a strong relationship between changes in the overall evaluation of the card and intended usage" (Assael 1992: 212). Mitchell & Olson (1981: 318) found that beliefs and evaluations of brands of facial tissue were related to intention to buy. They found also attitudes toward advertising as well as attitudes toward the brand influence the likelihood of buying. Greenwald & Banaji (1995: 7) maintains "attitudes have predictive validity in situations in which they are strongly activated and/or when the actor clearly perceives a link between attitude and behaviour". Similarly, Meyers (1990: 40) believes "our attitudes predict our actions" and Eagly & Chaiken (1993: 209) referred to the perceived relevance of attitude to action. However, attitudes do not always predict behaviour. Wells (1985: 43) found that "intentions track behaviour and attitudes do not" and adds that cognisance should be given "to the enabling conditions and precipitating circumstances that combine attitudes to produce behaviour". Similarly, researchers (Smith & Swinyard 1983; Roedder, Sternthal & Calder 1983; Sheth & Frazier 1982) have pointed out that attitudes are not very good predictors of overt behaviour. "While attitudes and behaviour are usually positively related in an aggregate analysis and, therefore, generally consistent, there will typically exist a significant number of cases where they are inconsistent or at odds with one another (Frazier & Sheth 1985: 39).

## ■ THE RELATIONSHIP BETWEEN INTENTION TO BUYER BEHAVIOUR

Intention to buy acts as an intervening variable between attitudes and behaviour. Intentions to buy brands have been used by marketers to evaluate new product concepts and advertising themes. Economists use consumer intentions to predict future economic trends. Hence, both marketers and economists use intention to predict future behaviour.

"The relationship between intention and subsequent behaviour should be confirmed if purchase intention is to be regarded as a valid measure of action tendency" (Assael 1992: 214). Bagozzi & Baumgarten (1989: 35) found intentions were closely related to behaviour for six of the seven magazines studied. McQuarrie (1988: 407) in his study on the purchase of computer systems found intentions were more closely related to behaviour for heavy computer users. Katona (1960) undertook studies and extensively confirmed the relationship between intentions and purchase. The majority of the subjects

in his study who intended to buy a product fulfilled their intentions. However, Bagozzi and his colleagues suggest that "attitude-behaviour consistency may be contingent on how well-formed intentions are and how much effort is required to enact a behaviour" (Tybout & Artz 1994: 141). Furthermore, repeat purchase behaviour may be modelled "as a function of prior intentions and customer satisfaction" (Bolton & Drew 1991: 2). However, a further analysis undertaken by Mackenzie & Spreng (1992: 521) specifies that "purchase intentions are a function of brand attitudes and that motivation will moderate the impact of attitudes on intentions".

## ■ **FACTORS INHIBITING THE RELATIONSHIP BETWEEN BELIEFS, ATTITUDES AND BEHAVIOUR**

The relationship between (1) attitudes and intentions and (2) beliefs, attitudes and behaviour may not always be consistent. Marketers need to recognize situations or conditions when attitudes are unlikely to be related to behaviour:-

- **LACK OF INVOLVEMNT**

Attitudes are less likely to be related to behaviour for low involvement products.

- **LACK OF DIRECT PRODUCT EXPERIENCE**

Lack of product experience may result in weakly held attitudes that are not related to behaviour. Berger & Mitchell (1989: 269) found when consumers have direct product experience, their attitudes are more likely to be related to subsequent behaviour. Fazio & Zanna (1978: 398) found that attitudes based on direct experiences were held with greater confidence and are more predictive of behaviour than attitudes based on direct experiences.

- **LACK OF PERCEIVED INSTRUMENTALITY**

Attitudes are unlikely to be related to behaviour if brand beliefs are not tied to consumer values.

- **POOR ATTITUDE ACCESSIBILITY**

Brand beliefs are retained in memory as schema representing consumer associations with the brand. In order for these beliefs to affect brand evaluations, they must be accessible from memory. People retrieve from memory "informational items acquired from various sources and then use these informational items as bases for their attitudes" (Loken & Hoverstad 1985: 155). In the Fazio model, an attitude is defined as "the evaluation of an object associated in memory with the representation of that object. Attitude accessibility is defined as the strength of this association" (Berger & Mitchell 1989: 270). Fazio argues behaviour is influenced by previously formed attitudes only if these attitudes are activated from memory in the behavioural situation. The Fazio model suggests "whether attitude activation occurs and, therefore, whether selective perception occurs depends on attitude accessibility" (Berger & Mitchell 1989: 270). Hence, "the accessibility of the attitude from memory is postulated to act as a critical determinant of whether the attitude-to-behaviour process is initiated" (Fazio, Powell & Williams 1989: 280). A lack of a relationship between behaviour and attitudes may be due to the fact that some attitudes are so weakly held that they are not accessible. "If attitudes are strongly held, they are often spontaneously retrieved when the individual encounters the object" (Assael 1992: 216). Fazio, Powell & Williams (1989: 287) found "subjects with highly accessible attitudes toward a given product displayed greater attitude-behaviour correspondence than did those with relatively less accessible attitudes". Berger & Fazio, Powell & Williams (1989: 287) found "the accessibility of an attitude from memory does appear to moderate the extent to which that attitude guides product selection behaviour".

However, Berger (1992) found "attitude confidence appears to have a greater moderating effect on attitude-behaviour consistency than does accessibility when consumers are engaged in deliberative (high involvement/personally relevant) decision making" (Tybout & Artz 1994: 140).

- **CHANGING MARKET CONDITIONS**

Consumers may switch to another brand with no change in attitudes when there is a price increase in the favoured brand, when the favoured brand is out-of-stock and when

a less preferred brand has a special price promotion. Berger & Mitchell (1989: 276) found advertising repetition can influence both attitude accessibility and confidence and "the consequent attitude-behaviour relationship".

#### 4.5.4 CONGRUITY THEORY

When consumers are in a state of incongruity, they experience an uncomfortable tension state that must be resolved. Marketers adopt various strategies in ensuring conflict resolution. The congruity principle is used often in promotional efforts. Advertisements of products, services, organisations and brand frequently entail celebrities. The intention is to encourage consumers who maintain positive attitudes toward a source "to develop a positive value association between the source and the object" (Loudon & Della Bitta 1988: 512).

#### 4.5.5 COGNITIVE DISSONANCE

Cognitive dissonance is a psychological state which occurs when an individual perceives "that two cognitions (thoughts), both of which he believes to be true, do not 'fit' together" or seem inconsistent" (Loudon & Della Bitta 1988: 513). According to Olson & Zanna (1993: 134) dissonance is aroused "whenever individuals feel responsible for aversive outcomes, whether the behaviour that produced those outcomes is consistent or inconsistent with their attitudes". The dissonance that arises produces tension and motivates the person to harmonize inconsistent components and decrease the psychological tension.

Dissonance can occur either as a result of any logical inconsistency, when an individual "experiences an inconsistency either between his attitude and his behaviour or between two of his behaviours" or "when a strongly held expectation is disconfirmed" (Loudon & Della Bitta 1988: 513). Individuals experiencing cognitive dissonance can reduce it either by means of rationalization, by seeking additional information that is consistent with their behaviours or by "either eliminating or altering some of the dissonant elements" (Loudon & Della Bitta 1988: 514). According to cognitive dissonance theory, "attitudes change to conform to previous behaviour, thus reducing post-purchase conflict" (Assael 1987: 195). Hence, cognitive dissonance theory suggests that "the conflicting thoughts, or dissonant information, that follow a purchase decision might propel consumers to change their attitudes to make them consonant with their actions" (Schiffman & Kanuk 1991: 263).

#### 4.5.6 STRATEGIC IMPLICATION OF ATTITUDINAL MODELS

It is evident that the multi-attribute models have widespread use for both academic marketers and marketing managers. Multi-attribute models provide more than just a procedure for measuring attitudes but also a powerful and effective means for diagnosing marketing problems and developing solutions to these problems. Since many marketing strategies are aimed at affecting consumers' general attitudes toward products and brands, "marketers can use changes in attitude to measure the success of those strategies" (Peter & Olson 1990: 149). The trend in attitudes towards the object over time can be beneficial in monitoring consumers' feelings about a brand and the competitive brands being marketed. Furthermore, the potential advantage of multi-attribute models over unidimensional models is that it provides an understanding of the attitudinal structure. "Diagnosis of brand strengths and weakness on relevant product attributes can then be used to suggest specific changes in a brand and its marketing support" (Loudon & Della Bitta 1988: 518). Furthermore, multi-attribute models have intuitive appeal. Marketers see goods and services as possessing need or motive satisfying properties. The attributes of the object are the means which satisfy consumers' motives. The importance of the multi-attribute approach is apparent in the strategic applications of needs and attitudes. "Consumers ratings of product attributes play a key part in evaluating the positioning of new products, the maintenance of attitudes for existing products, and the effectiveness of advertising in influencing or changing consumer beliefs" (Assael 1987: 180). Multi-attribute data are relatively easy to collect and evaluate. In addition, "multi-attribute models developed out of specific psychological theories in which the formation of buyers' attitudes is tied to more basic psychological processes" (Horton 1984: 170).

Fishbein's improvement from the multi-attribute attitude model to the behavioural intentions model enabled marketers to predict the behaviour of consumers more effectively. In addition, the second model enables marketers to determine the factor influencing consumers' intentions to behave. These attitudinal and subjective norm components can enable diagnosis of reasons for behaviour, and also "suggest alternative marketing strategies for effecting changes in consumers' attitudes and intentions to behave" (Loudon & Della Bitta 1988: 523).

Hence, attitudinal models enable marketers to:-

- Identify the strengths and weaknesses of the company's brand in relation to competitors.
- Determine the need to reposition existing products.
- Identify the most relevant attributes for strategic purposes. Advertising strategies would emphasize the criteria consumers believe to be important in an attempt to gain a competitive advantage.
- Identify new product opportunities. The value component may identify a combination of desirable attributes. Such a finding suggests an important market opportunity to introduce a brand to meet this combination of needs (Assael 1992: 217).

The successful use of the multi-attribute models would, however, depend on the quality of the measurement procedures associated with it" (du Plessis et al. 1990: 110).

#### 4.6 ATTITUDE MEASUREMENT

Attitude measurement involves determining the intensity of consumers attitudes. Attitudes "are constructs developed by researchers to help explain a psychological phenomenon" and should be measured indirectly (Zaltman & Wallendorf 1983: 449). It is difficult to measure attitudes because consumers may not know what their attitudes are or "how to articulate those attitudes" and the researcher has to accept the information provided by the consumers as being accurate. An attitude not held by the consumer may be created as a result of the attitude measurement question. Also, "there may be social norms or other situational factors operating that may influence the subjects' willingness or ability to respond to some types of questions" (Zaltman & Wallendorf 1983: 449).

A distinction can be made between qualitative and quantitative attitude research methods. **Qualitative methods** like depth interviews and focus groups are useful in providing a knowledge of the nature of attitudes. Depth interviews involve "an often lengthy, detailed, face-to-face interview" between the researcher and the subject (du Plessis et al. 1990: 110). The questioning procedure is open-ended and aims to encourage subjects to reveal their inner thoughts and beliefs. "With the open questioning, respondents are presented with a question that invites expression of attitude, as well as beliefs, arguments for or against, or behaviour, relative to an object" (Lastovicka & Bonfield 1982: 63). Focus groups involve similar



methods with the exception that a small group of subjects is interviewed in depth. Both methods attempt to shed light on inner thoughts, attitudes and beliefs.

**Quantitative research** is often used "when marketers need information that is representative of the attitudes of a defined market segment" (du Plessis et al. 1990: 110). The most common quantitative technique of attitude measurement is attitude scaling. An **attitude scale** may be described as a rating scale "in which a subject indicates the extent to which he agrees (or disagrees) with particular statements" (Huysamen 1988: 111). Three most common attitude scaling procedures include Likert scales, semantic differential scales and rank-order scales. Respondent's answers to attitude and opinion items in surveys are influenced by a variety of methodological factors, for example, the way questions are worded, response scales or response categories. "Answers to an item can also be affected by the preceding items," thereby causing "question order" or "context effects" (Olson & Zanna 1993: 124).

#### 4.7 THE IMPORTANCE OF ATTITUDES IN MARKETING

Marketers have a definite interest in consumers' attitudes and knowledge because "if they can have an influence on purchase-related attitudes and knowledge, they believe they can influence purchase behaviour" (McNeal 1982: 111). Marketers are interested in defining and measuring attitudes because attitudes can help to predict consumer behaviour, determine consumers' preferences, describe consumer segments and evaluate marketing strategy.

Furthermore, attitudes and knowledge are the active elements in the consumer's personality. They do the mental work that is necessary to fulfill needs. Attitudes and knowledge play a practical role in consumer behaviour especially with regards to product, store and brand preferences. Product preference is the term used to describe "a set of favourable attitudes toward a specific product" (McNeal 1982: 155). This concept subsumes both attitudes and knowledge since one cannot hold a preference for a product without possessing knowledge about it. It is necessary for marketers to determine the numerous attitudes of consumers in order to have a knowledge of their preferences and dislikes. Consumers also hold attitudes and knowledge about brands that translate into brand preferences. The value of brands, and thus, preferences for them, is a function of consumers' needs as reflected in their attitudes. Furthermore, brand names "exert control over opinion and evaluation responses depending

on the initial attitude of the consumer" (Pierce & Belke 1988: 234). A knowledge of consumer attitudes enables marketers to develop products and brands that would satisfy many consumers since "attitude toward a brand predisposes the prospective buyer to react to that brand in a reasonably predictable manner" (Boote 1981: 39). Undoubtedly, the brand most liked by the individual will be the one having the highest probability of selection in the market.

Like brand preferences, consumers frequently display store preferences. The latter "are attitudes and knowledge relative to those stores that reflect the need of various consumers" (McNeal 1982: 116). Marketers attempt to understand consumers' reasons for visiting a store or their "patronage motives" by eliciting attitudes and knowledge about stores (McNeal 1982: 116). Attitudes can be useful in describing consumer segments. Marketers could segment consumers "according to their beliefs about the attributes or consequences of brands and develop strategies based on those perceptions" (Peter & Olson 1990: 147). It is useful to segment consumers based on the importance they attach on various attributes. Knowing the salient beliefs underlying attitudes can suggest alternative persuasion strategies for attitude change.

As diagnostic measures, consumer needs and attitudes are used in evaluating marketing strategies. Attitudes are crucial in evaluating alternative positionings for new product concepts. The proper positioning depends on the needs of a defined target group and how it rates the key attributes of the product. A knowledge of the attitudes of consumers will enable the marketer to position the new product based on criteria that are rated favourably by the potential target group. Products must be rated on the evaluative criteria when they "are introduced into a test market prior to launch, as well as when they have been on the market for some time" (Assael 1987: 179). Marketers should determine if the product has performed successfully on the key criteria. Furthermore, evaluation of the product may change over time as needs change and new products enter the market. Marketers need to reassess the needs and attitudes of consumers periodically in order to ensure consumer satisfaction. Furthermore, a knowledge of attitudes is helpful in evaluating the effectiveness of advertising messages.

Attitudes are also important in defining benefit segments. Market segments can be defined by the benefits consumers desire. For example, the car market is defined by economy, performance and luxury segments. "Benefit segmentation is essential for targeting consumers because the benefits consumers desire influence their brand attitudes and behaviour" (Assael 1992: 202). Procter & Gamble was unsuccessful with a benefit segmentation approach when it introduced Pringles potato chips. It inadvertently identified an important market segment that wanted a fresher product. Hence, they introduced Pringles in a new cylindrical container that did keep chips fresher. However, in the process the company overlooked a key benefit of taste. Consequently, a substantial segment of buyers developed negative attitudes toward the product. It took Procter & Gamble years of "additional product development and sustained advertising to overcome the negative attitude toward the brand" (Assael 1992: 202).

Attitudes are important in developing promotional strategies and in judging the effectiveness of advertising messages. However, MacKenzie & Lutz (1989: 49) defines attitude toward the advertisement as "a predisposition to respond in a favourable or unfavourable manner to a particular advertising stimulus during a particular exposure occasion". Researchers (Lutz 1985; MacKenzie & Lutz 1989) regard the attitude-toward-the-advertisement construct as "an important influence on advertising effectiveness, brand attitudes, and purchase intentions" (Durvasula, Andrews, Lysonski & Netemeyer 1993: 627). Television commercials and print advertisements are often evaluated by how large and how favourable an attitude shift they produce. Attitudes are also used "to evaluate advertising campaigns over time to determine whether the attitudes are being maintained" or whether they are changing favourably or unfavourably (Assael 1992: 204). Research results (Mitchell & Olson 1981; Mitchell 1986) indicate that the visual elements of advertisements may affect brand attitudes in at least two ways:-

- Firstly, individuals may form inferences about the advertised brand based on the visual information presented, which may result in the formation or change of beliefs about the advertised brand.
- Secondly, if the visual element is positively or negatively evaluated, it may have an impact on brand attitudes that operates through attitude toward the advertisement.

Furthermore, Mitchell (1986: 21) observed the same two-fold effect of verbal information, which may result "in the formation or change of product attribute beliefs and may also affect attitude toward the advertisement. These two components, then, have independent effects on brand attitudes" (Mitchell 1986: 21). Hence, attitude toward the advertisement "is an important causal mediator of advertising's impact on brand attitude" (Madden, Allen & Twible 1988: 242).

The models of attitudes enable a better understanding of consumer behaviour which is so critical to marketers. In particular, the multi-attribute model provides knowledge relevant to marketing strategy. The information can be used to suggest changes in brand attributes. Multi-attribute analysis has important implications for new product development since "discovering that current offerings fall short of the ideal brand would reveal an opportunity for introducing a new offering that more closely resembles the ideal" (Engel, Blackwell & Miniard 1990: 318). A multi-attribute model can also be used successfully to forecast the market shares of new products. Furthermore, information regarding beliefs and evaluations of consumers can be used "to suggest modifications of promotional messages to better acquaint consumers with existing brand attributes", and to identify new market opportunities (Loudon & Della Bitta 1988: 518).

The importance of a knowledge of attitudes in the study of consumer behaviour is evident. Effective marketing strategy and effort cannot be attained without due consideration of this individual influencing variable. However, although attitudes are reasonably consistent, they do change.

#### 4.8 ATTITUDE CHANGE

Marketers develop strategies to change attitudes of consumers in attempts to increase market share. Any change in attitudes alters the behaviour of consumers since the cognitive-affective-conative components are consistent.

##### 4.8.1 ATTITUDE CHANGE AND THE DEGREE OF INVOLVEMENT

Attitude change is largely a function of the degree of involvement consumers are experiencing with the product. "When consumers are highly involved with a purchase,

marketers can expect attitude change preceding behaviour. When consumer involvement is low, attitudes will have a weaker role to play in determining purchase behaviour" (Wilkie 1990: 328).

#### 4.8.1.1 LOW-INVOLVEMENT STRATEGIES

Under low-involvement conditions consumers' interest is too low "for evaluating product attributes and forming beliefs about various brands" (Loudon & Della Bitta 1988: 531). However, consumer attitudes are not necessarily based on their beliefs and cognitions. Attitudes may also be changed when consumers develop positive reactions to an advertisement used to promote a brand. Furthermore, consumers may develop attitudes based on experience or post-purchase assessments. This implies that marketers deliver quality products so that the consumer would develop favourable evaluations and consequently, positive brand or product attitudes.

Another attitude change strategy for low-involvement conditions is to encourage individuals to increase their levels of prepurchase involvement. This can firstly be done by:

- Linking the product to an involving state. For example, linking a brand of toothpaste to problems of tooth decay and plaque. The implication is that attitude change will only occur "when the change will better satisfy needs" (McNeal 1982: 111).
- Linking the product to a current personal situation. This technique involves targeting a message to individuals when they are engaged in a product related activity.
- Developing high involvement advertisements. The intention is to create an advertisement that is linked to the product.
- Changing the importance of product beliefs.
- Announcing or introducing necessary product features.

The aforementioned five strategies aim to increase involvement levels among individuals to an extent to which "they will form attitudes prior to purchase and use these attitudes to influence their purchase decisions" (Loudon & Della Bitta 1988: 532). However, different strategies are used by marketers in high involvement conditions.

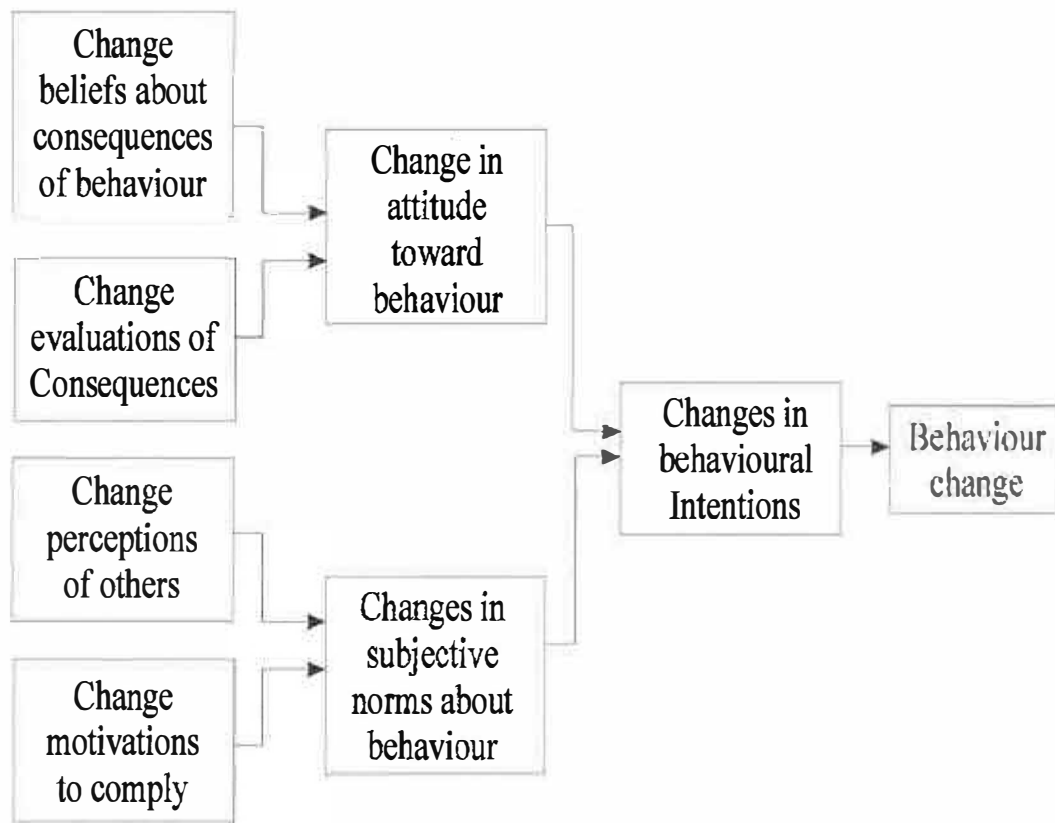
#### 4.8.1.2 HIGH-INVOLVEMENT STRATEGIES

Under high-involvement strategies the marketer can either change attitudes toward a brand or attitudes about behaving toward a brand. The latter is more closely linked to the consumer's intention to purchase. Numerous strategies may be adopted in altering consumers' attitudes toward behaviour (Figure 4.7). Behavioural modification, as indicated in Fishbein's model, is the outcome of changes in behavioural intentions. This refers to changes related to attitudes towards the behaviour and subjective norms concerning the behaviour, or other situational factors.

Attitude change can be brought about by changing existing beliefs about the outcomes of behaviour. Consumers frequently maintain incomplete or incorrect beliefs about the outcomes of consuming specific brands. Marketers modify these beliefs in such a manner that they positively influence attitudes and increase the intentions to buy. This is achieved by:

- Ensuring that the advertisements focus on brand beliefs.
- Changing consumers' evaluation of the outcomes of a specific action. Very often consumers may believe that using a brand will result in certain outcomes, but these consequences are not positively evaluated. Marketers adopt measures to increase evaluations of the outcomes and enhance consumer attitudes.
- Introducing "new belief/evaluation combination" (Loudon & Della Bitta 1988: 533). Marketers do this by adding or eliminating product attributes or emphasizing the presence or absence of existing product features in terms of their favourable outcomes for the consumer. Another strategy option is to change existing normative beliefs. Consumers may hold positive attitudes towards a product but may hesitate to buy it because of a negative reaction on the subjective norm component. Such beliefs can be changed by means of promotions that simulate group settings and by altering "consumers' motivations to comply with the influences of people important to them" (Loudon & Della Bitta 1988: 534).

**FIGURE 4.7**  
**STRATEGY OPTIONS FOR ATTITUDE CHANGE IN HIGH-INVOLVEMENT**  
**CONDITIONS**



Loudon, D. & Della Bitta, A.J. 1988. *Consumer Behaviour: Concepts and Applications*. New York: McGraw-Hill Book Company. p. 533.

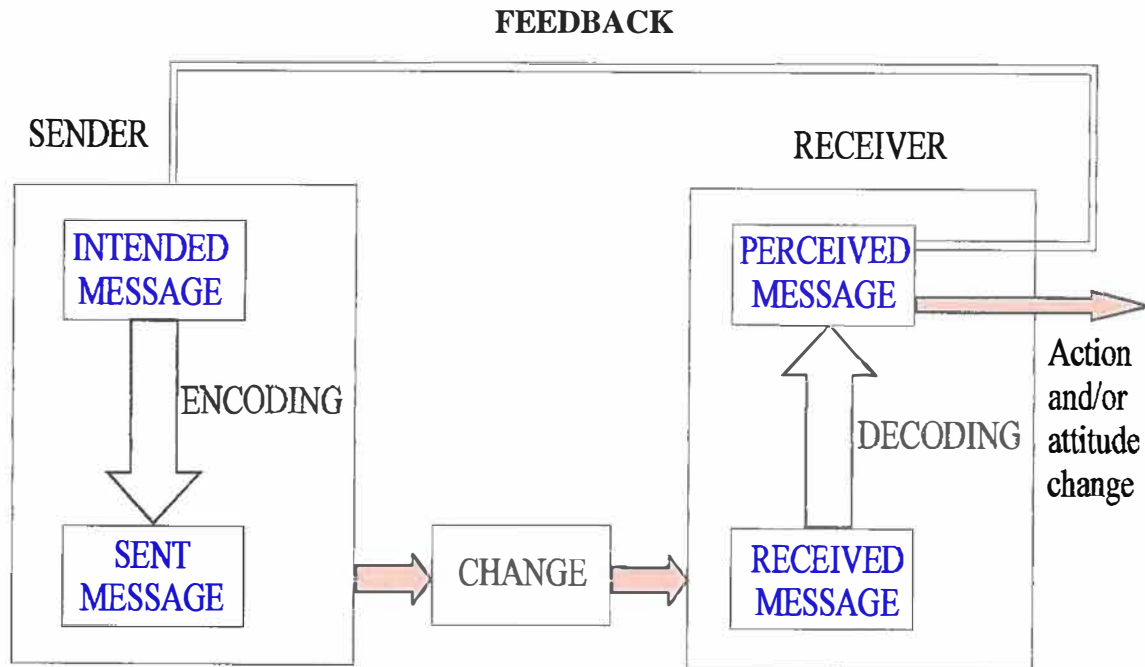
Although numerous strategy options exist for attitude change in high-involvement situations, the selection of the appropriate strategy to be adopted will depend on the competitive environment, the existing conditions that consumers face, consumers' knowledge and beliefs, and product attributes. It is easier to change the intensity or degree of attitudes than their direction. Also, "weak attitudes are more susceptible to change than strong or extreme attitudes" (Walters & Bergiel 1989: 198). Greater product or brand involvement implies greater personal relevance to the consumer. It is easier to change consumer beliefs than to change their evaluations of the outcomes of certain actions since evaluations are based on the need of the consumer, "which are more enduring and central to his values and self-concept than are beliefs about purchasing a particular brand" (Loudon & Della Bitta 1988: 535).

#### 4.8.2 THE COMMUNICATION PROCESS

The marketers' primary tool for influencing attitude change is "the design and implementation of persuasive communications" (Loudon & Della Bitta 1988: 535). A simplified model of this process is depicted in Figure 4.8.

**FIGURE 4.8**

#### **A SIMPLIFIED MODEL OF THE COMMUNICATION PROCESS**



Loudon, D. & Della Bitta, A.J. 1988. Consumer Behaviour: Concepts and Applications. New York: McGraw-Hill Book Company. p. 536.

The sender, who is generally a company or a product brand, initiates the communication message by transmitting the intended message to the target population, who are the receivers. The intended message aims to change consumers' attitude towards the brand or toward its purchase. This message "must be encoded into symbols making up the actual message which represent thoughts of the sender" (Loudon & Della Bitta 1988: 536). The actual message is transmitted over an appropriate channel of communication, for example, the radio, in-store displays and personal messages and is received by one or more receivers. However, the received message may differ from the actual one due to intervening factors like the channel



of transmission itself. The received message undergoes transmission as a result of information processing by the receiver and thus, the message is decoded such that received symbols are translated into meaning, which is a product of the individual's experiences and environment.

The feedback loop in Figure 4.8 indicates the communication process involves a two-way flow since senders and receivers interact with each other. Feedback depicts the message receiver as a message sender and enables the original sender to evaluate the effectiveness of the communication. Each stage of the communication process is susceptible to message distortion that is sometimes caused by noise, which refers to an "interference with message transmission" (Assael 1987: 211).

Beliefs, attitudes and behaviour are influenced by three kinds of factors that interact with each other. These are source, message and receiver factors.

#### **4.8.3 SOURCE FACTORS**

Marketing communication sources facilitate the effectiveness in changing views and attitudes of consumers.

##### **4.8.3.1 MARKETING COMMUNICATION SOURCES**

In marketing numerous sources can be used in order to reach consumers with persuasive communications. Communication sources available to consumers include:

- Companies
- Sales representatives who are viewed as having expertise or knowledge and can be persuasive to consumers
- Media, which are extensively used by consumers to obtain product information
- Individuals employed by companies as sales representatives in advertising. These so called "hired promoters" can be effective once they have established reputations for themselves (Loudon & Della Bitta 1988: 538).
- Retailers who frequently act as sources for marketing communications. A departmental store with a good reputation may sell unknown brands more easily than less reputable ones since the former are perceived as possessing an expertise in the product line.

- An integrated system. The aforementioned sources can be integrated to produce a combined source effect on consumers. Marketers must stringently select hired promoters, media and retailers to transmit persuasive brand messages. This is necessary since one bad selection can counteract the positive effects of the other sources adopted.

#### 4.8.3.2 INFLUENCES ON SOURCE EFFECTIVENESS

Numerous factors influence the persuasiveness of marketing communication sources:

**Highly credible sources**, those considered knowledgeable and trustworthy, bring about greater attitude change in consumers than those with less credibility (Cooper & Croyle 1984: 395). However, receivers perceive the source as having credibility, irrespective of whether or not the individual is actually so. The impact of source credibility is complex and depends on the following specific conditions:

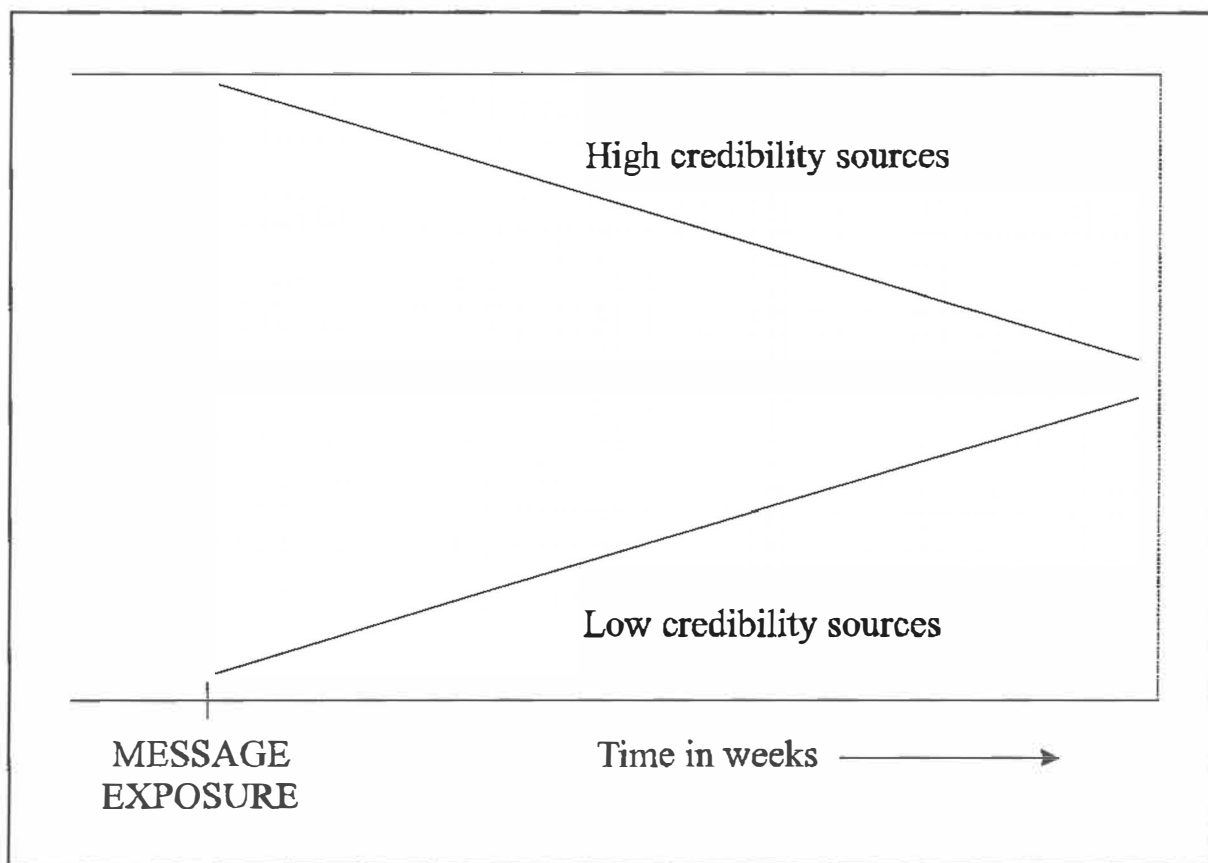
An influence on the impact of source credibility is the **initial opinion of the audience members**. "When receivers already hold opinions that are opposite to those presented in a message, a highly credible source is likely to generate more attitude change than will sources of lower credibility" because highly credible sources appear to have such a high level of believability that they obstruct cognitive responses and counterarguments (Loudon & Della Bitta 1988: 539).

Highly **discrepant messages** do not oppose receivers' initial opinions, but their beliefs. Credible sources are most effective in achieving changes in consumer attitudes for highly discrepant messages since it reduces cognitive responses considerably. Sources with low credibility are effective when receivers hold **initial opinions that are in keeping with message content**.

Attitude change can be attained with a low credibility source when the strategy is to develop a situation in which the source will communicate the message without gaining in any way. Under certain circumstances highly credible communicators can influence change in attitude. But in this case the initial effect can disappear very rapidly. However, "an audience exposed initially to a low-credibility source develops opinions more closely in line with the source as time passes" (Loudon & Della Bitta 1988: 541). This result is called "**the sleeper effect**"

(Markin 1974: 329). The implication is that with the lapse of time, opinion change brought about by high and low credibility sources would move toward equality (Figure 4.9).

**FIGURE 4.9**  
**ATTITUDE CHANGE CONVERGENCE PREDICTED ON THE BASIS OF**  
**SOURCE CREDIBILITY EFFECTS OVER TIME**



Loudon, D. & Della Bitta, A.J. 1988. *Consumer Behaviour: Concepts and Applications*. New York: McGraw-Hill Book Company. p. 541.

**Highly credible sources** can enhance the persuasiveness of marketing messages. A source will be perceived as having greater credibility if the audience views the person as being honest or trustworthy and believes this individual has nothing to gain personally by the message. The level of persuasiveness is increased when receivers view the source as having expertise or higher qualifications than others. A source whom the audience views as being high in status or prestige is frequently more credible than one perceived as being low in these qualities. The credibility of communicators is also influenced by their physical traits and

other features, for example, age, sex, colour, dress, voice inflections, "likability", "physical attractiveness" and attitudes of communicators (Chaiken & Stangor 1987: 599). Thorson, Chi & Leavitt (1992: 372) found credibility and liking, operate via attitude toward the advertisement and attitude toward the brand on purchase intention.

Communicators are more persuasive when they have a **positive attitude towards themselves, the message and the receiver**. When a source reflects self-confidence, a potential buyer can perceive this and be influenced to buy. Persuasiveness is increased when the source believes in the product being sold as well as in the sales message, when the marketer demonstrates "respect and admiration toward his prospective buyers" and when individuals perceive the source to be similar to themselves (Loudon & Della Bitta 1988: 545). Similarity can be perceived in terms of personality, race, interests, self-image and group affiliations.

These source factors are adhered to in order to maximize the persuasiveness of the source. However, effective communication also demands that cognisance be given to message factors as well.

#### 4.8.4 MESSAGE FACTORS

The components that make up a persuasive message are:

##### 4.8.4.1 MESSAGE STRUCTURE

Message structure refers to the manner in which the elements of a message are arranged.

##### ■ MESSAGE SIDEDNESS

A message can either be one or two-sided. A **one-sided message** is one which reflects only the strengths of the communicators position. However, a **two-sided** one offers both the strengths and the weakness of the communicator's position or even the strengths of the competitor's position. Either approach can be more effective depending on "the audience's initial opinion on the issue", "their exposure to subsequent counterarguments" and "the audience's educational level" (Loudon & Della Bitta 1988: 545).

## ■ MESSAGE ORDER

"Because the learning of many marketing messages, particularly advertisements, involves a low-involvement learning process, the order of presentation of information presented in the ad is critical to the message's success" (Hawkins, Best & Coney 1989: 460). Therefore, it is beneficial to consider whether the most informative parts or the persuasive arguments in an advertising message should be positioned at the beginning, middle or end.

A **climax order** refers to "ordering message elements whereby the strongest arguments are presented at the end of a message" (Loudon & Della Bitta 1988: 547). When the most informative arguments are presented at the beginning of a message, it is referred to as the "**anti-climax order**" (Loudon & Della Bitta 1988: 547). A "**pyramidal order**" refers to the presentation of the crucial materials in the middle of the message (Loudon & Della Bitta 1988: 547). An anticlimax order tends to be most effective for consumers with a low level of interest in the subject matter concerned because where interest is low, the stronger and more interesting arguments in a message should be placed first since they have the greater capability of attracting the attention of the consumers. "When the material presented first produces the greater opinion or attitude change, a **primacy effect** has occurred" (Loudon & Della Bitta 1988: 548). However, a "**recency effect**" occurs when the material displayed last produces the greater change (Markin 1974: 219).

## ■ CONCLUSION DRAWING

The degree of attitude change is greatest when a persuasive message states explicit conclusions. It is advantageous to draw a conclusion in order to achieve attitude change among less-intelligent consumers and to prevent them from drawing incorrect conclusions or no conclusions such that the intended opinion change does not occur. "Having decided to state conclusions, the communicator must determine how mild or extreme those conclusions should be in order to change attitudes most effectively" (Bernstein, Roy, Skrull & Wickens 1988: 634). Consumers rated with a higher intelligence have the ability to draw the correct conclusion themselves so that there is no need to draw a conclusion for this group of individuals.

## ■ REPETITION

Consumers' attitudes can be changed in a favourable way by means of frequent advertising exposures. However, marketers should not expect continuously positive attitude change as a result of increasing repetitions of a message because message wearout does occur due to boredom and inattention. The implication is that "moderate levels of advertising repetition over time appear to positively influence attitudes" as well as encourage rehearsal and transferring of information to long-term memory (Loudon & Della Bitta 1988: 547).

### 4.8.4.2 MESSAGE APPEALS

Message appeals, if appropriately used, can enhance the persuasiveness of messages. Four common types of message appeals are fear appeals, distraction, participation and humour.

**Fear appeals** "make use of threat of negative (unpleasant) consequences if attitudes or behaviours are not altered" and are effective in persuasion (Hawkins, Best & Coney 1989: 455). Fear of physical danger and social disapproval are beneficial in influencing consumers' attitudes and their behaviours toward the advertised product. Thus, "one way a communication can reinforce the acceptance of new beliefs is to arouse and then alleviate emotional tension" (Jahoda & Warren 1986: 140). Threatening messages will be effective "to the extent that they convince recipients that (a) the problem is serious, (b) the recipient is susceptible to the problem, (c) the recommendations will effectively avoid the problem, and (d) the recipient is capable of performing the recommendations" (Olson & Zanna 1993: 139). However, according to Bernstein et al. (1988: 635) "even when fear produces lasting effects on the cognitive component of an attitude, the effects on behaviour often fade after several weeks or months".

"Pleasant forms of **distraction** can often work to increase the effectiveness of persuasive appeals in encouraging attitude change" (Loudon & Della Bitta 1988: 551). Distraction is effective in bringing about attitude change since it prevents counterarguments and results in greater acceptance of the message.

**Participation** can increase the effectiveness of a persuasive appeal since it is a means of gaining attention and enhancing learning. This explains why marketers give samples to potential consumers, encourage trial use, and provide coupons for trial purchase. Janis and King (1954) found that "spoken agreement induced by role playing tends to increase the effectiveness of persuasive communication" (Jahoda & Warren 1966: 146).

Radio and television advertising adopts **humorous appeals** in order to attract attention. Humour also helps "to moderate the perceived threat of fear appeals or to assist message persuasiveness in some manner (Loudon & Della Bitta 1988: 553).

#### 4.8.4.3 MESSAGE CODES

The manner in which marketers arrange and use message codes have an impact on message persuasiveness.

The **verbal code** "is a system of word symbols" that are integrated in accordance with a set of rules (Loudon & Della Bitta 1988: 556). When devising verbal code structures, advertisers tend to use modifier words like adjectives and adverbs, to elicit favourable emotions within a consumer. **Non-verbal codes** refer to facial expression, gestures, posture, dress and mannerisms. They are extremely helpful in persuasive communications since they can affect how a receiver responds to a message. **Paralinguistic codes** are "those that lie between the verbal and nonverbal codes" and basically involve two elements which relate to "voice qualities" and "vocalizations" (Loudon & Della Bitta 1988: 557). It is evident that "response to advertising may be affected by the linguistic structure of the verbal portions of the ad" (Bettman 1986: 277).

It is evident that "advertising exposure, choice and usage" do influence persuasiveness of the message, although the effect varies for different groups of consumers" (Ginter & Bass 1972: 19). Persuasiveness also depends on the extent to which these message factors are considered. Comprehension itself is a function of several factors, including message characteristics, opportunity to process the message, and the recipient's motivation and ability" (Mick 1992: 411). Hence, effective communication also depends on receiver factors.

#### 4.8.5 RECEIVER FACTORS

In order to ensure optimum persuasiveness and effective marketing, marketers need to have a knowledge of the consumers, their personality characteristics and belief types.

##### 4.8.5.1 PERSONALITY TRAITS

Cognisance should be given to the relationship between personality traits and persuasibility in order to ensure effective communication.

**Self-esteem** refers to an individual's "feelings of adequacy and self-worth" (Loudon & Della Bitta 1988: 557). Individuals with low self-esteem have a tendency of being more persuasible than those with high self-esteem because "they lack confidence in their judgements and therefore tend to rely upon the opinions of others" (Loudon & Della Bitta 1988: 557). Hence, "susceptibility to persuasion does seem related to self-esteem" (Bernstein et al. 1988: 636). Individuals with high level of **rich imagery**, who live in dream worlds or fantasies, are more persuasible than those who do not.

Consumers with high **intellectual ability** tend "to be more influential than will those with low intelligence when exposed to persuasive communications that rely primarily on impressive logical arguments" (Loudon & Della Bitta 1988: 558). This can be attributed to their ability to draw valid inferences. However, individuals with high intelligence tend "to be less influenced than will those with low intelligence by unsupported generalities or false, illogical, irrelevant arguments" because of their high standard of evaluation or critical ability (Loudon & Della Bitta 1988: 558).

##### 4.8.5.2 BELIEF TYPES

Three basic belief types influence the commitment that the consumer will possess, namely, "central beliefs", "derived beliefs" and "central-free beliefs" (Loudon & Della Bitta 1988: 559). **Central beliefs** represent the heart of a person's cognitive structure and is quite resistant to change. **Derived beliefs** are an outgrowth of central beliefs. "**Central-free beliefs** exist separate and apart from other beliefs in the consumer's cognitive structure" (Loudon & Della Bitta 1988: 559). In descending order of difficulty in changing attitudes, these beliefs are central, derived and central-free beliefs.



Undoubtedly, these source, message and receiver factors must be considered by the marketing manager in order to ensure an effective communication process so that persuasiveness is maximized and generates significant attitude change. Not only is it found in studies (Lutz 1985; MacKenzie & Lutz 1989; Batra & Ray 1986; Gardner 1985) there is a strong relationship between attitudes and behaviour, but also that "advertising must first change attitudes to change behaviour" (Berger & Mitchell 1989: 269). Attitude change strategies also affect the components of attitudes.

#### **4.8.6 ATTITUDE CHANGE STRATEGIES**

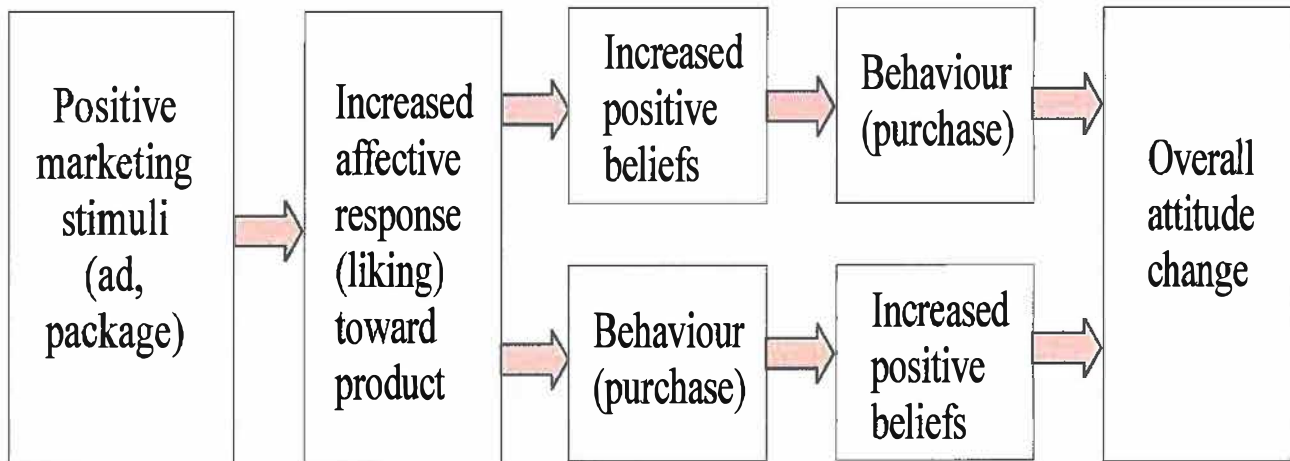
It is evident that marketing managers can form and change attitudes of consumers toward products and brands. Marketers change attitudes by focusing on one of the components of attitudes - either the cognitive, affective or conative. Since the three elements of the "triad" are consistent, a change in any one attitude component is likely to produce related changes in the other two (Thomas 1971: 26). "If one component in the tri-component attitude model is strongly influenced, it will have a domino effect on the other two" (du Plessis et al. 1990: 112). Marketers focus on any one or more of the components in attempts to develop favourable attitudes toward their brands.

##### **4.8.6.1 CHANGING THE AFFECTIVE COMPONENT**

Firms frequently try to influence consumers' liking of their brand without directly influencing the latter's beliefs and behaviour. "If the firm is successful, increased liking will tend to lead to increased positive beliefs which could lead to purchase behaviour should a need for the product category arise" (Hawkins, Best & Coney 1988: 464). Alternatively, increased liking may lead to purchasing the brand in order to satisfy a need and such purchase and use may result in increased positive beliefs (Figure 4.10).

**FIGURE 4.10**

**ATTITUDE CHANGE STRATEGY FOCUSING ON AFFECT**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1989. Consumer Behaviour: Implications for Marketing Strategy. 3rd Edition. Texas: Business Publications, Inc. p. 443.

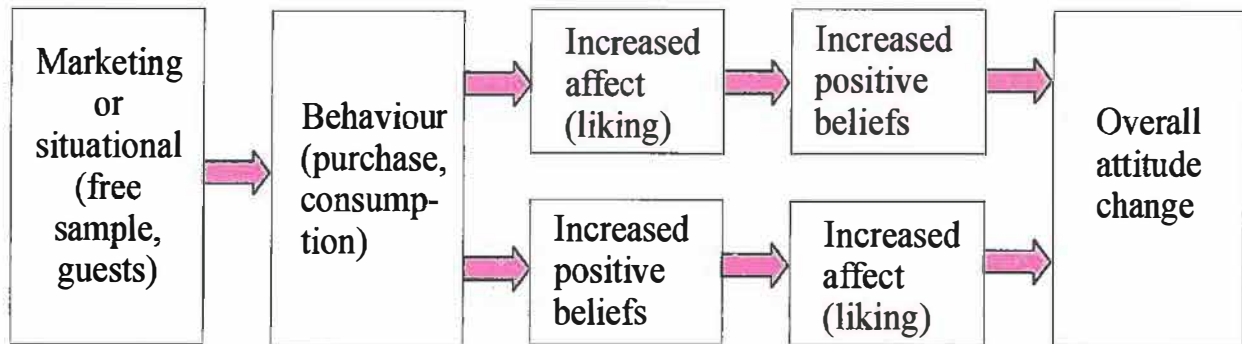
In their attempts to increase consumers' affect directly, marketers can use three basic approaches which involve classical conditioning, affect toward the advertisement and mere exposure (Cohen & Chakravarti 1990: 261).

**4.8.6.2 CHANGING THE BEHAVIOURAL COMPONENT**

Behaviour may precede or occur in contrast to the development of cognition and affect (Figure 4.11). For example, attitudes developed as a result of product trial are generally strongly held.

**FIGURE 4.11**

**ATTITUDE CHANGE STRATEGY FOCUSING ON BEHAVIOUR**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. *Consumer Behaviour: Implications for Marketing Strategy*. 3rd Edition. Texas: Business Publications, Inc. p. 466.

Figure 4.11 shows that behaviour can lead directly to affect or to cognitions or simultaneously to both. Individuals often try new brands or low cost products without any prior knowledge, experience or affect. Such purchases provide information and satisfaction of some basic need, for example, hunger.

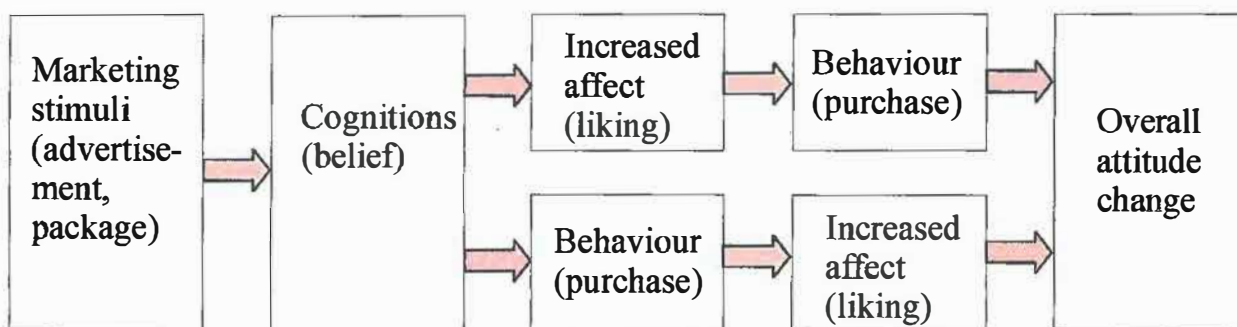
Changing behaviour before changing affect or cognition is based on instrumental conditioning. "The key marketing task is to induce people to purchase or consume the product while ensuring that the purchase/consumption will indeed be rewarding" (Hawkins, Best & Coney 1989: 445). Techniques for encouraging trial behaviour are coupons, free sample, point of purchase displays and price reductions.

#### **4.8.6.3 CHANGING THE COGNITIVE COMPONENT**

The most frequently used approach to change attitudes is to focus on the cognitive component and "alter consumers' beliefs" (Engel, Blackwell & Miniard 1990: 319). The intention is to influence beliefs so that affect and behaviour will then change (Figure 4.12). One of the most important tasks of marketing research is to determine which beliefs are the primary ones that directly influence attitudes so as to ensure effective marketing effort. The beliefs that the marketer manager actually attempts to change are called the "target beliefs" (Zaltman & Wallendorf 1983: 455). Marketers ensure that target beliefs are related to consumers'

primary beliefs in order to bring about attitude change. It is also possible that a change in cognition can lead directly to purchases which would, in turn, lead to increased affect.

**FIGURE 4.12**  
**ATTITUDE CHANGE STRATEGY FOCUSING ON COGNITIONS**



Hawkins, D.I., Best, R.J. & Coney, K.A. 1989. *Consumer Behaviour: Implications for Marketing Strategy*. 3rd Edition. Texas: Business Publications, Inc. p. 445.

The cognitive structure of a consumer's attitude can be changed by using one of four basic marketing strategies:

- The marketer can change beliefs of the consumers about the attributes or performance of the brand.
- The marketing manager can change the relative importance of these beliefs from negatively evaluated attributes to positively evaluated ones.
- The cognitive structure can be changed by adding new beliefs to the consumer's belief structure. "Adding a new salient belief to the existing beliefs that consumers have about a product or brand is probably the most common attitude-change strategy" (Peter & Olson 1990: 149).
- The marketer can alter the cognitive component by changing the beliefs or perceptions of consumers about the attributes of the ideal brand.

Consequently, attitude change can be brought about by either focusing on affect, behaviour or cognitions.

#### 4.8.7 THE IMPORTANCE OF ATTITUDE CHANGE IN MARKETING

In order to increase sales and the firm's market share, the marketer attempts to change the consumer's priority of needs and the consumer's brand attitudes. Undoubtedly, "one of the most important reasons for studying attitudes is to gain insights into how attitudes may be changed" (Horton 1984: 177). Existing attitudes are reinforced or changed primarily through advertising. Market stimuli must be effectively and efficiently communicated with due consideration of source, message and receiver factors in order to ensure that the message is correctly and successfully decoded by consumers. This would ensure and maximize attitude change in consumers.

Marketers recognise that attitude change depends on the level of consumer involvement with the product. This will determine the type of technique the marketer must adopt in bringing about attitude change.

Undoubtedly, attitude change is a tactful strategy of marketing managers since one way to change consumers' behaviour and ensure effective marketing strategy, effort and market share, is to alter consumers' attitudes.

#### 4.9 CONCLUSION

Attitudes influence how the consumer proceeds through the decision-making process regarding products and services. One of the major reasons marketers have been interested in attitudes is that they are believed to be the basis for actual behaviour. Once knowledge is obtained, "attitudes are the intervening cognitive element before a purchase is made" (McNeal 1982: 114). An examination of attitudes should thus provide strong clues to buyer behaviour.

Marketing managers understand what attitudes are, how they operate, how they can be measured as well as changed. This information will enable marketers to predict consumer behaviour, determine preferences, describe consumer segments and evaluate marketing strategy. Furthermore, marketers will be able to efficiently and successfully reinforce or change attitudes in order to influence consumer choice and purchases. This is crucial since attitudes guide consumers basic orientations towards objects, people and events.

Consequently, they strongly influence how consumers act and react to goods and services, and how they will respond to marketing communication formulated to convince them to engage in the act of purchases. Numerous attitude change strategies can be used to significantly generate and modify consumers' attitudes and are activated by means of marketing communications that incorporate proper and suitable message and source factors as well as receiver variables.

The attitude-behaviour relationship assumes "attitudes cause, reflect, or at least correlate substantially with behaviour" (Schuman & Johnson 1976: 161). However, a crucial aspect of post-purchase behaviour is that the outcome is not always satisfaction. The consumer may experience anxiety, especially after making a difficult, important, expensive and rather permanent decision. Therefore, an inconsistency between attitudes and behaviour results in post-purchase regret or dissonance. One strategy to reestablish consistency is to change attitudes. Attitude change strategies involve a change in either the cognitive, affective or conative elements in the attitude components triad. A knowledge of these strategies will enable marketers to determine which of the components should be changed considering the prevailing circumstances, in order to optimize attitude change. It also enlightens the marketer on the approaches to adopt in bringing about a change in each component and attitude change since a change in any one element will effect changes in the other two components. Hence, an understanding of attitudes, attitude consistency and particularly, attitude change, will not only assist marketers in evaluating new market opportunities and applications, choosing market segments, positioning products, new product development, marketing mix decisions, improve retail performance and enhance the efficiency of marketing strategy and techniques, but will also contribute to the theory of cognitive dissonance.

## **CHAPTER 5**

### **COGNITIVE DISSONANCE**

#### **5.1 INTRODUCTION**

One strategy to understand and predict consumption behaviour is to analyse the various needs, motivations and goals underlying pertinent action tendencies. The act of purchases represents just one stage the consumer engages in when making a decision. In addition to this physical activity, the individual undergoes various psychological processes, whilst being influenced by numerous individual and environmental influencing variables. Hence, consumer decision-making is a sequential series of stages comprising of problem recognition, search for alternatives, evaluation of alternative, purchase and post-purchase behaviour. During the final stage, that is, post-purchase evaluation, the individual judges the wisdom of decision and determines whether the choice effectively fulfilled the predetermined need or produced a tension state.

Among the basic needs which may have a significant effect on consumer decision-making and behaviour is the need for cognitive consistency. Human beings continuously receive stimulus information, which they perceive or interpret in a manner that reduces uncertainty and conflict. Therefore, individuals may engage in selective attention (avoidance of unfavourable information or high sensitivity to information favourable to the purchase decision), selective forgetting or perceptual distortion, to avoid inconsistency. This cognitive interpreting process or desire for consistency was explored by Leon Festinger (1957) in the theory of cognitive dissonance and later revised by Elliot Aronson (1968).

The original theory claims that the individual consumer strives toward consistency within the self. The consumers "attitudes, values, and beliefs are ordered into clusters that are internally consistent," and consistent with behaviour (Kassarjian & Cohen 1965: 55 - 56).

#### **5.2 DISSONANCE AND FESTINGER'S THEORY OF COGNITIVE DISSONANCE**

Prior to making any major decision, one encounters conflicts between two or more alternatives. Even after making a decision and purchase behaviour, the consumer evaluates

the wisdom of the decision. Festinger (1957) refers to these post-decision and post-action states as 'dissonance'. The underlying concept of balance, congruity, and dissonance is the notion that thoughts, beliefs, attitudes, and behaviour tend to interrelate in meaningful and sensible ways. The concept of consistency holds "behaviour and attitudes are not only consistent to the objective observer, but that individuals try to appear consistent to themselves. It assumes that inconsistency is a noxious state setting up pressures to eliminate it or reduce it" (Zajonc 1960: 280). The feeling of dissonance or inconsistency is "a state of discomfort, disequilibrium, or tension that demands reduction" (Kassarjian & Cohen 1965: 56). Walters & Bergiel (1989: 479) emphasize, dissonance is considered "to be normal after a decision or product selection - but not inevitable". Furthermore, although dissonance is a mental state, the doubt can be either physically or emotionally based. Physically-based dissonance occurs "when there is inconsistency between a consumer's perception of an expected physical need fulfilment and the actual fulfilment", for example, for basic needs such as food, water, warmth and sleep (Walters & Bergiel 1989: 480). Emotional-based dissonance, a common occurrence, results when there is a difference between the perceived or desired and actual psychological condition for the buyer (Walters & Bergiel 1989). For example, when purchasing a new car, the consumer may compare prices on different brands and models. Each of these has specific advantages and disadvantages, that is, prestige versus economy, style versus comfort, and combinations of accessories. Once the person selects the car, dissonance can develop "because economy may have been sacrificed for additional prestige, or the wrong combination of accessories was included. Of course, dissonance is inevitable if the consumer wants economy and prestige in equal amounts" (Walters & Bergiel 1989: 480). This explanation of physical and emotional dissonance may make the concepts sound distinct but, frequently physical and psychological inconsistencies occur together.

Dissonance, the existence of "nonfitting relations among cognitions", is a motivating factor (Festinger 1957: 1). Festinger's theory (1957: 260) emphasizes "the human organism tries to establish internal harmony, consistency, or congruity among his opinions, attitudes and values". It is essentially a theory "about sense making - how people try to make sense out of their environment and their behavior - and thus, try to lead lives that are (at least in their own minds) sensible and meaningful" (Aronson 1992: 304). According to Brehm (1992: 315) one of the convincing aspects of dissonance theory is the basic assumption of a strong



relationship between cognitions about behaviour and the environment: "If an organism failed to have its behavior correspond to environmental reality, it would not have a good chance for survival". When translated into psychological terminology, "knowledge, opinions and beliefs" about the environment, oneself or one's behaviour become "cognitions" and inconsistency among these cognitions is called "dissonance" (Straits 1964: 62). If an individual experiences dissonance between a behavioural and an environmental cognitive element, "he may attempt to change his behavior so that it will be more consistent with his attitudes and opinions, or he may attempt to change his opinions and attitudes so that they will be more consistent with his behavior" (Markin 1974: 144). Hence, in Festinger's (1957) original formulation of dissonance theory, "two elements in a cognitive system (eg. a belief and an attitude; an attitude and a behavior) were said to be consonant if one followed from the other ...., and dissonant if one implied the opposite of the other" (Petty, Unnave & Strathman 1991: 256). Goethals (1992: 327) maintains that dissonance is strongest "when there is a discrepancy between a cognition about the self and a cognition about how one has behaved".

Leon Festinger (1957) maintains whenever an individual makes a decision, there exists some degree of cognitive dissonance. The most studied dissonance paradigm involves the 'forced compliance' situation (Festinger & Carlsmith 1959). Forced compliance refers to a person "publicly behaving in a way contrary to that individuals privately held beliefs or attitudes," and then experiencing dissonance from knowledge of the fact (Internet: Key terms and concepts: 1997: 2). "When a person is 'forced' to engage in behavior that he would normally avoid, he experiences dissonance that can be reduced by coming to favor the behavior in which he has engaged" (Wicklund & Brehm 1976: 314). However, the dissonance paradigm most relevant to consumer attitudes involves the consequences of choice among alternatives. "As a result of virtually any decision, a person must accept the negative features and consequences of the chosen alternative, and must forego the positive features and consequences of the rejected alternative" (Petty et al. 1991: 256). When making choices, consumers often have difficulty determining the precise utilities of alternatives, and are therefore uncertain about their preferences. Very often decision makers experiencing such difficulty, tend "to make the choice that is supported by the best overall reasons" or when they find "arguments strong enough for making a decision" (Simonson 1989: 158). This

means the consumer will have doubts and anxieties about the choice made because the alternatives foregone had certain desirable traits, and the option selected has undesirable elements which the individual is forced to accept with the choice. "Post-choice doubt is motivated by awareness that one alternative was chosen and the existence that unchosen alternatives also have desirable attributes. Dissonance [then] occurs when two cognitions or behaviors do not fit together, and the result is a state of psychological discomfort" (Engel & Blackwell 1982: 505). "When a person holds two cognitions that are in a dissonant relationship, the amount of dissonance he experiences is a direct function of how important those cognitions are to him" (Wicklund & Brehm 1976: 2). Inherent in the theory of cognitive dissonance is the element of consistency. The theory postulates, "when an individual holds 'non-fitting' cognitions about himself or his behavior, as well as the environment, he will bring these into line, sometimes by behavioral shifts. There is, in short, the expectancy of consistency, and this is especially strong regarding attitudes about one's self. As a general rule, when an individual becomes aware that he is acting in a fashion discrepant with an attitude of importance, either the attitude or the behaviour will change" (Hollander 1971: 10). Hence, regret or dissonance relates to nonselected alternatives and foregone opportunities (Fred van Raaij 1991: 407). Therefore, there are two common ways that dissonance arises:-

### 5.2.1 POST DECISION

When a person makes a choice amongst several alternatives, each option has advantages and disadvantages. The positive cognitions of the rejected alternatives, and the negative ones of the selected option, are dissonant with the action taken. For example, a consumer may prefer the economy and performance of a sports car, but may desire the spaciousness of a larger car. Even when the individual makes a rational decision, there may subsequently be reasons (cognitions) that contradict the decision made. For example, even if a car buyer has chosen the best car, the fact that of all the alternatives considered, "it alone requires more expensive high-octane gasoline, is dissonant. If there are many such cognitions, then postdecision dissonance will be high even though the choice was the best possible" (Brehm 1992: 315).

### 5.2.2 COGNITIVE INTRUSION

A person may learn information which is dissonant with the present behaviour. For example, a person who purchases a car, whose shape changes drastically. The main difference between post-decision dissonance and cognitive intrusion is that "in the former the individual is aware of the dissonant elements before he determines his behavior, while in the latter these 'intrude' and conflict with established behavior" (Straits 1964: 62). Hence, dissonance can arise in three basic ways:-

- "Any logical inconsistency can create dissonance.
- Dissonance can be created when a person experiences an inconsistency either between his attitude and his behavior or between two of his behaviors.
- Dissonance can occur when a strongly held expectation is disconfirmed" (Loudon & Della Bitta 1984: 530).

The presence of dissonance, an uncomfortable state, leads to pressure to reduce it. Therefore, the theory of cognitive dissonance proposes: "If a person held two cognitions that were psychologically inconsistent, he or she would experience dissonance and would attempt to reduce dissonance much as one would attempt to reduce hunger, thirst, or any drive" (Aronson 1992: 304). Like all cognitive consistency theories, the theory of cognitive dissonance is based on the assumption, "the attitude system is, in principle, a balanced system, and if a change in one component produces an imbalance or disequilibrium there is an inherent mechanism to redress that imbalance and create a new equilibrium" (Kelvin 1969: 70).

### 5.3 FESTINGER'S THEORY OF COGNITIVE DISSONANCE: REVISED

Leon Festinger's (1957) colleague, Elliot Aronson, was of the opinion that the theory of cognitive dissonance needed 'its boundaries tightened'. Hence, in 1962 Elliot Aronson began revising the original theory of dissonance to incorporate the 'self-concept'. Aronson (1992: 305) believed "dissonance is greatest and clearest when it involves not just any two cognitions but, rather, a cognition about the self and a piece of our behavior that violates the self-concept". This modification retained the essence of the original theory of inconsistency, but shifted the emphasis to the self-concept. In 1968, Aronson elaborated on the centrality of the self-concept in the experience and reduction of dissonance and pertaining to this,

suggested, most individuals strive for three things:-

- "To preserve a consistent, stable, predictable sense of self.
- To preserve a competent sense of self.
- To preserve a morally good sense of self" (Aronson 1992: 305).

Aronson (1992) therefore maintains, people are motivated to reduce dissonance when they have done something that astonishes them, makes them feel stupid or makes them feel guilty. In this regard, Wilder (1992: 352) maintains "an attractive aspect of Aronson's tripartite modification of dissonance theory ... is its obvious parallel with the eternal trinity of social psychology: behaviour, beliefs, and affect. We want to behave consistently (predictable self); we want to have a set on consistent beliefs (competent self); and we want to like ourselves (good self)." According to Wilder (1992: 352) defined this way, Aronson's (1968) modification has "the breadth to encompass the social self while retaining the simplicity and directness of Festinger's original proposition". Both versions of the theory maintain, the basic ingredients for dissonance are "(a) volition concerning the choice, (b) irrevocable commitment to the decision (product choice), and (c) importance of the choice to the individual's self-concept" (Cummings & Venkatesan 1975: 25). It is evident that it is during the onset of the post-decision period that dissonance is crucial. Cummings & Venkatesan (1975: 21) maintain "dissonance is a post-decisional phenomena and should therefore, be a post-purchase phenomena".

#### **5.4. POST-PURCHASE EVALUATION**

The consumer decision-making process does not end with the decision to purchase but may result in one of two types of outcome, namely, purchase-related behaviour and post-purchase evaluation (Block & Roering 1976).

##### **5.4.1 PURCHASE-RELATED BEHAVIOUR**

Purchase-related behaviour includes purchase-related financial outlays, recognition of interest in related products and services, and product installation and use considerations.

###### **5.4.1.1 THE NATURE OF PURCHASE-RELATED BEHAVIOUR**

Purchase-related behaviour refers to the fact that many purchase decisions necessitate further

actions by the consumer. It includes "the near limitless variety of additional actions that can result from the purchasing processes", for example, the decision to buy a car may require that the consumer procure a loan. There are three types of further purchase-related behaviours of significance to marketing managers:-

#### ■ **PURCHASE-RELATED FINANCIAL OUTLAYS**

The decision to purchase a product or service "precipitates a financial outlay that for some purchase decisions (eg. automobiles, homes, major durables) present genuine problems for the consumer" (Block & Roering 1976: 328). Sometimes deciding on the most suitable method of payment triggers extended problem solving, whereby the consumer has to strategically select between methods of financing such as, instalment credit, bank financing, personal sources and complete payment at the point of purchases. This decision with regards to financial payment is among the most important confronted by many consumers in various buying situations.

#### ■ **RECOGNITION OF INTEREST IN RELATED PRODUCTS AND SERVICES**

The purchase of a particular product can generate interest in the purchase of related products. For example, the purchase of a new sofa can instigate the recognition that other furniture items, for example, chairs, frames, are needed to properly coordinate the entire room. The purchase of a new car frequently results in the purchase of numerous accessories such as, rubber mats, gearlocks, spoilers, sun-shade, seat-covers.

#### ■ **PRODUCT INSTALLATION AND USE CONSIDERATIONS**

Once a consumer decides to purchase a product, the item must be prepared for use. "For many products the preparation for use is a simple task. For example, the purchase of a shirt typically requires the consumer to simply remove the package, remove any tags, and, perhaps, iron it before use" (Block & Roering 1976: 329). Sometimes though, the preparation for use can be complex. For example, a do-it-yourself cupboard needs to be properly installed with prior learning in order to ensure stability. Product installation and use considerations "can require considerable time, thought, and effort, to say nothing of the consternation that can result if inadequate directions are provided" (Block & Roering 1976: 329).

#### 5.4.2 POST-PURCHASE EVALUATION

Post-purchase evaluation follows a purchase decision and thus, refers to the process by which a consumer assesses or evaluates a purchase decision.

##### 5.4.2.1 THE NATURE OF POST-PURCHASE EVALUATION

Consumers prefer to believe the purchase decision made was the best one, but the insufficient information encountered seldom allows such an unequivocal assurance. The lack of adequate information and the lack of technical knowledge makes it difficult for consumers to thoroughly evaluate alternative products available in the marketplace. This results in uncertainty regarding the correctness of the decision made. One consumer response related to these expectations is "purposeful delay of purchase" and hence, the occurrence of post-purchase evaluation (Holak, Lehmann & Sultan 1987: 243).

The post-purchase evaluation stage of the consumer decision-making process serves two primary functions:-

- "Post-purchase evaluation enables the consumer to appraise the astuteness of his decision-making in the marketplace.
- Post-purchase evaluation provides a vital feedback to the central control unit as to the extent to which a purchase serves to reduce a problem" (Block & Roering 1976: 332). Hence, a decision will increase the probability of similar purchase behaviour occurring in the future, thereby producing and strengthening brand loyalty.

Positive evaluations of purchase decisions strengthen the importance of evaluative criteria and enable consumers to acquire or learn attitudes on the basis of feedback resulting from the post-purchase evaluation. The complexity of the post-purchase evaluation process can vary substantially. Post-purchase evaluation triggered by new purchase-related information can occur as a result of various factors:-

- Expectations of a product or service that are unconfirmed prior to purchase cause consumers to carefully evaluate the product following the purchase (Block & Roering 1976: 342).
- A consumer's post-purchase change in attitude (however caused) can stipulate post-purchase evaluation.

- Misunderstanding of product-related information.
- The availability of more than one desirable alternative.

The managerial implications of post-purchase evaluations necessitate the development of suitable strategies to reinforce behaviour. For example, conducting interviews with customers determines what they do and do not like about the product purchased. It also enables the firm to identify consumer priorities with respect to product modifications. In addition, such information can also provide direction for promotional efforts (Block & Roering 1976: 333). Furthermore, adequate attention to postpurchase considerations enables marketers to understand the various ways in which dissonance is aroused and provides "substantial profit opportunities to business organizations" (Block & Roering 1976: 341).

### **5.5 DISSONANCE AROUSAL**

According to Cooper and Fazio (1984) the acceptance of responsibility for some aversive consequence, not cognitive inconsistency per se, produces a generalized state of arousal which they refer to as dissonance arousal. Similarly, Cooper & Worchel's (1970) study indicates "you will not experience dissonance if no aversive consequence ensues" and if you have not done "something that is repugnant to your self-concept" (Cooper 1992: 321). Consequently, the individual searches the environment to determine the nature of the tension and its cause. "The arousal may be interpreted as being due to the acceptance of responsibility for an aversive consequence" (Wright, Rule, Ferguson, McGuire & Wells 1992: 456). Therefore, dissonance theory assumes, cognitions change in order to eliminate an aversive motivational state produced by dissonant beliefs. "High dissonance and low dissonance conditions are a function of the individual's attitudes and values as well as the nature of the product and the conditions surrounding the purchase decision" (Markin 1974: 151). The magnitude of dissonance is a product of many factors:-

- The attractiveness of the rejected alternative.
- The degree of importance attached to a specific decision.
- The number of negative characteristics of the chosen alternative.
- The number of rejected alternatives.
- The degree of cognitive overlap between the alternatives available.
- The strongly held cognitions.

- Time - "The more recent the decision between alternatives, the greater will be the magnitude of dissonance because of the phenomenon of forgetting" (Markin 1974: 147).

Furthermore, "the strength of the pressure to reduce the dissonance is a function of the magnitude of the dissonance" (Westermann 1988: 218). Some people will encounter little dissonance, for example, one who selects an automobile that:-

- Matches the needs perfectly,
- Pleases friends,
- Is within easy financial limits, and
- For which the alternatives are not very attractive (Bell 1967: 13).

Other people may experience maximum dissonance, that is, have reached a peak where they are so unhappy with their original decisions that they are almost willing to take the cars back to the dealer or to sell them. Festinger (1957) maintains people who experience maximum dissonance will often seek out dissonance-producing information so that they will have so much conflict that they will be able to give up their original choices. Furthermore, the magnitude of post-decision dissonance is "a positive function of importance of the decision and of the relative attractiveness of unchosen alternatives, and as a negative function of the number of common characteristics among alternatives" (Menasco & Hawkins 1978: 651).

Regarding the magnitude of dissonance, Worchel & Cooper (1979) maintains:-

- "Dissonance increases as the degree of discrepancy among cognitions increases".
- "Dissonance increases as the number of discrepant cognitions increases". Dissonance is directly "proportional to the number of discrepant cognitions and to the degree of discrepancy among them". As degree and number increases, so does dissonance.
- "Dissonance is inversely proportional to the number of consonant cognitions held by an individual." The greater the number of consonant cognitions, the less the dissonance.
- In order to estimate the magnitude of dissonance from the aforementioned factors "the importance of the various cognitions must be taken into consideration" (Worchel & Cooper 1979: 117 - 118).

According to Shaver (1985: 181) "the magnitude of dissonance created by a single element will increase as the number of other cognitions dissonant with the element increases and as



the importance of each of those dissonant cognitions increases. Conversely, the magnitude of dissonance generated by a single element will decrease as the number of consonant cognitions increases and as the importance of those consonant cognitions increases". Therefore, several factors may simultaneously interact to increase or reduce the magnitude of dissonance.

#### **5.5.1 UNCONFIRMED EXPECTATIONS**

Before the act of purchase, consumers develop expectations regarding the consequences of the purchases. The feedback serves to either confirm or reject these expectations. When the purchase confirms the expectations, the latter are reinforced. However, when expectations are not met, cognitive inconsistency, an uncomfortable condition, arises to motivate the consumer to restore balance. Dissonance increases as product performance fails to meet consumer expectations. According to Walters & Bergiel (1989: 481) "failure to perform or to perform up to expectations is the most important reason for postpurchase dissonance". Dissonance can best be conceived of as a violation of expectancy. "People will behave in accordance with their attitudes, or at least will not behave in direct contradiction of them. When that expectancy is violated, dissonance is created." (Shaver 1985: 180). The importance of consumer expectations is that "unconfirmed expectations will be evaluated negatively, regardless of whether experience exceeds or falls short of the expectancy" (Block & Roering 19 : 334). However, according to Bar-Tal & Kruglanski (1988: 111), "simply making a decision is not good enough as additional cognitions may be necessary, in particular, 'having exercised one's volition', 'being responsible for the decision', and the decision yielding 'highly negative consequences'".

#### **5.5.2 AVERSIVE CONSEQUENCES AND RESPONSIBILITY**

Festinger's theory proposes, disconfirmed expectancies will generate dissonance, but with the stipulation that only disconfirmed expectancies for which the person feels responsible will arouse dissonance. It is further implied, "a negative consequence will increase its potential for creating dissonance to the degree that it is unexpected or disconfirms an expectancy, but only when the person feels responsible for the event" (Wicklund & Brehm 1976: 63). Hence, dissonance effects occur "when a person perceives that through own free choice, his/her behavior caused negative consequences, even if the person acted cognitively

consistently" (Internet: Shapiro 1997: 5). Furthermore, the more severe a consequence is, the more likely the individual that caused it is to feel responsible for it (Wicklund & Brehm 1976).

### 5.5.3 IMPORTANCE OF COGNITIONS

Festinger (1957) originally hypothesized that inconsistency among personally important elements would induce more dissonance. A difficulty with this version of dissonance theory has been an uncertainty concerning the motivational basis for dissonance effects.

Festinger (1957) was correct in asserting that inconsistency per se was dissonance arousing, but that many inconsistencies produce trivial (undetectable) amounts of dissonance (Berkowitz & Devine 1989). However, cognitive inconsistency did not seem to suffice as a motivation and thus, Festinger (1957) added the proviso that the cognitions has to be 'important' to the individuals (Kruglanski 1992). According to Jones & Gerard (1967: 191) "the amount of dissonance or consonance experienced by the person is a function of the number of related cognitions having value-relevant behavioral implications". Hence, "dissonance should increase with the importance of the cognitions, and to the extent that the individual commits some time and some money in the purchase, many purchase decisions should be important ones" (Cummings & Venkatesan 1975: 22). To Aronson (1968) importance had to do with three separate motives all related to the self-concept, namely, "the motives to preserve (a) a stable, predictable sense of self, (b) a competent sense of self, and (c) a morally good sense of self" (Kruglanski 1992: 334). For Cooper & Fazio (1984) importance related to the desire to be 'blameless'. Cooper & Fazio (1984) have produced impressive evidence that personal responsibility for aversive consequences is a sufficient condition for dissonance effects to arise. Cooper (1971) found, personal responsibility is a necessary condition for the arousal of cognitive dissonance. "A person was considered to feel personally responsible for his behavior if he voluntarily chose to act in a discrepant way and was able to foresee the consequences of his choice" (Cooper 1971: 354). In addition, Hoyt, Henley & Collins (1972: 209) deduced "substantial attitude change will follow counterattitudinal behavior to the extent that the actor feels personal responsibility for some distinctive consequence caused by his behavior". Likewise, Aronson's (1968) studies indicate dissonance occurs when an "individual's self-concept has been somehow impugned" even though "no socially aversive

consequences have been generated" (Kruglanski 1992: 334).

#### **5.5.4 PERSUASIBILITY, SELF-CONFIDENCE AND COGNITIVE DISSONANCE**

Consumers differ in their susceptibility to persuasion. Engel (1963: 55) suggests those who are more easily persuaded will be highly dissonant after the purchase. For example, they may realize they have been talked into buying cars they did not like, for prices they did not want to pay. Therefore, Bell (1967) suggested that all consumers may not be cognitively dissonant. "Rather, the type of personality an individual brings to the dealership and the experience he has while purchasing his new car determine the extent of his dissatisfaction with the metallic object sitting in his driveway" (Bell 1967: 16). However, Bell (1967: 14) found no association between persuasibility and dissonance. The explanation for this result is that the customer's self-confidence influences persuasibility as well as dissonance. According to Stuart (1984: 125) consumer confidence is "the interrelation of many attitudes and expectations" and determines willingness to buy. Bell (1967) proposed, consumers would be more dissonant:

- The more uneasy they were about the purchase decision,
- The more they wondered if they had made the right decision; or
- The more they wondered if they received the same kind of deal that other purchasers had received" (Oshikawa 1972: 65).

Bell (1967: 453) deduced a consumer's self-confidence has an unusual effect on persuasibility. Those most confident and those least confident in their car buying ability are most difficult to persuade. However, "those moderately confident are most easily persuaded" (Bell 1967: 453). Consumers who are high in self-confidence are difficult to influence because they have experience in making suitable decisions and have faith in their own judgement. Individuals low in self-confidence are difficult to persuade because "their precariously-held self-esteem causes them to react defensively against influence attempts" (Bell 1967: 12). Those with a moderate degree of self-confidence are most persuasible because they 'are neither secure with their own judgement nor highly defensive'. Bell (1967: 12) studied the effects of the associations between self-confidence and persuasibility upon a consumer's psychological reactions or cognitive dissonance after purchasing a new car. Significant relationship between persuasibility and cognitive dissonance was observed only

when the self-confidence of the customer is controlled. Therefore, Bell (1967: 14 - 15) found:-

- Customers who are high on self-confidence, were high on dissonance if they were easily persuaded in buying their new cars, since being persuaded is contrary to their usual behaviour.
- Those who are high on self-confidence experienced very little dissonance. They made their choices, accepted them and were content with their decisions.
- Those low on self-confidence had little dissonance if they were readily persuaded. They were convinced by the salesperson they had made the right choice and their confidence was enhanced by the persuasion attempts of the salesperson.
- Those with little confidence were highly dissonant if they resisted influence attempts by the salesperson and were not easily persuaded. After completing the purchases they begin to have self-doubts.

#### **5.5.5 PERSUASIBILITY, QUALITY OF SERVICE AND COGNITIVE DISSONANCE**

Bell (1967: 15) found a slight curvilinear relationship between persuasibility and quality of service:-

- Those who are low on persuasibility received quite good service. These individuals, referred to as 'grinders' were difficult to persuade and wore the salesperson down in their vigorous effort to obtain a good deal. They consequently, received very high quality services, often at good prices.
- Those who are easily persuaded in their car purchases are called 'flakes'. Whilst salespersons make jokes about this type of customers, they feel sorry for them and are more likely to give them free accessories, services and special care upon delivery. 'Flakes' often get quite good service because they pay slightly more for their cars than do the 'grinders' (Bell 1967: 15).
- Those medium on persuasibility get the worst service. They grind enough to put the salesperson on guard and to not feel sympathetic to the consumer and they do not have the talent or desire to wear down the salesperson to obtain good service (Bell 1967: 15).

Thus, persuasibility acts as an indirect cause of consumers' dissonance. "Those who are moderately persuasible receive the worst service, and those who receive poor service tend to be the highest on cognitive dissonance" (Bell 1967: 16).

It is evident, the type of personality an individual brings to the dealership and the experiences encountered whilst and after purchasing the new car determines the extent of dissatisfaction and cognitive dissonance.

A potential cause of post-purchase dissonance is the quality of service received. Ehrlich, Guttman, Schonbach & Mills (1957) assumed most people who purchase new cars will be dissonant, regardless of the quality of service required. However, Bell (1967: 15) supports the relationship between respondent's cognitive dissonance and the perceived quality of service and concludes "the better the quality of service, the lower the buyers' dissonance".

#### **5.5.6 ATTRACTIVENESS OF DECISION ALTERNATIVES**

Two key factors that regulate the amount of postdecision dissonance are 'postdecision inconsistency' and 'decision importance' (Festinger 1957). Thus, Greenwald (1969: 328) explains when decisions are made, dissonance should increase:-

- "With the relative attractiveness of the unchosen alternative (postdecisional inconsistency), and
- With the absolute value of the chosen alternative (decision importance)".

Close relative attractiveness of the alternatives being considered generates high inconsistency. This conflict arises because the more relatively attractive the unselected alternatives, the more difficult it is to justify the final choice. Hence, conflict is a result of "a mutually exclusive choice process" (Menasco & Hawkins 1978: 651). Brehm (1956) reports an experiment demonstrating that post-choice dissonance increases as the attractiveness of the rejected alternative increases. Shapiro (Internet: 1997: 2) maintains, "people forced to choose between almost equally attractive alternatives changed the respective desirability of the alternatives more than people choosing between a relatively attractive and a relatively unattractive alternative." Peterson & Wilson (1992: 68) undertook research on automobiles and found, "consumers who shop several dealerships report they are less satisfied after

purchasing a vehicle than are consumers shopping only a single dealer". Within decisional contexts, dissonance theory predicts that the greater the level of difficulty of a decision, the greater is post decision dissonance" (Menasco & Hawkins 1978: 651). Furthermore, "the harder the justification, the greater the dissonance, and the more 'spreading apart of alternatives' is predicted" (Greenwald 1969: 328). Self confidence should not increase spreading apart in high-conflict decisions because an uncertain person who lacks justification for a decision seeks additional justification whereas a confident person need not justify a decision (Greenwald 1969: 332). The absolute attractiveness of the alternatives depicts decision importance. "The more valued the alternatives, the greater the consequences of the decision and therefore, the greater the need to justify the decision. Thus, greater spreading apart is predicted for higher absolute attractiveness" (Greenwald 1969: 328).

#### 5.5.7 PRICE

Individuals react emotionally and psychologically to prices and price-related cues. "Price is a search attribute, and, regardless of how it is framed, consumers have the opportunity to discern or estimate the price differentials among brands within a store or within brands across stores" (Alba, Broniarczyk, Shimp & Urbany 1994: 219). Perception of the price cue for some consumers can be characterised by "a concern with the ratio of quality received to price paid in a purchase transaction" (Lichtenstein, Ridgway & Netemeyer 1993: 235). However, Grewel & Marmorstein (1994: 453) found "consumers' willingness to engage in price search does not increase concomitantly with the price variation of durable goods". The higher the price of the product, the greater the possibility of dissonance. In a report on the purchaser of the 1963 Chevrolet, Engel (1965: 34) indicates no doubts were found concerning purchase of the car versus other makes but "considerable dissonance was experienced concerning the price paid". According to Williams (1981: 111 - 112) "dissonance is likely to be strongest for the purchase of durable goods which are expensive items with a very low frequency of purchase". Cognitive dissonance has also been evoked to explain consumer's reactions to the prices charged for new products when they are introduced to the market. "Dissonance is reduced as the individual increases his liking for a goal and therefore, it is thought that the higher the price paid by the consumer, the greater is his tendency to like the brand and become loyal" (Foxall 1980: 51). Doob, Carlsmith, Freedman, Landauer & Tom (1969) demonstrates, in the long term, sales may be higher

following a relatively high introductory price, although there always exists a ceiling point beyond which the price charged becomes unreasonable. "Thus, a consumer who buys at a low introductory cost and subsequently discovers that the price has been substantially increased may show dissatisfaction as a result of confusion, frustration or a feeling of being cheated" (Foxall 1980: 51).

#### **5.5.8 PSYCHOLOGICAL IMPORTANCE**

Post-decision doubts are most probable when "the individual is committed to his decision because of its psychological significance to him" or product involvement (Engel & Blackwell 1982: 505). The concept of product involvement is a recognition that certain product classes "may be more or less central to an individual's life, his attitudes about himself, his sense of identity, and his relationship to the rest of the world. Automobiles, for example, have been found to be a relatively high ego-involvement product class for many consumers; they are chosen carefully, are important purchases, and are sometimes thought to reflect the owners' personalities" (Traylor 1981: 51). However, the greater the degree of psychological satisfaction derived from the decision or the product, the less the dissonance. Walters & Bergiel (1989: 481) maintain, "if the consumer very badly wants something, it will take a great deal of inconsistent information to cause that consumer to doubt either the product or the decisions associated with its purchase".

#### **5.5.9 EFFORT**

Effort refers to the resources, such as, material, intellectual and psychological resources, a consumer invests in a purchase. "The more effort a person puts into achieving a goal, the more attractive and worthwhile it is perceived to be when finally achieved. Dissonance theory is saying that regardless of how attractive, desirable, interesting, ... the goal actually is, it is what a person goes through to achieve it that determines its worth" (Pennington 1986: 74). Srinivasan & Ratchford (1991) found, while experience tends to reduce search effort, subjective knowledge tends to increase it. "This finding is consistent with the view that more knowledgeable consumers structure the purchase problem in richer, more complex ways and hence, see a need for more search effort (Srinivasan & Ratchford 1991: 241). Hence, "the effort is directly related to the importance of the purchase; the more effort invested the more important the purchase becomes and vice versa" (Geva & Goldman 1991: 145). This

implies, when a strongly held expectation is disconfirmed and there are future consequences, dissonance is aroused. "The magnitude of the dissonance is a direct function of the amount of work, effort, or expenditure of any kind that the individual has undergone because of his expectations. .... Thus, the greater the initial investment, the more the dissonance reduction that occurs" (Freedman, Carlsmith, & Sears 1970: 363). Hence, the more effort one expends attaining something, the more dissonance there is if the consequences are less than expected and the more likely one is to increase the evaluation of it so as to reduce this dissonance.

The amount of cognitive and behavioural effort consumers exert into their problem-solving processes is highly variable. "A decision between two close alternatives is more difficult and hence requires greater effort" (Jones & Gerard 1967: 222). When a person expends effort in attempting to acquire something, the knowledge that the alternative selected is low in value will be dissonant with the knowledge that a substantial amount of effort was invested. "Problem-solving effort varies from virtually none (a decisional plan is activated from memory and is carried out automatically) to very exhaustive," divided on a continuum "into three levels of problem-solving activity: extensive, limited and routine or habitual" (Peter & Olson 1996: 211). When making a purchase decision consumers set cutoffs, that is, establishing a minimum acceptable level on an attribute that an alternative must possess to be further considered (Huber & Klein 1991). Therefore, a consumer facing a purchase decision "should select cutoffs that strike a sensible balance between the benefit of reduced decision time and effort and the risk of lost utility" (Huber & Klein 1991: 346).

Loudon & Della Bitta (1984: 530) emphasize, "dissonance becomes particularly strong when the consumer makes a large commitment in the purchase. Such commitment refers not only to the amount of money, but also the investment of time, effort and ego". Psychological commitment refers to "a tendency to resist change in preference in response to conflicting information or experience. Psychological commitment is maximized when:-

- The individual is motivated by a need to maintain consistent relationships between preference and salient aspects of cognitive structure, and
- Important values and self-images are linked to the preference, leading to a state of position involvement" (Crosby & Taylor 1983: 414).



Commitment varies directly with the amount of cognitive-affective-behavioural support that exists for the preference. The greater the commitment to the purchase, the greater the degree of effort expended (Crosby & Taylor 1983). Foxall (1980: 51) maintains "the more effort ... a person exerts to attain a goal, the more dissonance is aroused if the goal is less valuable than expected". Effort appears to be minimal for convenience goods, moderate for shopping goods, and maximal for speciality goods (Kaish 1967). However, Kaish (1967: 28 -29) recognizes two types of effort:

- Physical effort that purchasers of specialty goods are willing to make in going out of their way to insist on a particular good.
- Mental effort of pricing, comparing, and distinguishing among consumer goods on the basis of this distinction.

Kaish (1967: 29) maintains:-

- A minimum of mental effort is expended in comparing product quality when convenience goods are purchased.
- No mental effort is expended when specialty goods are purchased but instead there is close-minded certainty over what is desired.
- For both convenience and specialty goods decision-making involves minimal effort.
- Shopping goods involve heavy investment of mental effort since a buyer still takes cognisance of prices, quality, suitability and style.

According to Geva & Goldman (1991), effort plays a dual function in the dissonance situation since it is a condition for dissonance arousal as well an element in the cognitive system. Dissonance is likely to be triggered when high effort is matched with low reward. This results in dissatisfaction which, in this context, is "the buyer's cognitive state of being inadequately rewarded in a buying situation s/he had undergone" such that "the intended purchasing (and consumption) goals have not been met" (Gronhaug & Gilly 1991: 166). The consumer is likely to reduce dissonance by justifying the investment. He or she may retrospectively distort the experience, selectively recall pleasant aspects, or be convinced that the effort invested was minimal" (Geva & Goldman 1991: 145).

#### **5.5.10 POSITIVE INDUCEMENT**

Inducement to buy influences the amount of dissonance experienced. Holloway (1967: 40) found "individuals with low inducement to buy will have more dissonance than those who have high inducement to buy". Conversely, Zaltman & Wallendorf (1983: 481) maintains, "the greater the inducement to perform the action, the less the dissonance, and therefore, the less the attitude change".

#### **5.5.11 MISUNDERSTANDING OF PRODUCT-RELATED INFORMATION**

Post-purchase evaluation can result from a misunderstanding of product-related information, especially for products that are technical in nature. A misperception of the product's capabilities can trigger post-purchase evaluation. "If the product-related information that was misunderstood is important to the consumer's satisfaction, the consumer might replace the product" (Block & Roering 1976: 337).

#### **5.5.12 ANTICIPATED DISSONANCE**

Some people have "a greater tendency to experience anxiety (a high-anxiety trait) than do others. The higher the tendency to experience anxiety, the more likely the individual will experience postpurchase dissonance" (Hawkins, Coney & Best 1980: 495). Individuals exposed to a condition of high anticipated dissonance will reflect greater dissonance than those with low anticipated dissonance. For example, a person buying a sports car wonders what comments colleagues will make and hence, experiences more dissonance than when buying an ordinary car which is likely not to draw criticism. Furthermore, dissonance may be externally induced, whereby "pressure is put upon the individual to conform to group standards, creating a dissonance within the individual as his beliefs and perceptions conflict with the demands of his peers" (Ward & Werner 1984: 230 -231). This phenomenon corresponds with Bearden & Etzel's (1982: 191) finding of "strong reference group influence for public-luxury product and brand decisions and negligible influence on private-necessity product and brand decisions". Therefore, threat of the person's self is a necessary condition of cognitive dissonance" (Westermann 1988: 221). Certain properties of products such as "technological complexity, high price, and newness as well as consumer-related factors such as inexperience with the product and importance attached to the purchase lead consumers to perceive risk, which gives rise to anxiety" (Folkes 1988: 13). When consumers perceive risk

in purchasing a product, market changes occur in their behaviour. Anticipation of post-decisional cognitive dissonance produces behaviour aimed to avoid or minimize it.

#### 5.5.13 INFORMATION AVAILABLE

The closer alternatives are to one another in functional character, the more easily a decision will be made since the consequences of selecting one good and rejecting another is negligible. When alternatives are identical and perfect substitutes, it is immaterial which is bought and thus, there is no dissonance. However, "goods that are very different functionally will arouse considerable dissonance when the wrong one is purchased," resulting in considerable dissatisfaction (Kaish 1967: 31). Holloway (1967: 43) concluded from his study that "consumers who obtain adequate information probably will have less dissonance than those who buy without sufficient information". Similarly, Jacoby, Speller & Berning (1974) deduced the more brand information consumers had when making a decision, the more satisfied they said they were with the decision. The reasoning is that additional positive information about a purchased item makes a buyer more confident and less dissonant than when not given any extra information. Furthermore, the credibility of the source of new information affects the amount of dissonance it causes. If you made a decision and was later told it was a poor one by a salesman, you are less likely to be affected than if the criticism came from a close family or friend. Hence, if you believe the source of the inconsistent information, you are more likely to show dissonance. Similarly, "a highly credible source may reduce the dissonance the consumer feels when presented with a highly discrepant message" (Foxall 1980: 82).

#### 5.5.14 COGNITIVE OVERLAP

Cognitive overlap refers to "the extent to which the alternatives have similar characteristics" (Williams 1981: 112). LoSciuto & Perloff (1967) observed significantly more favourable reevaluation of the chosen product (relative to the unchosen product) when subjects had to choose between two record albums close in desirability than when subjects chose between two albums disparate in desirability. Similarly, Holloway (1967: 41) found "the high cognitive overlap condition will create more dissonance than the low cognitive overlap condition". Thus, "the more similar the products which are considered, the greater is the magnitude of dissonance, and the greater the 'spread' in ultimate preference rankings of the

two products" (Cummings & Venkatesan 1975: 22). However, Williams (1981: 112) maintains "the greater the degree of cognitive overlap, the smaller the magnitude of dissonance".

#### 5.5.15 OTHER INFLUENCES

Dissonance is greater, when:-

- The number of alternatives increases. "The more alternatives available to the consumer, the greater the likelihood that dissonance will occur; the consumer is more likely to wonder if one of these rejected alternatives could have been better. This is especially likely if the selected alternative does not meet expectations (Walters & Bergiel 1989: 481 - 482). Consistent with the assumption that the positive characteristics of unchosen alternatives are related to dissonance, "it might be expected that the more alternatives involved in the choice, the more cognitive elements there are corresponding to desirable features of the rejected alternatives," hence the greater the resulting dissonance (Wicklund & Brehm 1976). Furthermore, if the consumer perceives performance of the rejected alternatives to be similar to the one selected, dissonance is more likely to result. This tendency increases if the selected alternative does not meet expectations.
- The action engaged in is discrepant or negative.
- The purchaser is unfamiliar with the product and lacks sufficient product knowledge.
- There exists volition and irrevocability of the commitment (Cummings & Venkatesan 1976: 304). "The easier it is to alter the decision, the less likely the consumer is to experience dissonance" (Hawkins, Coney & Best 1980: 494).

Holloway (1967: 40) summarizes the factors affecting dissonance (Figure 5.1).

**FIGURE 5.1**  
**DISSONANCE IN BUYING SITUATIONS: FACTORS AFFECTING**  
**DISSONANCE**

<b>FACTORS AFFECTING DISSONANCE</b>	
<b>NUMBER</b>	<b>INFLUENCING FACTOR</b>
<b>1</b>	Attractiveness of rejected alternative
<b>2</b>	Negative factors in chosen alternative
<b>3</b>	Number of alternatives
<b>4</b>	Cognitive overlap
<b>5</b>	Importance of cognitions involved
<b>6</b>	Positive inducement
<b>7</b>	Discrepant or negative action
<b>8</b>	Information available
<b>9</b>	Anticipated dissonance
<b>10</b>	Familiarity and knowledge

Holloway, R.J. 1967. An Experiment on Consumer Dissonance. **Journal of Marketing**, vol. 31, January, p. 40.

Kiesler & Pallak (1976: 1023) found "response competition and performance, incidental retention, misattribution of arousal, and physiological measures are consistent with a broader interpretation of dissonance as an arousal state". Inasmuch as the individual strives to maintain harmony or consonance among cognitive elements, "the presence of dissonance leads to pressure to reduce the dissonance, the amount of pressure being consistent with the

amount of dissonance that exists" (Lindgren 1973: 148). "Comparable to a need state, cognitive dissonance becomes motivating, driving a person toward the reduction of dissonance" (Sahakian 1982: 435). Since dissonance is a relation among cognitions that fail to fit together harmoniously, it can be deduced, dissonance leads to psychological incongruity. The tension or "psychological discomfort elicited by cognitive dissonance impels one to reconstruct cognition, eradicating stridency, for inner harmony has an effect on the way a person structures his world. Behavior discrepant with one's cognitions causes dissonance" (Sahakian 1982: 435).

#### 5.6 COGNITIVE DISSONANCE AS A MOTIVATING STATE: TENSION

Cognitive theories of motivation emphasize the role of thoughts, expectations, aims and purposive behaviour. This approach accepts that "people pursue goals, and that attaining a goal leads to gratification" (Louw & Edwards 1993: 433). To understand cognitive dissonance as a motivating state, it is necessary to have a clearer conception of the conditions that produce it. "The simplest definition of dissonance can, perhaps, be given in terms of a person's expectations. In the course of our lives we have all accumulated a large number of expectations about what things go together and what things do not. When such an expectation is not fulfilled, dissonance occurs" (McNeal 1969: 120).

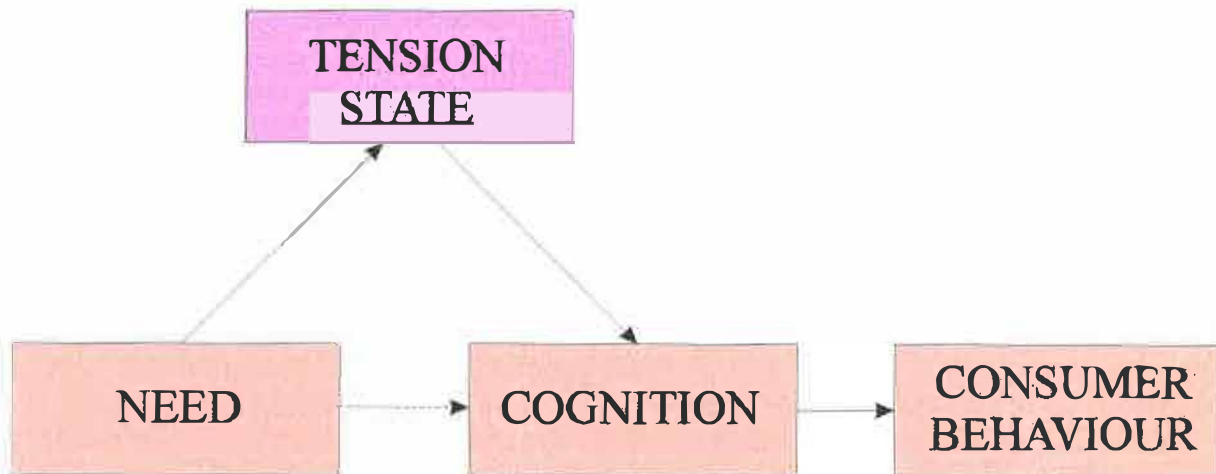
Cognitive theories contrast with the view that "behavior is aimed at mere reduction of tension or at the homeostasis relief of physiological or learned drives (Louw & Edwards 1993: 433). Instead, such theories focus on the cognitive aspect only. (McNeal 1969: 120) maintains "one point becomes clear about cognitive dissonance theory - man prefers cognitive consistency - a sort of psychological homeostasis - and will take actions to maintain it". "Inconsistency leads to psychological discomfort and results in a motive just as surely as discomfort in body functions leads to motive. The consumer attempts to reestablish equilibrium by removing the source of dissonance" (Walters 1974: 125). Therefore, "dissonance is a drive-like state" that occurs when there is some prior motive associated with the cognitions that are dissonant and it has "arousal properties" (Zanna & Cooper 1974: 703 - 709). This led to Festinger's conceptualization of cognitive dissonance "as a functionally motivational state", strongly supported in the results of two experiments undertaken by Elliot & Devine (1994: 382). Consequently, cognitive dissonance is a

motivational state brought about when a person has cognitive elements that imply the opposite of one another. In other words, Festinger assumes that the simultaneous existence of cognitions that in one way or another do not 'fit together' (dissonance) leads to effort on the part of the person to somehow make them fit better (dissonance reduction)" (Wicklund & Brehm 1976: 253). "The existence of nonfitting cognitions is a motivating factor in its own right" (Wicklund & Brehm 1976: 253). Cognitive elements are said to be dissonant when one implies the obverse of the other. "The degree to which there are dissonant elements determines the degree to which psychological tension having drive character is said to exist, making for the stress toward cognitive modification" (Wicklund & Brehm 1976: 253 - 254). The tension state may persist until cognitive or cognitive modification takes place. This cognitive work can consist of "adding consonant cognitions, increasing the importance of consonant cognitions, subtracting dissonance cognitions and decreasing the importance of dissonant cognitions" (Wicklund & Brehm 1976: 10).

Festinger (1957) points out, "dissonance functions like a drive, need or tension. Its presence leads to action to reduce it, just as the presence of hunger leads to action aimed at reducing the hunger" (Lindgren 1973: 148). Hence, "the state of tension is a condition of mental unrest that energizes cognitive operates in attempts to reduce or eliminate it" (McNeal 1982: 76). The need that initiates the tension state directs the cognitive activities in selecting a course of action.

The mental state is one side of a mental triangle (Figure 5.2) responsible for all behaviour. The need directs the tension state as well as the cognitive activity. "Need is the key determinant of behavior, but it is apparent that the tension state - the force that starts up and runs the cognitive machinery - is just as critical as the need or the cognitive activities in causing a consumer action" (McNeal 1982: 78). Satisfaction of the need will result in cognitive consistency and the tension state is removed or reduced. However, a tension state can prevent consumer behaviour because if the intensity of a tension state is very high, one's mental energies are focused on the need causing it, such that all other needs are temporarily neglected.

**FIGURE 5.2**  
**IMPACT OF TENSION STATE ON CONSUMER BEHAVIOUR**



McNeal, J.U. 1982. **Consumer Behaviour: An Integrative Approach**. United States of America: Little, Brown and Company. p. 76.

Figure 5.2 emphasizes, consumer behaviour does not occur without the existence of a tension state. The cognitive approach, therefore, emphasizes a very important aspect of motivation. However, "because it focuses on the cognitive aspect only (and not also on the physiological or learning aspects, for instance) it is unable to offer a comprehensive explanation for all forms of motivated behaviour" (Louw & Edwards 1993: 434). It, nevertheless emphasizes that dissonance is a "negative motivational state that causes the individual to engage in behaviors to reduce the level of dissonance" (Horton 1984: 183).

### **5.7 DISSONANCE REDUCTION**

Very seldom does the consumer make an entirely 'right' or a completely 'wrong' decision. Even the worst alternative has some positive attributes. Hence when a decision is made, the positive features of the unchosen alternative and the negative attributes of the selected one are inconsistent or dissonant with the action taken. However, once the choice is enacted, cognitions about the behaviour are aligned with the behaviour pattern to eradicate inconsistencies, such that the consumer is convinced the choice made was the best decision. In other words, "states of dissonance are transformed into states of consonance, and the



inconsistencies are eliminated" (Kassarjian & Cohen 1965: 56). Therefore, when psychological consistency is not achieved, psychological discomfort results necessitating dissonance reduction. Dissonance is therefore, "a 'relationship-incongruity' existing among cognitions, and as such is a motivating force" (Sanakian 1982: 436). Dissonance reduction is a fundamental motivating process in a person and many occur "either by a cognitive change concerning a person's behavior, by altering his strategy concerning his action, or by a shift in knowledge (or opinion) concerning the effects of his action" (Sanakian 1982: 436).

According to Cooper & Fazio (1984) if dissonance arousal is attributed to the acceptance of responsibility for an aversive consequence, dissonance motivation occurs and attitude change is likely to result. Wright et al. (1992: 456) indicate "if subjects who have misattributed dissonance arousal to an alternate source come to question the appropriateness of this label, attitude change is likely to occur". However, if the dissonance arousal is attributed to an external source, "dissonance motivation is not generated and attitude change does not occur. Rather, the individual attempts to cope with the arousal or emotion in a manner appropriate to that external source" (Wright et al. 1992: 457). Hence, cognitive dissonance theory demonstrates "people who behave in a counter-attitudinal manner typically alter their attitudes thereafter to make them conform with their behavior" (Wright et al. 1992: 456 - 457). Festinger (1957) maintains that such people modify their attitude to reduce an aversive drive state which is triggered by the desire for cognitive consistency. Hence, cognitive dissonance can be viewed as "an antecedent condition which leads to activity oriented toward dissonance reduction" (Britt 1966: 115).

The basic assumption of dissonance theory is "the greater the dissonance, the stronger the dissonance reduction attempts" (Oshikawa 1972: 64). Brehm & Cohen (1962), like Festinger (1957), interpreted dissonance as bound to cognitions concerned with making a decision. The dissonance perspective does not argue that in general, tension must always be minimized, but "rather that tension with respect to an ongoing commitment must be minimized. It is important then to know precisely what the person's goals are at any time, for it is just in these focal areas that the individual will strive to eliminate tension" (Forgas 1981: 159). Hence, "dissonance-reducing processes may occur very rapidly following commitment to a decision" (Knox & Inkster 1968: 319).

### 5.7.1 STRATEGIES FOR REDUCING DISSONANCE

Since dissonance is a tension state, people adopt various strategies in attempts to reduce its effects.

#### 5.7.1.1 CHANGING ATTITUDES

People usually reduce cognitive dissonance by changing their attitudes to make them consonant with behaviour. According to Gilovich (Internet 1997: 1) "the basic phenomenon: behaving contrary to your attitudes causes dissonance, which can be reduced by changing your attitude to make it consistent with the behavior." Elliot & Devine (1994: 382) found "dissonance is experienced as psychological discomfort and that this psychological discomfort is alleviated on implementation of a dissonance-reduction strategy, attitude change". "Cognitive consistency - the concept that we consumers strive for harmonious relationships in our thoughts and feelings - is a key concept underlying consumers attitudes" (Wilkie 1990: 311). According to dissonance theory, attitudes sometimes change to conform to previous behaviour, thereby reducing post-purchase conflict. "Individuals tend to reinforce their decision after the fact by changing their attitudes in favor of the chosen brand" (Assael 1992: 216). However, Kunda (1990: 492) maintains "the mere inconsistency between two beliefs does not suffice to produce dissonance motivation and its resulting attitude change". However, Ginter (1974: 30) found "although attitudes change both before and after choice of the new brand, the post-choice attitude change is greater in magnitude and correlated more highly with choice".

Brehm (1956) observed, as predicted by dissonance theory, "that when subjects had to choose between two products which were similar in desirability, there was substantial attitude change in favor of the chosen product relative to the unchosen product. When subjects chose between two products that were disparate in desirability, there was much less attitude change. In all conditions, the chosen product was favourably reevaluated and the unchosen product was derogated or unchanged in desirability" (Cummings & Venkatesan 1975: 22). Williams (1981) confirms the attitudes or beliefs can be changed so that they are consistent with behaviour. "By re-evaluating the product, possibly through establishing or even imagining a cognitive overlap, and adopting a positive attitude towards it, the individual achieves consonance; that is, attitudes and behavior are now consistent" (Williams 1981: 112). In

a study, Festinger & Carlsmith (1959) paid people to say a boring task was enjoyable. According to cognitive dissonance theory, those paid twenty dollars "had clear justification for lying and should have experienced little dissonance between what they said and what they felt about the task; indeed, their attitudes toward the task did not change very much. However, subjects with little justification to lie (one dollar) should have reduced the dissonance by displaying a more positive attitude toward the task, which they did" (Bernstein, Roy, Skrull & Wickens 1988: 638). Furthermore, people change their attitudes "to be consistent with their public behaviour when there is insufficient justification for that behaviour" (Zaltman & Wallendorf 1983: 481 - 482).

#### 5.7.1.2 ELIMINATING ONE OF THE COGNITIVE ELEMENTS OR ALTERNATING IMPORTANCE

If people know various things that are not psychologically consistent with one another, "they will, in a variety of ways, try to make them more consistent", "perhaps by dropping a cognition" (Foxall 1980: 50). An individual can reduce dissonance by "**eliminating one of the cognitive elements or his responsibility or control** over an act or decision" (Kassarjian & Cohen 1965: 56). Physical dissociation can take place by selling a newly purchased item for the exact amount one paid for it. Dissociation of responsibility or control over an act or decision is a rather common occurrence, perhaps because it is a 'painless' technique of dissonance reduction - simply believing the choice made was inevitable, unavoidable or one made by others as well. "Dissonance can be resolved or at least reduced by changing one of the cognitive elements involved, by adding new elements, or by decreasing the importance of elements" (Lindgren 1973: 148). Since the discrepant and consonant cognitions must be weighted by importance, "it may be advantageous to alter the importance of the various cognitions. The importance of the consonant cognition can be magnified and the importance of the discrepant cognitions can be minimized. When the new, altered importance weightings are placed in the formula, the magnitude of dissonance will be decreased." (Worchel & Cooper 1979: 118).

#### 5.7.1.3 TRIVIALIZATION

Simon, Greenberg & Brehm (1995: 247) refer to Festinger's dissonance reduction technique of decreasing the importance of the elements involved in the dissonant relations as

'trivialization'. Although cognitions can be added to help the individual reduce the perceived importance of the relevant cognitions, this trivialization mode differs from Festinger's mode of adding consonant cognitions in two important ways. First, when consonant cognitions are used to reduce dissonance, "the strategy is to add cognitions that make the attitude-behavior relationship seem more logical or justifiable. In contrast, the purpose of trivialization is not to reduce the level of inconsistency, but merely to reduce the importance of the inconsistency by reducing the importance of one or more of the dissonant elements" (Simon, Greenberg & Brehm 1995: 247). Second, "if, as Festinger posited, the importance of the cognitions is an initial determinant of dissonance, then, in trivialization, rather than adding new cognitions, a basic characteristics of one or more of the relevant cognitive elements - its importance - is changed" (Simon, Greenberg & Brehm 1995: 247).

Simon, Greenberg & Brehm (1995) undertook four studies to analyse the use of trivialization as a method of dissonance reduction. They found, "people use trivialization to reduce dissonance and that attitude change and trivialization are alternative modes of dissonance reduction" (Simon, Greenberg & Brehm 1995: 250). The results of the four studies provide genuine support for the notion that trivialization is a common mode of dissonance reduction. In addition, these studies clarify three sets of conditions under which trivialization is more likely than attitude change. Study 1 showed, "when the preexisting attitude is highly salient, people trivialize the cognitions rather than change their attitudes" (Simon, Greenberg & Brehm 1995: 256). Study 2 revealed "people are more likely to trivialize when the opportunity to evaluate the importance of the cognitions is presented prior to the opportunity to indicate their attitude" (Simon, Greenberg & Brehm 1995: 256). Studies 3 and 4 indicated, "following counterattitudinal behaviour, making important values or issues salient leads to trivialization rather than attitude change" (Simon, Greenberg & Brehm 1995: 256).

#### **5.7.1.4 CHANGING THE ENVIRONMENTAL COGNITIVE ELEMENT**

Festinger (1957) stated one way to preserve consonance is by changing an environmental cognitive element. For example, a person who is naturally very hostile towards others may deliberately be in the company of people who provoke hostility. Festinger (1957) explains the individual's "cognitions about the persons with whom he associates are then consonant with cognitions corresponding to hostile behavior".

#### 5.7.1.5 INFORMATION MAY BE DENIED, DISTORTED OR FORGOTTEN

Information can be **denied, distorted, or forgotten** in order to reduce dissonance. Elkin & Leippe (1986: 55) suggest "if dissonance is a drive state, drive reduction typically may be accomplished through gradual cognitive change or forgetting". Selective forgetting is a process by which "unpleasant or unreconcilable elements are dismissed from awareness" (Kassarjian & Cohen 1965: 56). People believe those facts which are palatable to themselves and disbelieve and distort unpleasant ones (Kassarjian & Cohen 1965: 57). In a study on dissonance amongst smokers, it was found, confirmed smokers justified their continuance of smoking "by denying, distorting, misperceiving or minimizing the degree of health hazard involved" (Venkatesan 1973: 359). Despite the multitude of stimuli influencing a consumer, a strong criterion impacting on the perceptual processes is the desire for consonance. Hence, advertisers have held onto this opportunity and have projected product and service advertising in vague and ambiguous terms to allow the listener to interpret the comments made according to his make-up.

#### 5.7.1.6 MINIMIZING THE IMPORTANCE OF THE DECISION

Buyers consider certain purchases more important than others. The most obvious reasons include:-

- Some goods are priced higher and thus, represents the sacrifice of greater alternative utilities.
- Durability of goods.
- The dynamics of the interactions between the product and the individual, especially the importance of ego-involvement. Any decision that affects the buyer's self-concept is an important one.

It is evident, for a good to be important it may have the qualities of cost and durability and 'what it helps the buyer to be'. Dissonance can be effectively reduced by **minimizing the importance** of the issue, decision, or act that resulted in the dissonant state. By perceiving issues to be unimportant when later reflecting upon them, consumers find it easier to excuse their ineffective, unsatisfying efforts in evaluating the alternatives. They may focus on more important issues that dominated their attention at that time and hence, may attribute failures to lack of interest or effort, rather than their own limitations.

#### 5.7.1.7 JUSTIFYING THE DECISION

When an attractive alternative is rejected, the dissonance which arises can be reduced by **justifying the decision**. Justification refers to "the degree to which reasons for performing a certain action outweigh the reasons against performing it" (Wicklund & Brehm 1976: 42). To do this, one might make the selected alternative seem even more favourable than it originally was. When an organism suffers in order to reach some desired state of affairs, dissonance can be reduced by finding something attractive about the situation in which the suffering occurs. This means, "in addition to the goal itself becoming more attractive, we would expect the organism to justify its behaviors by developing an increased appreciation for almost any relevant aspects of the uncomfortable or effort-producing setting" (Wicklund & Brehm 1976: 162). Aronson (1961) found, subjects come to increase their liking for the colour of an object associated with nonreward, especially when the object was obtained only after a considerable amount of effort.

It is therefore evident, people want to avoid cognitive dissonance, so they will often change their attitudes in order to justify their behaviour. For example, "people may come to like the things they have suffered for, because the liking justifies the suffering - it is worth suffering for something if you like it" (Baron & Byrne 1987: 145). Figure 5.3 depicts the effort justification sequence. If you could come to like the goal for which you suffered, "then you will have added a cognition that is consonant with your suffering" (Worchel & Cooper 1979: 130).

**FIGURE 5.3**  
**THE EFFORT JUSTIFICATION SEQUENCE**



Worchel, S. & Cooper, J. 1979. **Understanding Social Psychology**. Revised Edition. Homewood, Illinois: The Dorsey Press. 705p.

The result is "an increase in the attractiveness of the chosen alternative and decrease in the attractiveness of the rejected alternative" (Zajonc 1960: 291). The rejected option may also be devalued. Goethals & Cooper (1975) studied the timing of self-justificatory attitude change following forced compliance. They found "when subjects feel that they have all of the information that they are ever going to get regarding the consequences of their counterattitudinal behavior, they justify the behavior by changing their attitude - if it is definite or if it is possible that their behavior will produce unwanted consequences" (Goethals & Cooper 1975: 365). Frey, Kumpf, Irle & Gniech (1984: 447) found dissonance can be reduced by "focusing on the positive aspects of the chosen and the negative aspects of the nonchosen alternatives, hence increasing the attractiveness of the former and/or decreasing that of the latter". This type of dissonance reduction is referred to as "spreading apart the alternatives" (Greenwald 1969: 328). In dissonance theory "self-confidence should not increase spreading apart in high-conflict decisions. It should be an uncertain person who lacks justification for his decision and therefore seeks additional information. A confident person need not justify his decision" (Greenwald 1969: 332).

Research has shown, the spreading apart of chosen and rejected alternatives is greatest when:-

- The two alternatives are close in their rated desirability but have dissimilar features (Wicklund and Brehm 1976). Similarly Greenwald (1969: 328) maintains "the more

relatively attractive the unchosen alternatives, the harder it is to justify the decision. The harder the justification, the greater the dissonance, and 'the more spreading apart the alternatives' is predicted".

- The choice is irreversible (Brehm & Cohen 1962). "Less dissonance reduction is associated with a decision when it is reversible than when it is not, and so less re-evaluation should occur in the former case than in the latter" (Frey et al. 1984: 447). Furthermore, Frey et al. (1984: 449) obtained interesting results concerning the effects of reversability on the attractiveness ratings over time. With longer time intervals, the awareness that the decision is final or reversible strongly affects the perceived attractiveness of the alternatives. "When subjects expect the decision to be reversible, the difference in attractiveness between the chosen and unchosen alternatives becomes smaller over time" (Frey et al. 1984: 450).
- There is sufficient time to think about the choice (Frey, et al. 1984), and
- The expected consequences of the choice are imminent.

"With adequate justification for one's behaviour, dissonance can be reduced without attitude change, simply by thinking about the justification. Without adequate justification for one's behaviour, the most likely way to reduce dissonance is to change one's attitude to provide that justification" (Bernstein et al. 1988: 638).

#### 5.7.1.8 SELECTIVE EXPOSURE

In general, "dissonance theory predicts that people are motivated to expose themselves to (attitude-) consonant information and to avoid (attitude-) dissonant information in order to stabilize a decision (or an existing attitude), and in such a manner to maintain cognitive consonance or avoid cognitive dissonance" (Hewstone, Stroebe, Codd & Stephenson 1989: 154). To deal with dissonance resulting from the consequences of a decision, "people tend to focus on the positive aspects of their choices and to emphasize the negative qualities of unchosen alternatives" (Internet: Harrison 1993: 2). "**Selective exposure** to new information avoids a dissonance confrontation" (Kassarjian & Cohen 1965: 57). A person will tend to:-

- Avoid exposure to dissonance information or ignore the dissonant information (Assael 1992: 55).



- Be exposed to information which adds consonant elements or seek out positive information (Assael 1992: 55).
- Weaken existing dissonant elements.
- Reduce the importance of the issue which led to dissonance.
- Resort to a combination of the aforementioned strategies.

Advertising provides an avenue of relief to post-purchase dissonance. Wicklund & Brehm (1976) supports the proposition that as a result of a choice among alternatives, people will view the selected alternative as more desirable and/or perceive the rejected alternative as less attractive. A factor that might affect "the willingness of a person to expose himself to potentially damaging information is the amount of confidence he has in his ability to come to terms with that information" (Jones & Gerard 1967: 202). Numerous researchers (Brown 1961; Ehrlich, Guttman, Schonbach & Mills 1957) substantiate the existence of enhanced advertising readership by recent automobile purchasers. The results of Mill's (1965) experiments "establish that dissonant information is avoided and also provide additional evidence of the tendency to seek out consonant information". Furthermore, readership of automobile advertisements tends to be higher among owners of a specific make than among non-owners. Brown (1961) noted, 90 % of the people who had recently purchased a Ford read Ford advertisements.

Ehrlich et al. (1957: 90) found, on the average, new car owners noticed magazine automobile advertisements featuring the car they had just purchased nearly twice as often as advertisements for automobiles they had considered but not purchased. Ehrlich et al. (1957: 98) also found recent automobile buyers read car advertisements that supported their choices and avoided reading those that contradicted their decisions significantly more than non-purchasers. Therefore, those who had recently bought new cars experienced cognitive dissonance and "attempted to reduce the resultant anxiety by selectively exposing themselves to supporting advertisements" (Bell 1967: 13). Lord, Ross & Lepper (1979) found people who hold strong opinions on complex social issues are likely to examine relevant empirical evidence in a biased manner. They term this phenomenon 'biased assimilation', whereby people tend "to accept 'confirming' evidence at face value while subjecting 'disconfirming' evidence to critical evaluation, and as a result ... draw undue support for their initial

positions from mixed or random empirical findings" (Lord, Ross & Lepper 1979: 2098). Engel (1963) offers little evidence that the new car purchaser is a dissonant consumer engaging in selective behaviour. He (1963) explains the phenomenon of selective exposure or perception on the basis of 'changed figure and ground', whereby the purchases of a new car induces changed figure-and-ground relationships. Engel (1963: 58) maintains, "advertisements previously escaping attention now may be noticed and recalled by the purchaser because the automobile has entered his life pattern in a new and important way. It is expected that he would be sensitive to such advertisements". According to Lowe & Steiner (1968: 172), "people prefer to receive whatever kinds of information will be most useful to them and that the utility of a specific type of information depends in part upon the reversibility and consequences of the decision they have made". However, Engel (1963: 55) concluded new car purchasers were highly sensitive to favourable information, but did not reject dissonance-arousing information. Hence, this implies that individuals will not necessarily avoid unpleasant information. However, Engel & Blackwell (1982: 507) maintain, "it is more likely that a person experiencing dissonance will buttress choice through procuring additional information". It is evident, two processes are operating, namely, a dissonance process that increases attention to consonant items and a tendency to seek information that will assist one to make future decisions about whether to switch one's position, that is, to seek dissonant information. According to Frey (1982: 1175), "the latter tendency overrides the former as losses increase, leading to a net decrease in preference for consonant information. Also independent of the amount of money won or lost, more dissonant than consonant information was avoided". People engage in selective exposure and acceptance of unpleasant information when engaging in problem solving such that the information becomes useful in coping with the environment. Hence, the least resistant cognitive element changes in response to dissonance.

#### 5.7.1.9 ADDING NEW CONSONANT COGNITIONS

Dissonance is "a factor in motivation because it leads the individual to change his opinion, attitudes or behaviors [or to add new consonant cognitions] in order to reach a state of 'consonance' or harmony" (Foxall 1980: 50). Therefore, another method of reducing dissonance is "to create new cognitions that help bridge the gap between the two original ideas" (Internet: Harrison 1993: 1). "If two discrepant cognitions cause a certain magnitude

of dissonance, that magnitude can be reduced by adding one or more consonant cognitions" (Worchel & Cooper 1979: 118). "Consonant cognitions can be added, or the importance of preexistent consonant cognitions can be increased" (Wicklund & Brehm 1976: 42). Kassirjian & Cohen (1965:63) found a smoker, aware of the health hazards of smoking, justifies his rationality "either by dissociating his responsibility over the decision; by denying, distorting, misperceiving, or minimizing the degree of health hazard involved; and/or by selectively drawing out new cognitions and new information that will reduce the inconsistency of his behaviour and achieve consonance in his own cognitive world". Beavois & Rainis (1993: 104) in their radical version of dissonance theory found subjects who agreed to perform a tedious task reduced their dissonance "by finding the task more interesting (free choice effect)". Therefore, in addition to others, **new consonant cognitions** are added to the cognitive organisation of the individual" as a method of dissonance reduction (Kassirjian & Cohen 1965: 63). An interesting dissonance situation occurs when a person's behaviour is in conflict with attitudes or beliefs, because behaviour is usually difficult to undo. According to the theory, "dissonance may reduced by bringing beliefs and attitudes into line with the behavior" (Petty, Unnava & Strathman 1991: 256).

Apart from adopting different methods, people reduce dissonance at varying speeds. This makes the measurement of dissonance reduction a difficult task since researchers of cognitive dissonance do not measure dissonance but attempts by consumers to reduce it. A remorseful consumer, in attempts to reduce dissonance may seek out the opinions of friends who has the same car and whose opinions would coincide or may revisit the salesman for confirmation of the good features of the purchase. This is crucial because, as Festinger (1957: 177) explains, "social support reduces dissonance". Furthermore, the difficulty of dissonance reduction measurement is intensified since the magnitude of cognitive dissonance experienced differs from one consumer to another. According to Harrison (Internet 1993: 1) "dissonance-reducing behavior is often maladaptive, and it can hinder people from finding real solutions to their problems. It is necessary, nevertheless, for it serves an essential purpose by maintaining a positive image of ourselves and protecting the ego."

Dissonance may result in a reanalysis of the reasons why a person engaged in a certain behaviour or made a specific choice, and it may cause an individual to rethink the merits of

an attitude object. The end result of this reassessment can be a change in attitude object toward the object which restores consistency and ensures satisfaction (Petty et al. 1991: 257). It is important to note, "dissonance reduction is less than instantaneous, and builds as time beyond the decision elapses" (Wicklund & Brehm 1976: 117).

## 5.8 SATISFACTION

Satisfaction "is not the pleasurable of the [consumption] experience ... it is the evaluation rendered that the experience was at least as good as it was supposed to be" (Westbrook 1987: 260). Satisfaction is "an evaluation that the chosen alternative is consistent with prior beliefs with respect to that alternative. Dissatisfaction, of course, is the outcome when this does not prove to be the case" (Engel & Blackwell 1982: 501). Hence, "satisfaction/dissatisfaction refers to an emotional response to an evaluation of a product or service consumption experience" (Wilkie 1990: 622). Consumer satisfaction is important to the marketer since it is assumed to be a significant determinant of repeat sales, positive word-of-mouth communication and consumer loyalty. Engel & Blackwell (1982: 501) emphasize "an evaluation of satisfaction (or dissatisfaction) becomes a part of long-term memory, and hence it can exert an effect on brand beliefs and attitudes". "Satisfaction is important to the individual consumer because it reflects a positive outcome from the outlay of scarce resources and/or the fulfilment of unmet needs" (Bearden & Teel 1983: 21). In other words, satisfaction "appears to partially mediate the relationship between disconfirmation and follow-up attitudes" (Bearden & Teel 1983: 26). Post consumption consumer satisfaction/dissatisfaction can be defined as "the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption" (Tse & Wilton 1988: 204). Researchers (Bearden & Teel 1983; Day 1977; Oliver 1980; Woodruff, Cadotte & Jenkins 1983) have suggested that consumer satisfaction/ dissatisfaction is influenced by a pre-experience comparison standard. Congruity is "the degree of discrepancy between the valence of the perceived object (perceived value) and the valence of a referent state (evoked value)" (Sirgy 1987: 54). Evaluative congruity refers to "information processing directed to evaluate the stimulus object" and is best depicted by equating it with expectancy confirmation/disconfirmation (Sirgy 1987: 54). Disconfirmation is the extent to which the "pre-experience comparison standard is disconfirmed" (Tse & Wilton 1988: 204). "Positive

disconfirmation produces high satisfaction, confirmation produces moderate satisfaction, and negative disconfirmation produces low satisfaction (or dissatisfaction)" and these can be equated to positive incongruity, congruity and negative incongruity respectively (Sirgy 1987: 55). The three different situations of disconfirmation are:-

- "Negative disconfirmation when performance falls short of expectations;
- Confirmation when performance meets expectations, and
- Positive disconfirmation when performance exceeds expectations" (Geva & Goldman 1991: 145).

Hence, consumer satisfaction "is a function of expectation and expectancy disconfirmation" (Oliver 1980: 460). It is evident, satisfaction implies a conscious and deliberate evaluation of outcomes, which "is much more prevalent with long-involvement as opposed to low-involvement products" (Engel & Blackwell 1982: 501). Satisfaction, in turn, influences attitude change and purchase intention. The growing recognition of consumer satisfaction is a crucial construct in marketing and consumer behaviour has generated substantial research interest "in the processes preceding judgments of satisfaction/dissatisfaction and the consequences of these decisions" (Bearden & Teel 1983: 21). The degree of satisfaction increases as the performance/expectation ratio increases, thereby making expectations a factor in post-purchase evaluations (Engel, Kollat & Blackwell 1973; Howard & Sheth 1969). Therefore, perceived performance is a determinant of consumer satisfaction/dissatisfaction (Churchill & Surprenant 1982). Researchers and managers of service firms agree that service quality involves a comparison of expectations with performance. Service quality is a measure of how well the service level delivered matches the expectations of the customer. Delivering quality service means conforming to customer expectations consistently. Oliver (1980: 460) emphasizes the effects of expectation and discrepancy perceptions may be additive. Similarly, Smith & Houston (1982) claimed, satisfaction with services is related to confirmation or disconfirmation of expectations. Disconfirmation occurs when perceptions of product performance after trial are different from pretrial expectations about the product. "A disconfirmation experience may have either positive or negative effects; that is, posttrial product performance may be perceived as either better or worse than expected" (Olson & Dover 1979: 179). Expectations create a frame of reference against which one makes a comparative judgement. Based on the disconfirmation paradigm then, "satisfaction is related

to the size and direction of the disconfirmation experience where disconfirmation is related to the person's initial expectations" (Parasuraman, Zeithaml & Berry 1985: 42). Thus, "outcomes poorer than expected (a negative disconfirmation) are rated below this reference point, whereas those better than expected (a positive disconfirmation) are evaluated above this base" (Oliver 1980: 461). Moreover, Oliver & Swan (1989: 372) found "satisfaction was shown to be a function of product disconfirmation, complaints and satisfaction with the dealer".

Investigations in the areas of satisfaction with products and with self-performance (Shranger 1975: 581) have concluded that postfeedback ratings are a positive function of expectation and favourable disconfirmation and an inverse function of negative disconfirmation. The phenomenon of "hedonic affectivity" or "negativity theory" posits that "affective judgements following either positive or negative disconfirmation are an inverse function of the absolute degree of perceived disconfirmation" (Carlsmith & Aronson 1963: 151). Oliver (1976: 247) found hedonic reactions to the disconfirmation of expectations were observed only when involvement, commitment and interest in consumer product evaluations were high.

Literature on post-purchase satisfaction pertains predominantly to the behavioural criteria of complaining and repurchase. Satisfaction interacts with other cognitions of an emotional nature. While satisfaction is believed to mediate consumer learning from prior experience and to explain key post-purchase activities, the post-purchase period may also incorporate numerous emotional responses. "Since emotion constitutes a primary source of human motivation and exerts substantial influence on memory and thought processes," it is necessary to establish the relationship between emotion and satisfaction judgements and their contributions to explaining consumption behaviour (Westbrook & Oliver 1991: 84). Westbrook & Oliver (1991: 84 - 85) indicate consumption emotion, "the set of emotional responses elicited specifically during product usage or consumption experiences", influences satisfaction; although, "satisfaction measures vary in their ability to represent the affective content of consumption experiences".

The difference between prepurchase attitude and immediate post-purchase satisfaction is anticipated satisfaction and received satisfaction. It is "a disconfirmation at the more abstract

affect level rather than at the more objective attribute level" (Oliver 1980: 461). Satisfaction then can be seen "as a function of the expectation (adoption) level and perceptions of disconfirmation" (Oliver 1980: 461). Similarly, Tse & Wilton's (1988: 204) research concludes "perceived performance exerts direct significant influence on satisfaction in addition to those influences from expected performance and subjective disconfirmation".

Furthermore, satisfaction experiences influence future purchase intention as well as post-purchase attitude. Hence, "a dissatisfying product purchase should decrease one's inclination to repurchase" (Oliver 1980: 461). The level of expectation is therefore, related to post-exposure judgements ("affect and intention to buy") (Oliver 1977: 485). LaBarbera & Mazursky (1983) extend the understanding of consumer satisfaction by examining multiple consecutive product purchases in the context of a field study. Their findings "strongly support the role of satisfaction in mediating revised intentions and overt behavior" (LaBarbera & Mazursky 1983: 401). Furthermore, LaBarbera & Mazursky's (1983: 402) study, "which examines the cognitive process for more than a single purchase activity, supports an extension of the role of satisfaction in purchase behavior from a static to a longitudinal perspective" and demonstrates the importance of satisfaction/ dissatisfaction in explaining the behaviour of repeat purchasers and brand switchers. A study undertaken by Cohen & Houston (1972) on the cognitive consequences of brand loyalty indicates that dissonance reduction is only one possible post-purchase process. If learning from experience is an important consumption motive (particularly with new products), then whenever a product performs well a consumer is likely to experience satisfaction, regardless of the degree of the pre-experience comparison standard and disconfirmation. Hence, the analyses by Tse & Wilton (1988) indicates the need for an extension of the expectation and disconfirmation model of consumer satisfaction/ dissatisfaction to incorporate direct influences from perceived performance, in order to depict a comprehensive framework.

### **5.9 DISSONANCE AND THE SELF-CONCEPT**

A crucial part of Aronson's (1968) restatement of dissonance theory "contends that a person's tendency to change his or her attitudes is motivated by an aversive state of arousal caused by the violation of the self-concept" (Aronson 1988: 174). According to Cooper (1992) the arousal of dissonance may be the result of the self-concept. "People experience dissonance

largely because of a discrepancy between their self-concepts and the actions that they have been induced to perform in dissonance-generated research settings" (Cooper 1992: 321). Brehm (1992: 315) concludes, if a person were to choose between two alternatives and mistakenly chose the inferior one, "the less the value between the two alternatives, the less implication this mistake would have for the self-concept". Making a small error would not imply incompetence but a major error may threaten one's self-concept (Brehm 1992: 315). Individuals with high self-concepts render their unworthy behaviour dissonant. According to Cooper & Fazio's (1984) paradigm, dissonance is not due to inconsistent cognitions at all but people get into a state of dissonance arousal when they have brought about an aversive event and feel responsible for having brought it about (Cooper & Fazio 1984: 229). Scher & Cooper (1997) undertook the first empirical test that discrepancy is not needed in order to arouse cognitive dissonance. In Scher & Cooper's (1997) study, dissonance was aroused when subjects felt responsible for some aversive consequence, regardless of whether their behaviour was consistent or inconsistent with beliefs. The results, based on the dissonance motivation model of Cooper & Fazio (1984) strongly suggests that "the motivational basis for dissonance is the felt responsibility for aversive consequences" (Internet: Scher & Cooper 1997: 1). Cooper & Fazio (1984) explain, the tension can be either positively or negatively labelled, and can be attributed either to what caused it (the aversive event or some external factor). "Making the attribution that the tension has been caused by the dissonant cognitions, a person then experiences the cognitive motivation to change or alter his cognitions" (Cooper 1992: 321). By contrast, people with a low self-concept may not mind doing something negative and they may not undergo the anxiety state of dissonance (Aronson & Carlsmith 1962; Aronson & Mettee 1968). Similarly, Kruglanski (1992: 336) reports "a person with a positive self-concept in a domain would exhibit dissonance-like effects when faced with information inconsistent with his or her expectancies, whereas a person with a negative self-concept would exhibit such effects when faced with information consistent with his or her expectancies, because such information may reawaken those expectancies".

However, an epistemological difference exists between Aronson's (1988) self-concept view and that of Cooper & Fazio (1984). To Aronson, the self-concept is instrumental in arousing dissonance. Cooper & Fazio's (1984) position is functional: "Any consideration or set of considerations that ultimately leads a person to believe that a behavior has created an aversive



or unwanted situation is capable of producing dissonance" (Cooper 1992: 321). By introducing the self-concept, Aronson (1988) argues people are upset, threatened or encounter tension only when their actions have negative implications for the self. This overlooks the tension caused when one does things that are inconsistent with the view of themselves. Cooper & Fazio (1984) are of the opinion that dissonance arousal demands no intervening variable, that is, if a person's behaviour leads to an unwanted outcome, it is aversive and can be a source of dissonance arousal. In other words, "a consequence is considered aversive if, all things considered, the event is one that the person would rather have not occur" (Cooper 1992: 322). Hence, Cooper & Fazio's (1984) new-look position does not require knowing all salient aspects of a person's self-concept; 'it is simple and functional'. Both Dissonance-generated persuasion is highly involving because it incorporates a challenge to a person's self-concept. Self-persuasion is powerful because the self-concept of the individual is directly engaged in the process of attitudinal or behavioural change. "Perhaps the most dramatic demonstration of dissonance-related persuasion is evidenced in the counter-attitudinal paradigm. In this procedure, subjects are induced, under conditions of high choice or low incentive, to persuade others to believe something that they themselves do not believe. These subjects subsequently come to believe their own rhetoric; that is, they reduce dissonance by persuading themselves that their counter-attitudinal statements were, in fact, a reflection of their true belief" (Dickerson, Thibodeau, Aronson & Miller 1992: 843). In pro-attitudinal situations, a successful technique is to create feelings of hypocrisy. This is accomplished by inducing subjects to encourage other people to perform certain meaningful, worthwhile behaviour. Subjects are then reminded that, on occasion, their own behaviour has not been consistent with those goals. "Essentially, subjects are confronted with the realization that they do not always practice what they preach. This realization is expected to generate dissonance because being a hypocrite would be inconsistent with most people's self-concepts as persons of integrity" (Dickerson et al. 1992: 844). Consequently, subjects should be motivated to reduce dissonance by behaving in a manner more consistent with their espoused attitudes. Dickerson et al. (1992) undertook a study adopting this technique and used cognitive dissonance to encourage water conservation. As expected, "the 'hypocrisy' condition - in which subjects made the public commitment after being reminded of their past behavior - [was] dissonance-arousing, thereby motivating subjects to increase their efforts to conserve water" (Dickerson et al. 1992: 841).

Cooper (1992) and Collins (1992: 314) assert "dissonance theory must be revised to make aversive consequences a necessary component in the arousal of dissonance". Research by Aronson & Mettee (1968) on self-esteem and Steele (1988) on self-affirmation indicate the self-concept is both a way of helping the individual avoid forming behaviour that would arouse dissonance (Aronson & Mettee 1968) as well as a strategy of reducing dissonance that already exists (Steele 1988).

#### 5.10 COGNITIVE DISSONANCE AND ANXIETY

The decision conditions that lead to dissonance arousal may also lead to an emotional state of anxiety called "state anxiety" or anxiety arising from temporary circumstances (purchase situations) (Hawkins 1972: 63). State anxiety may occur in purchase behaviour where the possibility of decision failure exists and "where ego involvement or reflections on one's self-esteem are associated with product purchase" (Menasco & Hawkins 1978: 651). Anxiety may be the outcome of conflict resulting from a choice of mutually exclusive alternatives. Therefore, "the experience of post-purchase dissonance is a form of state anxiety" (Menasco & Hawkins 1978: 651). Oshikawa (1972) distinguishes between chronic anxiety and 'temporary' after-the-purchase anxiety. Hawkins (1972: 63) proposed, "the tendency to experience dissonance may be a personality variable that is a specific form of chronic anxiety". Chronic anxiety "does not affect the level of felt anxiety but only the probability that any given situation will elicit an anxiety reaction" (Hawkins 1972: 64). Temporary anxiety refers to "an induced anxiety rather than a personality trait. A person may ordinarily be low in chronic anxiety, but his temporary anxiety may rise when exposed to a strong fear-arousing communication" (Oshikawa 1972: 65). Post-purchase anxiety is not overlooked by marketing practitioners. This is evident in the content of instruction booklets accompanying new purchases, which are aimed at reassuring the consumer of the wisdom of the choice.

#### 5.11 COGNITIVE DISSONANCE AND ACTION IDENTIFICATION

In social psychology, the intersection of separate theories developed within independent paradigms give rise to new and essential ways of thinking about the dynamics of cognition and behaviour. Action identification theory develops on a central tenet of dissonance theory, that is, people think about their behaviour. In the theory of cognitive dissonance, it is the tension among different elements of such thought that triggers attitudinal and behavioural

change. Wegner & Vallacher's (1986) work on action identification centered on specifying the key parameters underlying the wide range of action-identities available to a given individual in a specific setting. Wegner & Vallacher (1986) showed "although various dimensions of thought come and go as a function of context, one parameter was preserved: an underlying organization of whatever identities are available into a functional hierarchy". The various act identities that people offer for their action can always be scaled hierarchically, "from lower level identities conveying the specifics or how-to components of the action to higher level identities conveying a more general understanding of the action, indicating why the action was done or what its effects and implications were" (Vallacher 1992: 349).

Morality, competence and a sense of self are important components of thinking about one's behaviour but do not define people's thoughts at all times. Principles of action identification help to clarify what kinds of cognitions become prepotent for people in different dissonance paradigms as well as reconceptualize dissonance phenomena as special cases of action identification processes (Vallacher 1992). "Whereas dissonance theory has its clearest application to behaviors that are presumably viewed negatively by subjects ... action identification theory suggests that anything a person does can come to be viewed in a different, and differently valenced, way" (Vallacher 1992: 350). Action identification processes are not limited to instances of cognitive conflict but provides a basis for a general theory of human behaviour and applies to a wide range of areas including prosocial versus antisocial behaviour, self-concept stability, skill development, self-control of maladaptive behaviour, performance impairment, self-presentation, intrinsic motivation and personality (Vallacher 1992). However, Wilder (1992: 351) emphasizes "dissonance theory saw the individual as most cognitively active or mindful following a commitment to behavior. The original focus was on active thought after decision making rather than the weighing of actions beforehand".

#### 5.12 DISSONANCE AND SOCIAL PSYCHOLOGY

Dissonance was the dominant theoretical perspective within Social Psychology in the 1960s. Jussim (1992: 332) supports this view and maintains "dissonance is a very powerful theory" and "it provides a conceptual tool potentially capable of integrating vast areas of social

psychology". Aronson (1988) also, asserts dissonance theory sheds light on some of the dark and confusing areas of social psychology. It is "the most important single development in the history of social psychology" and has become a mode of the synthesis approach to understanding much of social behavior (Cooper 1992: 320). According to Aronson (1988) four stands come together to propel dissonance theory to the forefront of social psychology:-

- It is a straightforward theory with few assumptions and postulates.
- It was "an iconoclast among theories", a bold challenger to other theories that had contributed well to the discipline (Cooper 1992: 320).
- It was a broad theory, covering a wide array of social behaviours, for example, from attitude change to judgements of attractiveness.
- The fourth strand was the brightness and excitement of the group of investigators working with Festinger, the most notable being Elliot Aronson. These investigators "boldly introduced research paradigms that could demonstrate the relations between incentive magnitude and attitude change, between effort and attraction, and between expectancy and behavior," the study of which added "cumulative support for the iconoclast upstart of the theory called dissonance" (Cooper 1992: 320).

Greenwald (1992: 331) maintains "dissonance theory has been so thoroughly interwoven into the fabric of contemporary social psychology that its removal would make the fabric itself unrecognizable". Although dissonance theory continues to generate interest in social psychology, it does not stimulate much research on consumer behaviour. Dissonance occurs frequently in consumer contexts, such as when a person buys an expensive product, experiences many attributes and consequences of product use, confronts information suggesting that unbought alternatives are in some ways superior and is therefore, motivated to seek information reducing dissonance (Bagozzi 1991: 146). Therefore, it is now quite clear that dissonance can lead to increased cognitive activity designed to reduce a cognitive conflict (Petty et al. 1991: 257).

### 5.13 COGNITIVE DISSONANCE AND CONSUMER BEHAVIOUR

The theory of cognitive dissonance depicts a tool that marketing has borrowed from the behavioural sciences to understand consumer behaviour. The theory of cognitive dissonance is a valuable source of hypotheses and insights regarding variables important in the process

of consumer decision-making. "It is especially useful in interrelating pre- and postdecision processes and specifying differences in goals, states of mind, and behavior between these two stages" (Cohen & Houston 1972: 97).

Kaish (1967) used the theory of cognitive dissonance to generate a set of behavioural criteria for classifying goods. The classification of goods into categories of convenience, shopping and specialty goods is one of "the venerable of marketing concepts" that has "proved useful in the analysis of pricing, promotion and distribution of goods problems" (Kaish 1967: 28). The American Marketing Association classified goods as follows: "Convenience goods are those consumers' goods which the consumer usually purchases frequently, immediately and with a minimum of effort; shopping goods are those consumers' goods which the consumer in the process of selection and purchase characteristically compares on such bases as suitability, quality, price and style; and specialty goods are those consumers' goods on which a significant group of buyers is habitually willing to make a special purchasing effort" (Definitions Committee 1948: 202). These definitions fall short since they imply, goods should be differentiated predominantly on the buyers' willingness to make an effort to purchase. Thus, Kaish (1967) employs Festinger's theory of cognitive dissonance to overcome such inadequacies and redefine the types of consumer goods.

#### 5.13.1 THE THEORY OF COGNITIVE DISSONANCE AND CONSUMER BEHAVIOUR

According to dissonance theory, decision-making is an anxiety-inducing activity. A person forced to choose one of several alternatives is faced with a mental conflict because both desirable and undesirable features are inherent in each alternative. Post-decision cognitive dissonance may arise when there is an awareness of one or more reasons why a particular decision should not have been made.

Cognitive dissonance theory maintains:-

- "Cognitive dissonance occurs in the personal consumption situation when a buyer, seeking to satisfy what is to him an important need, must choose from among a number of alternative goods" (Kaish 1967: 29). Since goods embody combinations of features, some qualities may be attractive and others unattractive to the buyer.

- The level of post-decisional dissonance is an interplay of the number of these conflicting product qualities, the extent to which they are crucial to the performance of the product, and the importance of the product to the purchaser.
- The greater the anticipated dissonance, the greater the effort to avoid post-decision dissonance by means of pre-decision comparison and evaluation.
- Lack of sufficient information about an intended purchase may result in the decision not to purchase.

Cummings & Venkatesan (1975: 27) undertook a review of studies on cognitive dissonance and conclude "the generalizability of cognitive dissonance theory to consumer behavior (within the areas of predecisional and postdecisional determinants of product satisfaction) - excluding information seeking behavior - has been substantiated".

#### 5.13.2 THE LEVEL OF COGNITIVE DISSONANCE AND CONSUMER BEHAVIOUR

Specific elements of the purchase situation overlap to determine the magnitude of cognitive dissonance and consumer behaviour:-

- Importance of the purchase - economically or psychologically important purchases are capable of producing anxiety, lest a wrong purchases is made (Kaish 1967).
- Functional performance differences - If the features of the alternatives differ significantly, the consequences of an incorrect decision will be great. Thus, a heavy premium is placed on accurate pre-decision search behaviour (Kaish 1967).
- Difficulty in relating physical product qualities and performance differences - Regardless of purchase importance and functional differences, a consumer's shopping activity will be worthwhile only if it can be determined, from available information, how the product will perform.
- Depth of assortments available - "Regardless of the individual's abilities to perceive and appraise a product's function performance, there is little value in refining one's image of the ideal product if the market doesn't offer it" (Kaish 1967: 31).

### 5.13.3 THE THEORY OF COGNITIVE DISSONANCE AND REDEFINITION FOR THE CLASSIFICATION OF CONSUMER GOODS

On the basis of the contributions of the theory of cognitive dissonance, Kaish (1967) extends the definitions of consumer goods as follows:-

- "Convenience goods are goods in which purchase is not important to the consumer, either because of low price, low durability, or low ego-involvement. Usually, there is consumer acceptance of a number of suitable substitutes for the utilities sought, and, anxiety that the purchase decision will later prove to be inappropriate and another would have been better.
- Shopping goods are goods that arouse high levels of pre-purchase anxiety about the possible inappropriateness of the purchase. This anxiety can be allayed by the consumer through information-gathering and subsequent decision-making. These goods are high in economic or psychological importance, contain significant performance differences, and have physical qualities that are readily related to the performance characteristics. These goods are available in assortments broad enough to permit acquisition of desired qualities without forcing the purchase of too many of the undesired. Thus, pre-purchase anxiety is high but reducible by shopping behavior.
- Specialty goods are goods that are economically or psychologically important enough and have different enough performance characteristics to qualify as shopping goods, but have physical qualities that are not readily related to the performance characteristics sought. In addition, the alternatives may be so limited that the consumer is forced to purchase a good that will be potentially unsatisfying. Pre-purchase anxiety is high here also, but not readily reducible by shopping behavior" (Kaish 1967: 31).

Whilst former definitions of consumer goods take cognisance mainly of mental effort, the theory of cognitive dissonance extends these to include behavioural criteria for the classification of these goods.

Festinger's (1957) theory of cognitive dissonance is not a panacea to all business and other problems but provides a broader frame of reference for understanding human/consumer behaviour.

#### 5.14 DISSONANCE THEORY AND MARKETING

Marketing researchers have applied a variety of behavioural science theories in order to better understand consumer buying processes. As Straits (1964: 115) explains, "the latest fad in marketing has been the shift from the thorny task of explaining consumer decision-making to that of studying consumers after their purchases". Oshikawa (1972: 64) emphasizes, Festinger's theory of cognitive dissonance "is one which has provided relevant, testable hypotheses". However, Straits (1964: 115) unreservedly maintains "the pursuit of the dissonant consumer is as difficult (if not more so) than understanding consumer decision-making".

Customer satisfaction after the purchase is a key factor in consumer decision making and consumer behaviour. Marketing managers are becoming increasingly interested in how a new purchaser feels after buying. Researchers in consumer behaviour have attempted to relate attitude change, information seeking and brand loyalty to the concept of cognitive dissonance. Furthermore, analyses into the effect of customers' personalities in relation to salesperson's persuasion attempts upon consumers' post-purchase satisfaction are being undertaken.

The theory cognitive dissonance has substantial applicability to the marketing situation. Kaish (1967: 28) explains how the theory of cognitive dissonance may be used "to give a new dimension to the classification of consumer goods" and to generate "a fresh set of behavioral criteria for classifying goods". Cummings and Venkatesan (1976: 306) maintain the predictions of the theory can be applied most accurately "when there is high perceived volition concerning the choice or purchase, when there is an irrevocable commitment to the choice or purchase, and when the choice or purchase is an important (ego-involving) one for the buyer". Furthermore, the manipulation of magnitude of dissonance can be expected to impact on post-purchase attitude or behaviour change, but not on post-purchase information seeking.

The fact that dissonance is likely in consumers is one of the more useful types of information marketing managers have. It is the foundation for business efforts to lure consumers away from competitors. As long as the customers of competitors are satisfied, there is little chance



of inducing them to change stores or brands. However, "if one firm can create dissonance in the minds of another firm's customers, there is a chance to induce those customers away" (Walters & Bergiel 1989: 483). Much of the effort of personal salespersons and advertising is designed to create such dissonance, for example, by reflecting competitor's products unfavourably. "Dissonance theory sheds new light on the role of advertising of increasing the repurchase probability of the advertised product. A seller's product advertisement reassures the consumer as to the wisdom of the purchase by emphasizing its desirable features and therefore helps to reduce post-purchase dissonance. Dissonance reduction, in turn, reinforces his purchase" (Oshikawa 1969: 49). Hence, purchases can be reinforced by conveying "the positive features of a product as a reinforcing rather than a persuasive message" (Williams 1981: 113). This is done deliberately and is an acceptable strategy fundamental to a free enterprise system. "The marketers ... desires to differentiate his firm's offerings as much as possible from competitors and to induce the consumer to make a purchase" (Engel & Blackwell 1982: 507). Thus, marketing managers know "the first step in luring competitors' customers is to cause them to doubt their loyalty to the competitors' product" (Walters & Bergiel 1989: 483).

Dissonance "disrupts the consumer's equilibrium", as a result of doubts about the purchase, causing the person to seek relief (Walters & Bergiel 1989: 478). Dissonance theory suggests that marketers should seek to reduce dissonance by supplying consumers with positive information about the brand after the purchase. Five strategies to provide supporting information after the purchase and thus, to reduce dissonance include the following:-

- Provide additional product information and suggestions for product care and maintenance through brochures or advertising.
- Provide warranties or guaranties to reduce post-purchase doubt.
- Ensure good service and immediate follow-up on complaints to provide post-purchase support.
- Advertise reliable product quality and performance to reassure recent purchasers of product satisfaction. Advertising must be careful not to exaggerate the positive features of a product. It is commonly believed by advertisers that a little positive exaggeration in product promotion favourably influences a consumer's judgement of product quality. Engel, Kollat & Blackwell (1973) warn that overstatement or understatement may be a

poor strategy. However, Olshavsky & Miller's (1972: 19) results support common marketing practice "in that overstatement resulted in more favourable ratings and understatement resulted in less favourable ratings". Nevertheless, promotional messages need to create realistic expectations. "Promotional efforts that create unrealistic expectations for products can result in consumer dissatisfaction with the purchase and use of the products" (Block & Roering 1976: 334). If a product does not live up to the consumer's expectations, as derived from advertisement, then dissonance will occur and this could be reduced through a subsequent negative evaluation of the product" (Williams 1981: 112). This is detrimental as it can result in unfavourable word-of-mouth communication to other members of that consumer's peer group and family. Oliver & Swan (1989: 516) confirm in their study, "although retailers cannot directly control word-of-mouth, steps to insure customer satisfaction and equitable treatment may produce favorable word-of-mouth effects". "Packaging, too, can help present a more-balanced picture of the product's attributes" (Loudon & Della Bitta 1984: 698).

- Follow-up after the purchase with direct contacts to confirm the customer understands how to use the product and to ensure satisfaction (Assael 1992: 238). Hunt (1970: 32) found that such post-purchase reassurances from a seller were effective in reducing dissonance after purchase of a refrigerator.

The aforementioned strategies "are relevant for high risk, high inducement product categories" and "are designed to change attitudes toward the product by reducing post-purchase doubts" (Assael 1992: 238). These strategies are particularly important because "marketplace dissatisfaction has significant implications for such key phenomena as brand loyalty and repurchase intentions" (Singh 1990: 57). Marketers should take cognisance of the fact that attitude change can be induced when attitudes held are inconsistent with behaviour. Incentives such as, free samples and coupons can be used to attract consumers to try the product, the resulting dissonance provoking attitude change. This could influence brand loyalty. Williams (1981: 113) reports, "the greater the post-decision dissonance after the first purchase, the greater the probability of buying that brand again".

Doubts that follow a purchase are often reduced by the search for additional information, both positive or negative, to verify the wisdom of a specific decision. On the one hand,

information that supports the consumer's choice "acts to bolster confidence in the correctness of the purchase decision. On the other hand, consumers may seek out discrepant facts in order to refute them and thereby also reduce dissonance" (Hawkins, Coney & Best 1980: 497). The search for information after purchase as a means to reduce uncertainty greatly enhances the role that advertising and aftersales efforts can have on consumers. Consumers confidence in their brand choice is increased when companies design certain advertisements for recent purchasers in the hope that these advertisements will help reduce post-purchase dissonance. This marketing effort results in owners of new automobiles recalling dealer advertisements to a greater extent. The finding of a study undertaken by Dhar & Somonson (1992: 439) suggests "it might be more effective to use a promoted brand as the focal option in a comparison with other brands (eg. using comparative advertising) than to feature the promoted brand exclusively". "Some manufacturers and retailers follow the beneficial practice of contacting consumers shortly after purchase to assert once again the wisdom of their choice and to affirm their appreciation" (Engel & Blackwell 1982: 508). These marketing strategies include post-purchase letters and telephone calls. However, Hunt (1970) found telephone calls produced the highest level of post-purchase doubt since it aroused feelings of uncertainty and suspicion by implying that something was wrong. The implication is, marketers should use caution when selecting a method to help consumers reduce potential dissonance.

Dissonance theory also implies the act of selecting one of several alternatives triggers a process of reevaluation of the choice options in which the selected item tends to be reevaluated more favourably relative to the rejected items. Sellers can facilitate this reevaluation process by providing supportive information. "This is one reason why many manufacturers include with their product a congratulatory message which compliments the buyer on his or her selection and carefully explains the high quality of the product even though the message can only be read after the product has been purchased" (Horton 1984: 186). Since post-decision regret is "only a temporary phenomenon", it may well be "that reestablishment of the original state of equilibrium through bolstering one's choice will make selection of that alternative more probable in the future" (Engel & Blackwell 1982: 506). Mittelstaedt (1969) supported this view and showed the probability of purchasing the same brand again is increased in proportion to the magnitude of post-decision dissonance

surrounding the initial purchase. This is of importance to marketing managers as it gives insight into the psychological mechanisms of brand loyalty.

It must be noted, little is known about the conditions under which the theory of cognitive dissonance is or is not applicable in the marketing situation. This is due to the fact that most of the research has been done in the laboratory rather than in the field. The use of the dissonance concept in marketing could be enhanced greatly "by employing a direct measure of the degree of dissonance experienced by consumers and the propensity for certain consumer segments to experience it" (Menasco & Hawkins 1978: 650). The recognition of market and behavioural variables associated with post-purchase dissonance arousal provides useful insights to purchase behaviour. The control of such factors may reduce the frequency and magnitude of dissonance and result in more satisfied consumers. However, "the evidence in favor of dissonance theory in the consumer behavior literature looks good" and the theory has already provided new ideas and spawned much new research in consumer behaviour (Cummings & Venkatesan 1976: 307). The theory of cognitive dissonance most certainly contributes to the understanding of the consumers degree of satisfaction. This contribution is beneficial to marketing since "the feelings of the customer after the purchase are the pillars of profitability in any company's future" (Bell 1967: 16). However, Foxall (1980: 51) warns "intriguing as cognitive dissonance phenomena are for the marketing man ..., we are far from knowing the extent to which they operate in determining consumer choices or how to exploit dissonance and self-concept fully in the marketplace".

### **5.15 CRITICISMS OF THE THEORY OF COGNITIVE DISSONANCE**

Many aspects of the theory of cognitive dissonance have been largely criticized, both positively and negatively.

#### **5.15.1 CRITICISMS IN FAVOUR OF THE THEORY OF COGNITIVE DISSONANCE**

The theory has been acknowledged for opening the doors of Social Psychology, contributing to the understanding of human behaviour, challenging reinforcement theory, adopting high-impact procedures and methodology of experimentation.

#### **5.15.1.1 FOCUS ON PSYCHOLOGICAL MOTIVATION: OPENING THE DOORS OF SOCIAL PSYCHOLOGY**

According to Aronson (1988) dissonance may have made its most important contribution by ending the hegemony that reinforcement theory had over the vast areas of psychology, including social psychology. By focusing specifically on psychological motivation and depicting its effects, "Festinger opened the doors of social psychology and let the sun shine in" (Goethals 1992: 327). Furthermore, dissonance theory was important because it emphasized the essential interaction of motivation (the drive to reduce dissonance) and cognition (the relations between thoughts). Hence, Festinger's (1957) theory of cognitive dissonance "burst on the scene and revitalized social psychology with its deft blend of cognition and motivation" (Aronson 1992: 303). Furthermore, the theory inspired a tremendous amount of stimulating research "leading to a burgeoning of knowledge about human social behavior" (Aronson 1992: 303) and by the mid-1970s, "it had transcended the boundaries of academic social psychology and was widely cited in scholarly journals" in a variety of disciplines such as economics, philosophy, political science and anthropology (Aronson 1992: 306). Cooper (1992: 320) emphasizes it was the assumption of magnitude in the theory of cognitive dissonance that made possible "a study like the original forced-compliance study of Festinger & Carlsmith (1959) or Aronson & Mill's (1959) effort justification research". Jones (1976: x) refers to the theory as "the most important single development in social psychology to date". Aronson (1992) further believes that Festinger (1957) not only saved social psychology "from the clutches of psychoanalytic theory and the specious concept of catharsis", but also from the clutches of mundane, irrelevant and frequently trivial, low-impact methodologies" (Collins 1992: 316). Collins (1992: 316) and more strongly, Aronson (1992), maintains "Festinger's contributions are vastly under-appreciated by the current generation of cutting-edge social-cognition theorists".

#### **5.15.1.2 A BREAKTHROUGH IN UNDERSTANDING HUMAN BEHAVIOUR**

Dissonance theory postulates if one could specify high resistance to change of a particular cognition, then it is possible to specify the magnitude of dissonance associated with the resistant cognition. Brehm (1992: 314) believed this magnitude phenomenon to be a major breakthrough. Similarly, Cooper (1992) expounds although Heider's Balance Theory and Newcomb's Symmetry Model explained consistency among cognitions, Festinger's theory

(1957) was more influential since he could make predictions about the relative amount (magnitude) of dissonance that people would experience. A further development was "the fact that a multitude of reasons for or against a particular behavior, behavioral commitment, or decision could all be lumped into the same psychological problem" (Brehm 1992: 314). For example, if a person purchased a new car, all the reasons for and against that purchases contributed to the formulation of cognitive dissonance. These include typical motor vehicle purchase criteria, for example, power, speed, resale value, fuel consumption, as well as tangential reasons, for example, ratings in Consumer Reports and opinions of family and friends. Brehm (1992: 314) considers this to be a breakthrough in a theory "that allowed one to take into account some of the complexity of human behavior - multiple reasons for action - and still make a prediction about the tendency to justify whatever action was taken".

#### **5.15.1.3 A CHALLENGE TO REINFORCEMENT THEORY: PEOPLE DO THINK**

According to Aronson (1992: 304) dissonance theory provided "a powerful vehicle for challenging reinforcement theory on its own turf". Whilst reinforcement theory would maintain humans like people and groups that are associated with reward, Aronson & Mills (1959) proved in their experiment people like things for which they suffer. Aronson (1992: 304) believes "dissonance theory produced experimental research that demonstrated convincingly ... that people think" and "are not simple reinforcement machines".

#### **5.15.1.4 HIGH-IMPACT PROCEDURES AND METHODOLOGY OF EXPERIMENTATION: A PRIMER TO RESEARCH**

Wilder (1992: 351) maintains "the development of 'high impact' experimental procedures (emphasizing subject involvement and high experimental realism) is arguably as important a contributing of dissonance research as the theory itself". Aronson & Carlsmith (1968) contributed largely to the methodology of experimentation, which still serves as a primer of how to do experimental social psychology in the laboratory. Dissonance theory is criticized for the highly contrived cover stories and inducements used to manipulate dissonance in the laboratory. Wilder (1992: 351) maintains these critiques are offended "because of the relish with which dissonance researchers employed these deceptions". "The 'high impact' procedures were necessitated by the dissonance view of the human as an active information processor who is motivated to defend his or her self-concept" (Wilder 1992: 351).

### 5.15.2 CRITICISMS AGAINST THE THEORY OF COGNITIVE DISSONANCE

Critics (Swann 1990; Kunda 1992) argue the essence of the theory is self-justification and not inconsistency. Other criticisms include, the simplicity of the theory is self-defeating, it has poor empirical support, it focuses on 'self-concept' at the expense of psychological consistency, the theory was overextended, adopts shape shifting and was a mistake, thereby creating the need for a more general motivational category with consideration of the social context.

#### 5.15.2.1 INCONSISTENCY OR SELF-JUSTIFICATION

The general phenomenon in Festinger's theory was to make cognitions fit and if two cognitions do not fit, there is pressure to make them do so. Thus, Aronson (1988) maintains the core notion of the theory is that of inconsistency. Aronson (1988) argues preserving a consistent sense of self together with a moral and competent sense of self, represents an important individual striving. When this consistent sense of self is threatened, dissonance arises. Swann (1990) reintroduced the self-consistency principle into the theory of cognitive dissonance by focusing on self-verification. The empirical question of whether self-consistency or self-enhancement is the superior driving principle behind cognitive dissonance phenomena is not yet established. Comments in this regard thus, focus on whether it is "more appropriate to interpret cognitive dissonance as a threat to self-consistency or as a threat to self-esteem" (Greenwald 1992: 331). Swann's (1990: 408) research on self-verification and Jussim's (1986: 429) study supports the self-fulfilling prophecy phenomenon. These studies led Goethals (1992: 328) to confirm and emphasize "self-justification really is the core notion of dissonance theory", and not inconsistency.

Similarly, Kunda (1992) argues the mere inconsistency between two cognitions is not sufficient to produce the motivational state termed dissonance and its consequent attitude change. Rather, "dissonance motivation appears to be aroused by the implications of such inconsistency for the self" (Kunda 1992: 337). For example, under the induced-compliance paradigm people are led to engage in counterattitudinal behaviours that they would ordinarily avoid and thus, shift their attitudes toward greater congruence with these behaviours. "In this case, the implications to the self that people are concerned about are that they will appear to be fools for having performed the counterattitudinal behaviors" (Kunda 1992: 337).

Likewise, Cooper & Fazio (1984) depicted in the induced-compliance paradigm, attitude change follow counterattitudinal behaviours only when the subjects believe they have chosen freely to engage in behaviours with foreseeable negative consequences. Aronson (1968) argues the inconsistency between the beliefs 'I am not a fool' and 'I have done something foolish' is the driving force behind the consequent attitude change. However, Steele (1988) deduced attitude change in the induced-compliance paradigm is driven by the motivation to avoid being a fool triggered by this inconsistency rather than by inconsistency per se. Hence, Aronson (1968) revised Festinger's original dissonance theory by retreating from an omnipotent consistency motive and elevated the importance of a self motive. Steele & Spencer (1992) abandon the consistency motive altogether and elevate the self motive to omnipotence or to primacy. They (1992: 345) argue "behind the apparent pursuit of self-consistency ... is not a motive for any sort of consistency, but a motive to believe in one's self-integrity, one's general moral and adaptive adequacy". Self-inconsistency becomes motivating only when it threatens the self-integrity of a person. Therefore, to Steele & Spencer (1992: 345) "self inconsistency is only a cue that sometimes signals self-inadequacy and, in this way, causes the appetite for self-justification and self-rectification we call dissonance".

#### **5.15.2.2 SIMPLICITY: THE SELF-DEFEATING LIMITATION**

Chapanis & Chapanis (1964: 2) comment on the simplicity of Festinger's dissonance formulations: "No matter how complex the social situation, Festinger assumes that it is possible to represent the meaning which the situation has for an individual by a series of elementary cognitions - statements that an individual might make describing his 'knowledge, opinions or beliefs'". Furthermore, a checklist of a group of related cognitions is enough to reveal whether they are consistent or not. Similar to Heider's Balance Theory, the theory of cognitive dissonance assumes people prefer consistency among their cognitions and they will initiate change in order to maintain cognitive equilibrium. One would expect the magic of Festinger's theory to "lie in the ease with which imponderably complex social situations are reduced to simple statements, most often just two such statements" (Chapanis & Chapanis 1964: 2). Hence, Chapanis & Chapanis (1964: 1) criticize the theory of cognitive dissonance on the basis of its experimental design together with "fundamental methodological inadequacies in the analysis of results". The authors question whether it is really possible



"to reduce the essentials of a complex social situation to just two phrases" and they thereby, conclude "the most attractive feature of cognitive dissonance theory, its simplicity, is in actual fact a self-defeating limitation" (Chapanis & Chapanis 1964: 21).

#### **5.15.2.3 POOR EMPIRICAL SUPPORT AND LACK OF THEORETICAL CLARITY**

Chapanis & Chapanis (1964) together with other critics (Bem 1967; Schlenker 1980; Tedeschi, Schlenker & Bonoma 1971) proposed alternative explanations of key effects in the theory of cognitive dissonance. Sears & Abeles (1969) claim the empirical support for the theory was weak and contradictory and Smith (1968) was amongst those researchers who argued Festinger's theory of cognitive dissonance emphasized experimental ingenuity at the expense of theoretical explicitness.

#### **5.15.2.4 FOCUS ON 'SELF-CONCEPT' AT THE EXPENSE OF PSYCHOLOGICAL CONSISTENCY**

Swann (1992: 346) believes "the real problem sprang from the fact that the data showed that a pristine need for cognitive consistency was not, of itself, sufficient to fuel the counterintuitive and compelling social behaviours that dissonance researchers were committed to studying". According to Swann (1992) something was required to trigger the need for consistency. Although critics suggested ego investment, behavioural commitment and knowledge of consequences, many researchers (Cooper & Fazio 1984; Greenwald & Ronis 1978; Wicklund & Brehm 1976) suggested 'self-enhancement'. Swann (1992: 347) opposed this view maintaining that "by shifting the motivational onus from the provocative cognitive-consistency motive to the noticeably less exotic self-enhancement motive, the revisionists focused the theory 'on cognitive changes occurring in the service of ego defense, of self-esteem maintenance, rather than in the interests of preserving psychological consistency'". The motives of consistency and self-enhancement "could have resided happily under the same theoretical roof" if their respective roles in controlling behaviour were specified (Swann 1992: 347).

#### **5.15.2.5 COGNITIVE DISSONANCE THEORY WAS OVEREXTENDED**

Lord (1992: 339) maintains, cognitive dissonance theorists may have "invited their own demise by overextending their domain". Lord (1992) demonstrates two ways in which

dissonance theory was overextended:-

- "attitude change following counterattitudinal behavior that is performed with insufficient justification and
- attitude polarization" (Lord 1992: 339).

Bem (1972) found counterattitudinal behaviour could alter attitudes without inducing the negative arousal state postulated by cognitive dissonance theory, simply through self-attribution. Lord (1992: 340) believes "Elliot Aronson has overextended dissonance theory in claiming that it can explain polarization effects". Festinger's formula for computing dissonance predicts attitude change in a counterattitudinal direction, but not (unless negative importance weights are added) in a proattitudinal direction (Lord 1989).

#### 5.15.2.6 COGNITIVE DISSONANCE THEORY WAS A MISTAKE

On pragmatic grounds, Lord (1992: 340) agrees with Jones (1985: 71) that cognitive dissonance theory "generated volumes of research [and] served as a clear example of the promise offered by theory-based experimental research in social science". However, on conceptual grounds, Lord (1992: 340) believes the theory is a mistake as "it led an entire generation of researchers on a lengthy detour that lost contact with mainstream psychological principles". Furthermore, the theory blinded generations of researchers to potentially more useful concepts, for example, Rescorla-Wagner Learning Model.

#### 5.15.2.7 SHAPE SHIFTING

"Dissonance theory derives much of its power and appeal from its ability to assume whatever form its devotees want it to take. It is, quite literally, all things to all people" (Schlenker 1992: 342). "Shape shifting" as a survival technique is evident in cognitive dissonance theory, but when assessing a scientific theory, this very criterion is not a strength but a weakness (Schlenker 1992: 342). Furthermore, Schlenker (1992: 343) argue, the theory offers no way to assess relevant cognitions, so researchers have been left to guess about the cognitions that may be inconsistent. The theory also offers no guidance as to how we deal with potentially compelling consonant cognitions". Hence, Schlenker (1992: 343) believes "the cognitive-consistency concept is plagued with problems" and no strategy has been developed to evaluate the amount of inconsistency and dissonance in isolation of subjects

dissonance reduction activities.

#### **5.15.2.8 NEED FOR A MORE GENERAL MOTIVATIONAL CATEGORY**

Kruglanski (1992: 335) believes both Cooper & Fazio's (1984) tendency to avoid responsibility for aversive consequences and Aronson's (1968) tendency to have a desirable self-concept "may be viewed more generally as instances of the wish to uphold pleasing conclusions of whatever kind or to reach specific desirable closures", that is, the need for specific closure.

Furthermore, Kruglanski (1990) questioned whether striving for stability and predictability is the only motivation that renders cognitive inconsistency aversive. Instead, he suggested "the need-for-nonspecific-closure", that is, "the desire for definite and subjectively certain knowledge, which cognitive inconsistency undermines" (Kruglanski 1992: 335). The need for closure may be aroused by instructions stressing the desirability of clear-cut knowledge, by time pressure, or by environmental noise that makes information processing difficult (Kruglanski & Freund 1983). It was also found that heightened need for closure increases the tendency to base judgements on pre-existing stereotypes (Jamieson & Zanna 1989) and on early informational returns (Heaton & Kruglanski 1991; Kruglanski & Freund 1983). Results from a study undertaken by Kruglanski & Mayseless (1987) indicate, a heightened need for closure increases persons' tendencies to seek out similarly minded others in a social comparison situation and to look down upon opinions deviates. Kruglanski (1992: 335) argues the-need-for-nonspecific-closure construct offers a synthesis between Aronson's self-concept phenomenon and "a broad range of contexts in which cognitive consistency is desired and cognitive inconsistency eschewed". Such synthesis links dissonance phenomena with fundamental social psychological topics including stereotyping, attribution, impression formation, social comparison and group decision-making.

#### **5.15.2.9 NEED TO CONSIDER SOCIAL CONTEXT**

The results of Cooper & Mackie (1988) highlight the importance of considering the intergroup context in understanding the effects of cognitive dissonance. There is evidence that taking a counter-attitudinal position under high-choice conditions evoked the unpleasant state of dissonance in all conditions. But "it would have been an error to predict attitude

change as a function of dissonance without taking the intergroup situation into account" (Cooper & Mackie 1988: 66). The consideration of ongoing social membership is crucial in understanding the consequences of such arousal. Divorcing dissonance from the social context in which it occurs allows predictions of attitude change to be made. "But considered within the social context of group membership and identity, the very same dissonance that is aroused by induced compliance may have effects that are very different from, and even contradictory to, the consequences of dissonance in a setting devoid of social context" (Cooper & Mackie 1988: 67).

#### 5.15.2.10 VERY LIMITED SCOPE AND RESTRICTED RANGE OF PHENOMENA

Kunda (1990) argues the dissonance theory has very limited and highly restricted range of phenomena under its jurisdiction. Kunda (1992: 338) maintains, "motivated inference may be triggered by diverse goals in many settings not encompassed by such theories". Furthermore, dissonance research completely ignores the question of the process underlying motivated reasoning. Motivation has its effects on judgement by affecting the choice of representations and heuristics that are applied to a given reasoning task (Sanitioso & Kunda 1990). Hence, Kunda (1992: 338) argues dissonance theory lacks "an attempt to integrate insights into the nature of social cognition". Dissonance theory need to develop by incorporating studies on "how dissonance motivation leads to attitude change, and more broadly, how goals affect reasoning" (Kunda 1992: 338).

#### 5.16 THE FUTURE OF THE THEORY OF COGNITIVE DISSONANCE

Whilst some critics (Schlenker 1992; Kunda 1992; Berkowitz 1992) believe the cognitive dissonance theory should not encompass other smaller theories, others are of the opinion the theory has the potential not only to survive and contribute to the understanding of human behaviour, but also to synthesize related mini-theories and act as an umbrella.

##### 5.16.1 ANALYSIS OR SYNTHESIS

According to Berkowitz & Devine (1989) analysis refers to the careful delineation and differentiation of the theoretical concepts and propositions that lead to the prediction of different outcomes. Synthesis relates to the collaboration of apparently disparate observations under a common theoretical umbrella (Berkowitz & Devine 1989). Whilst both orientations

are vital to any discipline, Aronson (1992) observed that researchers in social psychology focus on analysis rather than synthesis because there exists many little theories rather than one big one. Aronson (1992: 309) believes this approach "has led to a huge imbalance in the analysis-synthesis ratio ... resulting in a plethora of small theories to try to find the common ground among these theories". (Berkowitz & Devine 1989) supports this view maintaining synthesis offers great advantages in terms of economy of thought and connectivity among approaches, which can serve to help us discover the full meaning of a specific theory. Consequently, since "social psychology has rediscovered the richness in the hypotheses to be generated by combining the cognitive with the motivational", Aronson (1992: 310) believes "the time has come for a grand synthesis" as it would be "a serious mistake to diffuse ... energy into a series of unconnected mini theories". Hence, Aronson (1992: 307) assets the self-affirmation theory (Steele 1988), symbolic self-completion theory (Wicklund & Gollwitzer 1982), self-evaluation maintenance theory (Tesser 1988), self-discrepancy theory (Higgins 1989), action identification theory (Vallacher & Wegner 1985), self-verification theory (Swann 1984), self-regulation theory (Scheier & Carver 1988) and the concept of motivated inference (Kunda 1990) be contained under "the general rubric of dissonance theory, as modified in 1962". Aronson (1992: 307) believes when artificial barriers are erected and related theories get insulated from each other", vital synthesis is lost and the discipline becomes unduely "fragmented and disjointed". Brehm (1992: 314) comments that Aronson's plea for synthesis is "appropriate and timely".

#### 5.16.2 YES SYNTHESIS BUT NOT WITH DISSONANCE THEORY AS THE UMBRELLA

According to Schlenker (1992: 344) "Aronson claims a great strength of dissonance theory its ability to subsume several smaller theories. Yet to do this, dissonance theory must shift its shape to incorporate the central propositions of each of these other theories". Dissonance does not 'subsume' the others, but 'becomes' the others by changing its form to accommodate them. Schlenker (1992: 344) believes "dissonance theory cannot be allowed to have it all ways. It cannot be allowed to be a consistency theory and a self-esteem maintenance theory and a self-enhancement theory and whatever else someone says it might be".

Similarly, Berkowitz (1992: 312) believes a true synthesis is theoretically rich in meaning but even dissonance theory to date has not identified the conditions under which the individual will seek out self-enhancement or stability and thus, an adequate theory of the self is needed. Aronson (1992: 310) urges researchers not to view their endeavours as "a contest to see who is smarter or 'righter' but ... [as] a mutually beneficial, cooperative endeavour to get closer to an understanding of human thought and behavior". Berkowitz (1992: 313) argues, Aronson (1992) should take his own advice and be prepared to try to build on another's work rather than continually strive to strike out in unique, new directions. Consequently, Berkowitz (1992:313) recommends that Aronson (1992) "replace the label 'dissonance theory' with a much more inclusive term such as, perhaps, 'self theory'". Furthermore, a "creative synthesis" will be attained if self theorists of different types build on one another's work "in a truly cooperative, and maximally cumulative, endeavour" by "giving up their respective 'turfs'" and surrendering "the symbols of their separateness" (Berkowitz 1992: 313).

Kunda (1992) shares Aronson's desire for a unified theory that will incorporate a plethora of classic and novel motivational dimensions under a single theoretical umbrella. However, Kunda (1992: 337) emphatically states that he is "not convinced that dissonance theory as articulated by Festinger (1957) or as reformulated by Aronson (1968) is capable of providing this umbrella". Schlenker (1992: 345) adds "dissonance theory has had a remarkable and influential life" and should "retire to the comfortable historical pastures of social psychology," where it can be all things to all people. According to Schlenker (1992: 345) to bring dissonance theory back to everyday service, "would require a major overhaul. It cannot be both a shape shifter and a viable scientific theory".

Kruglanski (1992: 335) argues the need-for-specific-closure construct constitutes a general term that synthesizes not only divergent lines of dissonance research (Cooper & Fazio 1984; Aronson 1968) but also additional relevant lines of work addressing directional motivational biases on cognition (Croyle & Jemmott 1990; Kunda 1987; Kunda 1990).

### **5.16.3 SYNTHESIS: A CHANCE FOR DISSONANCE THEORY TO GROW**

Cooper (1992: 323) asserts "if dissonance theory is to make a genuine comeback and serve

as the synthetic focus of work in seemingly disparate fields", then dissonance must stretch "to encompass work on self-affirmation, the new look, and Aronson's self-concept formulation" such that Festinger's original theory "can grow, change and still retain its original excitement". Similarly, Vallacher (1992) emphasized one of the hallmarks of a successful theory (like dissonance theory) is that it not only evolves gradually but frequently spawns competing theories as well.

#### 5.16.4 **SYNTHESIS: ELLIOT ARONSON'S RESPONSE TO CRITICISM**

After a tremendous amount of criticism regarding the need for synthesis, Aronson (1992) confessed it was never his intention to demean new theories or to suggest that new ideas are dangerous; rather, claims to be excited about their development. "We would have a richer, more integrated, more cumulative science if, while we are constructing our new theories and generating new data, we paid closer attention to the rich reservoir of ideas and data generated by the relevant, more established theories ... with the aim integration" and so that we do not reinvent the wheel (Aronson 1992: 355). Aronson (1992: 354 - 355) further emphasizes "it is essential that we get rid of the implicit notion that we are working in a closed shop with rigid boundaries" since "there is no reason for these similar lines of thought and research to remain on separate tracks and infinitum", or else research would be "archaic" and "useless".

This also led Aronson (1992: 353) to retort to Schlenker's (1992) view of shape shifting as being a weakness in dissonance theory, by maintaining shape-changing is beneficial. Shape-changing "is useful - and perhaps [it is] even vital - for theories to undergo a process of evolution, to become tighter in the face of new data, or to reflect aspects of the procedure of its own experiments that were initially thought to be inconsequential but now appear to have been conceptually important".

#### 5.17 **CONCLUSION**

The recognition of a need or problem state forces the individual to search for alternatives to reduce the existing tension. Pre-decision conflict arises when the consumer is uncertain about the best course of action among two or more alternatives. After the decision is made, the consumer evaluates the extent to which the selected course of action has resulted in expectations being met or whether the desired level of satisfaction was attained. During this

post-purchase evaluation phase the consumer may also encounter a conflict situation. The individual may doubt whether the correct decision was made, which again produces a state of tension, creating the need for consistency. Such anxiety arises mainly because, when selecting among options, the consumer foregoes the attractive features of the unchosen alternatives. This cognitive interpreting process or desire for consistency was explored by Leon Festinger (1957) in the theory of cognitive dissonance and later revised by Elliot Aronson (1968). The original theory claims that the individual consumer strives toward consistency within the self. The consumer's attitudes, values and beliefs are ordered in such a manner that they are internally consistent and consistent with behaviour. Festinger (1957) refers to such post-decision tension as dissonance. The state of anxiety or inconsistency is an uncomfortable one, whereby two elements in a cognitive system are dissonant or imply the opposite of each other.

The discrepancy between cognitions or cognitive dissonance arises when individuals' expectations are not met, and when the individuals realize their behaviour has resulted in negative consequences for which they feel responsible. The magnitude of dissonance is enhanced when inconsistency amongst personally important cognitions exists. Dissonance may also be aroused by factors such as, the degree of persuasibility of the salesperson, the level of self-confidence of the individual and the consumer's perceived quality of service received. The magnitude of dissonance exasperates with the relative attractiveness of the unchosen alternatives and with the absolute value of the chosen alternative. The greater the attractiveness of the decision alternatives, the greater the degree of dissonance. The latter is enhanced when alternatives are similar to each other, that is, there exists high cognitive overlap.

Furthermore, certain products represent high psychological significance to the individual and high positive inducement to purchase. When product involvement exists, the consumer is prepared 'to pay the price' and to expend a substantial amount of effort, be these resources material, intellectual or psychological. However, having gone through these processes, if the individual's expectations are disconfirmed, the magnitude of dissonance experienced escalates rapidly. Add to this an inborn sense of anticipated dissonance, the lack of adequate information needed to make a decision, the increasing number of alternatives available to the



consumer, the lack of product knowledge and the recognition of volition and irrevocability of the commitment, and the magnitude of cognitive dissonance or inconsistency becomes crucial.

Aronson's (1968) restatement of the theory of cognitive dissonance maintains, a person's tendency to change attitudes is motivated by an aversive state of arousal caused by the violation of the self-concept. People experience dissonance largely because of a discrepancy between their self-concepts and the actions that they have engaged in.

As Festinger (1957) maintains, the existence of dissonance, being psychologically uncomfortable, will motivate the individual to try to reduce the dissonance and achieve consonance. Therefore, dissonance is a motivating factor towards internal harmony or consistency. The congruity among opinions, attitudes, values and behaviour may be reestablished by changing attitudes, eliminating one of the cognitive elements, adding new consonant cognitions or altering the importance attached to the elements concerned (trivialization). The individual may also try to minimize the importance of the decision. In attempts to reduce dissonance, consumers may change the environmental cognitive element. Furthermore, information may be denied, distorted or forgotten. Another strategy to reduce cognitive dissonance is to engage in selective exposure, whereby people are motivated to expose themselves to (attitude-) consonant information and to avoid (attitude-) dissonant information in an effort to stabilize a decision or existing attitudes and to achieve cognitive consonance. In addition, consumers try to justify their decision by providing reasons in favour of the action that outweighs the reasons against performing it.

Dissonance reduction is needed to eliminate the tension state and reestablish consistency. It is evident, dissonance is triggered largely by disconfirmation of expectations. This has an important implication for marketers because perceived performance exerts a direct significant influence on satisfaction, which in turn influences future purchase intention as well as post-purchase attitude. Hence, although Festinger's (1957) theory of cognitive dissonance and Aronson's (1968) revised version of the theory have been extensively criticized, it most certainly is a breakthrough in understanding human behaviour.

The theory of cognitive dissonance is important because it emphasized the essential interaction of motivation (the drive to reduce dissonance) and cognition (the relations between thoughts). Furthermore, Festinger's (1957) theory of cognitive dissonance inspired a tremendous amount of stimulating research leading to a burgeoning of knowledge about human behaviour. Irrespective of whether these smaller theories synthesize together under the umbrella of the theory of cognitive dissonance, their findings have generated important marketing implications.

Since consumer satisfaction is a key factor in consumer decision-making and consumer behaviour, marketers are becoming increasingly interested in how a new purchaser feels after buying, especially in the case of a durable good that requires extensive financial outlay. The existence of possible negative post-purchase feelings emphasizes the marketer might benefit from directing some of the communications to the recent buyer, rather than all of them to the potential buyer. This implies, the concept of cognitive dissonance has interesting and important implications for attitude change, information seeking and brand loyalty. Hence, marketing managers need to focus on dissonance arousal, dissonance reduction strategies and the formulation of tactics needed to maintain a competitive advantage and maximum market share. These incorporate the need to provide additional product information and suggestions for product care, warranties and guarantees, good service and immediate follow-ups on complaints, reliable advertising and follow-up after the purchase with direct contact to ensure proper product use and satisfaction.

Nevertheless, substantial research needs to be undertaken before marketers can be sure of the total value of the theory of cognitive dissonance to marketing. To simply theorize that consumers experience cognitive dissonance is of little assistance to the marketing manager. Hence, this study aims not only to establish the prevalence and magnitude of cognitive dissonance, but also to determine the factors that arouse dissonance, to evaluate dissonance reduction strategies adopted by individuals, to assess its impact on the self-concept and to determine how personality traits (for example, self-confidence) enhance dissonance. Such analyses will investigate the impact of cognitive dissonance on attitude change, information seeking behaviour, subsequent purchases and brand loyalty and therefore, have important marketing implications.

**CHAPTER 6**  
**RESEARCH METHODOLOGY**  
**THE RESEARCH DESIGN**

**6.1 INTRODUCTION**

A literature review was undertaken to understand cognitions, the operation of consumer cognitions in the decision-making process and its impact on attitudes and behaviour. Furthermore, it enabled the conceptualisation of the term 'cognitive dissonance', of Festinger's (1957) theory of cognitive dissonance and Aronson's (1968) revised theory as well as the identification of potential factors that arouse and reduce the magnitude of dissonance. The criticisms of the theory, and the latter's impact on consumer behaviour and marketing, were analysed.

In conjunction with the literature review, an empirical analysis will be undertaken in order to determine the prevalence of cognitive dissonance in post-purchase evaluation, consumers' expectations, their quest for maximum utility, the factors that arouse dissonance, the strategies consumers adopt to reduce dissonance, the impact of cognitive dissonance on subsequent purchases and the dissonance reduction strategies marketing practitioners can adopt, and capitalize on, to ensure the confirmation of consumer expectations and consequent, satisfaction.

**6.2 OBJECTIVES OF THE STUDY**

The aims of the study are as follows:-

- To examine automobile consumers' motivation (functional versus symbolic needs) to purchase.
- To analyse the number of alternative makes of cars consumers considered when making their purchase decision.
- To investigate the level of importance consumers attach to the various car attributes (price, style, economy, performance, roominess, popularity, colour and speed) when evaluating alternatives to make a decision.

- To establish the extent to which individuals choose that option which they perceive maximizes the utility function defined across the information set.
- To analyse the extent to which consumers of motor vehicle purchases experienced unconfirmed expectations, anxiety, damage to their self-concepts, persuasibility by the salesperson and lack of information.
- To determine the impact of psychological importance, effort, price, confidence, attractiveness of decision alternatives, cognitive overlap and quality of service received on the purchasing decision.
- To determine the magnitude of cognitive dissonance experienced by the automobile consumers.
- To establish whether a relationship exists between the factors that potentially arouse dissonance (unconfirmed expectations, anxiety, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service) and the magnitude of cognitive dissonance experienced.
- To investigate the dissonance reduction strategies adopted by automobile consumers.
- To establish whether a relationship exists between the factors that potentially arouse dissonance (unconfirmed expectations, anxiety, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service) and reported satisfaction.
- To investigate whether a relationship exists between the key variables related to dissonance (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, quality of service, reported satisfaction, attitude change, trivialization, selective exposure, and justification) and each of the biographical variables (gender, race, marital status, age, education, occupation and income) respectively.
- To investigate whether a relationship exists between the magnitude of cognitive dissonance experienced by motor vehicle consumers and each of the biographical variables (gender, race, marital status, age, education, occupation and income) respectively.

- To determine whether a relationship exists between the magnitude of cognitive dissonance experienced by consumers and each of the motor vehicle specific variables (make, model, month, dealership of purchases, range purchased) respectively.
- To investigate the impact of the number of decision alternatives on the magnitude of cognitive dissonance experienced by motor vehicle buyers.
- To analyse the post-purchase readership patterns of automobile consumers.
- To determine whether a relationship exists between fulfilment of expectations and selective exposure.
- To investigate whether a relationship exists between reported dissonance and readership patterns of automobile consumers.
- To establish whether a relationship exists between fulfilment of expectations and cognitive dissonance.
- To investigate consumers' post-purchase evaluations regarding the extent to which the selected make of car fulfilled their expectations on the various car attributes (price, style, economy, performance, roominess, popularity, colour and speed) when evaluating alternatives to make a decision.
- To investigate the impact of cognitive dissonance on future purchase behaviour.
- To determine consumers' reasons for repurchase of the same make of car.
- To analyse consumers' reasons for intentions to switch to an alternative make of car in future motor vehicle purchases.

### 6.3 SAMPLING TECHNIQUE AND DESCRIPTION OF THE SAMPLE

A sample is a subset of a population, drawn by means of either probability or non-probability sampling techniques.

#### 6.3.1 SAMPLING TECHNIQUE

A population is any group that is the subject of research interest. It is "a complete set of subjects, events, or scores that have some common characteristic. Characteristics of populations are known as parameters" (McCall 1994: 164). The members or elements of the population are referred to as "units of analysis" (Huysamen 1994: 38). It is often not practical to study an entire population. In many cases the population may be too large for

all its members to be observed. "It would be practically impossible to collect data from, or to test, or to examine every element. It would be prohibitive in terms of time, costs, and other human resources" (Sekaran 1992: 227). Hence, it becomes necessary to "make general findings based on a study of only a subset of the population. Such subsets are called samples" (Melville & Goddard 1996: 30). Samples must be representative of the population of concern so as to enable general observations. A representative sample is "a subset of a population that matches the characteristics of the population" (Rosenberg & Daly 1993: 114). Therefore, sampling is "a process of selecting a sufficient number of elements from the population so that by studying the sample, and understanding the properties or the characteristics of the sample subjects, we will be able to generalize the properties or characteristics to the population elements" (Sekaran 1992: 226 - 227).

There are two basic approaches to sampling, namely, non-probability sampling and probability sampling. "In non-probability sampling we have no guarantee that each element has the same chance of being included and no way to estimate the probability of each element's being included in the sample" (Shaughnessy & Zechmeister 1997: 138). It is not possible to determine the likelihood of the inclusion of all representative elements of the population into the sample. Some elements might even have no chance of being selected (Bless & Higson-Smith 1995). "It is difficult to estimate how well the sample represents a population and this makes generalization highly questionable" (Bless & Higson-Smith 1995: 88). In probability sampling all the elements have an equal chance of being included in the sample and "one can specify for each element of the population the probability that it will be included in the sample" (Judd, Smith & Kidder 1991: 133).

Two key features of samples determine how representative of the population they are, namely, size and bias. The sample must be 'large enough' to represent a population correctly. "A sample is said to be biased if it represents only a specific subgroup of the population or if particular subgroups are over- or under-represented. Random selection is the basic principle used to try to avoid bias in a sample" (Melville & Goddard 1996: 31). The random selection must ensure that each and every member of the population has an equal

chance of being included in the sample. Representativeness may be maximized by imposing some structure on simple random sampling, for example, by adopting stratified random sampling (Rosenberg & Daly 1993).

Stratification is used mainly for two reasons:-

- "To ensure that the sample is representative; and
- To reduce the variance of the sample mean" (Steffens 1993: 13).

Stratification means the population is divided into subpopulations, called strata. This categorisation should be such that individuals within a stratum are more homogenous than the population as a whole. Therefore, stratified random sampling involves "dividing the population into homogenous groups, each group containing subjects with similar characteristics" (Behr 1983: 15). Stratification "contributes to the efficiency of sampling if it succeeds in establishing classes that are internally comparatively homogenous with respect to the characteristics being studied - that is, if the differences between classes are large in comparison with the variation within classes" (Judd, Smith & Kidder 1991: 205). This implies, "the variation within any particular subgroup will be smaller than the variation among the respective subgroups" (Huysamen 1994: 40).

In stratified random sampling, the population is divided into mutually exclusive subpopulations, called strata, that are relevant, appropriate and meaningful in the context of the study and random samples are drawn from each separate stratum or subpopulation (Sekaran 1992). The strata may be based on a single criterion or "on a combination of two or more criteria" (Judd, Smith & Kidder 1991: 204). "In this manner a representative sample from a population with clearly distinguishable subpopulations is obtained with a greater degree of certainty than is possible with simple random sampling" (Huysamen 1994: 41). There are two general ways to determine how many elements should be drawn from each stratum. One way is to draw equal-sized samples from each stratum and another is to draw elements for the sample on a proportional basis (Shaughnessy & Zechmeister 1997). Hence, in stratified random sampling "one uses simple random sampling within each group

(stratum), ensuring that appropriate numbers are selected from each group so that the overall sample reflects each group in the known proportions" (Melville & Goddard 1196: 32).

In this study a probability sampling technique, stratified random sampling, is used because it allows the researcher to estimate how likely it is that the sample findings differ from the findings that would have been obtained by studying the whole population. In other words, it enables the researcher to indicate the probability with which sample results deviate in differing degrees from the corresponding population values. Furthermore, this strategy was used because probability sampling is far superior to non-probability sampling in ensuring that selected samples will be representative ones, a criteria of importance within the jurisdiction of the study. It also enables the researcher to determine the unrepresentativeness of the sample, that is, sampling error. In addition to its potential for increasing the representativeness of the sample, stratified random sampling was adopted in this study because of the need to make statements about portions of the population that has been sampled, especially consumers who purchased different ranges of motor vehicles. There are identifiable subgroups of elements within the population that are expected to have different parameters on the magnitude of cognitive dissonance (gender, age, month of purchases of motor vehicle). This enables the provision of adequate data for analysing the various subpopulations and enables different research methods and procedures to be used in different strata. This technique is therefore, useful because the researcher wants to study the characteristics of certain population subgroups. Furthermore, this technique, by preserving proportions even of very small samples, allows for any small minority to be well represented, which is crucial in this study.

Stratified samples in this study were selected on the basis of four controls or criteria, namely, range of motor vehicle purchased, gender of buyer, age of consumer and month of the year purchased. The Manager of the Market Research Division of a major, reputable and leading motor vehicle manufacturing company was approached. The nature, purpose and benefit of the study was discussed and permission to undertake the research with the concerned make of motor vehicle manufacturer, was obtained. A list of only brand new motor vehicle



buyers, who concluded their purchases in dealership with the geographical region of Kwa-Zulu Natal in 1997, was compiled by the Manager of the Market Research Division.

### **6.3.2 SAMPLING PROCESS FOLLOWED USING PROPORTIONATE STRATIFIED RANDOM SAMPLING**

The sample was proportionately stratified in that each stratum was properly represented so "the sample drawn from it was proportionate to the stratum's share of the total population" (Cooper & Emory 1995: 222). Firstly, representativeness was achieved by drawing a proportional frequency of consumers in the different ranges of motor vehicle purchased. The motor vehicles purchased were divided into 'bottom of the range', 'middle of the range' and 'top of the range' on the basis of price since the aim of the study is to establish the relationship between the degree of luxuriousness of the motor vehicle and the magnitude of cognitive dissonance experienced. Furthermore, as a result of such stratification, conclusion could also be made on secondary factors like congruence of motor vehicle purchased with the self-concept, perceptions of price, economy, style, roominess and popularity. Secondly, representation of male and female motor vehicle consumers were needed to establish whether the prevalence and magnitude of cognitive dissonance is related to gender. Thirdly, further distinction on the basis of age was instrumental in determining the impact of age on the magnitude of cognitive dissonance experienced and post-purchase evaluation of the motor vehicle, particularly, in terms of style, popularity, colour and speed. Lastly, consumers who purchased their motor vehicles in the different months of 1997 had to be proportionately represented in order to draw conclusions on the impact of the time of purchase on the magnitude of cognitive dissonance experienced. The study was conducted in September/October 1997 and only those consumers who purchased their motor vehicles between 1 January 1997 and 31 July 1997 were included in the study. The aim of stratification on the basis of the month of purchases was to determine whether consumers who purchased their motor vehicles earlier in the year experienced varying degree of cognitive dissonance from those who purchased later in the year. The impact of advertising and cognitive intrusion, was being analysed. Furthermore, such distinction enabled analyses of secondary factors like post-purchase selective exposure, attitude change, trivialization of

foregone features of unselected alternatives and justification of purchases.

The probability sampling technique was used as a compromise between the accuracy of the findings and the amount of time and money invested in collecting, checking and analysing the data. Since generalisations about populations from data collected used any sample are based on probability, the larger the sample size, the lower the likely error in generalising to the sample. The choice of the sample size in this study is further governed by:-

- The 95 % level of certainty the characteristics of the data collected will represent the characteristics of the total population.
- The 5 % margin of error that can be tolerated, that is, the accuracy required for any estimates made from the sample.
- The type of analyses to be undertaken with specific reference to the number of categories into which the data is subdivided since "many statistical techniques have a minimum threshold of data cases for each cell", for example, chi-square (Saunders, Lewis & Thornhill 1997: 128).

These factors impacted upon the overall sample size. Hence, "given these competing influences, it is not surprising that the final sample size is almost always a matter of judgement rather than calculation" (Saunders et al. 1997: 128). Saunders et al. (1997: 129) provide a guide to the different minimum sample sizes required for different sizes of population at the 95 % level of certainty. From this table, it can be deduced for a population of 1700 (purchasers of brand new motor vehicles during the months of January 1997 to 31 July 1997 who bought the vehicle for personal use), a sample size of 309 is appropriate in this study. However, the sample size was increased to 400 because "unfortunately, for many sample surveys a 100 per cent response rate is unlikely" and the sample "will need to be larger to ensure sufficient responses" for the margin of error required (Saunders et al. 1997: 128). The sample was proportionately stratified in order to ensure representativeness in terms of range of motor vehicle purchased, gender, age and month of purchases (Table 6.1).

**TABLE 6.1**  
**INITIAL COMPOSITION OF SAMPLE: BEFORE ADMINISTRATION**

<b>VARIABLE</b>	<b>N</b>	<b>%</b>
<b>RANGE OF MOTOR VEHICLE</b>		
'Bottom of the range'	189	47.25
'Middle of the range'	135	33.75
'Top of the range'	76	19.00
<b>TOTAL</b>	<b>400</b>	<b>100</b>
<b>GENDER</b>		
Male	212	53.00
Female	188	47.00
<b>TOTAL</b>	<b>400</b>	<b>100</b>
<b>AGE</b>		
20 - 29	73	18.25
30 - 39	111	27.75
40 - 49	98	24.50
50 - 59	72	18.00
60 and over	46	11.50
<b>TOTAL</b>	<b>400</b>	<b>100</b>
<b>MONTH OF PURCHASES</b>		
January 1997	47	11.75
February 1997	56	14.00
March 1997	73	18.25
April 1997	54	13.50
May 1997	39	9.75
June 1997	72	18.00
July 1997	59	14.75
<b>TOTAL</b>	<b>400</b>	<b>100</b>

### 6.3.3 COMPOSITION OF SAMPLE

The sample was proportionately stratified on the basis of range of motor vehicle purchased, month of purchases, gender and age of the respondent. Although 400 questionnaires were distributed only 208 were returned (52 % response rate) and a further 8 questionnaires were inappropriately completed, thereby reducing the sample size to 200 (50 % return rate). This is understandable as Huysamen (1994: 48) maintains "the number of subjects from whom usable data will eventually be obtained, may be much smaller than the number which was drawn originally. It may not be possible to trace some individuals, others may refuse to participate in the research, while still more may not provide all the necessary information or may not complete their questionnaires, so that the information has to be discarded." Profiles of the respondents were obtained on the basis of biographical data (gender, race, marital status, age, level of education, occupation, income) and motor vehicle specific data (range, make and model of motor vehicle, dealership and month of purchases) (Table 6.2).

**TABLE 6.2**

**FINAL COMPOSITION OF SAMPLE\*: POST-ADMINISTRATION OF  
QUESTIONNAIRE - BIOGRAPHICAL DATA AND MOTOR VEHICLE SPECIFIC  
VARIABLES**

<b>VARIABLE</b>	<b>N</b>	<b>%</b>
<b>GENDER</b>		
Male	94	47.0
Female	106	53.0
<b>TOTAL</b>	<b>200</b>	<b>100</b>
<b>AGE</b>		
20 - 29	40	20.0
30 - 39	49	24.5
40 - 49	47	23.5
50 - 59	36	18.0
60 and over	28	14.0
<b>TOTAL</b>	<b>400</b>	<b>100</b>
<b>RACE</b>		
Black	10	0.050
White	102	51.000
Indian	79	39.500
Coloured	9	0.045
<b>TOTAL</b>	<b>200</b>	<b>100</b>
<b>MARITAL STATUS</b>		
Single	55	27.5
Married	119	59.5
Divorced	15	7.5
Widow/Widower	11	5.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>

**TABLE 6.2 (CONTINUED)**  
**FINAL COMPOSITION OF SAMPLE\*: POST-ADMINISTRATION**

<b>VARIABLE</b>	<b>N</b>	<b>%</b>
<b>EDUCATION</b>		
Below Matric	18	9.0
Matriculation	63	31.5
Diploma	66	33.0
Degree	53	26.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>
<b>OCCUPATION</b>		
Professional	76	38.0
Managerial	39	19.5
Clerical	28	14.0
Service Worker	10	5.0
Artisan	8	4.0
Unemployed	21	10.5
Pensioner/Retired	15	7.5
Housekeeper	3	1.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>
<b>INCOME</b>		
Below R2 000	9	4.5
R2 000 - R3 400	36	18.0
R3 500 - R4 999	44	22.0
R5 000 - R6 499	40	20.0
R6 500 - R7 999	21	10.5
R8 000 - R9 499	12	6.0
R9 500 and over	38	19.0
<b>TOTAL</b>	<b>200</b>	<b>100</b>

**TABLE 6.2 (CONTINUED)**

**FINAL COMPOSITION OF SAMPLE\*: POST-ADMINISTRATION OF  
QUESTIONNAIRE - BIOGRAPHICAL DATA AND MOTOR VEHICLE SPECIFIC  
VARIABLES**

<b>VARIABLE</b>	<b>N</b>	<b>%</b>
<b>MOTOR VEHICLE SPECIFIC DATA</b>		
<b>RANGE OF MOTOR VEHICLE PURCHASED</b>		
'Bottom of the range'	90	45.0
'Middle of the range'	75	37.5
'Top of the range'	35	17.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>
<b>MONTH OF PURCHASES</b>		
January 1997	24	12.0
February 1997	30	15.0
March 1997	35	17.5
April 1997	30	15.0
May 1997	23	11.5
June 1997	29	14.5
July 1997	29	14.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>

\* Excluding 'spoilt' questionnaires.

Make and model of motor vehicle and dealership of purchases were not reflected due to the need to maintain anonymity of the motor vehicle manufacturing company concerned.

From Table 6.2 it is evident, a more or less equal distribution exists for categories on which stratification of the sample was based, namely, gender and age of the respondent, range of motor vehicle and month of purchases.

#### **6.3.4 ADEQUACY OF THE SAMPLE AND TEST OF SPHERICITY**

The Kaiser-Olkin Measure was used to determine sampling adequacy. Bartlett's test of sphericity was undertaken to "assess whether normality and homoscedasticity preconditions are satisfied" (Bless & Kathuria 1993: 136). Bartlett's test of sphericity "helps us decide if we should continue analysing MANOVA results or return to separate univariate tests. .... We look for a determinant value that is close to 0" (Cooper & Emory 1995: 529). This implies, one or more dependent variables is a linear function of another. "The determinant has a chi-square transformation that simplifies testing for statistical significance" (Cooper & Emory 1995: 529). When the observed significance is below the set or given level of significance, we are able to reject the null hypothesis and conclude there are dependencies among the variables in the study (Cooper & Emory 1995: 529).

#### **6.4 THE RESEARCH INSTRUMENT**

The research instrument refers to the questionnaire used to measure responses regarding the key variables of the study.

##### **6.4.1 DESCRIPTION AND PURPOSE**

The instrument used in this survey consisted of a precoded, standardised questionnaire comprising of:-

- Section A: Biographical Data
- Section B: Variables related to Cognitive Dissonance

The questionnaire comprised of structured questions using closed-ended questions, ranking on a 1 - 5 point scale, self-rating on a 1 - 5 point scale, a dichotomous scale, the Likert Scale and one open-ended question.

Closed-ended questions are survey questions "that require the respondent to select a category that is most representative of his or her attitude" (Rosenberg & Daly 1993: 108). Self graphical, numerical rating scales consist of a collection of items each of which involves a continuum of between three and nine rank-ordered scale points (for example, from 'very good' at one end to 'very poor' on the other). In the case of the graphical, numerical rating scales, each item is represented by a horizontal line and the various scale points, plotted by



numbers (1, 2, 3, ...) are indicated at equal intervals with short, vertical lines. The two ends are accompanied with descriptions, representing the positive end-point and the negative end-point (Huysamen 1994: 134). The respondent or rater checks the appropriate response at any point along the continuum. Dichotomous items are those that can assume only two different scores, that is, items which can earn a mark of 0 or 1 only such as correct/incorrect items.

The Likert scale involves "compiling a list of statements relevant to the attitudes under investigation with agreement-disagreement response scales" ranging from 'strongly disagree' to 'strongly agree' (Loudon & Della Bitta 1988: 74). "Each of the categories is allotted weightings of 5, 4, 3, 2, 1 or vice versa respectively. The overall attitude of the population under investigation to a particular statement is measured by a score which is the mean of the sum of the weightings given by the respondent" (Behr 1983: 152). The scale score "is derived by summing the numerically coded agree and disagree responses to each item (with sign intervals for negatively worded items)" (Judd, Smith & Kidder 1991: 163). This means the respondents "indicate the extent to which they agree or disagree to a variety of statements, which are then summated" (Sekaran 1992: 1770).

An open-ended question was used at the end of the questionnaire to allow the subject expression of attitude, as well as beliefs, arguments for or against, or behaviour, relative to an object. Such questions are very useful "for determining the salience of opinions" (Sommer & Sommer 1986: 109). This technique "has the advantage of not suggesting specific responses which might be accepted by acquiescent respondents" (Lastovicka & Bonfield 1982: 64).

#### 6.4.1.1 **BIOGRAPHICAL DATA**

The biographical data comprised of the respondent's gender, race, marital status, age, level of education, occupation and monthly income. These personal characteristics together with information regarding the make, model, date (month\year), dealership from which the vehicle was purchased and range of motor vehicle purchased, was regarded as being significant in relation to their automobile purchasing patterns and in determining the prevalence and magnitude of cognitive dissonance experienced by these consumers.

#### 6.4.1.2 VARIABLES RELATING TO COGNITIVE DISSONANCE

The following ten variables or dimensions relating to cognitive dissonance formed part of the jurisdiction of the study:-

##### ■ MOTIVATION TO PURCHASE

Closed-ended questions were asked to determine why the consumer needed to purchase a vehicle. Four precoded options were provided, that is, 'I desperately needed a car as a means of transportation', 'I needed a second car for my spouse/children/family', 'I needed a luxury car', 'Other reasons (specify)' and the respondent was required to mark a cross (X) in the appropriate box. In the same manner, respondents were requested to indicate the nature of their needs which reflected whether their wants were functional or symbolic.

##### ■ SEARCH FOR ALTERNATIVES

Subjects indicated the number of alternative makes of vehicles considered when making their purchase decision by marking a cross (X) in the most appropriate box from the options provided. Furthermore, respondents were requested to rank order the level of importance attached to various motor car attributes when engaging in selection amongst alternatives, on a 1 - 5 point scale ranging from extremely unimportant (1), unimportant (2), undecided (3), important (4) and extremely important (5). The car features related to price, style, economy, performance, roominess, popularity, colour and speed.

##### ■ LEVEL OF PERCEIVED GRATIFICATION OR UTILITY

A simple behavioural postulate on consumer choice is, "when faced with a set of options, consumers choose that option that is thought to deliver the highest level of perceived gratification or utility" (Robertson & Kassarian 1991: 88). When faced with a choice amongst alternative makes of vehicles, the consumer views each option as a bundle of attributes. Respondents were asked to form an overall assessment of the make of vehicle selected against the alternative make that came closest in favourability on the basis of set criteria, namely, price, style, economy, performance, roominess, popularity, colour and speed. This means, respondents had to indicate the extent to which they, when engaged in decision-making, perceived the selected make of car and the most

desired alternative to fulfil the criteria mentioned on the basis of ranking on a 1 - 5 point bipolar scale ranging from extremely unsuitable (1) to extremely suitable (5). It is assumed that the make of car selected has the higher overall evaluation than the second most desired option. Hence, the multinomial logit model believes, individuals make choices amongst alternatives by considering all relevant information available to the decision maker at the time of choice. The aim of this section of the questionnaire is to determine whether motor car buyers did indeed choose that option which maximizes some utility function defined across the information set or not.

#### ■ FACTORS THAT AROUSE COGNITIVE DISSONANCE

Statements relating to potential factors that arouse cognitive dissonance in consumers after the purchases of a motor vehicle were developed. Subjects were to reflect their attitudes about these statements by responding on a 1 - 5 point Likert scale ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The aim was to determine the degree to which these factors, namely, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, damage to the self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap and quality of service, aroused dissonance in the subjects after their automobile purchases. Consumer awareness of expectations were determined on a 1 - 5 point Likert scale. The impact of the number of alternatives considered (measured by providing four options) on cognitive dissonance was also questioned. The greater the sum of the numerically coded item responses, the greater the extent to which the factor influences cognitive dissonance.

#### ■ LEVEL OF SATISFACTION/DISSATISFACTION

Statements relating to satisfaction/dissatisfaction regarding the performance of the vehicle, choice of dealership, and motor vehicle workmanship were formulated. Subjects were to reflect their attitudes to these by responding on a 1 - 5 point Likert scale, ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The greater the sum of the numerically coded item responses, the greater the level of satisfaction reported by the automobile purchasers and vice versa.

## ■ **DISSONANCE REDUCTION STRATEGIES**

Statements relating to potential dissonance reduction strategies regarding attitude change, trivialization, selective exposure to information and justification were developed to determine which, if any, strategies are adopted by subjects experiencing cognitive dissonance after the purchases of a motor vehicle. Respondents were required to indicate their attitudes by responding on a 1 - 5 point Likert scale, ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The greater the score, that is, the mean of the sum of the weightings given by the respondents, the greater the extent to which respondents adopt the dissonance reduction strategy concerned.

## ■ **SELF-PERCEPTION**

Respondents' self-perceptions were evaluated relating to perceived degree of dissonance, level of anxiety, persuasibility, quality of service and level of confidence. Questions were asked on a graphical, numerical rating scale, ranging from 1 to 5. For example, subjects were requested to respond on a 1 to 5 point graphical rating scale ranging from 'very confident' (1) to 'not confident at all' (5) to the question: "To what extent do you feel that in general you are confident that you make right decisions?" The greater the sum of the numerically coded item responses, the greater the perceived level of dissonance, anxiety, persuasibility and poor service and the greater the degree of perceived lack of self-confidence.

## ■ **POST-PURCHASE EXPOSURE TO MOTOR VEHICLE RELATED INFORMATION**

Subjects' exposure to advertisements after their motor vehicle purchases, was assessed. Three precoded options were provided, that is, 'Read advertisements of purchased make only', 'Observed advertisements of other unselected makes but did not pay attention to the content', 'Read advertisements of selected makes and unselected makes equally' and the respondent was required to mark a cross (X) in the appropriate box from the options provided. The objective was to determine whether recent automobile purchasers adopt selective exposure to information as a dissonance reduction technique.

## ■ CONFIRMED/DISCONFIRMED EXPECTATIONS

Respondents were asked to indicate the extent to which they believe their selected make of vehicle fulfils the attributes of price, style, economy, performance, roominess, popularity, colour and speed, on a 1 - 5 point bipolar scale ranging from extremely unsuitable (1) to extremely suitable (5). The aim is to compare these post-purchase ratings with those ratings reflecting the level of importance attached to these motor vehicle attributes (pre-purchase) in order to determine the extent to which expectations were confirmed/disconfirmed.

## ■ SUBSEQUENT PURCHASES

Respondents were required to indicate on a dichotomous response scale, that is, 'Yes' or 'No', whether they would purchase the selected make of vehicle again or not. The reasons for possible repeat purchases were determined by providing eight option categories, namely, 'Excellent Performance', 'Quality Service', 'Economical', 'Like the Style', 'Roominess', 'Suitable Price', 'Popular', 'Like to stay with the tried and tested'. The reasons for prospective switching behaviour were also determined by providing eight option categories, namely, 'Poor Performance', 'Poor Service', 'Too expensive to maintain', 'Dislike the Style', 'Lacks roominess', 'Too expensively priced', 'Unpopular', 'Need a change'. The subject was required to respond by marking a cross (X) in the appropriate box from the options provided. The aim is to determine whether or not the level of dissonance experienced has an impact on subsequent purchases.

An open-ended question was included at the end of the questionnaire to give the respondent an opportunity to comment on any aspect of the motor vehicle purchases that the structure of the measuring instrument did not accommodate. The questionnaire ended with sincere thanks to respondents for their time and cooperation.

### 6.4.2 PRETESTING AND VALIDATION

A measuring instrument "is valid to the extent that differences in scores among objects reflect true differences of the objects on the characteristic that the instrument tries to measure" (Churchill 1987: 382). Validity concerns "the extent to which a measurement actually measure those features the investigator wishes to measure, and provides information that is

relevant to the question being asked" (Baker 1991: 102). Therefore, validity refers "to the extent to which the measurement procedures assign values that accurately reflect the conceptual variable being measured" (McCall 1994: 289).

The measuring instrument used in the study adequately captures the domain of the characteristic, namely, cognitive dissonance and therefore, has **content validity**. Since "the key to content validity lies in the procedures that are used to develop the instrument", it was ensured that the domain of the characteristic was conceptually defined (Churchill 1987: 382). The variable to be tested was specifically defined and a large collection of items that broadly represent the variable, was formulated. Items from all the relevant dimensions of the variable was carefully included. In attempts to ensure content validity, a literature search was undertaken and proved quite productive in indicating the various dimensions or strata of the variable. Furthermore, in order to ensure that the questionnaire developed and the procedures used, measure what they are supposed to, and to secure **internal validity**, the following precautions were taken:-

#### 6.4.2.1 CONSTRUCTION OF THE QUESTIONNAIRE

Questions drawn from similar studies (Engel 1963; Straits 1964; Britt 1966; Holloway 1967; Bell 1967; Greenwald 1969; Hunt 1970; Oshikawa 1972) on cognitive dissonance were modified to suit the objectives of the study.

Cognisance was given to methodological inadequacies that surfaced in the criticisms of other studies as well as to procedural suggestions and recommendations made by these researchers (Chapanis & Chapanis 1964; Straits 1964; Bell 1967). Closed-ended questions relating to motivation to purchase, search for alternatives, level of perceived utility, dissonance arousal, level of satisfaction/dissatisfaction, dissonance reduction, post-purchase exposure to information, confirmed/disconfirmed expectations and subsequent purchases were formulated to fulfil the objectives of the study, thereby ensuring its relevance and fit within the jurisdiction.

#### 6.4.2.2 IN-HOUSE PRETESTING

The questionnaire was given to colleagues who are lecturing in the field and are familiar with the nature of the study. These individuals indicated how they interpreted each questions and how they would respond to the alternatives provided. This information was useful in editing questions, and ensuring proper construction and wording of them. Double-barrelled, ambiguous and leading questions were rephrased. It was noted that the level of perceived gratification or utility could not be ascertained by means of a dichotomous scale, requiring 'Yes' or 'No' responses. This question was therefore changed to a 1 - 5 point bipolar rating scale ranging from extremely unsuitable (1) to extremely suitable (5). This strategy of in-house pretesting ensured **face validity**, that is, the instruments appears to measure what it is supposed to.

#### 6.4.2.3 PILOT STUDY

A pilot study was undertaken as "a trial run with a small number of subjects" (Cozby 1989: 125). This means that a pilot study is conducted (before the study proper) on a limited number of subjects from the same population as that for which the eventual project is intended. A pilot study is conducted "to detect weaknesses in design and instrumentation and provide proxy data for selection of a probability sample" (Cooper & Emory 1995: 66). Therefore, subjects were drawn from the target population, and procedures and protocols that were designated for data collection were simulated. In this study, the purpose of this mini-experiment was to:-

- Investigate the feasibility of the proposed project,
- To determine the validity and suitability of the questionnaire,
- To detect possible flaws in the measurement procedures (such as ambiguous instructions) and in the operationalisation of the independent variables, and
- To provide an opportunity to make any necessary changes in the procedure before doing the entire study.

The questionnaire was administered to 400 subjects, proportionately sampled on the basis of range of motor vehicle purchased, month of purchases, gender and age of motor vehicle buyer. This pretest revealed that subjects understood the instructions, that the survey was plausible and there were no confusing questions. Consequently, a further refinement to the

questionnaire was not necessary.

The pilot study also enabled people who were collecting the data to become comfortable with their roles and to standardise their procedures adopted.

#### 6.4.2.4 QUANTITATIVE ANALYSIS OF THE QUESTIONNAIRE

The 'goodness' of the measuring instrument was evaluated by means of two major criteria, namely, validity and reliability. "Validity refers to the extent to which a test measures what we actually wish to measure. Reliability has to do with the accuracy and precision of a measurement procedure" (Cooper & Emory 1995: 148). Validity is the most critical and reveals the extent to which a measure provides an adequate reflection of the topic being investigated. A questionnaire is reliable if it provides consistent results. In this study, the validity of the instrument was first determined using Factor analysis and thereafter, the reliability estimate was computed using Cronbach's Coefficient Alpha. This process was followed because "reliability is a partial contributor to validity, but a measurement tool may be reliable without being valid" (Cooper & Emory 1995: 162).

#### ■ FACTOR ANALYSIS

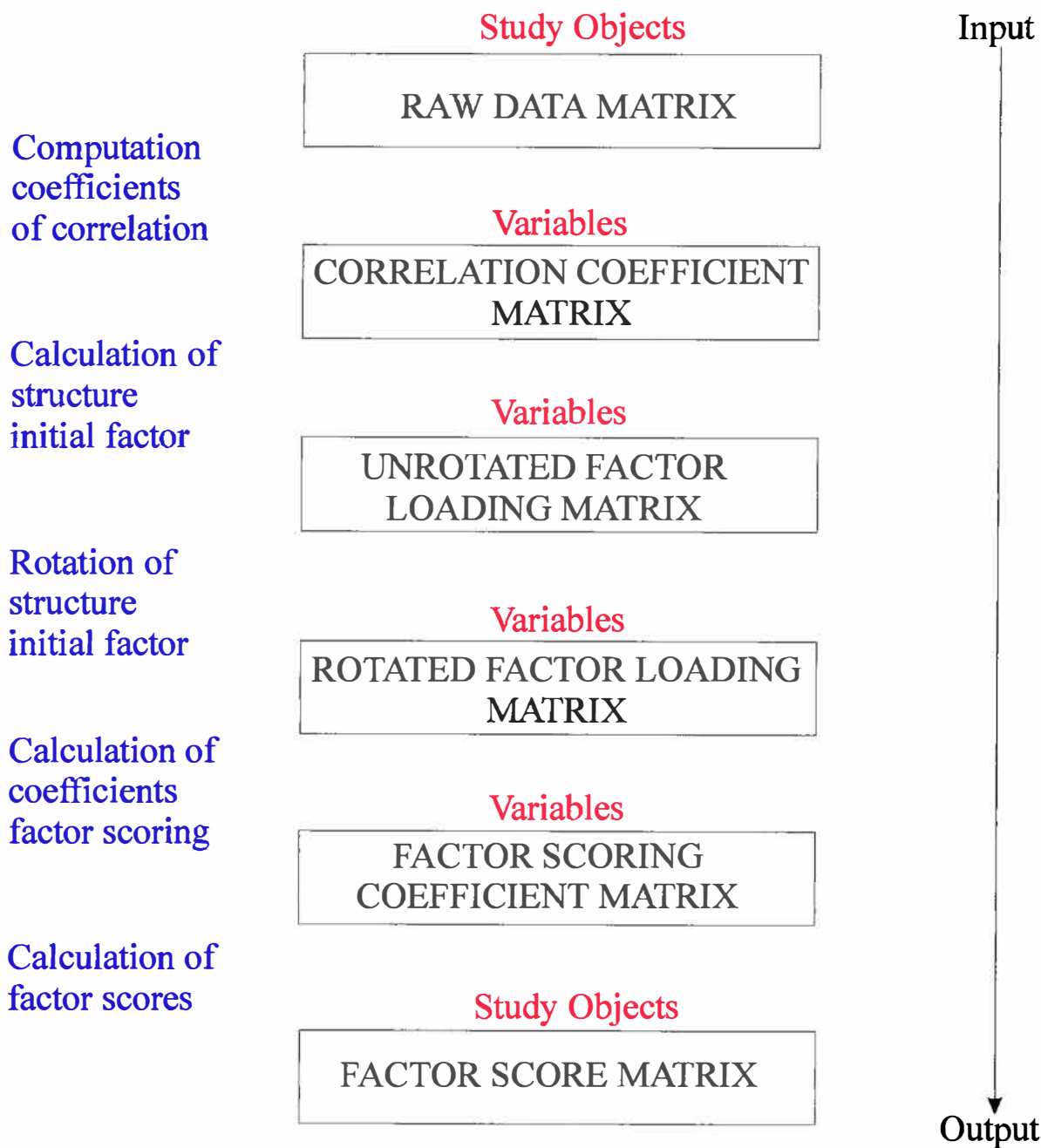
The questionnaire was quantitatively analysed using **factor analysis**. Factor analysis is "a multivariate statistical technique used to study relationships within a set of independent or dependent variables" (Peterson 1988: 487). Factor analysis is "a statistical method for determining which questions from a test instrument tend to measure the same dimension of behaviour" (Rosenberg & Daly 1993: 432). The main purpose of factor analysis is to summarise a large number of variables "by creating a smaller number of variates or factors (linear combinations or composites of variables) defined in terms of the original variables" (Peterson 1988: 488). Factors are calculated so that they retain the optimum amount of information available in the original variables. The specific objectives of factor analysis include:-

- "Deriving a set of uncorrelated variates.
- Grouping variables according to their relationships with one another.
- Describing the underlying structure of a data set.
- Classifying variables with respect to other known variables" (Peterson 1988: 488).



There are major activity stages in a typical factor analysis from input to output (Figure 6.1).

**FIGURE 6.1**  
**THE FACTOR ANALYSIS PROCESS**



Peterson, R.A. 1988. Marketing Research. 2nd Edition. United States of America: Business Publications, Inc. 576p.

The researcher starts with a raw data matrix of interval or ratio scaled variables and then computes correlation coefficients between all pairs of variables. This results in a matrix of correlation coefficients. "The correlation coefficients are subjected to an initial factor analysis whereby initial factors are extracted from the correlation matrix. One method for extracting initial factors is the **principal factors method**. The object of factor extraction is to find a set of factors that are formed as a linear combination of the variables in the correlation matrix. Highly correlated variables are combined together to form one factor. This linear combination is called a **principal component** or a **principal factor**. Communality is the proportion of a variable's total variation that is involved in the factors. The percentage of total variance in the data is called the **common variance**. The value for the amount of variation in the data accounted by one factor is called an **eigenvalue**. The principal-factors methodology is such that the factors extracted are uncorrelated with each other. The factors are said to be **orthogonal**. This initial factor analysis results "in an **unrotated matrix of factor loadings** - structural correlations between individual variables and factors" (Peterson 1988: 488).

The initial factor loading matrix is then rotated (manipulated) according to a prespecified criterion and becomes a **rotated factor loading matrix**. There are two broad classes of rotation:-

- **"Orthogonal rotation**, which maintains the factors are uncorrelated with one another.
- **Oblique rotation**, which allows the factors to be correlated with one another" (Kinnear & Taylor 1991: 610).

The aim of the rotation is to yield factors that each have some variables that correlate highly and some that correlate poorly. This eliminates the problem of having factors with all variables having midrange correlations, making it more amenable to interpretation. The final factor analysis activity "is calculating a factor score for each study object on each rotated factor. This results in a factor score matrix, factor scores for each study object" (Peterson 1988: 489).

In order to obtain an interpretation of the results, the rotated factors are examined. Often, factors are placed "with high-loading variables and each given a 'creative' name" by the

researcher (Kinnear & Taylor 1991: 614).

## ■ RELIABILITY OF THE QUESTIONNAIRE

The reliability of a measure indicates "the stability and consistency with which the instrument is measuring the concept and helps to assess the 'goodness' of a measure" (Sekaran 1992: 173). The reliability of a test refers to how consistently it measures, irrespective of when it is administered and which form of it is used" (Huysamen 1996: 19). Instrument reliability determines whether a measuring instrument works consistently. Hence, a reliable test or instrument is one that yields similar (consistent) results each time it is taken. In other words, "if the same experiment is performed under the same conditions, the same measurements will be obtained" (Melville & Goddard 1996: 37). An instrument which always gives the same score when used to measure an unchanging value "can be trusted to give an accurate measurement and is said to have high reliability" (Bless & Higson-Smith 1995: 130). The reliability of the questionnaire developed was statistically determined using Cronbach's Coefficient Alpha.

## **CRONBACH'S COEFFICIENT ALPHA**

Cronbach (1951) developed an equation for the mean split-half reliability coefficient (based on the less restrictive assumption of equal true-score differences for all individuals), a quantity which he called coefficient alpha (Huysamen 1996). Coefficient alpha can be used with dichotomous items as well as multipoint items (that is, items which may be assigned more than two values, as in the case of rating scales).

Coefficient alpha represents a coefficient of internal consistency. Since, it is based on all possible splits, it reflects the degree to which all possible splits measure the same thing, that is the internal consistency of the test. "To the extent that different groups of items measure different attributes, coefficient alpha will be reduced. Therefore, coefficient alpha will be greater for a test which consists of only vocabulary items, say, than for a test comprising vocabulary as well as arithmetic items" (Huysamen 1996: 26 - 27).

Being a mean split-half reliability coefficient, coefficient alpha also gives an estimate of parallel-forms reliability. "It provides an estimate of the correlation between the existing test

and a hypothetical test made up of items similar to those in the existing test (that is, a parallel test that could have been compiled)" (Huysamen 1996: 27).

The reliability coefficient is scale-free in that its value cannot be less than zero or greater than 1,00. It is generally accepted that standardised tests show reliability coefficients in excess of 0,85 if they are to be used for making decisions about individual persons. However, coefficients as low as 0,65 may be acceptable if decisions about groups are required" (Huysamen 1996: 27).

As a result of ensuring proper questionnaire construction, in-house testing and the pilot study in pretesting the questionnaire, and due to the quantitative determination by means of factor analysis and Cronbach's Coefficient Alpha, the instrument proved to be valid and reliable in that it measured what it was intended to measure and provided consistent measures.

#### **6.4.3 ADMINISTRATION OF THE QUESTIONNAIRE**

Questionnaires may be administered using one survey method, or a mixed mode of different methods, namely, personal interviews, telephonic interviews and mail surveys. After comparing the objectives of the study with the strengths and weaknesses of each method, the method optimally suited to the requirements of the study is the mail survey. The mail survey was selected since the investigation required information from respondents in hard-to-reach, inaccessible places and the geographic dispersion is wide. Although data had to be collected quickly, controls were set to ensure returns.

##### **6.4.3.1 METHOD OF DATA COLLECTION ADOPTED**

In this study, the mail survey method of data gathering was adopted. The mail survey is a self-administered questionnaire delivered by the Postal Service. The questionnaire, together with a covering letter indicating the purpose and need for the study was posted to sample subjects during September/October 1997. A self-addressed envelope and stamp was provided so respondents need not bear a financial cost, thereby increasing the return rate.

#### 6.4.3.2 EVALUATION OF THE METHOD OF DATA COLLECTION ADOPTED

##### MAIL SURVEY

Mail surveys generally cost less than personal interviews. Telephone and mail costs are in the same range but the latter technique was selected since the sample was dispersed throughout Kwa-Zulu Natal, thereby making mail surveys the lower-cost method. The benefit of using mail is, "we can contact respondents who might otherwise be inaccessible" (Cooper & Emory 1995: 282).

Furthermore, the researcher found it imperative to give the respondent more time to collect facts, talk with others or consider replies at length than is possible with the telephone or personal interview. The measuring instrument (15 pages = 130 questions) was developed to incorporate factors impacting on decision-making, post-purchase evaluation, the magnitude of cognitive dissonance experienced, dissonance arousal as well as dissonance reduction strategies. Due to the multiplicity of factors studied in response to the demands of the theory of cognitive dissonance, the resulting questionnaire was 15 typed pages (130 questions). The length of the questionnaire further necessitated the use of mail survey, so the respondent is given time to complete the entire instrument accurately and fully. In this way the subject was at liberty to answer different parts of the questionnaire at different free times.

The use of the mail survey is further justified on the basis of anonymity. "Mail surveys are typically perceived as more impersonal, providing more anonymity than the other communication modes" (Cooper & Emory 1995: 282). Respondents were not required to provide their names and confidentiality was assured. The questionnaires were posted to subjects, who were allocated numbers corresponding to a list of names (in the sole possession and knowledge of the researcher). The purpose of assigning numbers to respondents was to mark off the questionnaires which were returned, such that follow-up to the remaining respondents was possible. This was important since "the major weakness of the mail survey is nonresponse" (Cooper & Emory 1995: 282). Studies have shown, the better educated and those more interested in the topic answer mail surveys. "Mail surveys with a return of about 30 percent are often considered satisfactory, but there are instances of more than 70 percent response. In either case, there exists many nonrespondents" (Cooper & Emory 1995: 282). In this study, the return rate was 52 % (208 returns out of 400 sampled). The suitable

response rate for this mail survey was possibly accomplished because brand new motor vehicle buyers typically want to reflect their views on their recent purchases, perhaps to reflect complaints, or due to interest in the topic or to emphasize the wisdom of their decision.

Furthermore, the researcher adopted several strategies to improve response rates:-

- **Follow-ups or reminders** were conducted by telephoning each respondent. This process enabled the subjects to clarify questions regarding the study, and enabled the researcher to establish rapport with the respondents.
- **Preliminary/advance notification** was given to subjects residing outside Durban. This process not only helped to increase the response rate but accelerated the rate of return.
- Despite the length of the questionnaire (15 pages = 130 questions), the response rate was enhanced by **designing the instrument** using closed-ended questions such that the respondent simply had to mark a cross in blocks provided. Only one open-ended question at the end of the questionnaire required explanation, but this question was optional.
- **Stamped, return envelopes** were provided and encouraged response because it simplifies questionnaire return.
- A **cover letter** was included and was thought to be an integral part of the mail survey. "It is the most logical vehicle for persuading individuals to respond" and for emphasizing the benefit and need for the study, not only for the researcher, but to society, including the respondent, at large (Cooper & Emory 1995: 284).
- **Anonymity** and confidentiality of responses were ensured.
- During the design of the questionnaire, the researcher took cognisance of layout and **general appearance or 'get-up'** as the questionnaire was the vehicle through which the respondent could develop an impression of the researcher.

The combined utilisation of these strategies most certainly stimulated the response rate (52 %). Cooper & Emory (1995: 285) identified possible reasons for non-response (only those applicable to this study are included):-

- "The wrong address and low-rate postage can result in nondelivery or nonreturn.
- The wrong person opens the letter and fails to call it to the attention of the right person.
- A respondent finds no convincing explanation for completing the survey and discards it.

- A respondent temporarily lays the questionnaire aside and fails to complete it."

In addition, the researcher observed further reasons for non-response, established during telephonic calls during preliminary notification and follow-ups:-

- The respondent relocated to another residence.
- The respondent gave the dealership of purchases their employers physical address, where no mail is received since letters are posted to a box address. Hence, non-receipt of questionnaire was established.
- Time constraints due to work demands and domestic commitments.
- Numerous surveys are conducted on different aspects of motor vehicle purchases, which leaves the same respondents over-burdened with a high frequency of questionnaires and an array of different questions.

Although 208 questionnaires were returned, 8 were eliminated due to inaccurate responses, confusion, misunderstanding of scaling and incomplete questionnaires, thus reducing the response rate to 200 (50 %), at which point the researcher chose to ignore further returns and continue with data capturing, processing and analysis.

## 6.5 STATISTICAL ANALYSIS OF THE DATA

Numerous theories were used in the behavioural sciences. In order to provide empirical evidence to support or refute these theories and to monitor and explain the data which represent the behaviour of individuals, statistics are used. Statistics is "a collection of theory and methods applied for the purpose of understanding data" (Hinkle, Wiersma & Jurs 1979: 3). Whenever contemplating the use of statistics, cognisance has to be given to the four measurement scales, namely, nominal, ordinal, interval and ratio scales.

**Nominal measurement** is the process of classifying differing objects into different, mutually exclusive and exhaustive categories based upon some defined characteristics (Hinkle et al. 1979). Once the various categories are identified, the number of objects in each are counted. Such scales have no numerical or quantitative properties. "The numbers assigned to individuals only serve to distinguish between them in terms of the attribute being measured" (Huysamen 1994: 111). For example, a person is classified as either male or female when

gender is the variable being measured. In nominal data, the categories are mutually exclusive and have no logical order.

**Ordinal scales** involve quantitative distinctions and allows a logical ordering of the categories. Like in the case of nominal data, numbers are assigned to the categories. However, the numbers are assigned according to the amount of the characteristic possessed. "The assumption is made that those to whom higher numbers are assigned, exhibit more of the particular attribute than those receiving lower numbers" (Huysamen 1994: 112). An example of the ordinal scale is the movie rating system. This scale only enables rank ordering "but no particular value is attached to the intervals between the numbers used in the rating scale" (Cozby 1981: 234). For ordinal data, the data categories are also mutually exclusive but they have some logical order, unlike in the case of nominal data.

For **interval scales**, the data categories are mutually exclusive, have a logical order and are scaled according to the amount of the characteristic they possess. In addition, the differences between the various levels of the categories on any part of the scale reflect equal differences in the characteristic measured. For example, the interval between 3 and 4 on a scale is equal to that between 5 and 6. However, the point zero is just another point on the scale and does not reflect the starting point nor the total absence of the characteristic.

In **ratio scales**, data categories are mutually exclusive, have logical order, are scaled according to the amount of the characteristic they possess and equal differences in the characteristic are represented by equal differences in the numbers assigned to the categories. In addition, ratio scales have a fixed and an absolute zero point which reflects an absence of the characteristic being measured. For example, 30cm is twice the length of 15cm.

The type of measurement scale used determines which statistical treatment is most appropriate for the data. The purpose of using statistics is two-fold, that is, to describe data and to make inferences. Hence, the terms descriptive statistics and inferential statistics.



### 6.5.1 DESCRIPTIVE STATISTICS

Descriptive statistics is a collection of methods for classifying and summarising numerical data. The objective of descriptive statistics is "to provide summary measures of the data contained in all the elements of a sample" (Kinneer & Taylor 1991: 546). In doing so, an analysis of the data incorporated the use of frequencies, measures of central tendency and measures of dispersion.

#### 6.5.1.1 FREQUENCIES

Quantitative data come in two general forms which relate to frequencies and continuous measures. The latter are scores that "vary along a continuous dimension or distribution" such as age in years, "ranging from zero to some upper limit" (Sommer & Sommer 1986: 206).. Frequencies are simply the number of objects in sets or subsets. Research data, whether nominal, ordinal, interval or ratio-scaled, consists of a collection of numbers which represent the measurement of variables. These numbers are meaningless without considering some logical procedure for organising and summarising them.

The data in this survey was systematically organised and meaningfully summarised by constructing frequency tables or frequency distributions. A **frequency distribution** is "an ordered array of observed variable values and the frequency with which they occur in the data base" (Peterson 1988: 372). Values are represented in ascending or descending order. A frequency distribution indicates "the number of cases observed at each score value or within each interval of score values in a group of scores" (McCall 1994: 28). In addition to containing the absolute number of times the observed variable values occur, the frequency distributions indicate "the relative frequencies (the proportion of times each variable value occurs)" and the cumulative relative frequencies of the variables (Peterson 1988: 372). A **cumulative frequency distribution** is one in which the frequency for a class interval "consists of the frequency for that interval plus all preceding class intervals (below it on the scale of measurement)" (Hinkle et al. 1979: 23). **Percentages** will also be used in the analysis because the relative importance of figures is revealed more closely by this simple tool than by the original data. Results will be presented by transforming the cumulative frequencies into **cumulative percentages** by dividing it by the total number of cases and multiplying by 100.

Although a frequency distribution gives a convenient overview of observed variable values, additional insight into a variable can be obtained by computing the various measures of central tendency and the measures of dispersion.

#### 6.5.1.2 MEASURES OF CENTRAL TENDENCY

Measures of central tendency are points on the scale of measurement of a variable. "The central tendency of a distribution is a point on the scale corresponding to a typical, representative, or central score" (McCall 1994: 43). Simple tabulations can reduce a whole series of data to a single figure, the average, which serves the function of comparison. Three measures of central tendency used in marketing include the mean, median and mode.

The **mean** is the "arithmetic average" of a distribution of scores and takes into account the actual size of the scores (McCall 1994: 51). The mean of a set of scores is obtained by taking the sum of all scores and dividing by the number of scores. The mean "offers a general picture of the data without unnecessarily inundating one with each of the observations in a dataset" (Sekaran 1992: 260). Since the mean is appropriate only for interval or ratio scale data, it was used to determine consumers' mean rating of the importance of the pre-purchase evaluative criteria when engaging in the purchases of a motor vehicle. Mean ratings were also calculated during post-purchases on the evaluative criteria. The mean level of consumers pre-purchase awareness of expectations, level of reported dissonance and degree of cognitive dissonance experienced, were computed.

The **median** is "the point that divides the distribution into two parts [when all the scores are arranged in magnitude] such that equal numbers of scores fall above and below that point" (McCall 1994: 55). Hence, it is defined as the 50th percentile, the point on the scale of measurement below which 50 percent of the scores fall. "If there is an even number of values, then the median is usually taken to be the average of the middle two values" (Melville & Goddard 1996: 50). The advantage of the median over the mean is that "it is quickly calculated from the frequency distribution and it is a better indicator of central tendency when there are a few extremely high or extremely low scores" (Sommer & Sommer 1986: 213). The median can be used with ordinal, interval and ratio scale data.

The **mode** is the most frequently occurring score value in a distribution of scores and is determined by inspecting or counting the data rather than by computation. The mode can be used with any of the four types of measurement scales and is the only measure of central tendency that can be used with nominal data. It can only be considered as a good measure of central tendency:-

- "When the occurring frequency is very high compared to all others (at least a third of the total number of scores),
- When the distribution is unimodal (has only one mode) (Bless & Kathuria 1993: 46).

#### 6.5.1.3 MEASURES OF DISPERSION

The measures of central tendency are not a sufficient descriptor in itself. Since more information is needed in order to understand the distribution, the study, wherever possible, incorporates a description of the dispersion, spread or variability of the variables.

The **range** is the simplest measure of dispersion. It is the distance between the smallest and the largest values of a frequency distribution and consequently, merely represents the extreme values of the distribution. Therefore, the range "is not sensitive to the variability of all the scores, only to the difference between the two most extreme values" (McCall 1994 62).

"Variability is the extent to which scores in a distribution deviate from their central tendency" (McCall 1994: 44). It is "the mean of the squared deviations from the group mean" (Cozby 1981: 231). This means, "the variance is the average of the squared deviation scores from the distribution's mean. It is a measure of score dispersion about the mean. If all the scores are identical, the variance is 0. The greater the dispersion of scores, the greater the variance" (Cooper & Emory 1995: 3977). The variance is an appropriate measure of dispersion when data is being measured on an interval scale. The variance indicates the degree to which scores vary about the group mean.

It is the square root of the variance and is calculated for a continuous variable and a proportion. The standard deviation is frequently used in the interpretation of the percentage of scores in a distribution that are one standard deviation above the mean and one standard deviation below the mean. "The standard deviation is given in the same units as the original

measurement of the variable" (Hinkle et al. 1979: 47). The **standard deviation** is an appropriate measure of dispersion for interval data.

The calculation of the **relative and absolute frequencies** also serve as measures of dispersion for nominal data or better. "Absolute frequencies are just the numbers in the sample that appear in each category of the nominal data" whilst relative frequencies are the percentages of the total elements that appear in each category" (Kinnear & Taylor 1991: 550).

The purpose of data description "is to understand the underlying structure of the individual variables in a data base, not to conduct a complete data analysis" (Peterson 1988: 372). In this study, descriptive statistics enabled a qualitative analysis of the results. However, just describing what is in the sample is not enough. Data analysis demands the researcher make inferences from the sample to the population from which it was drawn.

#### 6.5.2 **INFERENTIAL STATISTICS**

Inferential statistics "is a collection of methods for making inferences about the characteristics of the population from the knowledge of the corresponding characteristics of the sample" (Hinkle et al. 1979: 10). Thus, inferential statistics "allow the researcher to make judgements about the population based upon the sample results" (Kinnear & Taylor 1991: 559). The purpose of inferential statistics is to enable the researcher to determine "whether or not a difference between two treatment conditions occurred by 'chance' or is a 'true' difference" (Dunham 1980: 311). Inferential statistical methods may be divided into parametric and nonparametric tests. **Parametric tests** make many assumptions "about the nature of the population from which the scores were drawn", and are thus, statistical tests concerning one or more population parameters (Siegel 1956: 2). An assumption behind the use of parametric statistics is the **assumption of normality**. A technique of inference may be based on the assumption that the scores were drawn from a normally distributed population. Furthermore, for a parametric test to be used there must be **homogeneity of variance**. In other words, the technique of inference may be based on the assumption that both sets of scores were drawn from populations having the same variance or spread of scores. Parametric tests also depend on the assumption that the measure to be analysed are **continuous measures with equal intervals**.

Numerous other techniques of inference, which do not make stringent assumptions about parameters, have been developed. These tests are valid for samples from continuous population distributions of any shape and are therefore, called distribution-free or **nonparametric tests**. These are methods that do not test hypothesis about specific parameters and require different and sometimes fewer assumptions than parametric tests. Nonparametric tests are used when one is in doubt about the normality of a population or when one knows that the population is not normal, and when variances are heterogeneous or are statistically different from group to group. Furthermore, nonparametric tests are not based on the assumption that the measures to be analysed are continuous with equal intervals.

Whilst parametric techniques are permissible only with scores which are truly numerical, nonparametric tests focus on the order or ranking of the scores and not on their numerical values and many are useful with classificatory data. Consequently, since this study deals with a mix of both nominal and interval data, a combination of parametric and non-parametric statistical techniques were employed.

The different inferential statistical procedures that will be used in this study to determine whether the alternative hypothesis or the null hypothesis should be accepted, include the Pearson Chi-square, Chi-square (Likelihood Ratio), Mann-Whitney U - Wilcoxon Rank Sum W Test, Kolmogorov-Smirnov Test, Kruskal-Wallis One-Way Analysis of Variance, Analysis of Variance, Analysis of Variance (Levene's Test of Homogeneity of Variance), correlation and intercorrelation, t-test and multiple regression. Significant differences surfacing using Analysis of Variance were established by means of Scheffes Multiple Comparisons Test, thereby overcoming the shortfall of the former. The validity and reliability of the measuring instrument were determined using Factor Analysis and Cronbach's Coefficient Alpha respectively.

#### 6.5.2.1 THE CHI-SQUARE ( $\chi^2$ ) ANALYSIS

A simple technique for describing sets of relationships is the cross-tabulation. A cross-tabulation or contingency table is "a joint frequency distribution of observations on two or more sets of variables" (Zikmund 1989: 636). The tabulation of subgroups serves as a measure of comparison. The statistical significance of contingency tables is tested using the

**chi-square.** "The chi-square analysis of a contingency table is an extension of the test to compare more than two percentages" (Peterson 1988: 294). The chi-square analysis is used when the data consists of categorical variables, that is, when data is presented in table or column form, whereby the different rows and columns frequently represent categorical variables. Therefore, when the researcher "collects independent and random samples of observations and wants to compare them in terms of the similarity with which those observations are distributed among several discrete and mutually exclusive categories", a Pearson chi-square can be used to analyse the data (McCall 1994: 362).

Since this study deals with nominal scale data and is based on frequencies, the chi-square analysis is considered a suitable nonparametric statistical technique to be used. In the chi-square test, "a hypothesized population distribution is compared with a distribution generated by a sample" (Kinnear & Taylor 1991: 559). The objective of chi-square analysis "is to determine if the differences observed in two sets of data can be attributed to sampling variation" (Boyd, Westfall & Stasch: 1977: 441).

In the  $\chi^2$  test statistic, "the greater the difference between an observed and expected value, the less likely the distribution of numbers being studied is due to random or chance sampling fluctuations" (Peterson 1988: 414). The chi-square analysis will be applied in two distinct ways. Firstly, expected values are determined externally of the data by means of theory. Thus, the **chi-square goodness-of-fit test** is used to determine "how well the observed (sample) distribution of study objects (frequencies) 'fits' or matches a predetermined (theoretical) distribution" (Peterson 1988: 414). The technique therefore, tests the goodness-of-fit of the observed distribution with the expected distribution. Secondly, the chi-square test may be used to test whether two or more variables are related in a population, or if differences exist between two or more populations. Thus, the **chi-square test of independence** is used, whereby expected values are based on the observed (sample) distribution of frequencies.

In this study, the chi-square statistic will be used to determine whether a significant relationship exists between:-

- The motivation to purchase (functional needs, symbolic needs) and reasons to purchase, number of alternative considered, make of motor vehicle, model of motor vehicle and range of motor vehicle purchased respectively.
- The number of alternatives considered and reason for purchases, make, model and range of motor vehicle purchased respectively.
- Pre-purchase and post-purchase evaluations based on the evaluative criteria (price, style, economy, performance, roominess, popularity, colour, speed) respectively.
- Intentions to engage in repeated purchase behaviour and the make, model and range of motor vehicle purchased and dealership of purchases respectively.
- Post-purchase communication and dealership of purchases, range of motor vehicle purchased and intentions to repurchase respectively.
- Awareness of expectations and race, marital status, age, education, occupation, make, model and range of motor vehicle respectively.
- Post-purchase fulfilment of expectations (based on evaluative criteria) and post-purchase readership behaviour, make, model and range of motor vehicle purchased respectively.
- Level of reported dissonance and intention to engage in repeat purchases of selected motor vehicle and post-purchase communication respectively.
- The magnitude of cognitive dissonance experienced and make of motor vehicle, intentions to engage in repeat purchases of selected motor vehicle and post-purchase communication respectively.

#### 6.5.2.2 THE MANN-WHITNEY U TEST

The Mann-Whitney U test is used to test whether two independent groups have been drawn from the same population, when at least ordinal measurement has been achieved. The assumptions required for the Mann-Whitney U Test are few:-

- "Random and independent sampling with independent groups is required.
- It is also assumed that the dependent variables is continuous. This implies that in infinite number of values theoretically exists between any two measured values.
- Last, the measurement scale must be at least ordinal in character" (McCall 1994: 367).

Being a powerful nonparametric test, the Mann-Whitney U test "allows for testing group differences when the populations are not normally distributed or when it cannot be assumed that the samples are from populations equal in variability" (Zikmund 1989: 664). Since this study uses measurement which is at most in an ordinal scale and employs two independent samples, the Mann-Whitney U test will be used to determine whether the mean rating on the evaluative criteria of males and females have the same distribution. This test is a suitable technique since it is sensitive to both the central tendency and the distribution of the scores. It is the rank order that is crucial in the U test and not the size of the actual scores on the measurement scale. The rationale for the test is based upon the premise that if two distributions of equal size are identical, then a listing of the observations from both groups together placed in rank order (that is, smallest first) should yield a sequence in which the scores from the two groups are well mixed" (McCall 1994: 367).

The Mann-Whitney U test is a powerful and excellent alternative to the t-test that will be useful when the data is of an ordinal type and the independent groups design is being used. In this study, the Mann-Whitney U - Wilcoxon Rank Sum W Test was used to determine whether a significant difference exists between males and females on the level of importance attached to the evaluative criteria when engaging in motor vehicle purchases.

#### 6.5.2.3 THE KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE

The Kruskal-Wallis one-way analysis of variance by ranks is applicable for two or more independent samples. It is a useful test in deciding whether k independent samples are from different populations. Since this technique is suitable when the researcher wishes to compare two or more groups and the data are ordinal, the statistical test is considered appropriate in determining whether:-

- The mean evaluative criteria of males and females have the same distribution, shape and dispersion.
- The mean evaluative criteria of upper, middle and lower class subjects have the same distribution, shape and dispersion.

The suitability of the test is enhanced since this technique is "a nonparametric equivalent to analysis of variance" (Zikmund 1989: 666).



The Kruskal-Wallis technique or the H-statistic tests the null hypothesis that "the k samples come from the same population or from identical populations with respect to averages" (Siegel 1956: 184). The test requires "that the data be ranked from lowest to highest or that the original data be converted so that a numerical rank may be assigned to every observation" (Zikmund 1989: 667).

The Kruskal-Wallis test is an efficient statistical technique to test whether k independent samples could have been drawn from the same continuous population because "it utilises more of the information in the observation, converting the scores into ranks rather than simply dichotomizing them as above or below the median" (Siegel 1956: 193). In this study, the Kruskal-Wallis One-Way Analysis of Variance was used to determine whether a significant difference exists between:-

- The mean level of importance attached to the evaluative criteria (price, style, economy, performance, roominess, popularity, colour, speed) and each biographical variable (race, marital status, age, education, occupation, income) and each motor vehicle specific variable (make, model, range) respectively.
- The level of reported dissonance amongst consumers who varied in the number of alternative makes of motor vehicle considered before purchases and who varied in their advertisement readership behaviour respectively.
- The level of cognitive dissonance experienced and consumers who varied in the number of alternative makes of motor vehicle considered before purchases and who varied in their advertisement readership behaviour respectively.

#### 6.5.2.4 KOLMOGOROV-SMIRNOV ONE-SAMPLE CASE

The Kolmogorov-Smirnov test is appropriate when the data are at least ordinal and the research situation calls for a comparison of an observed sample distribution with a theoretical distribution. Under these conditions, the Kolmogorov-Smirnov one-sample test is more powerful than the chi-square test and can be used for small samples when the chi-square test cannot. This statistics "is a test of goodness-of-fit in which we specify the cumulative frequency distribution that would occur under the theoretical distribution and compare that with the observed cumulative frequency distribution. The theoretical distribution represents our expectations under  $H_0$ " (Cooper & Emory 1995: 647). The point of greatest divergence

between the observed and theoretical distributions can be determined and this value can be identified as D (maximum deviation). It can then be determined whether such a large divergence is likely on the basis of random sampling variations from the theoretical distributions.

In this study, the Kolmogorov-Smirnov One-Sample Case was used to determine whether a significant difference exists in the mean ratings of males and females on the product attribute of 'popularity' when using evaluative criteria to judge decision alternatives.

#### **6.5.2.5 CORRELATIONAL ANALYSIS**

Correlational research is the study of the relationships of selected variables and natural treatments with measures of behaviour. Correlation is applied when we wish to see the nature, direction and significance of the relationship between two variables. Correlational analysis is a statistical tool that enables one to "determine whether or not a relationship or associations exists between variables" and to "quantify the strength of the association" (Rosenberg & Daly 1993: 42). Hence, the coefficient "is a numerical index that reflects the degree of relationship between two variables" (McCall 1994: 134). The Pearson's product moment correlation coefficient is the most widely used method for calculating correlations from sets of raw scores. It gives "not only the direction of a correlation, but also its strength" (Behr 1983: 45). Pearson  $r$  is "a measure of the strength and direction of association between interval- or ratio-scaled variables" (Rosenberg & Daly 1993: 43). To determine if the correlation is significant or not we examine the level of significance. For example, at the 5 % level of significant, we can say that 95 times out of 100, we can be sure that there is a significant correlation between the two variables and there is only a 5 % chance that the relationship does not exist. This index, or coefficient of correlation "is a number ranging from -1,00 through 0,00 to +1,00 that reflects the extent of a linear relationship. It is called a coefficient, not because it is used to multiply other quantities, but because it is a unitless index. ... It is called a product-moment correlation because it is defined in terms of the product of the moments of the two variables, moment being a concept in mathematical statistics" (McCall 1994: 139). When analysing the coefficient the decision rule will be to accept the alternate hypothesis and reject the null hypothesis if  $p < 0,05$  and reject the alternate hypothesis and accept the null hypothesis if  $p > 0,05$ .

Intercorrelation was used in this study to determine whether significant interrelationships exist between:-

- The dimensions of decision-making (awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service) and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively.
- Factors influencing decision-making and post-purchase evaluation and each biographical variable (gender, race, marital status, age, education, occupation, income) and each motor vehicle specific variable (make, model, dealership, month, range) respectively.

#### 6.5.2.6 T-TEST: INDEPENDENT SAMPLES

The t-test is used when the intention is to determine whether two groups are different from each other on a particular variable of interest. The t-test therefore, is used to determine "whether two sample means are sufficiently different so as to be unlikely to have been drawn from the same population" (Shaughnessy & Zechmeister 1997: 393). The independent samples t-test is based on the difference between the two sample means, so the expected value of t when the independent variables has no effect is zero. However, if the independent variable has had an effect the t will differ from zero. Statistical significance is determined by comparing the obtained t with a critical value from the appropriate t-distribution. Hence, the t-test is "a statistical test for evaluating the difference between two treatment means for significance" (Rosenberg & Daly 1993: 138).

The t-test was used in this study to determine whether a significant difference exists in the perceptions of males and females regarding the impact of each dimension on decision-making and post-purchase evaluation respectively.

#### 6.5.2.7 ANALYSIS OF VARIANCE

"Statistical inference requires a test that can be used to determine whether or not the outcome of an experiment was statistically significant" (Shaughnessy & Zechmeister 1997: 224). Analysis of variance is based on analysing different sources of variation in an experiment.

It is "a statistical procedure for comparing multiple treatments or treatment combinations", that is, for comparing more than two means. "Whereas the t-test would indicate whether or not there is a significant mean difference in a dependent variable between two groups, an analysis of variance (ANOVA) will help to examine if there are significant mean differences among more than two groups" (Sekaran 1992: 268). Analysis of variance therefore, indicates whether or not there is a significant mean difference in a dependent variable between two or more groups.

There are two sources of variation in any random groups experiment. First, "variation within each group can be expected because of the individual differences among the subjects who have been randomly assigned to that group" (Shaughnessy & Zechmeister 1997: 224). The variation due to individual differences cannot be eliminated, but it is assumed to be balanced across groups because of random assignment. The second source of variation in the random groups design is variation between the groups.

The null hypothesis of the analysis of variance asserts that the several groups under investigation are all samples drawn from the same population. In order to test the hypothesis two independent estimates of the population variance are made. If the two estimates give widely varying results, the hypothesis is false and hence rejected (Behr 1983). "One of the estimates of the population variance is based on the variation of the scores within the several groups. The other estimate is based on the variation between the group means. Now, if the groups belong to the same population, the two estimates of variance will be alike. If the variation between groups is considerably greater than that within them, then the groups are probably not samples of the same population" (Behr 1983: 75). "If the null hypothesis is true, the nonsystematic variation among the means of the groups can also be attributed to error variation" (Shaughnessy & Zechmeister 1997: 224).

In this study, Analysis of Variance was used to establish whether a significant difference exists between:-

- The mean ratings of consumers, who reported dissonance and those who did not, on the level of importance attached to pre-purchase evaluative criteria.

- The mean ratings of consumers, who experienced varying degrees of cognitive dissonance, on the level of importance attached to pre-purchase evaluative criteria.
- The level of reported dissonance of consumers on post-purchase evaluations of fulfilment of expectations.
- The magnitude of cognitive dissonance experienced by consumers based on post-purchase evaluations of fulfilment of expectations.
- Perceptions of consumers regarding each factor influencing decision-making and post-purchase evaluation and each biographical variable (race, marital status, age, education, income, range) respectively.
- Perceptions of consumers regarding each factor influencing decision-making and post-purchase evaluation and each motor vehicle specific variable (make, model, dealership, range) respectively.

It must be noted, if there are significant mean differences among the groups as indicated by the significance level of the F statistic, there is no way of knowing from the ANOVA results alone where the differences lie (Sekaran 1992). However, "several tests such as Scheffe's test, Duncan Multiple Range test, Turkey's test, and Student-Newman-Keul's test are available and can be used, as appropriate, to detect where exactly the mean differences lie" (Sekaran 1992: 268). In this study, the Scheffe's Multiple Comparisons Test was used to determine where exactly the mean differences lie.

#### 6.5.2.8 MULTIPLE REGRESSION

Whereas the correlation coefficient  $r$  indicates the strength of relationship between two variables, "it gives us no idea of how much of the variance in the dependent variable will be explained when several independent variables are theorized to simultaneously influence it" (Sekaran 1992: 268). Multiple regression analysis is the method of studying the effects and the magnitude of the effects of more than one independent variable on one dependent variable using principles of correlation and regression (Kerlinger 1986). Correlation analysis allows us to describe the strength and direction of association that exists between variables. It does not give any indication of how much of the variance in the dependent variable will be explained when several independent variables are theorised to simultaneously influence it.

However, once an association is known to exist, a further level of analysis is possible. When variables are related we can predict the value of one variable with the knowledge of the other (Rosenberg & Daly 1993). "Prediction, estimation of one variable value from knowledge of another, is done using the statistical procedure called regression analysis". Hence regression analysis "is a statistical procedure that uses a predictor variable to predict the value of the criterion variable. The stronger the association between the variables, the more accurate the predictions are likely to be" (Rosenberg & Daly 1993: 48). It is also possible to use more than one predictor variable when estimating criterion scores by means of multiple regression. Hence, multiple regression "is a statistical procedure that uses several predictor variables to predict a criterion variable" (Rosenberg & Daly 1993: 48). The index of the magnitude of the relation between a composite of independent variables and a dependent variable is called the multiple correlation coefficient ( $R$ ). The multiple correlation coefficient ( $R$ ) can be interpreted like the ordinary correlation coefficient ( $r$ ) except that it ranges from 0 to 1.00. The square of multiple  $r$  ( $R^2$ ) is "the amount of variance explained in the dependent variable by the predictors" (Sekaran 1992: 269). The analysis is known as multiple regression analysis since more than one independent variable (predictors) are regressed against a dependent variable (criterion).

The results can be interpreted when the  $R^2$  value or more specifically, the adjusted R-square value, the F statistics and the significance level are known. In this study, the multiple regression was used to establish how much of the variance in the magnitude of cognitive dissonance experienced will be explained by the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, selective exposure, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure and justification) respectively.

## 6.6 CONCLUSION

The research design and methodology incorporated an examination of the procedure in ascertaining empirical data for the research. The questionnaire developed was validated on the basis of proper construction of the instrument, in-house pretesting, a pilot study and

quantitative analysis of the questionnaire by means of factor analysis. The precoded questionnaires were analysed with the aid of the computer programmes (SYSTAT and SPSS), which processed the suitable statistical test statistics, thereby projecting the findings of the study.

## **CHAPTER 7**

### **PRESENTATION OF RESULTS**

#### **7.1 INTRODUCTION**

The relevant statistical techniques were computed using Simstat Version 3.1 and SPSS to test the hypotheses stated in Chapter One, and the findings of the study are presented.

The descriptive and inferential techniques were used to analyse:-

- Consumers' motivation/reasons to purchase a brand new motor vehicle.
- The number of decision alternatives considered during search and evaluation.
- The evaluative criteria consumers use when selecting a motor vehicle and the level of importance attached to these evaluative criteria/product related features (price, style, performance, economy, roominess, popularity, colour, speed).
- Post-purchase evaluation of fulfilment of expectations in terms of evaluative criteria.
- Consumers' perceptions of their personal decision-making capabilities (correctness of decision, level of anxiety, degree of external influence, quality of decision, level of confidence in purchase decision).
- Post-purchase advertisement readership behaviour of motor vehicle consumers.
- Consumers intentions to engage in repeat purchases, of the motor vehicle selected, in the future.
- Consumers' perceptions of the dimensions impacting on the decision-making process, namely, awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, cognitive overlap, attractiveness of decision alternatives, cognitive overlap, perceived quality of service.
- Consumer's perceptions of the dimensions influencing post-purchase evaluation and consequently, the magnitude of cognitive dissonance experienced by motor vehicle buyers, namely, unconfirmed expectations, level of anxiety, reported dissonance, reported satisfaction, post-purchase attitude change, trivialization, selective exposure and justification of purchases.
- Consumers' level of awareness of expectations prior to purchase.
- The level of reported dissonance of motor vehicle buyers.
- The magnitude of cognitive dissonance experienced by motor vehicle consumers.



- The degree of post-purchase communication, its impact on intentions to repurchase and its relationship to reported dissonance and magnitude of cognitive dissonance experienced by motor vehicle buyers.
- Profile analyses on all of the aforementioned, based on biographical variables (gender, race, marital status, age, education, occupation, income).
- Profile analyses on all of the aforementioned, based on motor vehicle related data (make, model, dealership of purchases, date of purchases, range of motor vehicle purchased).
- Consumers reasons for intentions to engage in repeat purchases, justification of intentions not to repurchase selected vehicle, suggests for improvement of motor vehicle and degree of brand loyalty amongst motor vehicle consumers.
- The appropriateness of the nineteen dimensions (decision-making factors and post-purchase evaluation influences) in determining the level of cognitive dissonance experienced by motor vehicle buyers.

Therefore, the statistical methods, together with qualitative analyses, were used to determine whether a significant relationship exists between the dimensions of cognitive dissonance experienced and each of the relevant biographical variables (gender, race, marital status, age, education, occupation, income) respectively and with each of the motor vehicle specific features (make, model, dealership of purchases, month of purchases) respectively. Hence, parametric and non-parametric analyses were used to generate the results of the study. The measuring instrument was quantitatively analysed using Factor analysis and Cronbach's Coefficient Alpha, thereby ensuring the accuracy and consistency of the results.

## **7.2 QUANTITATIVE ANALYSIS OF DATA**

Wherever necessary, both descriptive and inferential statistics were used to analyse the results of the study.

### **7.2.1 REASONS FOR/MOTIVATION TO PURCHASE MOTOR VEHICLE**

Respondents were requested to reflect their primary reason for the purchase of a brand new motor vehicle (Table 7.1).

**TABLE 7.1**  
**REASON FOR PURCHASE OF BRAND NEW MOTOR VEHICLE**

<b>REASON FOR PURCHASE</b>	<b>N</b>	<b>%</b>
Desperately needed motor vehicle as a means of transportation	91	45.5
Needed a second motor vehicle for spouse/children/family	39	19.5
Needed a luxury car	13	6.5
Other	57	28.5
<b>TOTAL</b>	<b>200</b>	<b>100.0</b>

The majority of the consumers (45.5 %) purchased a motor vehicle because they desperately needed a means of transportation. These purchases were therefore, concluded to fulfil primary needs of consumers. A further 19.5 % required a second car for their spouse/children/family and another 6.5 % fulfilled their desire for a luxury car. The latter therefore, fulfilled secondary or second-order needs although 1 % of these 6.5 % of consumers indicated their purchase of a 'top of the range' car was for safety and love for their family, thereby fulfilling primary needs as well. The remaining 28.5 % of consumers reflected other reasons on which their purchases were based. In descending order of frequency, several reasons for purchases of a brand new motor vehicle were given (Table 7.2).

**TABLE 7.2**  
**OTHER REASONS FOR PURCHASES OF BRAND NEW MOTOR VEHICLE**

<b>OTHER REASONS</b>	<b>%</b>
Replacement of old vehicle	12.0
Needed a more reliable vehicle	3.0
Desired latest shape/model	2.5
Needed smaller/economical car	2.0
Given car allowance	2.0
Avoid repairs to old vehicle	1.5
Desired automatic/power steering	1.5
Business reasons	1.5
Previous car was stolen	1.0
Accident - write off	1.0
Performance car needed	0.5
<b>TOTAL</b>	<b>28.5</b>

The results indicate, the majority of the consumers purchased motor vehicles to fulfil functional needs. A small segment of the consumers sampled reflected the fulfilment of symbolic needs. Consumers' responses were cross-examined by asking them to reflect whether they purchased a motor vehicle 'to take them, where they needed to go' (functional needs) or 'to reflect their status/progress/accomplishments' (symbolic needs) (Table 7.3).

**TABLE 7.3**  
**MOTIVATION TO PURCHASE**

<b>MOTIVATION TO PURCHASE</b>	<b>N</b>	<b>%</b>
Functional Needs	182	91
Symbolic Needs	18	9
<b>TOTAL</b>	<b>200</b>	<b>100</b>

Table 7.3 indicates, the majority of motor vehicle consumers (91 %) reflected their purchases was based on the fulfilment of functional needs, whilst 9 % displayed the satisfaction of symbolic needs.

The motivation to purchase was also correlated with the reasons for purchases, the number of alternative makes considered and the make, model and range of motor vehicle purchased respectively. The motor vehicles purchased were classified into 'bottom of the range', 'middle of the range' and 'top of the range' on the basis of price.

### **HYPOTHESIS 1**

There is a significant relationship between the motivation to purchase a motor vehicle (functional needs, symbolic needs) and consumers' reasons to purchase, the number of alternative makes considered and the make, model and range of vehicle purchased respectively.

**TABLE 7.4**

#### **PEARSON CHI-SQUARE: MOTIVATION TO PURCHASE MOTOR VEHICLE**

<b>VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Reason for purchases	34.3766	4	0.0000 *
Number of alternative makes considered	4.7022	12	0.9672
Make purchased	18.8863	2	0.0001 *
Model purchased	24.4989	7	0.0009 *
Range of vehicle	15.5590	2	0.0004 *

\*  $p < 0.05$

Since  $p < 0.05$ , it can be deduced, there is a significant relationship between motivation to purchase a motor vehicle (functional needs, symbolic needs) and the reason to purchase. Furthermore, a significant relationship exists between the motivation to purchase (functional needs, symbolic needs) and the make, model and range of car selected, at the 5 % level of

significance. It is evident, those consumers who purchased a car for symbolic needs bought the more expensive and 'top of the range' models of motor vehicles.

However, Table 7.4 indicates, no significant relationship was found between the motivation to purchase a motor vehicle (functional needs, symbolic needs) and the number of alternative makes considered, at the 5 % level of significance. The results show the motivation to purchase did not influence the number of alternative makes of cars considered.

#### **7.2.2 NUMBER OF ALTERNATIVE MAKES OF MOTOR VEHICLE CONSIDERED**

Respondents were requested to reflect the number of decision alternatives considered when engaging in the purchases of their motor vehicle (Table 7.5).

**TABLE 7.5**  
**FREQUENCY ANALYSIS: NUMBER OF ALTERNATIVES CONSIDERED**

<b>ALTERNATIVES CONSIDERED</b>	<b>N</b>	<b>%</b>
Considered only 1 make of car.	79	39.5
Considered only 2 makes of cars.	65	32.5
Considered 3 makes of cars.	33	16.5
Considered more than 3 makes of cars.	23	11.5
<b>TOTAL</b>	<b>200</b>	<b>100.0</b>

Table 7.5 shows, the majority of motor vehicle consumers (39.5 %) considered only 1 make of car, 32.5 % evaluated only 2 makes of cars, 16.5 % considered 3 makes of vehicles and 11.5 % assessed more than 3 makes.

The number of decision alternatives considered was also correlated with the reasons for purchases and the make, model and range of motor vehicle purchased respectively (Table 7.6).

## **HYPOTHESIS 2**

There is a significant relationship between the number of alternative makes of vehicle considered and the reasons for purchase, the make, model and range of vehicle purchased respectively.

**TABLE 7.6**

**PEARSON CHI-SQUARE: NUMBER OF ALTERNATIVE CONSIDERED**

<b>VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Reason for purchases	4.7022	12	0.9672
Make purchased	7.4398	6	0.2821
Model purchased	35.2598	21	0.0264 *
Range of vehicle	6.3590	6	0.3842

\*  $p < 0.05$

There is no significant relationship between the number of alternatives considered and the reasons for purchase, the make and range of vehicle purchased respectively, at the 5 % level of significance. However, Table 7.6 indicates, a significant relationship exists between the number of alternatives considered and the model of car purchased, at the 5 % level of significance.

### **7.2.3 EVALUATIVE CRITERIA**

The evaluative criteria refer to the factors motor vehicle buyers use to judge decision alternatives when engaging in purchases. In this study, eight motor vehicle evaluative criteria were predetermined, namely, price, style, economy performance, roominess, popularity, colour and speed.

#### **7.2.3.1 LEVEL OF IMPORTANCE ATTACHED TO MOTOR VEHICLE**

##### **EVALUATIVE CRITERIA (PRE-PURCHASE)**

Respondents were requested to rank their level of importance attached to eight motor vehicle features (price, style, economy, performance, roominess, popularity, colour, speed) used

when evaluating alternative makes of cars considered. Attributes considered to be extremely important were ranked 5 and those regarded as being extremely unimportant were ranked 1. Mean ratings were derived from the 1 to 5 point continuum (Figure 7.1).

FIGURE 7.1

MEAN LEVEL OF IMPORTANCE OF PRODUCT CRITERIA

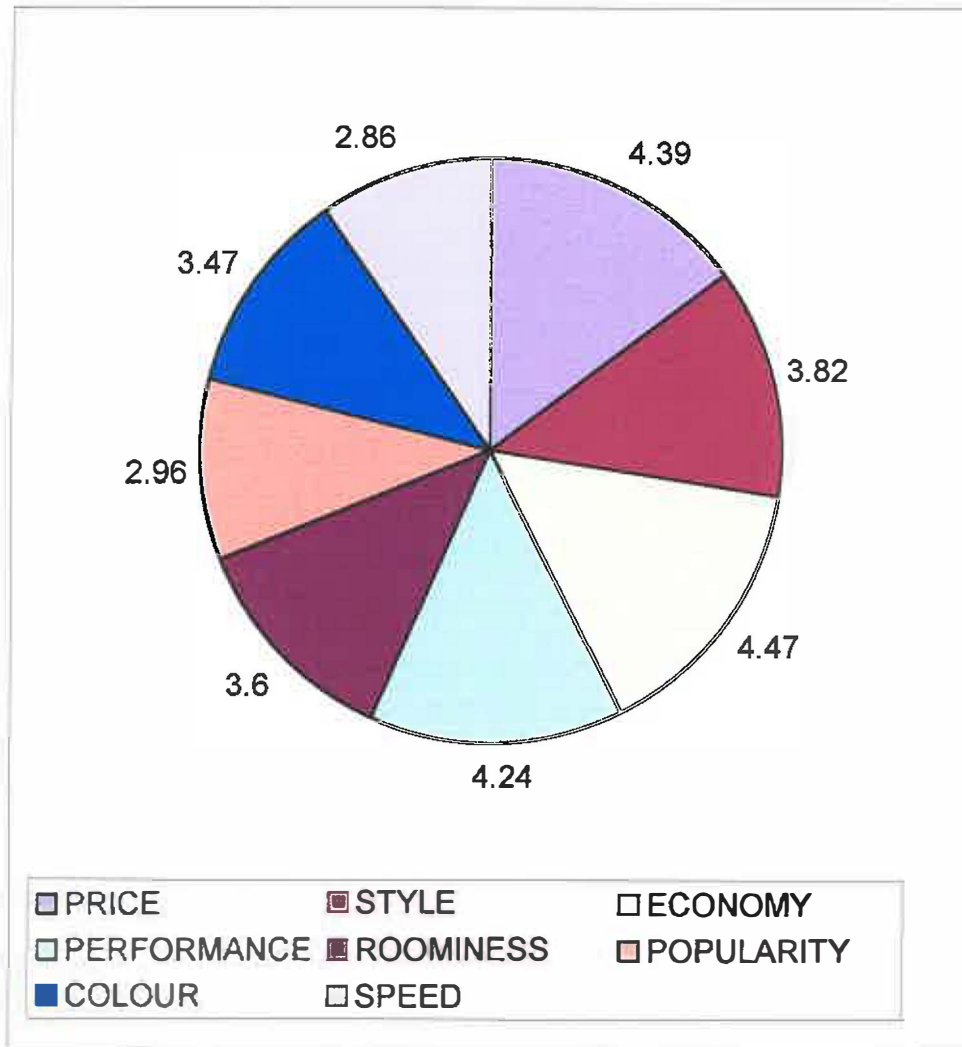




Figure 7.1 indicates, motor vehicle buyers attach varying levels of importance to the different product selection criteria. The ranking of the evaluative criteria in descending level of importance based on mean ratings are economy, price, performance, style, roominess, colour, popularity and speed.

A descriptive analysis of the pre-purchase evaluation of consumers of the motor vehicle was undertaken. Respondents were requested to reflect their pre-purchase evaluation of the selected motor vehicle on the basis of eight motor vehicle attributes, namely, price, style, economy, performance, roominess, popularity, colour and speed (Table 7.7).

**TABLE 7.7**  
**PRE-PURCHASE EVALUATION OF MOTOR VEHICLE PURCHASED**

CRITERIA	MEAN	STANDARD DEVIATION	CONFIDENCE INTERVAL FOR MEAN (95 %)
Price	4.275	0.918	4.1477 - 4.4023
Style	4.315	0.754	4.2105 - 4.4195
Economy	4.450	0.721	4.3500 - 4.5500
Performance	4.395	0.782	4.2866 - 4.5034
Roominess	4.160	0.859	4.0409 - 4.2791
Popularity	4.030	1.051	3.8843 - 4.1757
Colour	4.205	0.887	4.0820 - 4.3280
Speed	3.960	1.070	3.8117 - 4.1083

Table 7.7 indicates the mean ratings of consumers on the extent to which they perceived the selected make of car to be suitable (or not) on the eight motor vehicle criteria. Since the mean values for each criterion falls within the corresponding confidence intervals, it can be deduced, the majority of the consumers were confident the selected make of car is capable of fulfilling the set evaluative criteria. However, during pre-purchase evaluation consumers perceived their selected alternative to vary in the extent to which it is able to meet the set criteria. The evaluation of the selected vehicle, based on mean ratings, in descending level

of suitability are economy, performance, style, price, colour, roominess, popularity and speed.

Subjects were requested to rank the most favourable alternative make of car considered when making their purchase decision in terms of the aforementioned criteria. Only the alternative ranked closest in preference to the selected make of motor vehicle purchased was considered because 32.5 % of the respondents indicated they considered 2 makes of cars, 16.5 % considered 3 makes and 11.5 % evaluated more than 3 makes. It is interesting to note, the majority of buyers (39.5 %) assessed only 1 make of car, that is, the one purchased. These consumers displayed confidence in the make of motor vehicle bought. The results are supported by the fact, the majority of consumers (50.5 %) strongly agreed and a further 42.5 % agreed they had a good idea of what motor vehicle features they were looking for before making their purchase decision. Table 7.8 presents the mean ratings of consumers on the extent to which they perceived the most favourable make of car on each of the set alternatives.

**TABLE 7.8**  
**PRE-PURCHASE EVALUATION OF MOST FAVOURABLE MAKE**  
**CONSIDERED**

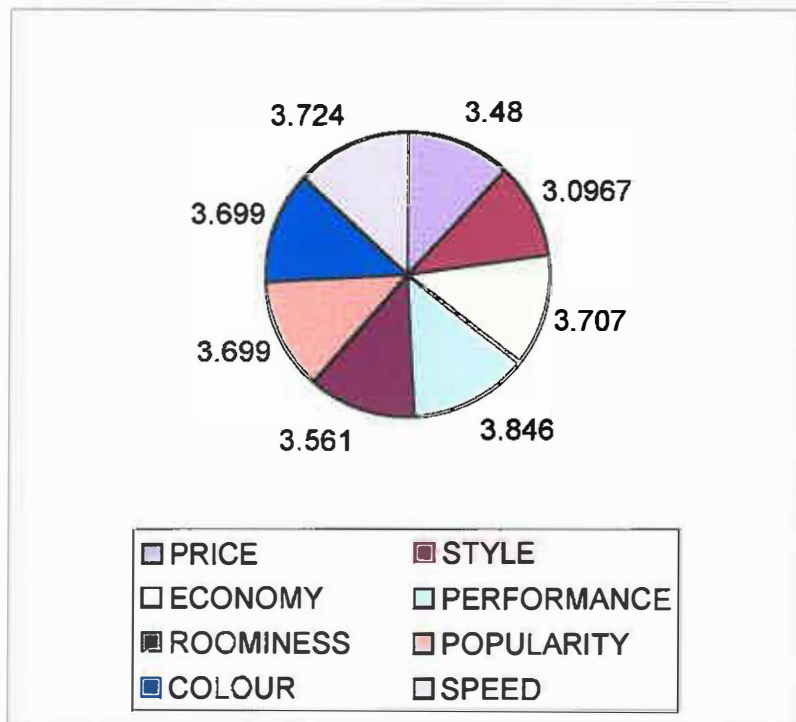
<b>CRITERIA</b>	<b>MEAN</b>	<b>STANDARD DEVIATION</b>	<b>CONFIDENCE INTERVAL FOR MEAN (95 %)</b>
Price	3.480	1.381	3.2356 - 3.7238
Style	3.967	1.008	3.7894 - 4.1456
Economy	3.707	1.143	3.5052 - 3.9094
Performance	3.846	1.056	3.6589 - 4.0322
Roominess	3.561	1.160	3.3559 - 3.7661
Popularity	3.699	1.101	3.5046 - 3.8938
Colour	3.699	1.086	3.5073 - 3.8911
Speed	3.724	1.019	3.5435 - 3.9036

The results in Table 7.8 indicate, the evaluation of the most attractive alternative, based on mean ratings, in descending order of suitability are style, performance, speed, economy, popularity, colour, roominess and price. Therefore, a key reason for selecting the purchased make over the most preferred alternative was the difference in price, the former being cheaper or more economical. Overall, the mean ratings on the most favourable alternative was lower than the mean rating on the purchased make on all criteria considered during pre-purchase (Figure 7.2).

FIGURE 7.2

COMPARISON ON MEAN RATINGS ON SUITABILITY OF PURCHASED  
MAKE AND MOST FAVOURABLE MAKE OF MOTOR VEHICLE  
ON SET PRODUCT ATTRIBUTES DURING PRE-PURCHASE

MOST FAVOURABLE ALTERNATIVE



PURCHASED MAKE

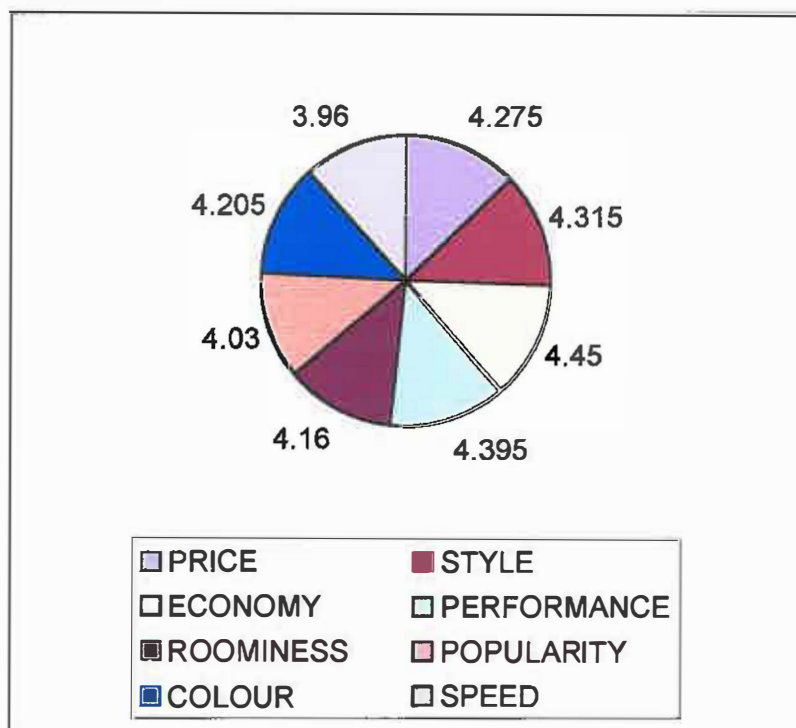
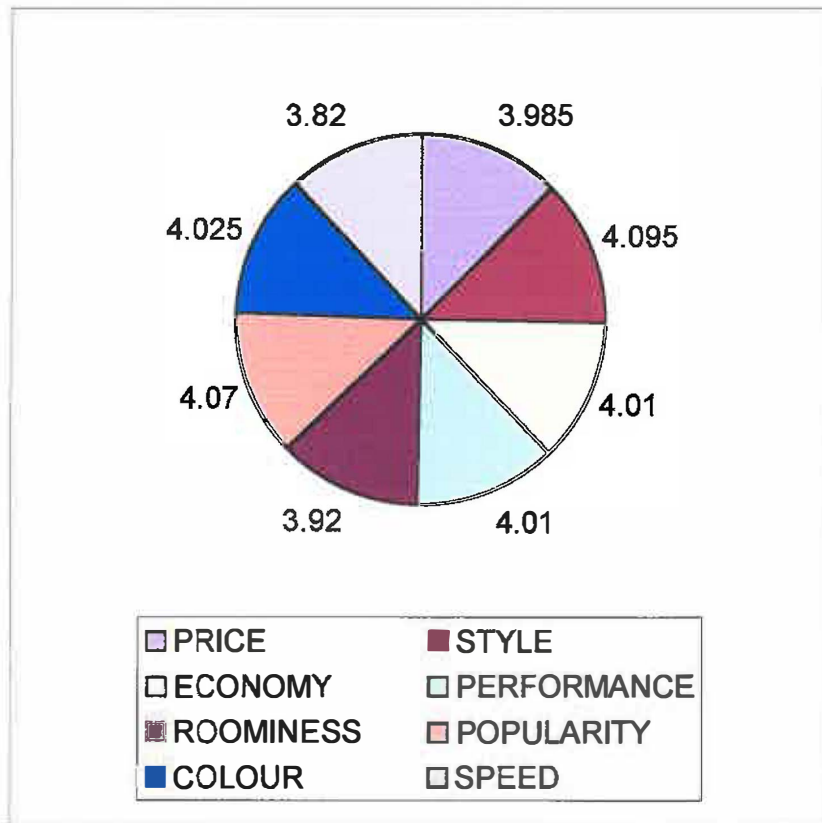


Figure 7.2 profiles the purchased and most suitable alternative makes of cars on the eight pre-determined evaluative criteria. It depicts, the mean ratings of consumers on the set criteria, namely, price, style, economy, performance, roominess, popularity, colour and speed, are higher for the purchased make of motor vehicle than for the most suitable alternative.

Respondents were also requested to compare their pre-purchase evaluation of the motor vehicle with their post-purchase evaluation based on price, style, economy, performance, roominess, popularity, colour and speed. The intention was to determine whether consumers' expectations were met in terms of these criteria. Figure 7.3 illustrates consumers' pre-purchase mean ratings with post-purchase mean ratings on the eight evaluative criteria.

FIGURE 7.3  
COMPARISON OF MEAN RATINGS ON PURCHASED VEHICLE  
BEFORE AND AFTER PURCHASES  
PRE-PURCHASE EVALUATION



POST-PURCHASE EVALUATION

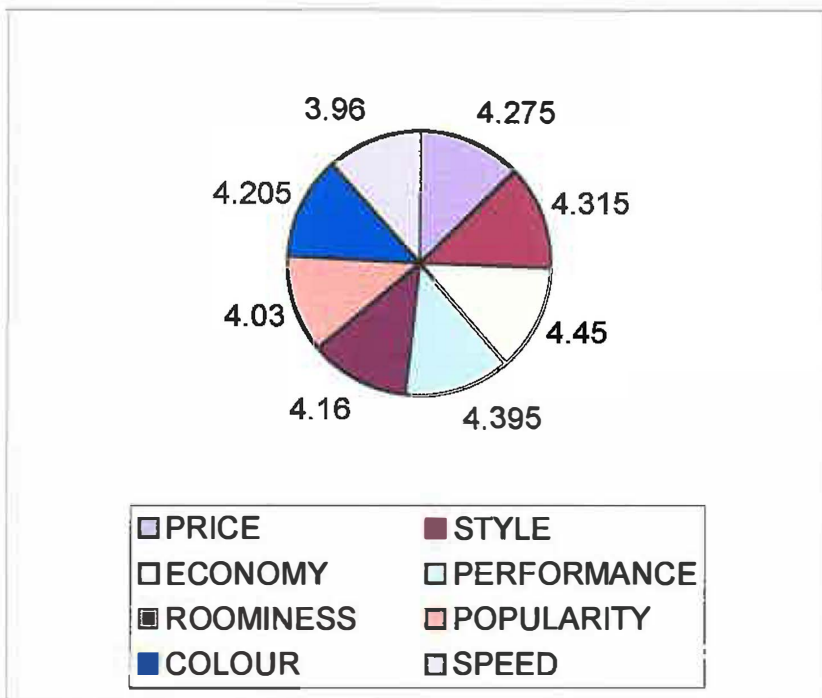


Figure 7.3 demonstrates post-purchase mean ratings were lower than pre-purchase mean ratings on seven product selection criteria, namely, price, style, economy, performance, roominess, colour and speed. This implies consumers' expectations on these criteria were not met. However, consumer expectations on the popularity on the motor vehicle purchased were exceeded. Although expectations on seven of the predetermined criteria were not met, the discrepancy between pre- and post-purchase ratings were negligible (Table 7.9).

**TABLE 7.9**  
**MEAN RATINGS ON PRE- AND POST-EVALUATION BASED ON SET**  
**CRITERIA**

CRITERIA	MEAN RATINGS		DIFFERENCE (PRE - POST)
	PRE-EVALUATION	POST-EVALUATION	
Price	4.275	3.895	0.38
Style	4.315	4.085	0.23
Economy	4.450	4.010	0.44
Performance	4.395	4.010	0.39
Roominess	4.160	3.920	0.24
Popularity	4.030	4.070	-0.04
Colour	4.205	4.025	0.18
Speed	3.960	3.820	0.14

Table 7.9 confirms a negligible difference between pre- and post-evaluation mean ratings, with differences ranging from -0.04 to 0.44.

Respondents were also requested to rank the level of importance attached to the product selection criteria ranging from extremely unimportant (1) to extremely important (5). Mean ratings were analysed in terms of gender in order to profile differences in value attached to these evaluative criteria (Table 7.10).

### **HYPOTHESIS 3**

There is a significant difference in the mean rating of consumers, on the basis of gender, race, marital status, age, education, occupation, income, make, model, range of motor vehicle purchased, on the level of importance attached to the evaluative criteria (price, style, economy, performance, roominess, popularity, colour and speed) when selecting a motor vehicle.

**TABLE 7.10**

**MANN-WHITNEY U - WILCOXON RANK SUM W TEST: MEAN LEVEL OF  
IMPORTANCE ATTACHED TO EVALUATIVE CRITERIA  
GENDER**

EVALUATIVE CRITERIA	U	W	CORRECTED FOR TIES	
			Z	p
Price	4447.5	8818.5	-1.3299	0.1835
Style	4587.0	9642.0	-1.0206	0.3074
Economy	4103.5	8474.5	-2.3338	0.0196 *
Performance	4559.0	8930.0	-1.0005	0.3171
Roominess	4182.0	10047.0	-2.0633	0.0391 *
Popularity	3674.5	10554.5	-3.2340	0.0012 *
Colour	4914.5	9314.5	-0.0389	0.9690
Speed	4428.5	9800.5	-1.3113	0.1897

\*  $p < 0.05$

From Table 7.10 it is evident there is no significant difference in the mean ratings of males and females on the level of importance attached to the evaluative criteria of price, style, performance, colour and speed. In other words, both males and females rank the importance of these criteria in the same way. However, there is a significant difference in the mean ratings of males and females on the level of importance attached to the evaluative criteria of economy, roominess and popularity respectively, at the 5 % level of significance. The difference in mean ratings of males and females is particularly noticeable on the product attribute of popularity of motor vehicle (Table 7.11).



**TABLE 7.11**  
**KOLMOGOROV-SMIRNOV TEST: MEAN LEVEL OF IMPORTANCE**  
**ATTACHED TO POPULARITY OF MOTOR VEHICLE**  
**GENDER**

EVALUATIVE CRITERIA	ABSOLUTE DIFFERENCE	K-S-Z	p
Popularity	0.23139	1.629	0.10 *

\*  $p < 0.05$

Table 7.11 emphasizes the significant difference in mean ratings (23,14 %) between males and females on the level of importance attached to the popularity of the motor vehicle during purchases, at the 5 % level of significance.

**TABLE 7.12**  
**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE**  
**ATTACHED TO EVALUATIVE CRITERIA**  
**RACE**

EVALUATIVE CRITERIA	CORRECTED FOR TIES	
	H	p
Price	1.2666	0.7371
Style	6.1128	0.1062
Economy	2.9123	0.4053
Performance	10.4725	0.0149 *
Roominess	5.3393	0.1486
Popularity	12.1955	0.0067 *
Colour	5.3080	0.1506
Speed	6.1011	0.1068

\*  $p < 0.05$

There is no significant difference in the mean rating of Blacks, Whites, Indians and Coloureds on the level of importance attached to the evaluative criteria of price, style, economy, roominess, colour and speed respectively, at the 5 % level of significance. However, Table 7.12 reflects significant differences at the 5 % level of significance on the mean ratings of the different race groups on the level of importance attached to performance and popularity respectively when selecting a motor vehicle.

**TABLE 7.13**

**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE  
ATTACHED TO EVALUATIVE CRITERIA  
MARITAL STATUS**

<b>EVALUATIVE CRITERIA</b>	<b>CORRECTED FOR TIES</b>	
	<b>H</b>	<b>p</b>
Price	3.3131	0.3458
Style	0.7969	0.8502
Economy	3.8921	0.2734
Performance	5.9290	0.1151
Roominess	5.0318	0.1695
Popularity	1.0822	0.7814
Colour	1.0295	0.7941
Speed	0.7799	0.8543

Table 7.13 indicates there is no significant difference in the mean ratings of single, married, divorced and widowed consumers on the level of importance attached to the evaluative criteria, at the 5 % level of significance. The results imply marital status does not influence the importance consumer attached to the product selection criteria when choosing a motor vehicle.

TABLE 7.14

**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE  
ATTACHED TO EVALUATIVE CRITERIA**

**AGE**

EVALUATIVE CRITERIA	CORRECTED FOR TIES	
	H	p
Price	5.0437	0.2828
Style	9.6751	0.0463 *
Economy	1.8605	0.7614
Performance	3.2038	0.5243
Roominess	4.4559	0.3478
Popularity	10.0232	0.0400 *
Colour	9.1330	0.0579
Speed	3.9919	0.4071

\*  $p < 0.05$

From Table 7.14 it is evident there is no significant difference in the mean ratings of consumers in the various age groups on the level of importance attached to the evaluative criteria of price, economy, performance, roominess, colour and speed respectively, at the 5 % level of significance. Therefore, age does not influence the importance of these selection criteria when deciding on the purchase of a motor vehicle. However, at the 5 % level of significance there is a significant difference in the mean level of importance attached to style and popularity respectively by consumers in the various age categories. In other words, age influences the motor vehicle purchase decision in terms of style and popularity.

**TABLE 7.15**  
**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE**  
**ATTACHED TO EVALUATIVE CRITERIA**  
**EDUCATION**

EVALUATIVE CRITERIA	CORRECTED FOR TIES	
	H	P
Price	0.0395	0.9978
Style	5.2912	0.1517
Economy	1.2531	0.7403
Performance	1.0885	0.7799
Roominess	0.9705	0.8084
Popularity	1.8792	0.5979
Colour	7.5756	0.0556
Speed	2.0301	0.5662

Table 7.15 indicates there is a significant difference in the mean ratings of motor vehicle consumers with varying levels of educational qualifications on the level of importance attached to the evaluative criteria, at the 5 % level of significance. The results therefore reflect, the level of education of the automobile buyer does not influence the level of importance attached to the evaluative criteria when selecting a motor vehicle.

**TABLE 7.16**

**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE  
ATTACHED TO EVALUATIVE CRITERIA  
OCCUPATION**

<b>EVALUATIVE CRITERIA</b>	<b>CORRECTED FOR TIES</b>	
	<b>H</b>	<b>p</b>
Price	13.8739	0.0535
Style	3.5966	0.8249
Economy	17.1027	0.0167 *
Performance	7.4596	0.3826
Roominess	5.7238	0.5723
Popularity	7.6705	0.3625
Colour	6.6602	0.4651
Speed	9.6204	0.2111

\*  $p < 0.05$

Since  $p > 0.05$  it can be deduced from Table 7.16 there is no significant difference in the mean ratings of motor vehicle consumers with varying occupations on the level of importance attached to the evaluative criteria of price, style, performance, roominess, popularity, colour and speed respectively, at the 5 % level of significance. However, there is a significant difference in the mean ratings of consumers with varying occupations on the level of importance attached to economy of the vehicle, at the 5 % level of significance.

**TABLE 7.17**  
**KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE**  
**ATTACHED TO EVALUATIVE CRITERIA**  
**INCOME**

EVALUATIVE CRITERIA	CORRECTED FOR TIES	
	H	p
Price	19.3824	0.0036 *
Style	4.5091	0.6081
Economy	13.3925	0.0372 *
Performance	2.1659	0.9038
Roominess	10.3755	0.1097
Popularity	2.4946	0.8691
Colour	6.4477	0.3749
Speed	8.4590	0.2064

\*  $p < 0.05$

From Table 7.17 it is evident there is no significant difference in the mean ratings of motor vehicle consumers with varying incomes on the level of importance attached to the evaluative criteria of style, performance, roominess, popularity, colour and speed respectively, at the 5 % level of significance. However, as can be expected, there is a significant difference in the mean ratings of consumers with differing levels of income on the level of importance attached to the evaluative criteria of price and economy respectively, at the 5 % level of significance.

TABLE 7.18

KRUSKAL-WALLIS ONE-WAY ANOVA: MEAN LEVEL OF IMPORTANCE ATTACHED TO EVALUATIVE CRITERIA  
MAKE, MODEL AND RANGE OF MOTOR VEHICLE PURCHASED

EVALUATIVE CRITERIA	CORRECTED FOR TIES: MAKE OF MOTOR VEHICLE		CORRECTED FOR TIES: MODEL OF MOTOR VEHICLE		CORRECTED FOR TIES: RANGE OF MOTOR VEHICLE	
	H	p	H	p	H	p
Price	24.4447	0.0000 *	33.2561	0.0000 *	26.6445	0.0000 *
Style	12.4476	0.0020 *	16.6709	0.0196 *	12.8557	0.0016 *
Economy	7.7434	0.0208 *	17.3746	0.0151 *	9.8631	0.0072 *
Performance	5.5723	0.0617	10.7511	0.1499	4.3145	0.1156
Roominess	7.3867	0.0249 *	14.8106	0.0885 *	9.6014	0.0082 *
Popularity	1.7018	0.4270	11.6455	0.1128	6.3506	0.0418 *
Colour	0.1831	0.9125	10.1850	0.1783	0.1514	0.9271
Speed	8.8580	0.0119 *	14.1334	0.0489 *	10.8814	0.0043 *

\*  $p < 0.05$

Table 7.18 indicates there is no significant difference in the mean ratings amongst consumers with different makes, models and ranges of motor vehicles purchased on the level of importance attached to the evaluative criteria of performance, popularity and colour respectively, at the 5 % level of significance. However, there is a significant difference in the mean ratings amongst consumers with varying makes, models and ranges of motor vehicles purchased on the level of importance attached to the product selection attributes of price, style, economy, roominess and speed respectively, at the 5 % level of significance. The results reflect the choice of a make, model and range of motor vehicle is largely influenced by these selection criteria. Furthermore, there is a significant difference in the popularity of the motor vehicle amongst the different ranges. Therefore, the range of the motor vehicle impacts on its perceived popularity.

#### **7.2.3.2 COMPARISON OF PRE-PURCHASE AND POST-PURCHASE EVALUATIONS**

A descriptive analysis was undertaken which compared pre-purchase and post-purchase evaluation based on price, style, economy, performance, roominess, popularity, colour and speed. Consumers ranked the extent to which they perceived the motor vehicle to fulfil these attributes (pre-purchase) as well as the extent to which the purchased vehicle meets these selection criteria (post-purchase). The descriptive analysis indicates although expectations based on popularity of the motor vehicle was only met, discrepancies on the other criteria from pre-purchase to post-purchase evaluations were negligible. Cross-tabulations between pre-purchase and post-purchase evaluations on each motor vehicle criterion were conducted to verify the results (Table 7.19).

#### **HYPOTHESIS 4**

There is a significant relationship between the pre-purchase evaluations and post-purchase evaluations of motor vehicle consumers based on each evaluative criteria (price, style, economy, performance, roominess, popularity, colour, speed) respectively.



**TABLE 7.19**  
**PEARSON CHI-SQUARE: PRE-PURCHASE AND POST-PURCHASE**  
**EVALUATIONS BASED ON EVALUATIVE CRITERIA**

EVALUATIVE CRITERIA	r	DEGREES OF FREEDOM	SIGNIFICANCE (p)
Price	29.4911	16	0.0208 *
Style	55.7811	16	0.0000 *
Economy	35.4853	12	0.0004 *
Performance	43.8347	16	0.0002 *
Roominess	35.3454	16	0.0036 *
Popularity	38.5272	16	0.0013 *
Colour	40.9697	16	0.0006 *
Speed	30.9386	16	0.0137 *

\*  $p < 0.05$

From Table 7.19 it is evident there is a significant relationship between pre-purchase and post-purchase evaluations of motor vehicle consumers based on the set evaluative criteria. The results confirm the descriptive analysis, thereby indicating although expectations based on price, style, economy, performance, roominess, colour and speed were not met, the discrepancy between pre-purchase and post-purchase evaluations based on these criteria were small. The chi-square analysis indicates a significant correlation between pre-purchase and post-purchase evaluations based on these selection criteria. Therefore, expectations on all attributes were sufficiently met after the purchase of the motor vehicle.

#### 7.2.3.3. PRE-PURCHASE EVALUATIONS

An investigation into the prevalence of reported dissonance based on pre-purchase evaluations on the eight criteria was conducted (Table 7.20). The mean level of reported dissonance was determined. Consumers were divided into two categories, that is, those with scores below the mean level of reported dissonance and those with scores above the mean.

## **HYPOTHESIS 5**

There is a significant difference in the mean ratings of consumers who reported dissonance and those who did not, on the level of importance of the pre-purchase evaluative criteria.

**TABLE 7.20**  
**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMOGENEITY OF**  
**VARIANCE - REPORTED DISSONANCE BASED ON PRE-PURCHASE**  
**EVALUATION**

<b>EVALUATIVE CRITERIA (PRE-PURCHASE)</b>	<b>F</b>	<b>p</b>
Price	1.165	0.328
Style	6.277	0.000 *
Economy	7.357	0.000 *
Performance	1.370	0.246
Roominess	1.024	0.396
Popularity	2.110	0.081
Colour	2.254	0.065
Speed	1.237	0.296

\*  $p < 0.05$

From Table 7.20 it can be deduced there is no significant difference in the mean ratings of consumers who reported dissonance and those who did not, on the level of importance attached to the pre-purchase criteria of price, performance, roominess, popularity, colour and speed respectively, 5 % level of significance. However, there is a significant difference in the level of importance attached to the pre-purchase evaluation attributes of style and economy between those consumers who reported dissonance and those who did not, at the 5 % level of significance. Since one cannot tell from the Analysis of Variance results alone where the differences lie, a Scheffes Multiple Comparisons Test was conducted to determine this (Table 7.21 and Table 7.22).

**TABLE 7.21**  
**SCHEFFES MULTIPLE COMPARISONS TEST**  
**REPORTED DISSONANCE: STYLE**

PRE-PURCHASE RATING (STYLE)		DIFFERENCE	CONFIDENCE INTERVAL (95 %)	SIGNIFICANCE (p)
5	4	1.4454	-1.3456 - 4.2364	0.6288
5	3	4.2379	-0.6995 - 9.1753	0.1385
5	2	5.8556	-7.4922 - 19.2033	0.7611
5	1	14.8556	1.5078 - 28.2033	0.0229 *
4	3	2.7925	-2.7925 - 7.7342	0.5461
4	2	4.4101	-8.9392 - 17.7595	0.9004
4	1	13.4101	0.0608 - 26.7595	0.0530
3	2	1.6176	-12.3392 - 15.5745	0.9977
3	1	10.6176	-3.3392 - 24.5745	0.2850
2	1	9.0000	-9.6702 - 27.6702	

\*  $p < 0.05$

Column 1 in Table 7.21 relating to pre-purchase ratings on style depicts different possible combinations of ratings. Table 7.21 indicates significant differences in the mean rating on the level of importance attached to the style of the motor vehicle during purchases between those consumers who reported dissonance and those who do not, lies in the combination 5 to 1. This result reflects, those individuals who considered the motor vehicle to be extremely unsuitable (1) in terms of style instead of extremely suitable (5) during purchases, reported dissonance.

**TABLE 7.22**  
**SCHEFFES MULTIPLE COMPARISONS TEST**  
**REPORTED DISSONANCE: ECONOMY**

PRE-PURCHASE RATING (ECONOMY)		DIFFERENCE	CONFIDENCE INTERVAL (95 %)	SIGNIFICANCE (p)
5	4	0.9748	-1.5847 - 3.5344	0.7644
5	3	6.5387	1.8855 - 11.1919	0.0020 *
5	1	8.5721	-3.4959 - 20.6401	0.2661
4	3	5.5639	0.7630 - 10.3648	0.0177 *
4	1	7.5972	-4.5285 - 19.7229	0.3802
3	1	2.0333	-10.6998 - 14.7665	0.9762

\*  $p < 0.05$

Column 1 in Table 7.22 relating to pre-purchase ratings on economy depicts different possible combinations of ratings. Table 7.22 reflects, the significant difference in the mean rating on the level of importance attached to the economy of the motor vehicle between those consumers who reported dissonance and those who did not, lies in the combination 5 to 3 and 4 to 3. This result indicates, those purchasers who considered the motor vehicle to be average on suitability in terms of economy instead of suitable (4) or extremely suitable (5) during pre-purchases, reported dissonance.

An investigation into the prevalence of cognitive dissonance was also conducted based on pre-purchase evaluations on the eight evaluative criteria (Table 7.23).

#### **HYPOTHESIS 6**

There is a significant difference in the mean ratings of consumers who experienced cognitive dissonance and those who did not, on the level of importance of the pre-purchase evaluative criteria.

**TABLE 7.23**  
**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMOGENEITY OF**  
**VARIANCE - COGNITIVE DISSONANCE BASED ON PRE-PURCHASE**  
**EVALUATION**

<b>EVALUATIVE CRITERIA (PRE-PURCHASE)</b>	<b>F</b>	<b>p</b>
Price	2.960	0.021 *
Style	3.239	0.013 *
Economy	8.404	0.000 *
Performance	1.410	0.232
Roominess	0.788	0.534
Popularity	1.336	0.258
Colour	1.342	0.256
Speed	1.353	0.252

\*  $p < 0.05$

From Table 7.23 it can be concluded, there is no significant difference in the mean ratings of consumers who experienced cognitive dissonance and those who did not, on the level of importance attached to the pre-purchase evaluative criteria of performance, roominess, popularity, colour and speed respectively, at the 5 % level of significance. However, there is a significant difference in the mean ratings on the level of importance attached to the pre-purchase selection attributes of price, style and economy between these two groups (those who experienced cognitive dissonance and those who did not), at the 5 % level of significance.

The Scheffes Multiple Comparisons Tests was conducted to determine exactly where the differences lie. However, none of the combinations of ratings indicate where significant mean differences lie for the attributes of price and style. Significant mean differences were plotted in the rating of the economy of the motor vehicle during pre-purchases between those consumers who experienced cognitive dissonance and those who did not (Table 7.24).

**TABLE 7.24**  
**SCHEFFES MULTIPLE COMPARISONS TEST**  
**COGNITIVE DISSONANCE: ECONOMY**

PRE-PURCHASE RATING (ECONOMY)		DIFFERENCE	CONFIDENCE INTERVAL (95 %)	SIGNIFICANCE (p)
5	4	5.4122	-3.7046 - 14.5289	0.4255
5	3	25.4955	8.9218 - 42.0692	0.0005 *
5	1	38.9955	-3.9883 - 81.9793	0.0944
4	3	20.0833	2.9836 - 7.1831	0.0157 *
4	1	33.5833	-9.6060 - 76.7727	0.1966
3	1	13.5000	-31.8530 - 58.8530	0.8705

\*  $p < 0.05$

Column 1 in Table 7.24 relating to pre-purchase ratings on economy depicts different possible combinations of ratings. Table 7.24 indicates, the significant difference in the mean rating on the level of importance attached to the economy of the motor vehicle between those consumers who experienced cognitive dissonance and those who did not, lies in the combinations 5 to 3 and 4 to 3. The result reflects, those buyers who rated the motor vehicle as being average in suitability in terms of economy rather than suitable (4) or extremely suitable (5) during pre-purchases, experienced cognitive dissonance. Similar results were found in the case of reported dissonance.

#### 7.2.3.4 POST-PURCHASE EVALUATIONS

Consumers were requested to assess the extent to which the purchased motor vehicle fulfilled their pre-purchase expectations based on the motor vehicle evaluative criteria, namely, price, style, economy, performance, roominess, popularity, colour and speed. These ratings were correlated with post-purchase advertisement readership behaviour (see Table 7.32 for frequency distribution) and motor vehicle specific criteria (make, model and range) respectively (Table 7.25).

### **HYPOTHESIS 7**

There is a significant relationship between post-purchase evaluation of fulfilment of expectations and post-purchase advertisement readership behaviour, make, model and range of motor vehicle purchased respectively.

TABLE 7.25

CHI-SQUARE (LIKELIHOOD RATIO): POST-PURCHASE FULFILMENT OF EXPECTATIONS BASED ON MOTOR  
VEHICLE EVALUATIVE CRITERIA

EVALUATIVE CRITERIA	POST-PURCHASE READERSHIP BEHAVIOUR			MAKE OF VEHICLE PURCHASED			MODEL OF VEHICLE PURCHASED			RANGE OF VEHICLE PURCHASED		
	r	DF	SIG. (p)	r	DF	SIG. (p)	r	DF	SIG. (p)	r	DF	SIG. (p)
Price	1.8753	2	0.3915	7.3915	2	0.0248 *	10.893	7	0.143	4.3049	2	0.1114
Style	1.1129	2	0.5732	0.8177	2	0.6644	5.492	7	0.600	1.6496	2	0.4383
Economy	1.6785	2	0.4320	0.1960	2	0.9066	8.336	7	0.303	0.9047	2	0.6361
Performance	0.4525	2	0.7975	0.0998	2	0.9513	2.174	7	0.949	0.2636	2	0.8765
Roominess	3.6066	2	0.1648	7.5235	2	0.0232 *	16.341	7	0.022 *	0.8207	2	0.6634
Popularity	0.2623	2	0.8771	0.6709	2	0.7150	17.262	7	0.015 *	5.9321	2	0.0515
Colour	0.7894	2	0.6739	0.5578	2	0.7560	6.440	7	0.489	2.9108	2	0.2333
Speed#												

# Consumers were unable to judge speed of car due to adherence to traffic laws.



From Table 7.25 it can be deduced there is no significant relationship between post-purchase evaluation of fulfilment of expectations based on the evaluative criteria and post-purchase advertisement readership behaviour, at the 5 % level of significance. There is a significant relationship between post-purchase evaluation of fulfilment of expectations and make of car purchased based on price and roominess of vehicle respectively, at the 5 % level of significance. There is a significant relationship between post-purchase evaluation of satisfaction of pre-purchase expectations and the model based on roominess and popularity of motor vehicle respectively, at the 5 % level of significance. There is no significant relationship between post-purchase evaluation of fulfilment of expectations based on the evaluative criteria, and the range of motor vehicle purchased, at the 5 % level of significance. Hence, whilst both make and model of motor vehicle purchased influences evaluations on the roominess of the vehicle, the latter impacts on the popularity of the automobile.

Further analyses were undertaken to determine whether consumers who reported dissonance engaged in different post-purchase evaluation on the fulfilment of pre-purchase expectations from consumers who did not report dissonance (Table 7.26). These two categories of consumers were determined on the basis of the mean level of reported dissonance.

### **HYPOTHESIS 8**

There is a significant difference between those consumers who reported dissonance and those who did not report dissonance on the post-purchase evaluations of the fulfilment of pre-purchase expectations on the evaluative criteria respectively.

**TABLE 7.26****ANALYSIS OF VARIANCE: REPORTED DISSONANCE BASED ON POST-PURCHASE EVALUATION OF FULFILMENT OF EXPECTATIONS**

<b>EVALUATIVE CRITERIA</b>	<b>F RATIO</b>	<b>F PROBABILITY</b>
Price	18.0025	0.0000 *
Style	9.6963	0.0021 *
Economy	12.3689	0.0005 *
Performance	10.8753	0.0012 *
Roominess	27.1735	0.0000 *
Popularity	9.7612	0.0020 *
Colour	10.4481	0.0014 *
Speed#		

\*  $p < 0.05$

# Consumers were unable to judge speed of car due to adherence to traffic laws.

From Table 7.26 it can be deduced there is a significant difference in the post-purchase evaluation of the fulfilment of pre-purchase expectations based on all evaluative criteria (price, style, economy, performance, roominess, popularity, colour) respectively, between consumers who reported dissonance and those who did not.

In addition, investigations were conducted to determine whether consumers who experience cognitive dissonance engaged in different post-purchase evaluations on the fulfilment of pre-purchase expectations from consumers who did not experience post-purchase dissonance (Table 7.27). These two categories of consumers were determined on the basis of the mean level of magnitude of cognitive dissonance experienced.

## **HYPOTHESIS 9**

There is a significant difference between those consumers who experienced high levels of cognitive dissonance and those who did not, on the post-purchase evaluation of the fulfilment of pre-purchase expectations.

**TABLE 7.27**

**ANALYSIS OF VARIANCE: MAGNITUDE OF COGNITIVE DISSONANCE  
EXPERIENCED BASED ON POST-PURCHASE EVALUATION OF FULFILMENT  
OF EXPECTATIONS**

<b>EVALUATIVE CRITERIA</b>	<b>F RATIO</b>	<b>F PROBABILITY</b>
Price	21.6107	0.0000 *
Style	15.7186	0.0001 *
Economy	18.1803	0.0000 *
Performance	17.0728	0.0001 *
Roominess	31.4810	0.0000 *
Popularity	14.4493	0.0002 *
Colour	14.5273	0.0002 *
Speed#		

\*  $p < 0.05$

# Consumers were unable to judge speed of car due to adherence to traffic laws.

From Table 7.27 it can be concluded, there is a significant difference in the post-purchase evaluation of the fulfilment of pre-purchase expectations based on all evaluative criteria (price, style, economy, performance, roominess, popularity, colour) respectively, between consumers who experienced cognitive dissonance and those who did not, at the 5 % level of significance.

#### 7.2.4 PERCEPTION OF PERSONAL DECISION-MAKING

Respondents were requested to evaluate their decision-making in general on the basis of the correctness of the decisions, level of anxiety when making decisions, degree of external influence on the decision-making process, quality of decisions and level of confidence in the decision taken. Subjects were asked to rate their responses on a 1 to 5 Semantic Differential scale ranging from positive traits, for example, 'always right decision' (1) to negative characteristics, for example, 'always wrong decisions'. Mean analyses were undertaken on the perceptions of respondents about the dimensions of personal decision-making ability (Table 7.28).

**TABLE 7.28**  
**DESCRIPTIVE ANALYSES: PERCEPTIONS REGARDING DIMENSIONS OF**  
**PERSONAL DECISION-MAKING ABILITY**

VARIABLE	MEAN	STANDARD DEVIATION	CONFIDENCE INTERVAL FOR MEAN (95 %)
Correctness of Decision	2.245	0.799	2.1343 - 2.3557
Level of Anxiety	2.500	1.089	2.3491 - 2.6509
External influence on the decision-making process	2.315	0.995	2.1770 - 2.4530
Quality of Decision	2.140	0.821	2.0262 - 2.2538
Level of Confidence in decision taken	1.900	0.845	1.7829 - 2.0171

The smaller the value of the mean, the greater the ease reflected in the decision-making process. Therefore, it can be deduced respondents reflect confidence in the decisions they make (Mean = 1.900).

Consumers perceive themselves to engage in quality decisions and to be able to concur very good deals (Mean = 2.140). Respondents perceive themselves as being able to generally make the right decisions (Mean = 2.245). Consumers did reflect their decision-making in

general is influenced by external others, be they family, friends, reference groups or marketing stimuli (Mean = 2.315). Furthermore, consumers reported an average level of anxiety experienced when engaging in decision-making, that is, the median on a 1 to 5 point scale (Mean = 2,500).

Hence, Table 7.28 reflects consumers are likely to be confident in decisions taken, believe they engage in quality decisions, and are sure of the correctness of decisions taken. They do reflect external influence in decision-making and express a level of anxiety experienced when engaging in the process of decision-making in general.

#### 7.2.5 RANGE OF MOTOR VEHICLE PURCHASED

The motor vehicles purchased were classified into 3 categories on the basis of price (Table 7.29). Those vehicles priced up to R60 000,00 were classified as 'bottom of the range'. Price range R60 000,00 to R85 000,00 represented the 'middle of the range' motor vehicle and greater than R85 000,00 depicted the 'top of the range' automobile.

**TABLE 7.29**  
**FREQUENCY ANALYSIS: RANGE OF MOTOR VEHICLE**

<b>RANGE OF MOTOR VEHICLE</b>	<b>N</b>	<b>%</b>
Bottom of the Range	90	45.0
Middle of the Range	75	37.5
Top of the Range	35	17.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>

From Table 7.29 it can be seen the majority of consumers (45%) purchased the 'bottom of the range' motor vehicle, 37.5 % purchased motor vehicles in the 'middle of the range' and 17.5 % purchased 'top of the range' vehicles. The ratio is understandable in terms of the occupation and income levels of the sample composition as these biographical data play a pivotal role in determining purchasing power.

Descriptive analyses were undertaken to see whether the range of the motor vehicle selected is related to the level of importance attached to the motor vehicle evaluative criteria (price, style, economy, performance, roominess, popularity, colour and speed) during purchases (Table 7.30).

**TABLE 7.30**

**DESCRIPTIVE ANALYSIS: RANGE OF MOTOR VEHICLE BASED ON MEAN  
LEVEL OF IMPORTANCE ATTACHED TO EVALUATIVE CRITERIA**

<b>EVALUATIVE CRITERIA</b>	<b>BOTTOM OF RANGE</b>	<b>MIDDLE OF RANGE</b>	<b>TOP OF RANGE</b>
Price	4.62	4.32	3.94
Style	3.64	3.85	4.20
Economy	4.66	4.41	4.14
Performance	4.11	4.36	4.34
Roominess	3.46	3.60	3.97
Popularity	2.88	2.83	3.43
Colour	3.50	3.45	3.43
Speed	2.62	2.95	3.31

The following results emerged from Table 7.30:-

- Consumers who purchased 'bottom of the range' motor vehicles attached the greatest level of importance to price, economy and colour, followed by those consumers who bought 'middle of the range' cars and then, by those who selected the 'top of the range' motor vehicle.
- Consumers who purchased 'top of the range' motor vehicles attached the highest level of importance to style, roominess and speed, followed by those consumers who bought 'middle of the range' cars, and then, by those who selected the 'bottom of the range' motor vehicle.

- Mean differences in the level of importance attached to the performance of the motor vehicle was negligible ('Middle of the Range': Mean = 4.36; 'Top of the Range': Mean = 4.34; 'Bottom of the Range': Mean = 4.11).
- Mean differences in the level of importance allocated to speed of the car was negligible ('Top of the Range': Mean = 3.31; 'Middle of the Range': Mean = 2.95; 'Bottom of the Range': Mean = 2.62). It can however be noted, the speed of the car is of greatest importance to the top of the range motor vehicle buyer.

Evidently, the level of importance attached to the motor vehicle evaluative criteria differ amongst consumers who purchased different ranges of motor vehicles. The level of importance attached to the motor vehicle attributes, in descending level of importance, differs amongst the three categories ('Bottom of the Range', 'Middle of the Range', 'Top of the Range') as presented in Table 7.31.

**TABLE 7.31**  
**DIFFERING LEVELS OF IMPORTANCE ATTACHED TO EVALUATIVE**  
**CRITERIA BY CONSUMERS**

ORDER OF IMPORTANCE	'BOTTOM OF THE RANGE'	'MIDDLE OF THE RANGE'	'TOP OF THE RANGE'
1	Economy	Economy	Performance
2	Price	Performance	Style
3	Performance	Price	Economy
4	Style	Style	Roominess
5	Colour	Roominess	Price
6	Roominess	Colour	Popularity Colour
7	Popularity	Speed	-
8	Speed	Popularity	Speed

It is evident from Table 7.31 in descending level of importance:-

- Consumers who purchased 'bottom of the range' motor vehicles valued economy, price and then, performance.
- Consumers who purchased the 'middle of the range' motor vehicles placed emphasis on economy, performance and then, price.
- Consumers who purchased the 'top of the range' motor vehicles rated performance, style and then economy as being important.

#### 7.2.6 POST-PURCHASE ADVERTISEMENT READERSHIP BEHAVIOUR

Respondents were requested to reflect their post-purchases advertisement readership characteristics (Table 7.32).

**TABLE 7.32**  
**POST-PURCHASE ADVERTISEMENT READERSHIP BEHAVIOUR**

<b>ADVERTISEMENT READERSHIP CHARACTERISTIC</b>	<b>N</b>	<b>%</b>
Read advertisements of purchased make only	20	10.0
Observed advertisements of other unselected makes but did not pay attention to the content	25	12.5
Read advertisements of selected makes and unselected makes equally	155	77.5
<b>TOTAL</b>	<b>200</b>	<b>100.0</b>

It can be observed from Table 7.32, 75.5 % of motor vehicle consumers read advertisements of both the selected makes of cars and foregone alternatives to an equal extent. Furthermore, 10 % of motor vehicle consumers read advertisements of the purchased make only and 12.5 % of the buyers observe advertisements of other unselected makes but do not pay attention to the content.

Furthermore, it was deduced no significant relationship exists between post-purchase advertisement readership behaviour and post-purchase evaluation of the extent to which the



motor vehicle purchased fulfilled the pre-purchase expectations of price, style, economy, performance, roominess, popularity and colour respectively, at the 5 % level of significance (Table 7.25).

#### 7.2.7 REPEAT PURCHASE INTENTIONS AND BEHAVIOUR

Consumers' intentions to engage in repeat purchase behaviour of the motor vehicle selected was analysed (Table 7.33).

**TABLE 7.33**  
**FREQUENCY ANALYSIS: INTENTION TO REPURCHASE SELECTED MOTOR VEHICLE**

<b>INTENTION TO REPURCHASE</b>	<b>N</b>	<b>%</b>
Yes, would repurchase selected motor vehicle	178	89
No, would not repurchase selected motor vehicle	22	11
<b>TOTAL</b>	<b>200</b>	<b>100</b>

From Table 7.33 it can be deduced, whilst the majority of the consumers (89 %) indicated their intention to repurchase the selected motor vehicle in the future only 11 % reflected intentions not to repurchase the selected make of car.

Reasons for intentions of the 89 % of the respondents to repurchase the selected motor vehicle were analysed (Table 7.34). Each respondent was requested to reflect only one reason, that is, the most important reason for their intentions to engage in repurchases.

**TABLE 7.34**  
**FREQUENCY ANALYSIS: REASONS FOR INTENTION TO ENGAGE IN**  
**REPEAT PURCHASES OF SELECTED MOTOR VEHICLE**

REASON	N	%
Excellent Performance	45	22.5
Quality Service	13	6.5
Economical	34	17.0
Like the Style	5	2.5
Roominess	2	1.0
Suitable Price	25	12.5
Popular	3	1.5
Like to 'stay with the tried and tested'	47	23.5
Good Resale Value	7	3.5
<b>TOTAL</b>	<b>178</b>	<b>89.0 #</b>

# 11 % of the respondents reflected intentions not to engage in repeat purchase behaviour when engaging in future motor vehicle purchases.

Table 7.34 reflects the reasons for intentions to repurchase in descending level of priority to be as follows:-

- Like to 'stay with the tried and tested' (23.5 %).
- Excellent performance of motor vehicle selected (22.5 %).
- Economical (17.0 %).
- Suitable price (12.5 %).
- Quality service received (6.5 %).
- Good resale value of motor vehicle (3.5 %).
- Like the style (2.5 %).
- Popularity (1.5 %).
- Roominess of vehicle (1 %)

Reasons for intentions not to engage in repurchase of the selected motor vehicle were also investigated (Table 7.35).

**TABLE 7.35**

**FREQUENCY ANALYSIS: REASONS FOR INTENTIONS NOT TO ENGAGE IN  
REPURCHASE BEHAVIOUR OF SELECTED MOTOR VEHICLE**

REASON	N	%
Poor Performance	3	1.5
Poor Service	10	5.0
Too expensively priced	1	0.5
Need a change	8	4.0
<b>TOTAL</b>	<b>22</b>	<b>11.0 #</b>

# 89 % of the consumers reflected intentions to engage in repeat purchase behaviour when selecting a motor vehicle in the future.

Table 7.35 displays the reasons for intentions not to engage in repeat purchases of the selected motor vehicle in descending level of priority as:-

- Poor service (5 %).
- Need a change (4.0 %).
- Poor performance (3 %).
- Too expensively priced (0.5 %).

Intentions to engage (or not) in repeat purchases of the selected motor vehicle were analysed in relation to the make, model, dealership and range of motor vehicle purchased from respectively (Table 7.36).

**TABLE 7.36**  
**CHI-SQUARE: INTENTIONS TO ENGAGE IN REPEAT PURCHASE**  
**BEHAVIOUR**

VARIABLE	r	DEGREES OF FREEDOM	SIGNIFICANCE (p)
Make	3.3226	2	0.1899
Model	13.2563	7	0.0661
Dealership	11.1222	10	0.3481
Range of vehicle	2.1240	2	0.3458

The results in Table 7.36 indicate the intentions to engage in repeat purchase behaviour (or not to) is not related to the make, model or range of motor vehicle purchased nor is it related to the dealership of purchases, at the 5 % level of significance.

It must be emphasized, intentions to engage in repeat purchases of the selected motor vehicle (or not) correlates significantly with the level of reported dissonance and the magnitude of cognitive dissonance experienced respectively (Table 7.50 and Table 7.55).

#### 7.2.8 AFTER-SALES COMMUNICATION

Post-purchase communication was evaluated on the basis of whether consumers received a letter or telephone call from the dealership enquiring about their degree of satisfaction with the purchased motor vehicle. Consumers were requested to indicate whether they received:-

- A telephone call from the dealership enquiring about the performance of the motor vehicle.
- A telephone call from the dealership enquiring whether the consumer was satisfied with the car.
- A letter from the dealership congratulating the individual on the purchase and emphasizing the wisdom of the decision.
- A letter from the dealership assuring the buyer of continuous and efficient service in the future.

The aforementioned four strategies of post-purchase communication was encountered by 85.5 % of the motor vehicle consumers in varying combinations. The majority of the consumers (19 %) received at least a telephone call enquiring about their level of satisfaction with the purchase. A further 12 % received a letter assuring them of continuous and efficient service in the future. Seventeen percent of the motor vehicle consumers indicated the dealership communicated with them through all of the four aforementioned channels. Another 37.5 % of the consumers received some form of communication, including different combinations of the four aforementioned strategies. However, 14.5 % of the motor vehicle buyers reported they received no communication from the dealership, be it telephonic or written, after purchases.

An investigation was undertaken to determine whether there is a significant relationship between post-purchase communication and the range of motor vehicle purchased, the dealership of purchases and consumers' intentions to engage in repurchases of the selected motor vehicle (Table 7.37).

#### **HYPOTHESIS 10**

There is a significant relationship between post-purchases and the range of motor vehicle purchased, the dealership of purchases and consumers' intentions to engage in repeat purchases of the selected motor vehicle respectively.

**TABLE 7.37**

#### **CHI-SQUARE (LIKELIHOOD RATIO): POST-PURCHASE COMMUNICATION**

<b>VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Dealership	119.0732	140	0.8995
Range of motor vehicle	41.9004	28	0.0443 *
Intentions to repurchase selected motor vehicle	14.3317	14	0.4253

\*  $p < 0.05$

From Table 7.37 it can be deduced there is a significant relationship between post-purchase communication and the range of motor vehicle purchased, at the 5 % level of significance. However, there is no significant relationship between post-purchase communication and dealership of purchases and intentions to engage in repeat purchases of the selected motor vehicle respectively, at the 5 % level of significance.

In addition, an analysis was conducted to determine whether post-purchase communication impacts on the level of reported dissonance (Table 7.51) and the magnitude of cognitive dissonance experienced by motor vehicle consumers (Table 7.56). The findings indicate a significant relationship between post-purchase communication and the level of reported dissonance and the magnitude of cognitive dissonance experienced by motor vehicle consumers respectively, at the 5 % level of significance.

#### **7.2.9 CONSUMER PERCEPTIONS OF PURCHASES: DIMENSIONS OF DECISION-MAKING AND POST DECISION-MAKING**

Consumers' perceptions of their motor vehicle purchases were analysed on the bases of eleven dimensions having the potential to impact on the decision-making process and eight dimensions impacting on post-purchase evaluation. These nineteen variables combined influence the magnitude of cognitive dissonance experienced by motor vehicle buyers in varying degrees.

##### **7.2.9.1 DIMENSIONS OF DECISION-MAKING AND POST-PURCHASE DECISION-MAKING**

Consumers were requested to respond to numerous statements pertaining to their motor vehicle purchases on a 1 to 5 point Likert Scale, ranging from strongly disagree (1) to strongly agree (5). The statements were categorised so as to determine consumers' perceptions on key dimensions during the motor vehicle decision-making process impacting on the magnitude of cognitive dissonance experienced. These dimensions include, awareness of expectations, psychological importance of the purchases, degree of effort exerted during purchases, congruence between the purchase and the self-concept of the individual, price perception, persuasiveness of the salesperson, perceived lack of product related information, level of confidence in purchases, degree of attractiveness of decision alternatives, degree of

cognitive overlap amongst decision alternatives and perceived quality of service. The mean values on these dimensions fall within the 95 % confidence interval and therefore, significantly impacts on the decision-making process (Table 7.38). Cognisance was also given to aspects of post-purchase evaluation which are capable of influencing the magnitude of cognitive dissonance experienced. These factors relate to unconfirmed expectations, level of anxiety experienced, reported dissonance, reported satisfaction, post-purchase attitude change in favour of the selected alternative, degree of trivialization of foregone features of unselected alternative, extent of selective exposure and justification of purchases. The mean scores on these factors lie within the 95 % confidence interval and hence, significantly influences post-purchase evaluations (Table 7.38).

TABLE 7.38

## DESCRIPTIVE ANALYSES: DIMENSIONS OF DECISION-MAKING AND POST-PURCHASE DECISION-MAKING

VARIABLE	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM	CONFIDENCE INTERVAL FOR MEAN (95 %)
<b>DECISION-MAKING</b>					
Awareness of Expectations	4.405	0.731	1.000	5.000	4.3037 - 4.506
Psychological Importance	12.955	3.079	5.000	23.000	12.528 - 13.381
Effort	23.220	6.285	7.000	35.000	22.348 - 24.091
Self-concept	13.655	5.388	7.000	34.000	12.908 - 14.401
Price	9.725	3.836	4.000	25.000	9.1933 - 10.256
Persuasability	8.550	3.839	5.000	25.000	8.0178 - 9.082
Lack of Information	11.320	4.137	6.000	28.000	10.746 - 11.893
Confidence	13.550	5.178	7.000	35.000	12.832 - 14.267
Attractiveness of Decision Alternatives	11.305	3.896	4.000	20.000	10.765 - 11.845
Cognitive Overlap	11.180	3.195	4.000	18.000	10.737 - 11.622
Service	58.350	10.646	22.000	75.000	56.833 - 59.866



**TABLE 7.38 (CONTINUED)**  
**DESCRIPTIVE ANALYSES: DIMENSIONS OF DECISION-MAKING AND POST-PURCHASE DECISION-MAKING**

<b>VARIABLE</b>	<b>MEAN</b>	<b>STANDARD DEVIATION (SD)</b>	<b>MINIMUM</b>	<b>MAXIMUM</b>	<b>CONFIDENCE INTERVAL - MEAN (95%)</b>
<b>POST DECISION-MAKING</b>					
Unconfirmed Expectations	20.090	7.181	10.000	42.000	19.094 - 21.085
Anxiety	14.000	5.863	8.000	35.000	13.187 - 14.812
Reported Dissonance	12.855	6.236	8.000	40.000	11.990 - 13.719
Reported Satisfaction	29.655	5.406	7.000	35.000	28.905 - 30.404
Attitude Change	19.180	3.781	5.000	25.000	18.655 - 19.704
Trivialization	14.035	3.485	4.000	20.000	13.552 - 14.518
Selective Exposure	19.535	4.692	9.000	35.000	18.884 - 20.185
Justification	16.285	2.866	5.000	20.000	15.887 - 16.682
Magnitude of Cognitive Dissonance	59.755	22.504	33.000	140.000	56.635 - 62.874

From Table 7.38 it is evident, the majority of consumers are highly aware of their expectations during pre-purchase (Mean = 4.405; SD = 0.731). Since the mean values fall within the specified confidence intervals (95 %) it can be deduced, the dimensions significantly influencing decision-making are psychological importance (Mean = 12.955; SD = 3.079), effort (Mean = 23.220; SD = 6.285), self-concept (Mean = 13.655; SD = 5.388), price (Mean = 9.725; SD = 3.836), persuasiveness (Mean = 8.550; SD = 3.839), lack of information (Mean = 11.320; SD = 4.137), confidence (Mean = 13.550; SD = 5.178), attractiveness of decision alternatives (Mean = 11.305; SD = 3.896), cognitive overlap (Mean = 11.180; SD = 3.195), and service (Mean 58.350; SD = 10.646).

Since the mean values lie within the specified confidence intervals (95 %) it can be concluded, the dimensions significantly influencing post-purchase evaluation are unconfirmed expectations (Mean = 20.090; SD = 7.181), anxiety (Mean = 14.000; SD = 5.863), reported dissonance (Mean = 12.855; SD = 6.236), reported satisfaction (Mean = 29.655; SD = 5.406), attitude change (Mean = 19.180; SD = 3.781), trivialization (Mean = 14.035; SD = 3.485), self-concept (Mean = 19.535; SD = 4.692) and justification of purchases (Mean = 16.285; SD = 2.866).

The prevalence of cognitive dissonance is also evident (Mean = 59.755; SD = 22.504) with a significant magnitude (95 % Confidence Interval: 56.635 - 62.874).

#### **7.2.9.2 RELATIONSHIP BETWEEN THE DIMENSIONS OF DECISION-MAKING AND POST-PURCHASE DECISION-MAKING**

Numerous factors encountered during the process of decision-making when engaging in complex purchases such as purchasing a motor vehicle, were analysed, namely, awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap and service. Dimensions relating to post-purchase evaluation were also investigated, namely, unconfirmed expectation, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases. These dimensions were studied since they are capable of impacting on the level of cognitive dissonance experienced. Hence, they not

only influence the prevalence of cognitive dissonance but also its magnitude. Intercorrelations between these variables were analysed (Table 7.39).

#### **HYPOTHESIS 11**

There is a significant relationship between the factors influencing the decision-making process and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification) respectively, when engaging in motor vehicle purchases.

Table 7.39 indicates there is no significant relationship between awareness of expectations and psychological importance of the motor vehicle purchases, effort, attitude change, selective exposure and justification of purchases respectively, at the 5 % level of significance. However, there exists a significant, inverse relationship between awareness of expectations and unconfirmed expectations, anxiety, reported dissonance, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap and the level of cognitive dissonance experienced respectively, at the 5 % level of significance. In addition, a significant, direct relationship was observed between awareness of expectations and quality of service, reported satisfaction and trivialization.

From Table 7.39 it is evident, there exists a significant and direct relationship between unconfirmed expectations and the level of anxiety experienced, reported dissonance, psychological importance of the motor vehicle, effort exerted, incongruency of motor vehicle with the self-concept, price of motor vehicle, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, the results depict a significant and inverse relationship between unconfirmed expectations and service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

From Table 7.39 it can be deduced, there is a significant, direct relationship between the level of anxiety experienced and reported dissonance, psychological importance of the motor vehicle, effort expended, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. The results also reflect a significant, inverse relationship between the level of anxiety experienced and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and the level of justification of purchases respectively, at the 5 % level of significance.

The results in Table 7.39 reflect a significant and direct relationship between reported dissonance and psychological importance, effort exerted, self-concept, price, persuasibility,

lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore Table 7.39 indicates a significant, inverse relationship between the level of reported dissonance and quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

It can be concluded from Table 7.39, there is a significant, direct relationship between psychological importance attached to the motor vehicle purchases and effort exerted, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. In addition, the greater the extent of psychological importance, the greater the magnitude of cognitive dissonance experienced. This happens because high levels of psychological importance causes one to set very high levels of expectations, which are more likely to be unconfirmed. Table 7.39 also depicts a significant, inverse relationship between the level of psychological importance attached to the motor vehicle purchases and quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

From Table 7.39 it can be deduced, there is a significant, direct relationship between the amount of effort expended and self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, there exists a significant, inverse relationship between the amount of effort expended and reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. There is no significant relationship between the amount of effort exerted and perceptions of the quality of service received, at the 5 % level of significance.

Table 7.39 displays, there is a significant and direct relationship between self-concept and price, persuasibility, lack of information, level of confidence, attractiveness of decision

alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. It can be concluded, there is a significant and inverse relationship between the self-concept of the buyer and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

From Table 7.39 it can be deduced, there is a significant and direct relationship between price and salesperson persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, it can be deduced there is a significant but inverse relationship between price and perceived quality of service received, reported satisfaction, attitude change after purchases, trivialization of foregone features of unselected alternatives, selective exposure and justification of purchases respectively, at the 5 % level of significance.

Table 7.39 indicates, there is a significant and direct relationship between salesperson persuasibility and lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, it can be deduced there is a significant but inverse relationship between salesperson persuasibility and perceived quality of service received, reported satisfaction, attitude change after purchases, trivialization of foregone features of unselected alternatives, selective exposure and justification of purchases respectively, at the 5 % level of significance.

From Table 7.39 it can be concluded there is a significant and direct relationship between the lack of product related information and the level of confidence of the motor vehicle buyer, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. There is also a significant but inverse relationship between the lack of information when engaging in motor vehicle purchases and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

It is evident from Table 7.39 there is a significant and direct relationship between the level of confidence of the motor vehicle buyer and attractiveness of decision alternatives, cognitive overlap, and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, there exists a significant and inverse relationship between consumers' level of confidence and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

Table 7.39 depicts a significant, inverse relationship between the attractiveness of decision alternatives and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification respectively, at the 5 % level of significance. The results also indicate there is a significant and direct relationship between the attractiveness of decision alternatives and cognitive overlap between alternatives and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance.

Furthermore, there is a significant, direct relationship between cognitive overlap of decision alternatives and the magnitude of cognitive dissonance experienced, at the 5 % level of significance. Table 7.39 displays a significant, inverse relationship between cognitive overlap and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

From Table 7.39 it can be deduced there is a significant, direct relationship between perceived quality of service and reported satisfaction, attitude change, trivialization, and justification of purchases respectively, at the 5 % level of significance.

There is however a significant, inverse relationship between perceived quality of service and magnitude of cognitive dissonance experienced, at the 5 % level of significance. However, there is no significant relationship between perceived quality of service and selective exposure at the 5 % level of significance.

From Table 7.39 it can be concluded there is a significant, direct relationship between reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. There is, as expected, a significant but inverse relationship between reported satisfaction and magnitude of cognitive dissonance experienced at the 5 % level of significance.

There is a significant, direct relationship between post-purchase attitude change and trivialization of foregone features, selective exposure and justification of purchases respectively at the 5 % level of significance. There is however, a significant but inverse relationship between post-purchase attitude change and magnitude of cognitive dissonance experienced at the 5 % level of significance.

Furthermore, it is evident from Table 7.39 there is a significant, direct relationship between trivialization of foregone features of unselected alternatives, selective exposure and justification of purchased make and model respectively, at the 5 % level of significance. There is also a significant, inverse relationship between trivialization of foregone attributes and the magnitude of cognitive dissonance experienced, at the 5 % level of significance.

It can be deduced from Table 7.39 there is a significant, direct relationship between selective exposure and justification of purchases, at the 5 % level of significance. There is however, a significant, inverse relationship between post-purchase selective exposure and magnitude of cognitive dissonance experienced, at the 5 % level of significance. Similarly, a significant but inverse relationship exists between justification of purchases and the magnitude of cognitive dissonance experienced, at the 5 % level of significance. Hence, the greater the degree of post-purchase justification of selected alternative, the smaller the magnitude of cognitive dissonance experienced.

One hundred and ninety pairs of factors influencing decision-making and post-purchase evaluation were correlated. One hundred and eighty-three pairs (93.32 %) depicted significant relationships and only seven pairs (3.68 %) portrayed no significant relationships at the 5 % level of significance.



### **7.2.9.3 FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION: PROFILES BASED ON BIOGRAPHICAL DATA**

The factors influencing decision-making (awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service) and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure, justification, cognitive dissonance) were correlated with biographical data (Table 7.40).

#### **HYPOTHESIS 12**

There is a significant relationship between the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) and each of the biographical variables (gender, race, marital status, age, education, occupation, income) respectively.

**TABLE 7.40**  
**INTERCORRELATION: FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION BY BIOGRAPHICAL DATA**

VARIABLE	AE	UE	ANX	RD	PI	EFF	SC	PRICE	PERS	LI
GENDER	-0.1855 <b>0.0009 *</b>	-0.0806 <b>0.256</b>	-0.1060 <b>0.135</b>	-0.0938 <b>0.186</b>	-0.1029 <b>0.147</b>	-0.1753 <b>0.013 *</b>	-0.0727 <b>0.306</b>	0.0018 <b>0.980</b>	-0.0139 <b>0.845</b>	0.0010 <b>0.988</b>
RACE	0.0080 <b>0.911</b>	0.0404 <b>0.570</b>	0.1580 <b>0.025 *</b>	0.1152 <b>0.104</b>	0.1724 <b>0.015 *</b>	0.0264 <b>0.710</b>	0.0353 <b>0.620</b>	0.1107 <b>0.119</b>	0.1031 <b>0.146</b>	0.0774 <b>0.276</b>
MARITAL STATUS	0.0667 <b>0.348</b>	-0.0516 <b>0.468</b>	-0.0456 <b>0.521</b>	-0.0264 <b>0.711</b>	-0.0626 <b>0.379</b>	-0.0458 <b>0.520</b>	-0.0636 <b>0.371</b>	-0.0557 <b>0.433</b>	-0.0298 <b>0.675</b>	-0.0683 <b>0.337</b>
AGE	-0.0053 <b>0.941</b>	0.0909 <b>0.200</b>	0.0278 <b>0.696</b>	0.1201 <b>0.090</b>	-0.0636 <b>0.371</b>	-0.1108 <b>0.118</b>	0.1063 <b>0.134</b>	0.0522 <b>0.463</b>	0.1701 <b>0.016 *</b>	0.1033 <b>0.145</b>
EDUC	0.0264 <b>0.710</b>	-0.1185 <b>0.095</b>	-0.0799 <b>0.261</b>	-0.0808 <b>0.255</b>	-0.0330 <b>0.643</b>	-0.0482 <b>0.498</b>	-0.848 <b>0.232</b>	-0.1327 <b>0.061</b>	-0.1202 <b>0.090</b>	-0.1419 <b>0.045 *</b>
OCCUP	-0.0230 <b>0.746</b>	0.1471 <b>0.038 *</b>	0.1134 <b>0.110</b>	0.1200 <b>0.091</b>	0.0524 <b>0.461</b>	-0.0285 <b>0.689</b>	0.1139 <b>0.108</b>	0.1308 <b>0.065</b>	0.1463 <b>0.039 *</b>	0.1898 <b>0.007 *</b>
INCOME	0.0466 <b>0.512</b>	-0.0729 <b>0.305</b>	-0.1453 <b>0.040 *</b>	-0.1094 <b>0.123</b>	-0.0135 <b>0.849</b>	0.0011 <b>0.988</b>	-0.0841 <b>0.237</b>	-0.2161 <b>0.002 *</b>	-0.0821 <b>0.248</b>	-0.1783 <b>0.012 *</b>

\*  $p < 0.05$

**KEY:** AE - Awareness of Expectations    PI - Psychological Importance    LI - Lack of Information  
 UE - Unconfirmed Expectations    EFF - Effort    RD - Reported Dissonance  
 ANX - Anxiety    SC - Self-concept    PERS - Persuasibility

**TABLE 7.40 (CONTINUED)**  
**INTERCORRELATION: FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION BY BIOGRAPHICAL DATA**

VARIABLE	CON	ADA	CO	SER	RS	AC	TRIV	SE	JUST	CD
GENDER	0.0392 <b>0.581</b>	-0.1264 <b>0.074</b>	-0.5070 <b>0.476</b>	0.0083 <b>0.907</b>	0.0935 <b>0.188</b>	0.0901 <b>0.204</b>	0.1591 <b>0.024 *</b>	0.0404 <b>0.570</b>	0.0730 <b>0.304</b>	-0.0778 <b>0.274</b>
RACE	0.1249 <b>0.078</b>	0.0048 <b>0.946</b>	0.0198 <b>0.781</b>	0.0157 <b>0.826</b>	-0.0239 <b>0.737 *</b>	0.0649 <b>0.361</b>	0.0827 <b>0.244</b>	0.0736 <b>0.301</b>	-0.0154 <b>0.829</b>	0.0875 <b>0.218</b>
MARITAL STATUS	-0.0557 <b>0.434</b>	-0.1416 <b>0.045 *</b>	-0.0874 <b>0.218</b>	0.0986 <b>0.165</b>	0.1234 <b>0.082</b>	0.0641 <b>0.367</b>	0.0089 <b>0.901</b>	0.0265 <b>0.709</b>	0.0213 <b>0.765</b>	-0.0584 <b>0.412</b>
AGE	0.0368 <b>0.605</b>	-0.0104 <b>0.884</b>	-0.0443 <b>0.534</b>	0.0388 <b>0.586</b>	-0.0510 <b>0.473</b>	-0.0094 <b>0.895</b>	0.0221 <b>0.756</b>	0.0168 <b>0.813</b>	-0.0627 <b>0.378</b>	0.1204 <b>0.090</b>
EDUC.	0.1199 <b>0.091</b>	0.0205 <b>0.773</b>	0.0954 <b>0.179</b>	-0.1547 <b>0.029 *</b>	0.0326 <b>0.647</b>	-0.0081 <b>0.910</b>	0.0299 <b>0.674</b>	-0.0526 <b>0.459</b>	0.1228 <b>0.083</b>	-0.1131 <b>0.111</b>
OCCUP.	0.1854 <b>0.009 *</b>	0.0833 <b>0.241</b>	0.0372 <b>0.601</b>	-0.0053 <b>0.940</b>	-0.1253 <b>0.077</b>	-0.0625 <b>0.380</b>	-0.0499 <b>0.482</b>	0.0261 <b>0.714</b>	-0.1723 <b>0.015 *</b>	-0.1565 <b>0.027 *</b>
INCOME	0.2106 <b>0.003</b>	-0.0313 <b>0.659</b>	0.1568 <b>0.027 *</b>	-0.0437 <b>0.539</b>	0.0068 <b>0.924</b>	-0.0733 <b>0.302</b>	-0.1519 <b>0.032 *</b>	-0.0659 <b>0.354</b>	-0.0395 <b>0.579</b>	-0.1175 <b>0.097</b>

\* p < 0.05

**KEY:** CON - Confidence  
 ADA - Attractiveness of Alternatives  
 CO - Cognitive Overlap  
 SER - Service  
 RS - Reported Satisfaction  
 AC - Attitude Change  
 TRIV - Trivialization  
 SE - Selective Exposure  
 JUST - Justification  
 CD - Magnitude of Cognitive Dissonance Experienced

Table 7.40 generates one hundred and forty pairs of intercorrelations between the factors influencing decision-making and post-purchase evaluations and each biographical variable respectively. However, only 21 pairs of variables correlate significantly at the 5 % level of significance. On the basis of the correlations that emerged, the following relationships can be concluded at the 5 % level of significance:-

- There is a significant relationship between gender and awareness of expectations, amount of effort expended when purchasing an automobile and trivialization of foregone features of the unselected alternatives respectively.
- There is a significant relationship between race and level of anxiety experienced when engaging in motor vehicle purchases and psychological importance of the purchases respectively.
- There is a significant relationship between marital status and attractiveness of decision alternatives.
- There is a significant relationship between age of the motor vehicle buyer and perceived persuasibility of the salesperson when engaging in motor vehicle purchases.
- There is a significant relationship between the level of educational qualification of the motor vehicle buyer and the amount of product related information encountered and perceived quality of service respectively.
- There is a significant relationship between the occupation of the motor vehicle purchaser and unconfirmed expectations, degree of perceived salesperson persuasibility, perceived availability of information, level of confidence in the purchase decision, justification of purchases and the magnitude of cognitive dissonance experienced respectively.
- There is a significant relationship between the level of income of the motor vehicle buyer and the level of anxiety experienced when engaging in the purchases, the price of the motor vehicle and capital outlay demanded, the perceived availability of information, level of confidence in the purchase decision, the degree of cognitive overlap in decision alternatives and the extent of trivialization of foregone and attractive features of unselected alternatives respectively.

### **HYPOTHESIS 13**

There is a significant difference in the perceptions of consumers regarding each factor influencing decision-making and post-purchase evaluation (awareness of expectations,

unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively with differing biographical profiles based on gender, race, marital status, age, education, occupation and income.

**TABLE 7.41**  
**T-TEST: GENDER**

<b>VARIABLE</b>	<b>t</b>	<b>p</b>
Awareness of Expectations	5.515	0.020 *
Unconfirmed Expectations	0.403	0.526
Anxiety	3.684	0.056
Reported Dissonance	3.095	0.080
Psychological Importance	0.108	0.742
Effort	1.473	0.226
Self-concept	2.585	0.110
Price	0.235	0.628
Persuasibility	0.384	0.536
Lack of Information	0.737	0.392
Confidence	0.052	0.819
Attractiveness of Decision Alternatives	0.614	0.434
Cognitive Overlap	0.002	0.966
Service	0.447	0.504
Reported Satisfaction	0.146	0.703
Attitude Change	0.005	0.943
Trivialization	0.608	0.206
Selective Exposure	0.073	0.787
Justification	0.081	0.776
Cognitive Dissonance	0.957	0.329

Table 7.41 indicates males and females do not differ significantly in the level of unconfirmed expectations, anxiety, reported dissonance, level of psychological importance attached to the motor vehicle purchases, effort exerted, congruence of purchases with self-concept, price, perceived persuasibility, perceived availability of information, confidence, perceived attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization of foregone features, selective exposure, justification of purchases and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. However, there is a significant difference in the pre-purchase awareness of expectations of males and females at the 5 % level of significance. The result implies males and females differ in the extent to which they are aware of the product features desired when engaging in motor vehicle purchases. This result supports the intercorrelation analysis which depicts a significant relationship between awareness of expectations and gender at the 5 % level of significance.

A similar analysis was undertaken using Analysis of Variance (Levene's Test of Homogeneity of Variance) on the impact of the other biographical variables (race, marital status, age, education, occupation, income) respectively (Table 7.42).

**TABLE 7.42**  
**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMEGENITY OF**  
**VARIANCE - BIOGRAPHICAL VARIABLES**

VARIABLE	RACE		MARITAL STATUS		AGE	
	F	p	F	p	F	p
Awareness of Expectations	0.248	0.863	0.491	0.689	0.693	0.598
Unconfirmed Expectations	0.663	0.575	0.217	0.884	0.449	0.773
Anxiety	0.858	0.464	0.419	0.739	0.290	0.884
Reported Dissonance	0.433	0.730	0.523	0.667	0.472	0.756
Psychological Importance	0.419	0.740	0.206	0.892	0.555	0.695
Effort	1.648	0.180	1.242	0.296	0.957	0.432
Self-concept	1.621	0.186	1.442	0.232	0.562	0.691
Price	1.020	0.385	0.314	0.815	0.662	0.619
Persuasibility	0.051	0.985	0.305	0.822	1.210	0.308
Lack of Information	0.776	0.509	0.279	0.841	0.147	0.964
Confidence	1.190	0.315	1.469	0.224	0.923	0.452
Attractiveness of Decision Alternatives	1.048	0.372	0.093	0.964	1.017	0.400
Cognitive Overlap	1.294	0.278	0.589	0.623	0.044	0.440
Service	0.047	0.986	0.453	0.716	1.549	0.190
Reported Satisfaction	1.078	0.359	0.679	0.566	0.240	0.915
Attitude Change	0.728	0.537	0.256	0.857	0.345	0.848
Trivialization	0.749	0.524	0.806	0.492	1.621	0.170
Selective Exposure	0.535	0.659	1.055	0.369	0.493	0.741
Justification	0.432	0.730	0.508	0.677	0.145	0.965
Magnitude of Cognitive Dissonance	0.657	0.580	0.327	0.806	0.504	0.733

**TABLE 7.42 (CONTINUED)**  
**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMOGENEITY OF**  
**VARIANCE - BIOGRAPHICAL VARIABLES**

VARIABLE	EDUCATION		OCCUPATION		INCOME	
	F	p	F	p	F	p
Awareness of Expectations	0.940	0.422	2.111	0.044 *	5.813	0.000 *
Unconfirmed Expectations	0.447	0.720	1.387	0.212	0.527	0.788
Anxiety	0.295	0.829	2.468	0.019 *	1.376	0.226
Reported Dissonance	0.310	0.818	2.363	0.024 *	1.593	0.151
Psychological Importance	0.743	0.528	0.563	0.785	0.671	0.674
Effort	1.403	0.243	0.325	0.942	1.264	0.276
Self-concept	0.405	0.749	1.731	0.104	1.013	0.418
Price	0.370	0.775	2.460	0.019 *	0.309	0.932
Persuasibility	1.064	0.366	1.745	0.101	0.411	0.871
Lack of Information	0.169	0.917	2.160	0.039 *	1.706	0.121
Confidence	0.570	0.636	2.729	0.010 *	0.946	0.463
Attractiveness of Decision Alternatives	0.586	0.625	0.772	0.611	1.595	0.150
Cognitive Overlap	0.035	0.991	0.683	0.686	1.038	0.402
Service	0.485	0.693	3.005	0.005 *	0.744	0.614
Reported Satisfaction	0.498	0.648	2.209	0.035 *	1.116	0.355
Attitude Change	0.506	0.679	1.058	0.392	0.960	0.454
Trivialization	0.760	0.518	2.524	0.017 *	0.843	0.538
Selective Exposure	0.821	0.484	0.836	0.558	0.732	0.624
Justification	0.352	0.788	1.837	0.082	0.678	0.668
Magnitude of Cognitive Dissonance	0.345	0.793	2.304	0.028 *	0.603	0.728

\*  $p < 0.05$



Table 7.42 indicates there is no significant difference in the respective factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) based on each biographical variable (race, marital status, age, education) respectively, at the 5 % level of significance. However, significant differences were noted in the various occupational groups on the factors influencing decision-making and post-purchase evaluation (awareness of expectations, level of anxiety experienced during the motor vehicle purchases, level of reported dissonance, perceptions of price, perceived availability of product related information, level of confidence in motor vehicle purchases, perceived quality of service, reported satisfaction, trivialization of foregone and attractive features in unchosen alternatives and magnitude of cognitive dissonance experienced) respectively, at the 5 % level of significance. A Scheffes Multiple Comparisons Test was undertaken to determine exactly where the differences lie and the following emerged:-

- Housekeepers were least aware of their pre-purchase motor vehicle expectations and requirements, that is, the motor vehicle features they desired.
- Housekeepers and service workers reported the highest level of anxiety during the purchase of their motor vehicle.
- Housekeepers and service workers reported the highest levels of dissonance.
- Housekeepers reported the highest level of dissatisfaction with the price of the motor vehicle.
- Housekeepers and artisans reported the highest degree of perceived lack of product related information when engaging in motor vehicle decision-making.
- Housekeepers and artisans reflected higher levels of lack of confidence in the purchase decision.
- Service workers perceived the quality of service to be unfavourable.
- Housekeepers and artisans reported the lowest levels of satisfaction with the purchase and purchasing process.
- Artisans engage the least in post-purchase trivialization of foregone and attractive features of alternatives not selected.

- Housewives reflected the highest levels of cognitive dissonance experienced.

Furthermore, from Table 7.42 it can be deduced, there is a significant difference in the awareness of expectations of consumers in the various income groups. A Scheffes Multiple Comparisons Test was conducted to determine exactly where the difference lies. It was found, consumers who receive an income in the upper range, namely, R8 000,00 - R9 499,00 per month, were least aware of their motor vehicle expectations and requirements prior to buying, that is, they were not sure of the motor vehicle features they desired.

Further analyses were undertaken to determine whether the biographical profile of the motor vehicle consumer influences consumer perceptions of the decision-making process and post-purchase evaluation (Table 7.41 to Table 7.42).

#### **7.2.9.4 FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION: PROFILES BASED ON MOTOR VEHICLE SPECIFIC DATA**

Factors influencing decision-making (awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service) and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) were correlated with motor vehicle specific data (Table 7.43).

#### **HYPOTHESIS 14**

There is a significant relationship between the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) and each of the motor vehicle specific data (make of motor vehicle, model, dealership, month of purchases and range of motor vehicle) respectively.

TABLE 7.43

## INTERCORRELATION: FACTORS INFLUENCING

## DECISION-MAKING AND POST-PURCHASE EVALUATION BY MOTOR VEHICLE SPECIFIC DATA

VARIABLE	AE	UE	ANX	RD	PI	EFF	SC	PRICE	PERS	LI
MAKE	0.1308 <b>0.065</b>	0.1133 <b>0.110</b>	0.0768 <b>0.279</b>	0.0895 <b>0.208</b>	0.0650 <b>0.360</b>	0.0262 <b>0.712</b>	-0.0174 <b>0.806</b>	0.0382 <b>0.592</b>	-0.0128 <b>0.858</b>	-0.0251 <b>0.724</b>
MODEL	0.1005 <b>0.157</b>	0.1105 <b>0.119</b>	0.1366 <b>0.054</b>	0.1569 <b>0.026 *</b>	0.0916 <b>0.197</b>	0.0298 <b>0.675</b>	0.0767 <b>0.280</b>	0.1174 <b>0.098</b>	0.0777 <b>0.274</b>	0.1095 <b>0.123</b>
DEALER	-0.0817 <b>0.250</b>	-0.0940 <b>0.186</b>	-0.0474 <b>0.505</b>	-0.0125 <b>0.860</b>	-0.0429 <b>0.547</b>	-0.1128 <b>0.112</b>	-0.0687 <b>0.334</b>	-0.1452 <b>0.051</b>	-0.0731 <b>0.303</b>	-0.0494 <b>0.487</b>
MONTH	-0.1144 <b>0.107</b>	-0.0699 <b>0.326</b>	-0.0540 <b>0.447</b>	-0.0369 <b>0.604</b>	-0.1258 <b>0.076</b>	-0.0515 <b>0.469</b>	-0.0134 <b>0.851</b>	-0.0887 <b>0.212</b>	-0.0408 <b>0.566</b>	-0.0566 <b>0.426</b>
RANGE	0.1229 <b>0.083</b>	-0.0057 <b>0.936</b>	-0.0231 <b>0.746</b>	-0.0130 <b>0.855</b>	0.0055 <b>0.938</b>	-0.0343 <b>0.629</b>	-0.1481 <b>0.036 *</b>	-0.0954 <b>0.179</b>	-0.0365 <b>0.607</b>	-0.0808 <b>0.256</b>

\*  $p < 0.05$ KEY

AE	-	Awareness of Expectations	EFF	-	Effort
UE	-	Unconfirmed Expectations	SC	-	Self-concept
ANX	-	Anxiety	PERS	-	Persuasability
RD	-	Reported Dissonance	LI	-	Lack of information
PI	-	Psychological Importance			

TABLE 7.43 (CONTINUED)

INTERCORRELATION: FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION BY  
MOTOR VEHICLE SPECIFIC DATA

VARIABLE	CONF	ADA	CO	SERV	RS	AC	TRIV	SE	JUST	CD
MAKE	-0.0166 <b>0.815</b>	-0.0102 <b>0.886</b>	-0.0085 <b>0.905</b>	0.0178 <b>0.802</b>	-0.0331 <b>0.642</b>	-0.0478 <b>0.502</b>	-0.0651 <b>0.359</b>	0.0335 <b>0.638</b>	-0.1065 <b>0.133</b>	0.0817 <b>0.250</b>
MODEL	0.0621 <b>0.383</b>	0.0884 <b>0.213</b>	0.0805 <b>0.257</b>	-0.0193 <b>0.786</b>	-0.0844 <b>0.235</b>	-0.1700 <b>0.016 *</b>	-0.0231 <b>0.745</b>	-0.0704 <b>0.322</b>	-0.1407 <b>0.047 *</b>	0.1341 <b>0.058</b>
DEALER	-0.0725 <b>0.308</b>	-0.0521 <b>0.463</b>	0.0165 <b>0.817</b>	-0.0591 <b>0.405</b>	-0.0389 <b>0.584</b>	0.0166 <b>0.815</b>	0.0251 <b>0.724</b>	0.0893 <b>0.208</b>	0.0016 <b>0.932</b>	-0.0615 <b>0.387</b>
MONTH	-0.0617 <b>0.385</b>	-0.0276 <b>0.698</b>	0.0747 <b>0.293</b>	0.1000 <b>0.159</b>	0.0335 <b>0.638</b>	-0.0410 <b>0.564</b>	-0.0216 <b>0.762</b>	0.1093 <b>0.123</b>	0.0559 <b>0.432</b>	-0.0491 <b>0.490</b>
RANGE	-0.1251 <b>0.078</b>	-0.0959 <b>0.177</b>	0.0104 <b>0.884</b>	-0.0784 <b>0.270</b>	-0.0575 <b>0.419</b>	-0.0181 <b>0.800</b>	-0.0409 <b>0.565</b>	0.1246 <b>0.079</b>	-0.1282 <b>0.070</b>	-0.0434 <b>0.542</b>

\*  $p < 0.05$ **KEY**

CONF -	Confidence	AC -	Attitude Change
ADA -	Attractiveness of Alternatives	TRIV -	Trivialization
CO -	Cognitive Overlap	SE -	Selective Exposure
SERV -	Service	JUST -	Justification
RS -	Reported Satisfaction	CD -	Cognitive Dissonance
PI -	Psychological Importance		
EFF -	Effort		

Table 7.43 generated 100 pairs of intercorrelations between the factors influencing decision-making and post-purchase evaluations and each motor vehicle specific variable respectively. However, only 4 pairs of variables correlate significantly at the 5 % level of significance.

On the basis of the correlations which emerged from Table 7.43, the following relationships can be concluded at the 5 % level of significance:-

- There is a significant relationship between the model of the motor vehicle purchased and reported dissonance, post-purchase attitude change and justification of purchases of the selected alternative respectively.
- There is a significant relationship between the range of motor vehicle purchased and perceptions of congruence between the motor vehicle purchased and the individual's self-concept.

A further analysis was undertaken to determine whether motor vehicle characteristics (make, model, dealership of purchases, range of motor vehicle) influences consumer perceptions of the decision-making process and post-purchase evaluation (Table 7.44).

### **HYPOTHESIS 15**

There is a significant difference in the perceptions of consumers regarding each respective factor influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) with differing motor vehicle related choices (make, model, dealership, range of motor vehicle) respectively.

**TABLE 7.44**  
**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMOGENITY OF**  
**VARIANCE - MOTOR VEHICLE SPECIFIC VARIABLES**

VARIABLE	MAKE		MODEL	
	F	p	F	p
Awareness of Expectations	0.947	0.390	0.111	0.355
Unconfirmed Expectations	2.735	0.067	1.677	0.117
Anxiety	4.897	0.008 *	2.519	0.017 *
Reported Dissonance	5.161	0.007 *	2.788	0.009 *
Psychological Importance	1.390	0.251	1.076	0.380
Effort	0.564	0.571	0.753	0.627
Self-concept	2.217	0.112	2.620	0.013 *
Price	2.493	0.085	2.870	0.007 *
Persuasibility	0.542	0.582	2.055	0.050 *
Lack of Information	4.026	0.019 *	2.651	0.012 *
Confidence	3.289	0.039 *	3.130	0.004 *
Attractiveness of Decision Alternatives	2.346	0.098	1.256	0.274
Cognitive Overlap	0.440	0.645	0.882	0.522
Service	8.209	0.000 *	3.538	0.001 *
Reported Satisfaction	0.415	0.661	1.702	0.110
Attitude Change	0.421	0.668	2.071	0.048 *
Trivialization	0.147	0.863	0.842	0.553
Selective Exposure	1.866	0.157	1.168	0.323
Justification	0.444	0.642	1.277	0.264
Magnitude of Cognitive Dissonance	5.476	0.005 *	3.185	0.003 *

\*  $p < 0.05$

TABLE 7.44 (CONTINUED)

**ANALYSIS OF VARIANCE: LEVENE'S TEST OF HOMOGENITY OF  
VARIANCE - MOTOR VEHICLE SPECIFIC VARIABLES**

VARIABLE	DEALERSHIP		RANGE OF VEHICLE	
	F	p	F	p
Awareness of Expectations	1.704	0.082	0.863	0.423
Unconfirmed Expectations	0.895	0.539	1.521	0.221
Anxiety	1.865	0.052	3.132	0.046 *
Reported Dissonance	1.966	0.039 *	3.767	0.025 *
Psychological Importance	0.407	0.942	0.231	0.794
Effort	1.454	0.159	1.291	0.277
Self-concept	4.278	0.000 *	1.593	0.206
Price	1.167	0.315	2.738	0.067
Persuasibility	1.931	0.043 *	0.662	0.517
Lack of Information	1.492	0.054	4.016	0.020 *
Confidence	1.492	0.144	2.910	0.057
Attractiveness of Decision Alternatives	1.755	0.071	1.927	0.148
Cognitive Overlap	0.530	0.868	0.262	0.772
Service	2.954	0.002 *	7.505	0.001 *
Reported Satisfaction	1.730	0.076	0.235	0.791
Attitude Change	0.455	0.917	0.967	0.382
Trivialization	3.177	0.001 *	0.012	0.998
Selective Exposure	1.104	0.361	2.780	0.064
Justification	1.344	0.209	0.203	0.817
Magnitude of Cognitive Dissonance	2.309	0.014 *	3.608	0.029 *

\*  $p < 0.05$

From Table 7.44 the following results emerged:-

- There is no significant difference in the level of awareness of expectation, degree of unconfirmed expectations, level of psychological importance to the motor vehicle purchases, amount of effort exerted, congruence of motor vehicle selected with the individual's self-concept, price, persuasibility, perceived attractiveness of decision alternatives, perceived cognitive overlap, degree of reported satisfaction, post-purchase attitude change, amount of post-purchase trivialization, selective exposure and degree of justification of purchases respectively of consumers who purchased different makes of motor vehicles, at the 5 % level of significance. However, at the 5 % level of significance there is a significant difference amongst consumers who purchased varying makes of cars with regards to amount of anxiety experienced, degree of reported dissonance, perceived availability of product related information, level of confidence in the purchase, perceived quality of service and magnitude of cognitive dissonance experienced respectively.
- There is no significant difference in the level of awareness of expectations, level of unconfirmed expectations, level of psychological importance of the motor vehicle purchases, amount of effort exerted, degree of attractiveness of decision alternatives, extent of cognitive overlap, level of reported satisfaction, degree of trivialization, selective exposure and justification of purchases respectively of consumers who purchased different models of cars, at the 5 % level of significance. However, there is a significant difference amongst consumers who purchased varying models of cars with respect to degree of anxiety experienced during purchases, level of reported dissonance, perceived congruence of purchases with the self-concept, perceived price of the motor vehicle, perceived degree of persuasibility of salesperson, perceived lack of product related information, level of confidence in purchases, perceived quality of service, degree of post-purchase attitude change and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance.
- There is no significant difference in the level of awareness of expectations, degree of unconfirmed expectations, level of anxiety during purchases, degree of psychological importance of motor vehicle purchases, amount of effort exerted, perceived suitability of price, perceived availability of information, level of confidence in purchases, perceived degree of attractiveness of decision alternatives, degree of cognitive overlap, level of



reported satisfaction, degree of post-purchase attitude change, selective exposure and justification of purchases respectively of consumers who purchased their motor vehicles at different dealerships, at the 5 % level of significance. There is however, a significant difference in the degree of reported dissonance, perceived congruence of purchases with the individual's self-concept, perceived degree of salesperson persuasiveness, perceived quality of service, degree of post-purchase trivialization of foregone and attractive features of unselected alternatives and the magnitude of cognitive dissonance experienced respectively by consumers who purchased their motor vehicles at different dealerships, at the 5 % level of significance.

- There is no significant difference in the level of awareness of expectations, unconfirmed expectations, level of psychological importance to the motor vehicle purchases, amount of effort exerted, congruence of motor vehicle selected with the individual's self-concept, price, persuasibility, level of confidence in the purchases, perceived degree of cognitive overlap amongst decision alternatives, degree of reported satisfaction, post-purchase attitude change, amount of post-purchase trivialization, selective exposure and degree of justification of purchases respectively of consumers who purchased different ranges of motor vehicles, at the 5 % level of significance. However, at the 5 % level of significance there is a significant difference amongst consumers who purchased varying ranges of cars with regards to the amount of anxiety experienced during purchases, degree of reported dissonance, perceived lack of information, perceived quality of service and magnitude of cognitive dissonance experienced respectively.

A Scheffes Multiple Comparisons Test was conducted to determine exactly where the differences lie. The following results emerged:-

- Consumers who purchased the 'top of the range' motor vehicle reported the lowest levels of anxiety and dissonance, smallest degree of perceived lack of product related information and experienced the smallest degree of cognitive dissonance. However, these consumers also perceived the quality of service received to be inferior, that is, they expressed the greatest amount of dissatisfaction with the quality of service received.

- Consumers who purchased the 'middle of the range' motor vehicles reported the highest levels of anxiety and dissonance and experienced the greatest degree of cognitive dissonance. However, they also displayed the greatest degree of satisfaction with the quality of service received.
- Consumers who purchased 'the bottom of the range' motor vehicles reflected the greatest degree of perceived lack of product related information when engaging in purchases.

#### 7.2.10 **DECISION-MAKING: AWARENESS OF EXPECTATIONS**

Respondents were requested to indicate their level of awareness of expectations when engaging in motor vehicle purchases. In other words, the intention was to determine whether consumers were aware of the motor vehicle features they were seeking.

The mean responses determined on a 1 to 5 point Likert scale, ranging from strongly disagree (1) to strongly agree (5) about being aware of motor vehicle features desired was 4.405. The result indicates consumers are highly aware of their motor vehicle needs, desired features and expectations of the purchased motor vehicle. On the basis of the mean score (Mean = 4.405) consumers were categorised into those who are not fully aware of expectations (less than mean score) and those who are aware of their motor vehicle expectations (equal to and greater than mean score). Differences in perceptions of consumers in these two categories (those not fully aware and those aware of motor vehicle expectations) on each of the factors influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively were determined (Table 7.45).

**TABLE 7.45**  
**ANALYSIS OF VARIANCE: AWARENESS OF EXPECTATIONS**

VARIABLE	F RATIO	F PROBABILITY
Unconfirmed Expectations	6.8616	0.0095 *
Anxiety	9.1653	0.0028 *
Reported Dissonance	8.2434	0.0045 *
Psychological Importance	0.7978	0.3729
Effort	1.2282	0.2691
Self-concept	14.8952	0.0002 *
Price	6.5029	0.0115 *
Persuasibility	10.1457	0.0017 *
Lack of Information	6.4556	0.0118 *
Confidence	10.0567	0.0018 *
Attractiveness of Decision Alternatives	6.6023	0.0109 *
Cognitive Overlap	5.8929	0.0161 *
Service	3.6939	0.0560
Reported Satisfaction	7.6271	0.0063 *
Attitude Change	1.0062	0.3170
Trivialization	2.2033	0.1393
Selective Exposure	1.9341	0.1659
Justification	2.3890	0.1238
Cognitive Dissonance	10.2186	0.0016 *

#### **HYPOTHESIS 16**

There is a significant difference in the perceptions of motor vehicle consumers with varying levels of awareness of expectations during pre-purchase and each factor influencing decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives,

cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) respectively.

From Table 7.45 it can be deduced there is a significant difference in the perceptions of motor vehicle consumers with differing levels of awareness of expectations on each factor influencing decision-making and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, reported satisfaction and magnitude of cognitive dissonance) respectively, at the 5 % level of significance.

It can also be concluded from Table 7.45 there is no significant difference in the perceptions of consumers with differing levels of awareness of motor vehicle expectations on each factor influencing decision-making and post-purchase evaluations (psychological importance, effort, service, attitude change, trivialization, selective exposure, justification of purchases) respectively, at the 5 % level of significance.

Furthermore, investigations were undertaken to determine whether differences in the level of awareness of expectations of the motor vehicle is related to biographical variables (Table 7.46).

#### **HYPOTHESIS 17**

There is a significant relationship between the level of consumer awareness of expectations of the motor vehicle during pre-purchase and each of the biographical variables (race, marital status, age, education, occupation) respectively.

**TABLE 7.46**  
**PEARSON CHI-SQUARE: AWARENESS OF EXPECTATION BY**  
**BIOGRAPHICAL VARIABLES**

<b>BIOGRAPHICAL VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Race	0.4468	3	0.9304
Marital Status	3.7679	3	0.2876
Age	2.6026	4	0.6264
Education	0.3879	3	0.9427
Occupation	6.3953	7	0.4944

From Table 7.46 it can be deduced there is no significant relationship between the level of consumer awareness of expectations of the motor vehicle and each of the biographical variables (race, marital status, age, education, occupation) respectively. The results imply race, marital status, age, education and occupation do not influence consumers' level of awareness of motor vehicle product features desired.

#### **HYPOTHESIS 18**

There is a significant relationship between the level of consumer awareness of expectations of the motor vehicle and each of the motor vehicle specific features (make, model, range) respectively.

**TABLE 7.47**  
**PEARSON CHI-SQUARE: AWARENESS OF EXPECTATIONS BY MOTOR**  
**VEHICLE SPECIFIC FEATURES**

<b>MOTOR VEHICLE FEATURES</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Make of vehicle	2.1143	2	0.3474
Model of vehicle	5.7140	7	0.5735
Range of vehicle	2.4285	2	0.2969

From Table 7.47 it can be concluded there is no significant relationship between the level of consumer awareness of expectations of the motor vehicle and each motor vehicle specific characteristic (make, model, range) respectively, at the 5 % level of significance. The results imply, the level of awareness of motor vehicle product features desired before purchases is not associated with the make, model and range of motor vehicle ultimately purchased.

#### **7.2.11 POST-PURCHASE EVALUATION: REPORTED DISSONANCE**

The relationship between reported dissonance and the number of alternative makes of motor vehicle considered, post-purchase advertisement readership behaviour, repeat purchase intentions and post-purchase communication respectively, were analysed.

##### **7.2.11.1 NUMBER OF ALTERNATIVES CONSIDERED**

Analyses were undertaken to determine whether reported dissonance is related to the number of alternative makes of motor vehicles considered before purchases (Table 7.48) and advertisement readership after purchases (Table 7.49).

#### **HYPOTHESIS 19**

There is a significant difference in the level of reported dissonance amongst consumers who varied in the number of alternative makes of motor vehicles considered before purchases.

**TABLE 7.48**  
**KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE:**  
**REPORTED DISSONANCE**

VARIABLE	CORRECTED FOR TIES	
	H	p
Number of alternative makes of motor vehicle considered	2.5679	0.2769

Since  $p > 0.05$ , it can be concluded from Table 7.48 there is no significant difference in the level of reported dissonance amongst consumers who varied in the number of alternative

makes of motor vehicle considered at the 5 % level of significance.

#### 7.2.11.2 ADVERTISEMENT READERSHIP BEHAVIOUR

Individuals' advertisement readership habits were categorised into those who 'Read advertisements of purchased make only', those who 'Observed advertisements of other unselected makes but did not pay attention to the content' and those who 'Read advertisements of selected makes and unselected makes equally'.

#### HYPOTHESIS 20

There is a significant difference in the post-purchase advertisement readership behaviour of consumers with varying levels of reported dissonance (Table 7.49).

**TABLE 7.49**  
**KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE: REPORTED**  
**DISSONANCE**

VARIABLE	CORRECTED FOR TIES	
	H	p
Advertisement readership behaviour	1.5759	0.4558

From Table 7.49 it can be concluded there is no significant difference in the post-purchase advertisement readership behaviour of consumers with differing degrees of reported dissonance.

#### 7.2.11.3 REPEAT PURCHASE INTENTIONS AND BEHAVIOUR

The impact of the level of reported dissonance on intentions to engage in repeat purchases of the selected motor vehicle (or not) was analysed. The mean rating on the level of reported dissonance was determined. Those consumers with scores less than the mean rating were considered to report low, if not insignificant, levels of reported dissonance and those respondents with scores greater than the mean rating were seen to report high, if not very significant, level of reported dissonance. These two categories (low level of reported

dissonance, high levels of reported dissonance) were cross-tabulated with intentions to engage in repeat purchases of the selected motor vehicle, or not (Table 7.50).

#### **HYPOTHESIS 21**

There is a significant relationship between the level of reported dissonance amongst motor vehicle consumers and their intentions to engage in repeat purchases of the selected motor vehicle, or not.

**TABLE 7.50**  
**PEARSON CHI-SQUARE: LEVEL OF REPORTED DISSONANCE**

<b>VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Intention to engage in repeat purchases of selected motor vehicle	10.6482	1	0.0011 *

\*  $p < 0.05$

Since  $p < 0.05$  it can be deduced from Table 7.50 there is a significant relationship between the level of reported dissonance and intentions to engage in repeat purchases of the selected motor vehicle (or not) at the 5 % level of significance.

#### **7.2.11.4 AFTER-SALES COMMUNICATION**

An analysis was undertaken to determine whether the presence or absence of after-sales communication impacts on the level of reported dissonance (Table 7.51).

#### **HYPOTHESIS 22**

There is a significant relationship between after sales communication and the level of reported dissonance.



**TABLE 7.51**  
**PEARSON CHI-SQUARE: LEVEL OF REPORTED DISSONANCE**

VARIABLE	r	DEGREES OF FREEDOM	SIGNIFICANCE (p)
Post-purchase communication	26.1960	14	0.0244 *

\*  $p = 0.05$

From Table 7.51 it can be concluded there is a significant and direct relationship between post-purchase communication and the level of reported dissonance, at the 5 % level of significance.

A similar analysis was undertaken with regards to the level of cognitive dissonance experienced.

#### **7.2.12 POST-PURCHASE EVALUATION: MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED**

The key area of interest is whether a significant relationship exists between the magnitude of cognitive dissonance experienced and the make of the motor vehicle selected (Table 7.52).

#### **HYPOTHESIS 23**

There is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle consumers and the make of the automobile purchased.

**TABLE 7.52**  
**PEARSON CHI-SQUARE: MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED**

VARIABLE	r	DEGREES OF FREEDOM	SIGNIFICANCE (p)
Make of motor vehicle	9.2728	2	0.0097 *

\*  $p < 0.05$

Since  $p < 0.05$  it can be concluded from Table 7.52 there is a significant relationship between the magnitude of cognitive dissonance experienced by consumers and the make of the motor vehicle purchased.

In addition, research was undertaken to determine whether the level of cognitive dissonance experienced is related to the number of alternative makes of motor vehicle considered before purchases (Table 7.53) and post-purchase advertisement readership characteristics (Table 7.55).

#### **HYPOTHESIS 24**

There is a significant difference in the magnitude of cognitive dissonance experienced amongst consumers who varied in the number of alternative makes of vehicles considered prior to purchases.

**TABLE 7.53**

**KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE: MAGNITUDE OF  
COGNITIVE DISSONANCE EXPERIENCED**

VARIABLE	CORRECTED FOR TIES	
	H	p
Number of alternative makes of motor vehicles considered	1.9928	0.3692

From Table 7.53 it can be concluded there is no significant difference in the magnitude of cognitive dissonance experienced by consumers who vary in the number of alternatives considered before purchases at the 5 % level of significance.

#### **HYPOTHESIS 25**

There is a significant difference in the post-purchase advertisement readership characteristics of consumers with differing magnitudes of cognitive dissonance experienced (Table 7.54).

**TABLE 7.54****KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE: MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED**

VARIABLE	CORRECTED FOR TIES	
	H	p
Advertisement readership behaviour	0.229	0.9866

Since  $p > 0.05$  it can be deduced from Table 7.54 there is no significant difference in the after purchase advertisement readership habits of consumers who experience varying degrees of cognitive dissonance.

**HYPOTHESIS 26**

There is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle buyers and their intentions to engage in repeat purchases of the selected motor vehicle.

**TABLE 7.55****PEARSON CHI-SQUARE: LEVEL OF COGNITIVE DISSONANCE EXPERIENCED**

VARIABLE	r	DEGREES OF FREEDOM	SIGNIFICANCE (p)
Intention to engage in repeat purchases of selected motor vehicle	9.9962	1	0.0016 *

\*  $p < 0.05$

From Table 7.55 it can be concluded there is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle consumers and their intentions to engage in repeat purchases of the selected motor vehicle, or not, at the 5 % level of significance.

In addition, the relationship between post-purchase communication and the level of cognitive dissonance experienced by motor vehicle consumers, was investigated (Table 7.56).

#### **HYPOTHESIS 27**

There is a significant relationship between after-sales communication and the magnitude of cognitive dissonance experienced by motor vehicle consumers.

**TABLE 7.56**  
**PEARSON CHI-SQUARE: MAGNITUDE OF COGNITIVE DISSONANCE**  
**EXPERIENCED**

<b>VARIABLE</b>	<b>r</b>	<b>DEGREES OF FREEDOM</b>	<b>SIGNIFICANCE (p)</b>
Post-purchase communication	23.8229	14	0.0481

From Table 7.56 it is evident, there is a significant relationship between post-purchase communication and the magnitude of cognitive dissonance experienced by motor vehicle buyers, at the 5 % level of significance.

The appropriateness of the nineteen key dimensions, impacting on decision-making and post-purchase evaluation, used to determine the magnitude of cognitive dissonance experienced by motor vehicle consumers was also established (Table 7.57).

#### **HYPOTHESIS 28**

The nineteen dimensions of cognitive dissonance (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification) significantly explain the variance in the magnitude of cognitive dissonance experienced.

**TABLE 7.57**  
**STEPWISE MULTIPLE REGRESSION: MAGNITUDE OF COGNITIVE**  
**DISSONANCE EXPERIENCED**

MULTIPLE REGRESSION					
Multiple R = 0.9960			Significance of R = 0.0000		
Multiple R Square = 0.9920					
Adjusted R Square = 0.9916					
ANALYSIS OF VARIANCE					
SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
Regression	8	99 965.9886	12 495.7486	2 942.872	0.0000
Residual	191	811.0064	4.2461		

Table 7.57 indicates, 99.16 % of the variance in the magnitude of cognitive dissonance experienced was significantly explained by eight dimensions of cognitive dissonance (awareness of expectation, unconfirmed expectations, reported dissonance, effort, self-concept, price, persuasibility of salesperson, level of confidence in the purchase decision). The F-ratio of 2 942.872 ( $p = 0.0000$ ) indicates the regression of magnitude of cognitive dissonance experienced expressed by the R square ( $R^2 = 0.9916$ ) is statistically significant. Therefore, only eight dimensions (awareness of expectations, unconfirmed expectations, reported dissonance, effort, self-concept, price, persuasibility, confidence) significantly explain the variance in the magnitude of cognitive dissonance experienced.

A summary Analysis of the Variance indicates the amount of variance attributed to each dimension of cognitive dissonance (Table 7.58).

**TABLE 7.58**

**STEPWISE MULTIPLE REGRESSION: SUMMARY ANALYSIS OF VARIANCE -  
FACTORS IMPACTING ON THE MAGNITUDE OF COGNITIVE DISSONANCE  
EXPERIENCED**

<b>SOURCE</b>	<b>DF</b>	<b>SUM OF SQUARES</b>	<b>MEAN SQUARE</b>	<b>F RATIO</b>	<b>F PROB.</b>
Awareness of expectations	1	18.6045	18.6045	4.382	0.0377
Unconfirmed expectations	1	3464.5890	3464.5890	815.945	0.0000
Reported Dissonance	1	898.3790	898.3790	211.577	0.0000
Effort	1	150.5799	150.5799	35.463	0.0000
Self-concept	1	1576.2692	1576.2692	371.227	0.0000
Price	1	61.8072	61.8072	14.556	0.0002
Persuasibility	1	203.0977	203.0977	47.832	0.0000
Confidence	1	56.2704	56.2704	13.252	0.0004
<b>Explained</b>	<b>8</b>	<b>99965.9886</b>	<b>12495.7486</b>	<b>2942.872</b>	<b>0.0000</b>
<b>Residual</b>	<b>191</b>	<b>811.0064</b>	<b>4.2461</b>		
<b>TOTAL</b>	<b>199</b>	<b>100776.9950</b>	<b>506.4171</b>		

Table 7.58 indicates the eight dimensions (awareness of expectations, unconfirmed expectations, reported dissonance, effort, self-concept, price, persuasibility, confidence) explains the variance in the magnitude of cognitive dissonance experienced in varying degrees. The impact of these variables on the magnitude of cognitive dissonance in descending level of influence are unconfirmed expectations (Mean = 3464,5890), perceived incongruence between motor vehicle and self-concept (Mean = 1567.2692), degree of reported dissonance (Mean = 898.3790), extent of salesperson persuasiveness (Mean = 203.0977), level of effort exerted during purchases (Mean = 150.5799), perceived suitability of price (Mean = 61.8072), level of confidence in purchase decision (Mean = 56.2704) and awareness of expectations (Mean = 18.6045).

These dimensions account for the 99.16 % of the variance in magnitude of cognitive dissonance experienced (Explained Mean Squares = 12495.7486). The remaining and negligible 0.84 % of the variance, that is, residual mean squares = 4.2461 is explained by other factors. Eleven dimensions of cognitive dissonance included in the study (anxiety, psychological importance, lack of information, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization, selective exposure, justification of purchases) do not significantly explain the variance in the magnitude of cognitive dissonance experienced (Table 7.59).

**TABLE 7.59**

**MULTIPLE REGRESSION: FACTORS WHICH DO NOT EXPLAIN VARIANCE  
IN MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED**

<b>VARIABLE</b>	<b>F</b>	<b>SIGNIFICANCE F</b>
Anxiety	1.338	0.2488
Psychological Importance	3,676	0.0567
Lack of Information	1.658	0.1994
Attractiveness of Decision Alternatives	3.305	0.0706
Cognitive Overlap	1.146	0.2857
Service	0.465	0.4959
Reported Satisfaction	0.390	0.8441
Attitude Change	2.361	0.1261
Trivialization	0.355	0.5522
Selective Exposure	0.122	0.7279
Justification	1.551	0.2146

From Table 7.59 it can be deduced, since  $p > 0.05$  for each of the dimensions (level of anxiety experienced during purchases, degree of psychological importance, perceived lack of information, perceived attractiveness of decision alternatives, extent of cognitive overlap, perceived quality of service, reported satisfaction, degree of post-purchase attitude change,

trivialization of foregone features of unselected alternatives, selective exposure and justification of purchases), these factors fail to significantly explain the variance in the magnitude of cognitive dissonance experienced. It must be noted, although not significant, the impact of the degree of psychological importance of the motor vehicle purchases ( $p = 0.0567$ ) and the perceived attractiveness of decision alternatives ( $p = 0.0706$ ) on the magnitude of cognitive dissonance experienced respectively, is close to statistical significance.

#### **7.2.13 ECONOMETRIC MODEL: THE ECONOMIC THEORY OF INDIVIDUAL CHOICE**

When faced with a choice, an individual views each option as a bundle of attributes. The consumer then forms an overall assessment of each alternative such that the chosen one has the highest overall evaluation. Although the econometric model has predictive value, its purpose here was not to determine probability of purchase of a specific make of motor vehicle. Instead, the aim is to firstly, verify individuals make choices by considering all relevant information available to the decision maker at the time of choice. Secondly, the objective is to confirm the individual chooses the option which optimizes some utility function defined across this information set.

Consumers were requested to reflect the level of importance attached to various pre-purchase evaluative criteria (price, style, economy, performance, roominess, popularity, colour, speed) on the make of vehicle purchased. They were also required to indicate the level of importance attached to these evaluative criteria on the most favourable alternative make of motor vehicle considered.

#### **HYPOTHESIS 29**

When faced with a set of options, consumers choose that option thought to deliver the highest overall value.



The econometric model was adopted in the following way:-

Let  $X_i$  be a vector of the measured attributes of choice option  $i$ , and let  $V_i(X_i)$  be a preference mapping which links the vector  $X_i$  to a summary indicator of the overall utility or value of  $i$ .  $V$  is assumed to be a linear combination of the set of observed attributes of  $i$ :

$$V_i(X_i) = b_i + \sum_{k=1}^m b_k x_{ik} \quad (1.1)$$

where  $x_{ik}$  is the observed value of option  $i$  on attribute  $k$  (such as price),  $k = 1, \dots, m$ , and  $b_i$  and  $b_k$ ,  $k = 1, \dots, m$  are scaling parameters. Expression (1.1) presumes an intercept  $b_i$  which is unique to each alternative, and a set of generic attribute effects  $b_k$ ,  $k = 1, \dots, m$ . The alternative-specific intercept is designed to capture the systematic constant component in the attractiveness of option  $i$  not captured by the attribute vector  $X_i$ . Expression (1.1) may be expanded to include higher-order cross products among attributes, but this was not investigated here as it falls outside the scope of the study. In this study,  $b_i$  was allocated a value of 1 since both the purchased and the most favourable make of motor vehicle considered were evaluated across the same set or combination of motor vehicle product features. It was found, the majority of consumers (94.5 %) perceived greater utility out of the purchased make of motor vehicle, and therefore purchased it. Only a small segment of consumers (5.5 %) attached greater utility to the most favourable alternative considered but purchased another make of motor vehicle. Reasons for such behaviour were analysed and it was observed:-

- Although these consumers attached greater utility to the most favourable alternative considered, they purchased another make of motor vehicle because it was cheaper or was suitable on the basis of economy and price. In other words, the most favourable alternative considered had higher ratings on style, performance, roominess, popularity, colour and speed and lower ratings on price and economy than the purchased make. Hence, consumers who attached value to these product attributes purchased the most 'economical vehicle' and not the 'most favoured one'.

- Although these consumers attached greater utility to the most favourable alternative considered, they purchased another make of motor vehicle because of better resale value.
- Although these consumers attached greater value to the most favourable alternative considered, they eventually decided to 'stay with the tried and tested'.

Therefore, the hypothesis is supported because when faced with a set of options, consumers choose that option thought to deliver the highest level of perceived gratification or utility. The result again reflects, consumers engage in rational decision-making. They engage in sophisticated and complex decision-making when the purchases involves a tremendous amount of expenditure, for example, the purchase of a motor vehicle. These consumers engage in information search and use evaluative criteria to assess competing alternatives in order to select the option capable of yielding the greatest utility or degree of gratification.

### **7.3 QUALITATIVE ANALYSES**

At the end of the questionnaire an open-ended question was asked so as to give respondents an opportunity to comment of any aspect regarding the purchase of their motor vehicle. This question was optional. Forty-four percent of the respondents commented. A qualitative analysis was undertaken on the positive comments, negative aspects of the purchases, suggestions for improvement presented and other factors (Table 7.60)

**TABLE 7.60**  
**QUALITATIVE ANALYSES: COMMENTS REGARDING MOTOR VEHICLE**  
**PURCHASES**

COMMENTS	FREQUENCY OF COMMENT
<b>POSITIVE COMMENTS</b>	<b>51</b>
Successful/Performance car	33
Good service during purchases and after sales	11
Economical	3
Good Resale Value	4
<b>NEGATIVE COMMENTS</b>	<b>34</b>
Unavailability of colour	1
Lack of information from salesperson/dealership during the decision-making process	3
Poor service during and after sales	11
Mechanical problems	2
Technical problems	14
Uneconomical	3
<b>SUGGESTIONS FOR IMPROVEMENT</b>	<b>8</b>
<b>OTHER FACTORS</b>	<b>3</b>
Desire for luxury car	1
Desire for performance car in the range	1
Opportunity cost	1

Table 7.60 reflects a significant number of motor vehicle consumers expressed satisfaction on the successful performance of the vehicle. Other positive comments included good service during and after sales, economical vehicle and good resale value.

Negative comments incorporated unavailability of colour, lack of product related information during purchases, poor service during and after sales, uneconomical vehicle, mechanical and technical problems experienced on brand new motor vehicle.

Negative comments incorporated unavailability of colour, lack of product related information during purchases, poor service during and after sales, uneconomical vehicle, mechanical and technical problems experienced on brand new motor vehicle.

Suggestions for improvement were made and other factors capable of influencing the magnitude of cognitive dissonance experienced include the desire for a luxury car, desire for a 'top of the range' motor vehicle and the opportunity cost of foregoing other activities, for example, going on a holiday, had the money not been spent on a brand new motor vehicle.

#### **7.4 QUANTITATIVE ANALYSIS OF THE QUESTIONNAIRE**

The 'goodness' or 'appropriateness' of the questionnaire used in the study was quantitatively analysed to determine its reliability and validity. The former was established using Factor Analysis, whilst the consistency of the measuring instrument was determined by means of a reliability estimate, Cronbach's Coefficient Alpha.

##### **7.4.1 FACTOR ANALYSIS**

A principal component analysis was used to extract initial factors and resulted in 28 factors. An iterated principal factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. Twenty two factors with latent roots greater than unity were extracted from the factor loading matrix. The factor matrix and the percentage of total variance explained by each factor are reflected in Table 7.61. Only items with loading ">0.29" were regarded as being significant (Erwee & Pottass 1982: 91). Furthermore, when items were significantly loaded on more than one factor only that with the highest value was acknowledged.

**TABLE 7.61**

**VARIMAX ROTATED FACTOR MATRIX ON THE MAGNITUDE OF  
COGNITIVE DISSONANCE EXPERIENCED BY MOTOR VEHICLE BUYERS:  
FINAL STATISTICS**

<b>FACTOR</b>	<b>COMMUNALITY</b>	<b>EIGENVALUE</b>	<b>PERCENT OF TOTAL VARIANCE</b>
1	0.69171	39.09613	34.3
2	0.69255	7.58239	6.7
3	0.66069	5.80526	5.1
4	0.78588	3.99154	3.5
5	0.80361	3.00781	2.6
6	0.61131	2.43571	2.1
7	0.63630	2.41444	2.1
8	0.65769	2.25554	2.0
9	0.77700	2.04457	1.8
10	0.80764	2.01321	1.8
11	0.82615	1.76115	1.5
12	0.83696	1.67373	1.5
13	0.67620	1.66968	1.5
14	0.84321	1.52702	1.3
15	0.89230	1.40227	1.2
16	0.88745	1.30688	1.1
17	0.68329	1.26146	1.1
18	0.87559	1.23128	1.1
19	0.89100	1.15410	1.0
20	0.82312	1.13213	1.0
21	0.81808	1.07395	0.9
22	0.75013	1.02625	0.9

Table 7.61 indicates, fifty seven items have high loadings on Factor 1, which represents 34.3 % of the total variance. The following variables loaded significantly on this factor:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Unconfirmed Expectations	0.63524
Anxiety	0.72052
Reported Dissonance	0.78671
Psychological Importance	0.53866
Self-concept	0.69414
Price	0.57217
Persuasibility	0.66320
Lack of Information	0.59646
Confidence	0.65179
Cognitive Overlap	0.41562
Reported Satisfaction	0.56187
Attitude Change	0.46082

Hence, Factor 1 can be described as the **magnitude of cognitive dissonance experienced**.

Factor 2 accounts for 6.7 % of the total variance and is made up of 15 items. The variables loading significantly on this factor are:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Service	0.68047
Reported Satisfaction	0.62761

Items of Factor 2 relate to the quality of service received and reported satisfaction based on the quality of service. Factor 2 may therefore, be labelled as **perceived quality of service received**.

Nine factors have high loadings on Factor 3, which accounts for 51 % of the total variance. Three variables loaded significantly on this factor.

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Reported Satisfaction	0.48962
Attitude Change	0.64273
Justification	0.50052

Items on Factor 3 refer to reported satisfaction in post-purchases, post-purchases attitude change and justification of purchases based on the degree of satisfaction. Factor 3 may hence, be labelled as degree of **reported satisfaction**.

Factor 4 accounts for 3.5 % of the total variance and is made up of 7 items. The following variables loaded significantly on this factor:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Effort	0.69517
Self-concept	0.69597

Items on Factor 4 relate to the effort exerted during purchases on the degree to which the alternative purchased reflects the individual's self-concept. Factor 4 may be called degree of **effort exerted** during purchases.

Factor 5 accounts for 2.6 % of the total variance and is made up of 13 items. The variables loaded significantly on this factor are:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Price	0.34214
Persuasibility	0.31240
Lack of Information	0.52442
Confidence	0.48186

Although lack of information has the highest average loading, Factor 5 is labelled level of confidence in purchases since questions on the latter are based on the perceived suitability of price, perceived persuasiveness of the salesperson and perceived **lack of product related information**.

Four items have high loadings on Factor 6, which accounts for 2.1 % of the total variance. Only one variable, that is, trivialization loaded significantly on the factor with an average loading of 0.714125. Factor 6 may be labelled as **trivialization of foregone features** of unselected alternatives.

Factor 7 also accounts for 2.1 % of the total variance and comprises of 4 items. Just one variable, that is, attractiveness of decision alternatives, loaded significantly on this factor with an average loading of 0.657365. Factor 7 may be called perceived **attractiveness of decision alternatives**.

Factors 8, 9 and 18 accounts for 2.0 %, 1.8 % and 1.1 % of the total variance respectively. Furthermore, these factors contained 3, 2 and 1 item/s respectively. Only one variable, that is, selective exposure, loaded significantly on Factors 8, 9 and 18 with average loadings of 0.78255, 0.774635 and 0.65912 respectively. Factors 8, 9 and 18 may therefore, be labelled as degree of post-purchase **selective exposure**.

Four items have high loadings in Factor 10, which accounts for 1.8% of the total variance. The only variable loading significantly on this factor is cognitive overlap with an average loading of 0.590475. Factor 10 may be labelled as perceived as the degree of **cognitive overlap** between decision alternatives.

Factor 11 accounts for 1.5 % of the total variance and comprises of 5 items. Only one variable, that is, self-concept, loaded significantly on this factor with an average loading of 0.516546. Hence, Factor 11 may be labelled as perceived congruence between purchase and **self-concept**.



Factor 12 accounts for 1.5 % of the total variance and comprises of 5 items. The variables loaded significantly on this factor are:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Psychological Importance	0.60883
Effort	0.33581
Attitude Change	0.51958

Although psychological importance has the highest average loading, Factor 12 is labelled as post-purchase **attitude change** since questions on the latter are based on the degree of psychological importance of purchases and amount of effort exerted during the decision-making process.

Factor 13 and Factor 19 account for 1.5 % and 1.0 % of the total variance respectively. Furthermore, these factors incorporate 2 and 1 items/s respectively. Only one variable, that is, psychological importance, loaded significantly on Factors 13 and 19 with average factor loadings of 0.708505 and 0.64964 respectively. Therefore, Factors 13 and 19 may be labelled as **psychological importance of the purchase**.

Factor 14 and Factor 16 account for 1.3 % and 1.1 % of the total variance respectively. Furthermore, these factors comprise of 3 and 2 items respectively. Only one variable, namely, unconfirmed expectations, loaded significantly on Factors 14 and 16 with average loadings of 0.618363 and 0.567145 respectively. Therefore, Factors 14 and 16 may be labelled as the degree of **unconfirmed expectations**.

Two items have high loadings on Factor 15, which accounts for 1.2 % of the total variance. Only one variable, namely, price, loaded significantly on this factor with an average loading of 0.61114. Factor 15 may be called perceived suitability of **price**.

Factor 17 accounts for 1.1 % of the total variance and incorporates 4 items. Two variables loaded significantly on this factor:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Persuasibility	0.33544
Service	0.55791

Although service has the higher average loading, Factor 17 is labelled as perceived persuasiveness of salesperson since questions on the quality of service received relate to the degree of **persuasibility of the salesperson** during purchases.

Factor 20 accounts for 1.0 % of the total variance and comprises of just one item. This factor has an average loading of 0.77319 and is called **awareness of expectations** before purchases.

Three items have significant loadings on Factor 21, which accounts for 0.9 % of the total variance. Three variables loaded significantly on this factor:-

<u>VARIABLE</u>	<u>AVERAGE LOADING</u>
Price	0.31318
Lack of Information	0.36101
Selective Exposure	0.49749

Although selective exposure has the highest average loading, Factor 21 is labelled as perceived **lack of product related information**, since the questions on the dimension of price relate to the lack of information concerning price and also because questions regarding the degree of selective exposure are based on perceived lack of product related information during purchases.

Factor 22 accounts for 0.9 % of the total variance and comprises of just one item. This factor has an average loading of 0.41051 and is labelled level of **anxiety** during purchases.

#### 7.4.2 CRONBACH'S COEFFICIENT ALPHA

The internal consistency of the questionnaire or the degree of homogeneity among the items was assessed using Cronbach's Coefficient Alpha (Table 7.62). Due to the multiplicity of dimensions of the magnitude of cognitive dissonance experience, measured on a 1 to 5 point Likert scale in the study, the Cronbach's Coefficient Alpha was considered the most suitable since it "has the most utility of multi-item scales at the interval level of measurement" (Cooper & Emory 1995: 155).

**TABLE 7.62**  
**CRONBACH'S COEFFICIENT ALPHA: RELIABILITY ESTIMATE**

Standardised item alpha	=	0.8951
Cronbach's Alpha	=	0.8908

The closer the value of the Coefficient Alpha to 1, the greater the reliability of the questionnaire. Hence, the Coefficient Alpha of 0.8908 in Table 7.62 indicates the questionnaire is highly reliable and can consistently measure the dimensions of the magnitude of cognitive dissonance it is designed to measure. In other words, the measuring instrument is capable of consistently reflecting the same underlying constructs. Furthermore, it indicates a high degree of homogeneity amongst the questionnaire items.

#### 7.5 ADEQUACY OF THE SAMPLE

The Kaiser-Olkin Measure of Sampling Adequacy and the Bartlett Test of Sphericity were computed (Table 7.63).

**TABLE 7.63**  
**MEASURE OF SAMPLING ADEQUACY**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	=	0.87062	
Bartlett's Test of Sphericity	=	21059.071,	Significance = 0.00000

The closer the measure of adequacy to 1, the greater the appropriateness of the sample. From Table 7.63 it can be concluded, the research sample is suitable and adequate (Sampling adequacy = 0.87062) and the degree of sphericity is significant. Since the value is 0, Bartlett's test of sphericity implies one or more dependent variables is a linear function of another. Since the observed significance is below the set level of significance (5 %), we are able to conclude there are dependencies among the nineteen key variables of the study depicting dissonance arousal, dissonance reduction strategies and factors impacting on the magnitude of cognitive dissonance experienced. Therefore, the Barlett's test of sphericity confirms the appropriateness in analysing MANOVA results, that is, there is no need to return to separate univariate tests only. The results indicate, the normality and homoscedasticity preconditions are satisfied.

## 7.6 CONCLUSION

The results yielded by the empirical study enables an analysis and understanding of the factors impacting on the decision-making process and post-purchased evaluation, with specific reference to the magnitude of cognitive dissonance experienced by motor vehicle consumers. An exploration into buyers' motivations to purchase, level of importance attached to product criteria, level of awareness of expectations prior purchases, decision-making abilities, post-purchase advertisement readership behaviour, intentions to engage in repeat purchases, perceptions of the dimensions influencing decision-making and post-purchase evaluation, perceptions of after-sales communication, dissonance arousal factors, dissonance-reduction strategies adopted, level of reported dissonance and magnitude of cognitive dissonance experienced, revealed interesting results in terms of the theory of cognitive dissonance. The interrelationships between these variables, the dimensions impacting on decision-making and post-purchase evaluation and each of the biographical data (gender, race, marital status, age, education, occupation, income) and each of the motor vehicle specific variables (make, model, dealership, month of purchases, range), were analysed. Hence, profiles on the basis of biographical and product related data, were established.

The aim of such a study is to provide the marketer with ideas to ensure a better combination of the marketing mix variables and a more efficient and effective implementation of the marketing strategy adopted. This is imperative since the success of any marketing

programme is dependent upon the deeper knowledge of the behaviour and thought processes of consumers. Furthermore, evidence of rational decision-making and constructive evaluation of purchases and post-purchases necessitates an analysis into the factors impacting on consumer satisfaction and the magnitude of cognitive dissonance experienced, as these, when appropriately managed, are the ingredients for repeat purchases and loyalty. In addition, a comprehensive analysis of the behaviour and cognition of consumers during purchases and post-purchases will enable marketers to adopt the appropriate selling strategies with the suitable amount of persuasiveness, to develop the most effective appeals, to determine the factors influencing quality of service, to increase the level of consumer satisfaction, thereby reducing the incidence and magnitude of cognitive dissonance experienced, and ensure gratification and repeat purchases.

However, such research information loses its value and applicability when presented and interpreted in a vacuum. An integration of the findings with past and current research in the field can result in meaningful conclusions.

## **CHAPTER 8**

### **DISCUSSION OF RESULTS**

#### **8.1 INTRODUCTION**

The value and applicability of research results gain momentum when compared and contrasted with that of earlier studies. The presentation of results have considerable marketing implications, and together with the outcomes of past research, can contribute to a deeper understanding of human behaviour and to the development of effective and efficient marketing strategies with specific reference to motor vehicle purchases. Post-purchase evaluation follows a purchase decision, and thus refers to the process by which a consumer evaluates a purchase decision. Consumers prefer to believe the decision made was the best one. However, the lack of adequate information and sometimes, the lack of technical knowledge makes it difficult for the motor vehicle consumer to thoroughly evaluate alternative makes available in the marketplace. This results in uncertainty regarding the correctness of the decision made. A discussion relating to the prevalence of cognitive dissonance, the factors arousing dissonance, the dissonance reduction strategies adopted by consumers and the magnitude of dissonance experienced by motor vehicle buyers, ensues.

#### **8.2 DISCUSSION OF RESULTS RELATING TO KEY DIMENSIONS OF THE STUDY**

Results relating to the key dimensions of purchasing behaviour, factors impacting on decision-making and post-purchase evaluation and consumer behaviour are discussed in relation to the theory of cognitive dissonance and in conjunction with research undertaken in the field.

##### **8.2.1 MOTIVATION TO PURCHASE**

The majority of motor vehicle consumers (91 %) reflected their purchases was based on the fulfilment of functional needs ('to take them where they needed to go'), whilst 9 % displayed the satisfaction of symbolic needs, that is, 'to reflect their status/progress /accomplishments'.

In addition, there is a significant relationship between motivation to purchase a motor vehicle (functional needs, symbolic needs) and the reason to purchase, at the 5 % level of

significance. Various reasons for purchases were given (Tables 7.1 and 7.2). The results indicate a significant relationship between those consumers who purchased a vehicle for functional needs, that is, 'to take me where I need to go' and reasons to purchases which include desperately needed a car as a means of transportation, replacement of old vehicle, avoid repairs to old vehicle, needed smaller/economical car, old vehicle was stolen, accident (write off) and for business purposes respectively, at the 5 % level of significance. Similarly, a significant relationship was noted between those consumers who purchased a vehicle for symbolic needs, that is, 'reflects my status/progress/accomplishments' and reason to purchase which incorporate needing a second car for spouse/children/family, needing a luxury car, desire for latest shape/model, requiring an automatic/power steering, given car allowance and need for a performance car respectively, at the 5 % level of significance.

Furthermore, a significant relationship exists between the motivation to purchase (functional needs, symbolic needs) and the make, model and range of car selected, at the 5 % level of significance. It is evident, those consumers who purchased a car for symbolic needs bought the more expensive and 'top of the range' models of motor vehicles.

The results show, the motivation to purchase did not influence the number of alternative makes of cars considered.

#### **8.2.2 NUMBER OF ALTERNATIVE MAKES OF MOTOR VEHICLE CONSIDERED**

The results indicate, the majority of the consumers (72 %) considered not more than 2 makes of motor vehicles (39.5 % considered only 1, 32.5 % considered only 2 makes). It is evident, motor vehicle consumers know what they are looking for. This is reflected in the high mean score on the extent to which consumers are aware of their expectations during pre-purchase (Mean = 4.405, Maximum = 5.000). Sixteen and a half percent of the respondents considered 3 makes of motor vehicles and the remaining 11.5 % considered more than 3 makes. Dissonance is greater when the number of alternatives increases. Walters & Bergiel (1989: 481 - 482) maintain "the more alternatives available to the consumer, the greater the likelihood that dissonance will occur; the consumer is more likely to wonder if one of these reflected alternatives could have been better. This is especially likely if the selected alternative does not meet expectations".

Furthermore, whilst the number of alternatives considered did not correlate significantly with reason for purchases, make and range of motor vehicle purchased, a significant relationship with model of motor vehicle purchased was noted at the 5 % level of significance. The implication is, uncertainty of fulfilment of expectations based on the motor vehicle evaluative criteria exists for particular models of the motor vehicle, such that consumers begin to search for information on, and evaluate other makes of motor vehicles.

### 8.2.3 EVALUATIVE CRITERIA

The findings reflect, consumers attach differing levels of importance to the varying product selection criteria. The ranking of the evaluative criteria in descending level of importance based on mean rating (Figure 7.1) are economy, price, performance, style, roominess, colour, popularity and speed.

The results depict, although consumers value performance, cognisance is given to economy and price. Hence, consumers desire 'good value for money'. This is justified on the basis of the rate of inflation. Priority is given to style, roominess, colour, and popularity over speed. The lowest mean rating allocated to the speed of the vehicle is perhaps due to the desire for road safety and adherence to traffic rules. The evaluation of these criteria reflects motor vehicle purchasers engage in cognitive processing and complex decision-making.

Consumers rated the extent to which they perceived the selected make of vehicle to be suitable (or not) on the eight motor vehicle criteria. High mean ratings indicated the majority of the consumers were confident the selected make of car was capable of fulfilling their set evaluative criteria.

During pre-purchase evaluation consumers perceived their selected alternative to vary in the extent to which it met the set criteria. The evaluation of the selected vehicle, based on mean ratings, in descending level of suitability are economy, performance, style, price, colour, roominess, popularity and speed. This depicts the majority of the consumers based their motor vehicle purchases predominantly on economy (91.5 %) and performance (88.5 %).



Subjects were requested to rank the most favourable alternative make of car considered, when making their purchase decision in terms of the same evaluative criteria. Their evaluation, based on mean ratings, indicate the level of importance (in descending level of suitability) are style, performance, speed, economy, popularity, colour roominess and price.

Therefore, a key reason for selecting the purchased make over the most preferred alternative was the difference in price, the former being cheaper or more economical. Overall, the mean ratings on the most favourable alternative was lower than the mean rating on the purchased make on all criteria considered during pre-purchase (Figure 7.2).

The discrepancy on the evaluation on the two makes was the smallest on the attribute of speed of the motor vehicle. Hence, the purchased make represents greater suitability on the attributes considered than the most attractive alternative. The implication is, the motor vehicle purchasers do not purchase impulsively but engage in extensive decision-making. Alternative makes of cars are carefully considered on the basis of evaluative criteria. The consumers therefore, actively engage in information search and evaluation, thereby making decision-making complex and intensive. This conclusion coincides with the result, where 41 % of the respondents strongly agreed and a further 46.5 % agreed the choice of a car is an important decision to make.'

Hence, motor vehicle consumers engage in rational decision-making and select the option with the greatest level of perceived utility after considering different makes of motor vehicle on a set or combination of evaluative criteria.

Respondents were also expected to reflect whether their expectations on the eight evaluative criteria were met after purchases. Only consumers' expectations on popularity of the motor vehicle purchased were met and exceeded. Pre-purchase expectations on price, style, economy, performance, roominess, colour and speed of motor vehicle were not fulfilled.

High consumer expectations during the purchase of a motor vehicle is justified due to the large expenditure incurred and the desire for 'good value for money'. Although expectations on seven of the predetermined criteria were not met, the discrepancy between pre- and post-

purchase ratings were negligible (Table 7.9). Chi-square statistics confirmed the descriptive analyses by indicating, a significant correlation between pre-purchase and post-purchase evaluations based on these selection criteria. Therefore, expectations on all attributes were sufficiently met after the purchase of the motor vehicle.

Despite these minor differences, the post-purchase mean ratings were greater than 3 on a 1 to 5 point Likert Scale ranging from 'does not fulfil expectations' (1) to completely fulfils expectations (5). The lowest mean rating was on the criteria of speed (Mean = 3.820), which still depicted a high mean rating, that is, closer to 4. The results depict satisfaction with the selected motor vehicle. This is confirmed since 41 % of the respondents agree to and a further 49.5 % strongly indicate their intentions to recommend the purchased make of car to others. Furthermore, an alarming 92 % of the subjects (37 % who agrees, 55 % who strongly agrees) emphasize the correctness of their decision and 89.5 % (37.5 % who agrees, 52 % who strongly agrees) expressed total satisfaction with their choice of motor vehicle.

Respondents were also requested to rank the level of importance attached to the product selection criteria ranging from extremely unimportant (1) to extremely important (5). Mean ratings were analysed in terms of gender in order to profile differences in value attached to these evaluative criteria (Table 7.10).

Profile analyses on the level of importance attached to the evaluative criteria when selecting a motor vehicle were undertaken. Results based on gender indicated males and females vary in the importance attached to economy, roominess and popularity when engaging in motor vehicle purchases. The difference in mean ratings of males and females is particularly noticeable on the product attribute of popularity of motor vehicle (Table 7.11).

Analyses based on race reflect significant differences exist on the mean ratings of the different race groups on the level of importance attached to performance and popularity when selecting a motor vehicle. Furthermore, age influences the motor vehicle purchase decision in terms of style and popularity (Table 7.14). The result is justifiable since younger consumers focus greater attention on these features as a symbol of prestige and accomplishment, whilst a significant relationship exists between older consumers and the

functional value of a motor vehicle. Furthermore, there is a significant difference in the mean ratings of consumers with varying occupations on the level of importance attached to economy of the motor vehicle. Analyses based on income, directly related to the occupation of the motor vehicle buyer, supports this result. The income levels of consumers impact on the level of importance attached to the evaluative criteria of price and economy respectively. The purchases of a motor vehicle involves a tremendous amount of capital outlay and often imposes a financial strain on the buyer requiring one to plan. The relationship between the occupation and income levels of motor vehicle buyers and their level of importance attached to economy and price as well as in the case of the latter respectively is therefore, understandable and justifiable. The level of education of the motor vehicle buyer and their marital status do not influence mean ratings of consumer on the level of importance on the motor vehicle evaluative criteria.

Furthermore, the choice of a make, model and range of motor vehicle is significantly influenced by the level of importance attached to the product selection criteria of price, style, economy, roominess and speed. Also, there is a significant difference in the perceived popularity of the motor vehicle amongst the different ranges of motor vehicles purchased. Therefore, the range of the motor vehicle impacts on consumers' perceptions of popularity.

Although only negligible differences were noted between pre-purchase and post-purchase evaluations by motor vehicle consumers based on the eight evaluative criteria, these minor differences are capable of producing dissonance. This is largely due to the fact, consumers feel expending a large capital outlay for the purchase of a motor vehicle should not be associated with any drawbacks. The high expectations set in line with the expenditure incurred may result in dissonance based on even minute drawbacks for certain personality types. Hence, an investigation into the prevalence of reported dissonance based on pre-purchase evaluations on the eight criteria was conducted (Table 7.20). The result reflects there is a significant difference in the level of importance attached to the pre-purchase evaluation attributes of style and economy between those consumers who reported dissonance and those who did not, at the 5 % level of significance.

Analyses on a Scheffes Multiple Comparison Test shows, those individuals who considered the motor vehicle to be extremely unsuitable (1) in terms of style instead of extremely suitable (5) during pre-purchases, reported dissonance. Similarly, those purchasers who considered the motor vehicle to be average (3) on suitability instead of suitable (4) or extremely suitable (5) during pre-purchase, reported dissonance and experienced cognitive dissonance.

Whilst mean ratings on the level of importance attached to style and economy impacts on the degree of reported dissonance, an added criterion, price of motor vehicle, influences the magnitude of cognitive dissonance experienced. This is understandable since the higher the expenditure involved, the greater the level of consumer expectations. Furthermore, only a minute problem with the motor vehicle after purchases is capable of producing cognitive dissonance due to the financial outlay. Motor vehicle consumers expect 'good value for money' and anticipate an expensive product to be error-free.

Consumers were requested to assess the extent to which the purchased motor vehicle fulfilled their pre-purchase expectations based on the motor vehicle evaluative criteria, namely, price, style, economy, performance, roominess, popularity, colour and speed.

These ratings were correlated with each motor specific criteria (make, model, range of motor vehicle purchased) respectively. Whilst the make and model of motor vehicle purchased influences post-purchase evaluations on the roominess of the vehicle, the latter impacts on the popularity of the automobile. Also, although not significant, the relationship between popularity and range of motor vehicle purchased approaches significance (Table 7.25).

Post-purchase ratings on the fulfilment of pre-purchase expectations on the set product selection criteria were evaluated. Consumers who reported dissonance reflected significant differences in the post-purchase evaluation of the fulfilment of pre-purchase expectations based on price, style, economy, performance, roominess, popularity and colour respectively from consumer who did not report dissonance. Similarly, results were observed between consumers who experienced cognitive dissonance and those who did not. This means

perceived lack of fulfilment of expectations based on price, style, economy, performance, roominess, popularity and colour, are capable of producing dissonance and magnifying the degree of cognitive dissonance experienced. Similarly, Engel (1965) deduced from his study, the higher the price of the product, the greater the possibility of dissonance. In a report on the purchasers of the 1963 Chevrolet, Engel (1965: 34) found, no doubts were found concerning purchase of the car versus other makes but "considerable dissonance was experienced concerning the price paid". Williams (1981: 111 -112) concluded from his study, "dissonance is likely to be strongest for the purchase of durable goods which are expensive items with a very low frequency of purchase".

#### 8.2.4 PERCEPTIONS OF PERSONAL DECISION-MAKING

Respondents evaluated their level of decision-making in general, on the basis of the correctness of their decisions, the level of anxiety experienced when making decisions, the degree of external influence on the decision-making process, the quality of decisions and the level of confidence in the decision taken.

Respondents reflected confidence in the decisions they make. This is in support of the frequency analyses, which indicated 45.5 % of the respondents displayed confidence in their decisions taken and a further 35 % reported they are very confident about the decisions they take. Hence, the majority of the respondents (80.5 %) displayed confidence in decision-making in general. Bell (1967: 12) studied the effects of the associations between self-confidence and persuasibility upon a consumer's psychological reactions or cognitive dissonance after purchasing a new car. Bell (1967: 14 - 15) found consumers who are high on self-confidence, were high on dissonance if they were easily persuaded in buying their new cars, since being persuaded in contrary to their usual behaviour. Furthermore, Bell (1967) deduced those who are high on self-confidence experienced very little dissonance since they made their choices, accepted them and were content with their decisions. In addition, those low on self-confidence had little dissonance if they were readily persuaded and those with little confidence were highly dissonant if they resisted influence attempts by the salesperson and were not easily persuaded. Bell (1967) substantiates, after completing the purchases the latter begin to have self-doubts.

Consumers perceive themselves to engage in quality decisions and to be able to concur very good deals (Mean = 2.140). These findings were replicated in the frequency analyses, which showed 48.5 % of the consumers believe their decision-making results in good deals and a further 21.5 % perceive their deals to be very good. An alarming 70 % therefore, reflected their ability to engage in high quality decision-making and to accomplish very good deals.

Furthermore, a substantial 88 % of the subjects indicated, they believe they got 'good value for their money' by choosing the make of car they did. Respondents perceive themselves as being able to generally make the right decisions (Mean = 2.245). Sixty eight and a half percent of the consumers felt they make the correct decisions most the times (54.5 %), if not all the time (14 %).

Consumers did reflect their decision-making in general is influenced by external others, be they family, friends, reference groups or marketing stimuli (Mean = 2.315). Frequency analyses undertaken in this study indicate, 46.5 % of the respondents reflected they spoke to family members and friends to obtain feedback about various makes of cars considered, before making a purchase decision. However, 60.5 % of the respondents indicated they are more likely not to be influenced (38 %) or are not influenced at all (22.5 %) by others when they engage in decision-making in general. Ward & Werner (1984: 230 - 231) deduced, dissonance may be externally induced, whereby "pressure is put upon the individual to conform to group standards, creating a dissonance within the individual as his beliefs and perceptions conflict with the demands of his peers". This phenomenon corresponds with Bearden & Etzel's (1982: 191) finding of "strong reference group influence for public-luxury product and brand decisions and negligible influence on private-necessity product and brand decisions".

Consumers reported an average level of anxiety experienced when engaging in decision-making, that is, the median on a 1 to 5 point scale (Mean = 2,500). Fifty five and a half percent of the respondents indicated they are more likely not to be anxious in decision-making (37.5 %) or never worry at all about decision taken (18 %). However, the remaining 44.5 % reflected a tendency to worry very much when engaging in decision-

making in general. The higher the tendency to experience anxiety, the more likely the individual will experience post-decision dissonance. For example, a person buying a sports car wonders what comments colleagues will make and hence, experiences more dissonance than when buying an ordinary car which is likely not to draw criticism.

#### 8.2.5 RANGE OF MOTOR VEHICLE PURCHASED

The motor vehicles purchased were classified into 'bottom of the range', 'middle of the range' and 'top of the range' in terms of price and thus, in terms of model.

The descriptive analyses undertaken show, the range of the motor vehicle selected is related to the level of importance attached to the motor vehicle evaluative criteria (price, style, economy, performance, roominess, popularity, colour and speed) during purchases.

Results indicate, consumers who purchased 'bottom of the range' motor vehicles attached the greatest level of importance to price, economy and colour, followed by 'middle of the range' and then, 'top of the range' buyers. Consumers who purchased 'top of the range' motor vehicles attached greatest value to style, roominess and speed, followed by 'middle of the range' and then 'bottom of the range' motor vehicle consumers. Mean differences in the level of importance attached to the performance and speed of the motor vehicle were negligible across consumers who purchased different ranges of motor vehicles.

Ranking on the level of importance attached to the evaluative criteria reflect consumers who purchased 'bottom of the range' vehicles do so due to the high level of importance placed on economy and price. The desire for 'good value for money' is evident since these consumers ranked performance third in order of importance. Consumers who purchased the 'middle of the range' vehicle also considered economy, performance and price as the three most important criteria when selecting a motor vehicle. However, these consumers gave preference to performance over price. Consumers who purchased the 'top of the range' motor vehicles rank the top three evaluative criteria as being performance, style and then economy. Apart from style of motor vehicle, these consumers also gave greater preference to roominess, popularity and speed than consumers who purchased 'middle' and 'bottom of the range' vehicles.

#### **8.2.6 POST-PURCHASE ADVERTISEMENT READERSHIP BEHAVIOUR**

Results indicate, the majority of consumers (75.5 %) read advertisements of both the selected makes of cars and foregone alternatives to an equal extent and thus, do not engage in selective exposure. Walters & Bergiel offers a possible explanation for such behaviour by concluding, "if the consumer very badly wants something, it will take a great deal of inconsistent information to cause that consumer to doubt either the product or the decisions associated with its purchase". However, numerous researchers (Brown 1961; Ehrlich, Guttman, Schonbach & Mills 1957) indicate the existence of enhanced advertising readership by recent automobile purchasers. In this study, post-purchase selective exposure is displayed by the 10 % of motor vehicle consumers who read advertisements of the purchased make only and to some degree, by a further 12.5 % of the motor vehicle buyers who observed advertisements of other unselected makes but do not pay attention to the content. Similarly, the results of Mill's (1965) experiments "establish that dissonant information is avoided and also provide additional evidence of the tendency to seek out consonant information". Furthermore, Brown (1961) and Ehrlich et al. (1957) noted in their studies, the readership of motor vehicle advertisements tend to be higher among owners of a specific make than among non-owners. The results in Brown's (1961) study indicate, 90 % of the people who had recently purchased a Ford, read Ford advertisements. Similarly, Ehrlich et al (1957) found in their study, on the average, new car owners noticed magazine automobile advertisements featuring the car they had just purchased nearly twice as often as advertisements for automobiles they had considered but not purchased. However, Engel (1963) offers little evidence that the new car purchaser is a dissonant consumer engaging in selective exposure. Engel (1963) explains the phenomenon of selective exposure or perception on the basis of 'changed figure and ground', whereby the purchases of a new car induces changed figure-and-ground relationships. Engel (1963: 58) therefore maintains, "advertisements previously escaping attention now may be noticed and recalled by the purchaser because the automobile has entered his life pattern in a new and important way. It is expected that he would be sensitive to such advertisements".

#### **8.2.7 REPEAT PURCHASE INTENTIONS AND BEHAVIOUR**

Post-purchase evaluation typically results in some change in the consumer. The purchase experience impacts on future buying behaviour. If the feedback is complete satisfaction,



similar purchase behaviour will be reinforced and repeated to solve a similar problem in the future. Bearden & Teel (1983: 21) found satisfaction influences attitude change and repeat purchase intention, whilst Churchill & Surprenant (1982) concluded, perceived performance is a determinant of consumer satisfaction. The findings of Oliver (1980: 461) therefore lend support and indicate, "a dissatisfying product purchase should decrease one's inclination to repurchase". Oliver (1977: 485) concluded, the level of expectation is therefore, related to post-exposure judgements ("affect and intention to buy"). Similarly, in this study it was observed, the majority of the consumers (89 %) indicated their intention to repurchase the selected motor vehicle in the future. Only 11 % reflected intentions not to engage in repeat purchases of the chosen motor vehicle. From the study it is evident, the main criteria for repeat purchase behaviour are reflected as being related to reputation of motor vehicle, that is, 'staying with the tried and tested', performance and economy of motor vehicle. The intention 'to stay with the tried and tested' depicts a sense of brand loyalty amongst an alarming 47 % of the motor vehicle consumers, a strategy often adopted in attempts to avoid post-purchase cognitive dissonance. This explain why consumer satisfaction has become a growing and crucial construct in marketing and consumer behaviour and justifies LaBarbera & Mazursky's (1983: 402) demonstration of the importance of satisfaction in explaining the behaviour of repeat purchasers and brand switchers.

These results indicate the quality of service perceived influences consumers' intentions to engage in repeat purchase behaviour with regards to motor vehicle purchases. Variety or the need for a change also surfaced as a key reason for non-repeat purchases. These consumers have not necessarily experienced dissatisfaction or incomplete satisfaction with the purchased motor vehicle, but may have a desire for change and variety. Such consumers may be classified as innovative and adventurous shoppers. Performance and price of the motor vehicle was negatively perceived by a negligible percentage of the consumers, that is, 3 % and 0.5 % respectively.

Further analyses indicated, the intentions to engage in repeat purchase behaviour (or not) is not related to the make, model or range of motor vehicle purchased nor is it related to the dealership of purchases. However, intentions to engages in repeat purchases of the selected motor vehicle (or not) correlates significantly with the level of reported dissonance and the

magnitude of cognitive dissonance experienced respectively (Table 7.51 and Table 7.56).

#### **8.2.8 AFTER-SALES COMMUNICATION**

The results indicate, 85.5 % of motor vehicle consumers received some form of post-purchase communication (telephonic, letter). The nature of the communication related to enquiring about the performance of the motor vehicle, about satisfaction with the motor vehicle, congratulating consumers and emphasizing the wisdom of their decision and/or assuring them of continuous and efficient service in the future. Furthermore, frequency analyses indicated, 78.5 % of the respondents reflected, ever since their purchase, any queries and services required have been handled efficiently and effectively by the dealership concerned. However, 14.5 % of the motor vehicle buyers reported receiving no communication from the dealership, be it telephonic, written or other. Lack of post-purchase communication has detrimental effects and is shown in this study to impact on the level of reported dissonance and the magnitude of cognitive dissonance experienced.

It was also found, the range of motor vehicle purchased impacts on the level of post-purchase communication. Consumers who purchased 'top of the range' motor vehicles were unhappy about the degree of post-purchase communication. An obvious explanation is, these consumers expect special attention during and after purchases due to the tremendous amount of money spent.

#### **8.2.9 DIMENSIONS OF DECISION-MAKING AND POST DECISION-MAKING**

Descriptive analyses indicate the level of pre-purchase evaluation of expectations, psychological importance to the purchases, degree of effort exerted during purchases, congruence between the purchase and the self-concept of the individual, price, persuasiveness of the salesperson, lack of information, level of confidence in purchases, degree of attractiveness of decision alternatives, extent of cognitive overlap amongst alternatives, and perceived quality of service respectively, significantly influences the motor vehicle decision-making process. In addition, the level of unconfirmed expectations, level of anxiety experienced, reported dissonance, reported satisfaction, post-purchase attitude change in favour of the purchased alternative, degree of trivialization of foregone features of unselected alternatives, extent of selective exposure and justification of purchases respectively,

significantly influences post-purchase evaluations and the magnitude of cognitive dissonance experienced.

#### 8.2.9.1 INTERRELATIONSHIPS BETWEEN THE DIMENSIONS OF DECISION-MAKING AND POST DECISION-MAKING

Significant interrelationships between 183 pairs (93.32 %) of dimensions of decision-making and post-purchase decision-making were noted with only 7 pairs (3.68 %) depicting no significant relationships. Hence, the 19 dimensions of decision-making and post decision-making (awareness of expectations, unconfirmed expectations, anxiety, reported dissonance, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service, reported satisfaction, attitude change, trivialization of foregone features, selective exposure, justification of purchases, magnitude of cognitive dissonance experienced) correlate significantly with one another respectively, at the 5 % level of significance, except for the following:-

- No significant relationships were noted between perceived quality of service and selective exposure and the amount of effort exerted respectively, at the 5 % level of significance.
- No significant relationships were noted between pre-purchase awareness of expectations and amount of effort exerted, psychological importance to the purchases, post-purchase attitude change, justification of purchases and selective exposure respectively, at the 5 % level of significance.

The 93.32 % of significant relationship between the pairs of dimensions of decision-making and post decision-making produced interesting results in terms of the theory of cognitive dissonance:-

## ■ AWARENESS OF EXPECTATIONS

The results of this study indicate there is no significant relationship between awareness of expectations and psychological importance of the motor vehicle purchases, effort, attitude change, selective exposure and justification of purchases respectively. However, there exists a significant, inverse relationship between awareness of expectations and unconfirmed expectations, anxiety, reported dissonance, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap and the level of cognitive dissonance experienced respectively.

Therefore, the results of the study indicate, the higher the level of awareness of expectations, the lower the level of anxiety, reported dissonance and cognitive dissonance experienced. In addition, a significant, direct relationship was observed between awareness of expectations and quality of service, reported satisfaction and trivialization. These results emphasize, post consumption consumer satisfaction is "the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption" (Tse & Wilson 1988: 204). The relationship between awareness of expectations and the magnitude of cognitive dissonance reported in this study is substantiated by researchers (Bearden & Teel 1983; Day 1977; Oliver 1980; Woodruff, Cadotte & Jenkins (1983) who have suggested, the consumer satisfaction is influenced by a pre-experience comparison standard.

The results show, the higher the awareness of expectations of consumers, the higher the quality of service perceived, the greater the degree of reported satisfaction and the larger the extent of trivialization of unmet expectations respectively.

Tests of differences were conducted to determine whether significant differences exist in the perceptions of motor vehicle consumers with varying levels of awareness of expectations and each of the nineteen factors influencing decision-making and post decision-making respectively. The results reflect consumers who are aware of their motor vehicle expectations differ from those who are not fully aware of what motor

vehicle features they desire, in the following ways:-

- Perceptions of unconfirmed expectations.
- Level of anxiety experienced during purchases.
- Level of reported dissonance.
- Perceptions of incongruence between motor vehicle purchased and the self-concept of the buyer.
- Perceptions of suitability of price.
- Perceptions of salespersons persuasibility.
- Perceived availability of product related information.
- Level of confidence in purchase decision.
- Perceived attractiveness of decision alternatives.
- Perceived degree of cognitive overlap between decision alternatives.
- Level of reported satisfaction.
- Magnitude of cognitive dissonance experienced.

Furthermore, consumers who are aware of their motor vehicle expectations do not differ from those who are not fully aware of what motor vehicle features they desire, in terms of:-

- The level of psychological importance attached to the motor vehicle purchases.
- The amount of effort exerted during the motor vehicle purchases.
- Their perceptions of quality of service.
- The level of post-purchase attitude change in favour of the purchased alternative.
- The degree of trivialization of foregone and attractive features of unselected alternatives.
- The level of post-purchase selective exposure.
- The degree of justification of purchases.

Furthermore, the biographical profile of the motor vehicle consumer based on race, marital status, age, education, and occupation does not impact on consumers' level of awareness of expectations during pre-purchase. In addition, the product-specific data of the motor vehicle purchased (make, model, range of motor vehicle purchased) is not related to the level of awareness of expectations of consumers during pre-purchase.

## ■ UNCONFIRMED EXPECTATIONS

According to Walters & Bergiel (1989: 481) "failure to perform or to perform up to expectations is the most importance reason for postpurchase dissonance". Dissonance can best be conceived of as a violation of expectancy. The findings of this study indicate, there exists a significant and direct relationship between unconfirmed expectations and the level of anxiety experienced, reported dissonance, psychological importance of the motor vehicle, effort exerted, incongruency of motor vehicle with the self-concept, price of motor vehicle, level of confidence, persuasibility, lack of information, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively. Furthermore, the results depict a significant and inverse relationship between unconfirmed expectations and service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively.

Hence, the results of this study indicate, the higher the level of unconfirmed expectations, the higher the level of anxiety experienced, reported dissonance, incongruence with self-concept, lack of information, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance respectively, at the 5 % level of significance. Festinger proposed, disconfirmed expectancies will generate dissonance, but with the stipulation that only disconfirmed expectancies for which the person feels responsible will arouse dissonance. Similarly, Wicklund & Brehm (1976: 63) observed in their study, "a negative consequence will increase its potential for creating dissonance to the degree that it is unexpected or disconfirms an expectancy, but only when the person feels responsible for the event". Furthermore, Wicklund & Brehm (1976) maintain, if the consumer perceives performance of the rejected alternatives to be similar to the one selected, dissonance is more likely to result, especially if the selected alternative does not meet expectations.

Furthermore, this study revealed, the lower the degree of unconfirmed expectations, the larger the perceived quality of service, the extent of reported satisfaction, the magnitude of attitude change in favour of the purchased make and model, the extent of trivialization of unmet needs and the degree of selective exposure to unselected makes and models of

motor vehicle. In addition, the results of this study showed, the greater the degree of unconfirmed expectations, the greater the justification of purchases respectively. Gronhaug & Gilly (1991: 166) maintain, high effort matched with low reward results in dissatisfaction which, in this context, is "the buyer's cognitive state of being inadequately rewarded in a buying situation s/he had undergone" such that "the intended purchasing (and consumption) goals have not been met". As depicted in the results of this study, the consumer is likely to reduce dissonance by justifying the investment.

#### ■ **LEVEL OF ANXIETY EXPERIENCED**

The results indicate there is a significant, direct relationship between the level of anxiety experienced and reported dissonance and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. These results are justified by Menasco & Hawkins (1978: 651) who maintain, anxiety may be the outcome of conflict resulting from a choice between mutually exclusive alternatives, such that "the experience of post-purchase dissonance is a form of state anxiety". Similarly, Hawkins, Coney & Best (1980: 495) deduced, the higher the tendency to experience anxiety, the more likely the individual will experience post-purchase dissonance. Furthermore, the findings of this study indicate a significant, direct relationship between the level of anxiety experienced and psychological importance of the motor vehicle, effort expended, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap respectively, at the 5 % level of significance. These findings are congruent with that of Folkes (1988: 13) who deduced, certain properties of products such as "technological complexity, high price, and newness as well as consumer-related factors such as inexperience with the product and importance attached to the purchase lead consumers to perceive risk, which gives rise to anxiety". Furthermore, Cummings & Venkatesan (1976: 304) maintain, the level of anxiety increases when "there exists volition and irrevocability of the commitment". Hawkins, Coney & Best (1980) support this viewpoint, maintaining the harder it is to alter the decision, the more likely the consumer is to experience dissonance.

The results of the study also reflect a significant, inverse relationship between the level of anxiety experienced and perceived quality of service, reported satisfaction, attitude

change, trivialization, selective exposure and justification of purchases respectively. Furthermore, the higher the level of anxiety experienced, the lower the perceived quality of service, reported satisfaction, degree of attitude change, trivialization, selective exposure and justification of selected make and model respectively, at the 5 % level of significance.

## ■ **REPORTED DISSONANCE**

The study reflects, there is a significant, direct relationship between the level of anxiety experienced and reported dissonance, psychological importance of the motor vehicle, effort expended, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. The results also indicates a significant, inverse relationship between the level of anxiety experienced and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and the level of justification of purchases respectively, at the 5 % level of significance.

The results of this study reflect a significant and direct relationship between reported dissonance and psychological importance, effort exerted, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance.

The findings therefore indicate, the incidence of reported dissonance is greater when consumers:-

- Attach psychological importance to the motor vehicle purchases,
- Exert a tremendous amount of effort,
- Perceive their purchases to be incongruent with their self-concepts,
- Perceive the price to be unsuitable,
- Have been persuaded by the salesperson into purchases,
- Lack sufficient product related information,
- Lack confidence in their purchase decision,



- The decision alternatives are equally attractive,
- They experience high levels of cognitive dissonance.

These factors therefore, arouse dissonance in motor vehicle consumers. Similarly, Menasco & Hawkins (1978: 651) report, within decisional contexts "the greater the level of difficulty of a decision, the greater is post decision dissonance".

Furthermore the results of the study indicate a significant, inverse relationship between the level of reported dissonance and quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. Hence, higher levels of reported dissonance are associated with:-

- Lower levels of reported satisfaction,
- A smaller degree of post-purchase attitude change,
- A lower degree of trivialization of unmet needs,
- A lower extent of justification of purchases.

#### ■ **PSYCHOLOGICAL IMPORTANCE**

Since cognitive consistency did not seem to suffice as a motivation Festinger (1957) added the proviso, the cognitions have to be 'important' to the individual. Kruglanski (1992) supported this view. It can be concluded from this study, there is a significant, direct relationship between psychological importance attached to the motor vehicle purchases and effort exerted, self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance.

Therefore, it can be observed from the study, the greater the degree of psychological importance to the purchases of the motor vehicle, the greater:-

- The amount of effort exerted,
- The congruence of the motor vehicle selected with the individual's self-concept, and
- The price of the motor vehicle.

In accordance with the results of this study, Crosby & Taylor (1983) found in their study, the greater the commitment to the purchase, the greater the degree of effort expended. Similarly, Cummings & Venkatesan (1975: 22) deduced from their study, "dissonance should increase with the importance of the cognitions, and to the extent that the individual commits some time and money in the purchase, many purchase decisions should be important ones". Likewise, Menasco & Hawkins (1978: 651) undertook a study and found the magnitude of post-decision dissonance is "a positive function of importance of the decision". Similarly, Greenwald (1969: 328) explains when decisions are made, dissonance should increase "with the absolute value of the chosen alternative (decision importance)". Their findings were replicated in this study which indicated, the greater the extent of psychological importance, the greater the magnitude of cognitive dissonance experienced. Likewise, Engel & Blackwell (1982: 505) found, post-decision doubts are most probable when "the individual is committed to his decision because of its psychological significance to him" or due to product involvement. This happens because high levels of psychological importance causes one to set very high levels of expectations, which are more likely to be unconfirmed. Similarly, Kaish (1967) found economically or psychologically important purchases are capable of producing anxiety, lest a wrong purchases is made. However, Cooper & Fazio (1984) found, importance related to the desire to be 'blameless'. Cooper & Fazio have produced impressive evidence indicating, personal responsibility for aversive consequences is a sufficient condition for dissonance effects to arise.

The results of this study also depicts a significant, inverse relationship between the level of psychological importance attached to the motor vehicle purchases and quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. According to Greenwald (1969), the absolute attractiveness of the alternatives depicts decision importance. Contrary to the results of this study, Greenwald (1969: 328) deduced from his study, "the more valued the alternatives, the greater the consequences of the decision and therefore, the greater the need to justify the decision. Thus, greater spreading apart is predicted for higher absolute attractiveness".

## ■ **EFFORT**

From this study it can be deduced, there is a significant, direct relationship between the amount of effort expended and self-concept, price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, there exists a significant, inverse relationship between the amount of effort expended and reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

Therefore the results from the study indicate, motor vehicle consumers exert a greater amount of effort when:-

- They desire the motor vehicle selected to be a reflection of their self-concept,
- The motor vehicle is an expensive one,
- They sense a large degree of persuasibility from the salesperson,
- The decision alternatives are highly attractive,
- They perceive a large degree of cognitive overlap.
- The purchases is a psychologically important one.

These results coincide with that of Geva & Goldman (1991: 145) who found in their study, "the effort is directly related to the importance of the purchase; the more effort invested the more important the purchase becomes and vice versa". Furthermore, in support of these results, frequency analyses undertaken in this study indicate, 18 % of the respondents strongly agreed and a further 32 % agreed they spent a considerable amount of time in evaluating alternative makes of cars before making a decision. Furthermore, 59 % of the consumers demonstrated their level of effort exerted by visiting/obtaining quotations from many dealerships before making a decision. In addition, 68 % of the respondents indicated they planned extensively before making their purchase decision. Furthermore, 45.5 % of the motor vehicle consumers reflected, they searched for a lot of motor vehicle related information before making their decisions to purchase.

In addition, the results of this study reflect a significant and direct relationship between effort and the magnitude of cognitive dissonance experienced. Similarly, Foxall (1980: 51) concludes, "the more effort .... a person exerts to attain a goal, the more dissonance is aroused if the goal is less valuable than expected". Likewise Geva & Goldman (1991) maintain, effort plays a dual function in the dissonance situation since it is a condition for dissonance arousal as well as an element in the cognitive system. They substantiate, dissonance is likely to be triggered when high effort is matched with low reward.

Furthermore, the greater the amount of effort exerted during decision-making, the lower the degree of reported satisfaction, the smaller the attitude change in favour of the purchased make and model, the less the extent of trivialization of foregone attributes in alternatives not selected, the smaller the degree of post-purchase selective exposure and the extent of justification of purchases. No significant relationship was noted between the degree of effort exerted and the perceived quality of service, at the 5 % level of significance.

#### ■ SELF-CONCEPT

Aronson (1992: 305) believed "dissonance is greatest and clearest when it involves not just any two cognitions but, rather, a cognition about the self and a piece of our behaviour that violates the self-concept". Wilder (1992) and Cummings and Venkatesan (1975: 25) support Aronson's view, the basic ingredients for dissonance are "(a) volition concerning the choice, (b) irrevocable commitment to the decision (product choice), and (c) importance of the choice to the individual's self-concept". Similarly, Cooper (1992: 321) found, "people experience dissonance largely because of a discrepancy between their self-concepts and the actions that they have been induced to perform in dissonance-generated research settings". Furthermore, Brehm (1992: 315) concluded from a study, if a person were to choose between two alternatives and mistakenly chose the inferior one, "the less the value between the two alternatives, the less implication this mistake would have for the self-concept". Motor vehicle purchases reflect a product class capable of creating product involvement. Traylor (1981) found automobiles are a relatively high ego-involvement product class for many consumers; "they are chosen carefully, are important purchases, and are sometimes thought to reflect the owners' personalities".

The results of this study are congruent with the view of these theorists. These results display a significant and direct relationship between self-concept and price, persuasibility, lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Furthermore, it can be concluded from these findings, there is a significant and inverse relationship between the self-concept of the buyer and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance.

Therefore, the empirical analysis reflects, the greater the incongruence between the purchases of motor vehicle and the self-concept of the individual, the greater the magnitude of cognitive dissonance experienced. However, researchers (Aronson & Carlsmith 1962; Aronson & Mettee 1968) people with a low self-concept may not mind doing something negative and they may not undergo the anxiety state of dissonance. Congruent with these findings, Kruglanski (1992: 336) reports " a person with a positive self-concept in a domain would exhibit dissonance-like effects when faced with information inconsistent with his or her expectancies, whereas a person with a negative self-concept would exhibit such effects when faced with information consistent with his or her expectancies, because such information may reawaken those expectancies".

In addition, the less the selected motor vehicle reflects one's self-concept, the smaller the perception of good quality service, the smaller the degree of reported satisfaction, the smaller the extent of attitude change in favour of the purchased make and model, the smaller the extent of trivialization of foregone attributes of unselected alternatives, the less the extent of selective exposure and justification of purchases. Similarly, Goethals (1992: 327) found, dissonance is strongest "when there is a discrepancy between a cognition about the self and a cognition about how one has behaved". Conversely, Cooper & Worchel deduced from their study "you will not experience dissonance if no aversive consequence ensues" and if you have not done "something repugnant to your self-concept" (Cooper 1992: 321). Similarly, in Scher & Cooper's (1997) study, dissonance was aroused when subjects felt responsible for some aversive consequence, regardless of whether their behaviour was consistent or inconsistent with beliefs. These

findings support Cooper & Fazio's (1984) view which suggests "the motivational basis for dissonance is the felt responsibility for aversive consequences". Research undertaken by Aronson & Mettee (1968) on self-concept and Steele (1988) on self-affirmation indicate the self-concept is both a way of helping the individual avoid forming behaviour that would arouse dissonance (Aronson & Mettee 1968) as well as a strategy of reducing dissonance which already exists (Steele 1988).

## ■ **PRICE**

The empirical analysis of this study reflects a significant and direct relationship between price and persuasibility of salesperson, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively. Similarly, Freedman, Carlsmith & Sears (1970: 363) deduced, "the magnitude of the dissonance is a direct function of the amount of work, effort, or expenditure of any kind that the individual has undergone because of his expectations". Furthermore, a significant but inverse relationship was observed between price and perceived quality of service, post-purchase attitude change, trivialization, selective exposure and justification of purchases respectively.

## ■ **PERSUASIBILITY OF SALESPERSON**

Consumers differ in their susceptibility to persuasion. The findings of this study indicate, there is a significant and direct relationship between salesperson persuasibility and lack of information, level of confidence, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. These results correspond with that of Engel (1963: 55) who found in his study, those who are more easily persuaded will be highly dissonant after the purchase. In this study, like in that of Engel's (1963), consumers reported they have been talked into buying cars they did not like, for prices they did not want to pay. Similarly, Bell (1967) found, all consumers may not be cognitively dissonant. Bell (1967: 16) deduced from his research "the type of personality an individual brings to the dealership .... determine the extent of his dissatisfaction with the metallic object sitting in his driveway". However, Bell (1967) found no association between persuasibility and dissonance. His explanation for this result is, the customer's self-confidence influences

persuasibility as well as dissonance.

Furthermore, it can be deduced from this study, there is a significant but inverse relationship between salesperson persuasibility and perceived quality of service received. These results replicate those of Bell (1967) who found a slight curvilinear relationship between persuasibility and quality of service. In his study Bell (1967) observed, those who are low on persuasibility, that is, those called 'grinders' received quite good service. In addition, those who are easily persuaded in their car purchases, referred to as 'flakes' often get quite good service because they pay slightly more for their cars than do the 'grinders'. Furthermore, Bell (1967) added, those medium on persuasibility get the worst service. Thus, according to Bell (1967), and as confirmed in this study, persuasibility acts as an indirect cause of consumers' dissonance. "Those who are moderately persuasible receive the worst service, and those who receive poor service tend to be the highest on cognitive dissonance" (Bell 1967: 16).

In addition, it was found in this study there is a significant but inverse relationship between reported satisfaction, attitude change after purchases, trivialization of foregone features of unselected alternatives, selective exposure and justification of purchases respectively, at the 5 % level of significance.

#### ■ **LACK OF INFORMATION**

The lack of adequate information and the lack of technical knowledge makes it difficult for consumers to thoroughly evaluate alternative products available in the marketplace. This results in uncertainty regarding the correctness of the decision made. Consequently, Holak, Lehmann & Sultan (1987: 243) found one consumer response to the lack of information to be "purposeful delay of purchase". The results of this study incorporate these views and conclude, there is a significant and direct relationship between the lack of product related information and the level of confidence of the motor vehicle buyer, attractiveness of decision alternatives, cognitive overlap and the magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. Similarly, Holloway (1967: 43) found in his study, "consumers who obtain adequate information probably will have less dissonance than those who buy without sufficient information".

In further support of these findings, Jacoby, Speller & Berning (1974) concluded the more brand information consumers had when making a decision, the more satisfied they said they were with the decision. The reasoning is, additional positive information about a purchased item makes a buyer more confident and less dissonant than when not given any extra information.

Therefore, the lack of information is an instrumental factor in escalating levels of cognitive dissonance. Similarly, Block & Roering (1976) emphasize these drastic implications of misunderstanding of product-related information, especially for products which are technical in nature. These findings are supported by the results of this study which indicates, there is also a significant but inverse relationship between the lack of information when engaging in motor vehicle purchases and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. Hence, the greater the shortage of product related information during motor vehicle decision-making, the smaller the degree of reported satisfaction, the smaller the extent of attitude change in favour of the purchased make or model, the smaller the extent of trivialization, selective exposure and justification of purchases.

#### ■ LEVEL OF CONFIDENCE

It is evident from the results of the study, there is a significant and direct relationship between the level of confidence of the motor vehicle buyer and attractiveness of decision alternatives, cognitive overlap, and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance. These results are congruent with that of Bell (1967) who undertook a study and found, consumers would be more dissonant, the more uneasy they were about the purchase decision, the more they wondered if they had made the right decision, or the more they wondered if they received the same kind of deal that other purchasers had received.

Bell (1967: 453) deduced from his study, a consumer's self-confidence has an unusual effect of persuasibility. Those most confident and those least confident in their car buying ability are most difficult to persuade. However, "those moderately confident are



most easily persuaded" (Bell 1967: 453). Consumers who are high in self-confidence are difficult to influence because they have experience in making suitable decisions and have faith in their own judgement. Bell (1967: 12) observed, individuals who are low in self-confidence are difficult to persuade because "their precariously-held self-esteem causes them to react defensively against influence attempts".

Furthermore, there exists a significant and inverse relationship between consumers' level of confidence and perceived quality of service, reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. The significant and inverse relationship between consumers' level of confidence and justification of purchases observed replicates the findings of Greenwald (1969). Greenwald (1969) maintains self confidence should not increase spreading apart in high-conflict decisions because an uncertain person who lacks justification for a decision seeks additional justification whereas a confident person need not justify a decision.

#### ■ **ATTRACTIVENESS OF DECISION ALTERNATIVES**

In virtually any decision, a person must accept the negative features and consequences of the chosen alternative, and must forego the positive features and consequences of the rejected alternatives" (Petty, Unnave & Strathman 1991: 256). When making choices, consumers often have difficulty determining the precise utilities of alternatives, and are therefore uncertain about their preferences. Brehm (1992) found, the positive cognitions of the rejected alternatives, and the negative ones of the selected option, are dissonance with the action taken. Even when the individual makes a rational decision, there may subsequently be reasons (cognitions) that contradict the decision made. For example, even if a car buyer has chosen the best car, the fact that of all the alternatives considered, "it alone requires more expensive high-octane gasoline, is dissonance. If there are many such cognitions, then postdecision dissonance will be high even though the choice was the best possible" (Brehm 1992: 315).

The results of this research depict a significant, inverse relationship between the attractiveness of decision alternatives and perceived quality of service, reported

satisfaction, attitude change, trivialization, selective exposure and justification respectively, at the 5 % level of significance. The findings reflect the greater the degree of overlap of information regarding product features of decision alternatives, the more attractive the options become. In support of these results Brehm (1956) observed in a study undertaken, "when subjects had to choose between two products which were similar in desirability, there was substantial attitude change in favor of the chosen product relative to the unchosen product. When subjects chose between two products that were disparate in desirability, there was much less attitude change. In all conditions, the chosen product was favourably reevaluated and the unchosen product was derogated or unchanged in desirability" (Cummings & Venkatesan 1975: 22). These findings are congruent with that of Menasco & Hawkins (1978: 651) who undertook a study and found, the magnitude of post-decision dissonance is a positive function of "the relative attractiveness of unchosen alternatives" and "a negative function of the number of common characteristics among alternatives". Similarly, Greenwald (1969: 328) found in his study, when decisions are made, dissonance increases "with the relative attractiveness of the unchosen alternative (postdecisional inconsistency)". Therefore, close relative attractiveness of the alternatives being considered generates high inconsistency. This conflict arises because the more relatively attractive the unselected alternatives, the more difficult it is to justify the final choice. Hence, Menasco & Hawkins (1978: 651) maintains, here conflict is the result of "a mutually exclusive choice process".

Furthermore, there is a significant, direct relationship between cognitive overlap of decision alternatives and the magnitude of cognitive dissonance experienced, at the 5 % level of significance. This implies the greater the similarity in information on decision alternatives, the greater the magnitude of cognitive dissonance experienced. Furthermore, greater the degree of cognitive overlap between decision alternatives, the:-

- Less the frequency of good quality service perceived,
- Smaller the incidence of reported satisfaction,
- Smaller the extent of trivialization of unmet needs,
- Less the occurrence of selective exposure,
- Less the degree of justification of purchases, and the

- Less the degree of post-purchase attitude change,

Conversely, Shapiro (Internet: 1997) found, "people forced to choose between almost equally attractive alternatives changed the respective desirability of the alternatives more than people choosing between a relatively attractive and a relatively unattractive alternative".

## ■ COGNITIVE OVERLAP

The results of the study indicate a significant and direct relationship between the degree of cognitive overlap between decision alternatives and the magnitude of cognitive dissonance experienced. This means the greater the extent to which alternatives have similar characteristics, the larger the possibility of dissonance. Similarly, Holloway (1967: 41) found in his study, "the high cognitive overlap condition will create more dissonance than the low cognitive overlap condition". In support of these results, Cummings & Venkatesan (1975: 22) found in their empirical analysis, "the more similar the products which are considered, the greater is the magnitude of dissonance, and the greater the 'spread' in ultimate preference rankings of the two products". However, contrary to these findings, Williams (1981: 112) concluded from his study, "the greater the degree of cognitive overlap, the smaller the magnitude of dissonance".

Furthermore, the results of this study indicate a significant, but inverse relationship between cognitive overlap and perceived quality of service, reported satisfaction, post-purchase attitude change, trivialization, selective exposure and justification of purchases respectively.

## ■ QUALITY OF SERVICE

Managers of service firms agree, service quality involves a comparison of expectations with performance. Service quality is a measure of how well the service level delivered meets the expectations of the customer. Delivering quality service means conforming to customer expectations consistently.

In this study it was found, there is a significant, direct relationship between perceived quality of service and reported satisfaction, attitude change, trivialization, and justification of purchases respectively, at the 5 % level of significance. There is however a significant, inverse relationship between perceived quality of service and magnitude of cognitive dissonance experienced, at the 5 % level of significance. However, there is no significant relationship between perceived quality of service and selective exposure at the 5 % level of significance.

Therefore, in this study, the results imply perceptions of good quality service are associated with:-

- High levels of reported satisfaction,
- A greater extent of post-purchase attitude change in favour of the purchased make and model,
- A greater degree of trivialization of foregone attributes in unselected alternatives, and
- A greater extent of justification of purchases.

Similarly, Oliver & Swan (1989: 372) found "satisfaction was shown to be a function of product disconfirmation, complaints and satisfaction with the dealer". The frequency analyses undertaken in this study, indicate, 80 % of the consumers reflected they were happy with the quality of service received and 84 % of the respondents indicated, the salesperson was helpful and offered all the assistance needed. Furthermore, Tse & Wilson's (1988: 204) research concludes "perceived performance exerts direct significant influence on satisfaction in addition to those influences from expected performance and subjective disconfirmation". In addition the findings of this study reflects, the smaller the degree of perceived 'good' quality of service, the higher the magnitude of cognitive dissonance experienced. These results concerning the relationship between respondent's cognitive dissonance and the perceived quality of service support those of Bell (1967: 15) who concludes "the better the quality of service, the lower the buyer's dissonance". However, Ehrlick, Guttman, Schonbach and Mills (1957) assumed most people who purchase new cars will be dissonant, regardless of the quality of service required.

## ■ REPORTED SATISFACTION

From this study it can be concluded there is a significant, direct relationship between reported satisfaction, attitude change, trivialization, selective exposure and justification of purchases respectively, at the 5 % level of significance. Therefore, from the study it can be deduced, the greater the level of reported satisfaction with the choice of motor vehicle, the greater the possibility of post-purchase attitude change in favour of the purchased make and model, the greater the extent of trivialization of foregone features of unchosen alternatives, the greater the degree of selective exposure and of justification of purchases. Researchers (Bearden & Teel 1983; Day 1977; Oliver 1980; Woodruff, Cadotte & Jenkins 1983) have suggested, consumer satisfaction is influenced by a pre-experience comparison standard. Oliver (1980) found, consumer satisfaction "is a function of expectation and expectancy disconfirmation".

There is, as expected, a significant but inverse relationship between reported satisfaction and magnitude of cognitive dissonance experienced at the 5 % level of significance. Therefore, the larger the degree of reported satisfaction, the smaller the magnitude of cognitive dissonance experienced. Frequency analyses undertaken in this study indicate 89.5 % of the respondents reflected they were totally satisfied with their choice of motor vehicle and an alarming 93 % indicated, the car selected meets their needs perfectly. Similarly, Walters & Bergiel (1989) maintain the greater the degree of psychological satisfaction derived from the decision or the product, the less the dissonance.

## ■ ATTITUDE CHANGE

There is a significant, direct relationship between post-purchase attitude change and trivialization of foregone features, selective exposure and justification of purchases respectively at the 5 % level of significance. There is however, a significant but inverse relationship between post-purchase attitude change and magnitude of cognitive dissonance experienced at the 5 % level of significance. Elliot & Devine (1994: 382) found "dissonance is experienced as psychological discomfort and that this psychological discomfort is alleviated on implementation of a dissonance-reduction strategy, attitude change". Frequency analyses undertaken in this study indicate, the majority of the respondents displayed they adopted the dissonance reduction technique of attitude. This

means, 83 % of the respondents indicated the car they purchased now seems more desirable to them, 84 % reflected they have grown to like the car they chose even more, 64.5 % reflected any doubts about the correctness of their decision were overcome by positive feedback obtained from their family and 69.5 % of the subjects indicated positive feedback from friends regarding the chosen motor vehicle convinced them of the correctness of their decision.

Similarly, Cooper & Fazio (1984) concluded from their study, if dissonance arousal is attributed to the acceptance of responsibility for an aversive consequence, dissonance motivation occurs and attitude change is likely to result. Wright, Rule, Ferguson, McGuire & Wells (1992: 457) demonstrate, "people who behave in a counter-attitudinal manner typically alter their attitudes thereafter to make them conform with their behaviour". Likewise, Assael (1992) found, "individuals tend to reinforce their decision after the fact by changing their attitudes in favor of the chosen brand". In addition, Zaltman & Wallendorf (1983: 481 - 482) deduced, people change their attitudes "to be consistent with their public behaviour when there is insufficient justification for that behaviour". Goethals & Cooper (1975: 365) studied the timing of self-justificatory attitude change following forced compliance and found "when subjects feel that they have all of the information that they are ever going to get regarding the consequences of their counterattitudinal behaviour, they justify the behaviour by changing their attitude". However, Zaltman & Wallendorf (1983: 481) maintain, "the greater the inducement to perform the action, the less the dissonance, and therefore, the less the attitude change".

As evidenced, contrary to popular view, Kunda (1990: 492) found "the mere inconsistency between two beliefs does not suffice to produce dissonance motivation and its resulting attitude change". However, Ginter (1974: 30) deduced from his study, "although attitudes change both before and after choice of the new brand, the post-purchase attitude change is greater in magnitude and correlated more highly with choice".

## ■ TRIVIALIZATION

Consumers will have doubts and anxieties about the choice made because the alternatives foregone had certain desirable traits, and the option selected has undesirable elements which the individual is forced to accept with the choice. Engel & Blackwell (1968:505) found post-choice doubt is motivated "by the awareness that one alternative was chosen and the existence that unchosen alternatives also have desirable attributes". The result is a state of psychological discomfort, and consumers often adopt the strategy of trivialisation in attempts to reduce such inconsistency between the two cognitions. In this research, as in the study undertaken by Simon, Greenberg & Brehm (1995), trivialization refers to decreasing the importance of the elements involved in the dissonant relations.

Furthermore, it is evident from the study, there is a significant, direct relationship between trivialization of foregone features of unselected alternatives, selective exposure and justification of purchased make and model respectively, at the 5 % level of significance. There is also a significant, inverse relationship between trivialization of foregone attributes and the magnitude of cognitive dissonance experienced, at the 5 % level of significance.

The results indicate therefore indicate, the greater the degree of trivialization of unmet needs, the greater the degree of selective exposure and the greater the extent of justification of purchases respectively. The results of this study lend support to the findings of the four studies undertaken by Simon, Greenberg & Brehm (1995) regarding the use of trivialization as a method of dissonance reduction. The results jointly reflect, "people use trivialization to reduce dissonance and that attitude change and trivialization are alternative modes of dissonance reduction" (Simon, Greenberg & Brehm 1995). The results of the studies undertaken by these authors provide genuine support for the notion that trivialization is a common mode of dissonance reduction. A significant and notable finding of Simon, Greenberg & Brehm (1995: 256) is, "when the preexisting attitude is highly salient, people trivialize the cognitions rather than change their attitudes". This implies the motor vehicle consumers engage in the adoption of dissonance reduction strategies. The tendency to continually engage in trivialization of unmet needs is shown

to reduce the magnitude of cognitive dissonance experienced. Frequency analyses undertaken in this study indicate respondents adopt the dissonance reduction tactic of trivialization. Results show, 64.5 % of the respondents reflected the positive features of unselected alternatives, that are nonexistent in their selected motor vehicle, are not important to them. Furthermore, 60.5 % of the subjects indicated the positive features of unselected alternatives, that are nonexistent in their selected motor vehicle, are trivial and a 58 % of these consumers felt the positive features of unselected alternatives were not part of their needs. In addition, 59.5 % of the respondents indicated, the positive features of unselected alternatives, that are nonexistent in their chosen motor vehicle, are unnecessary and increase the price of the car. These results emphasize, motor vehicle consumers adopt trivialization as a method of dissonance reduction.

### ■ **SELECTIVE EXPOSURE**

The results of the study indicate, there is a significant, direct relationship between selective exposure and justification of purchases. Hence, the greater the extent of post-purchase selective exposure in favour of the purchased motor vehicle, the greater the degree of justification of purchases. Again, the adoption of dissonance reduction strategies is reflected. The tendency to continually engage in selective exposure and justification of purchases is shown, in this study, to result in a reduction in the magnitude of cognitive dissonance experienced. Kassarian & Cohen (1965) found, people believe those facts which are palatable to themselves and disbelieve and distort unpleasant ones; thereby dismissing unpleasant or unreconcilable elements from awareness. In a study on dissonance amongst smokers, Venkatesan (1973: 359) found, confirmed smokers justified their continuance of smoking "by denying, distorting, misperceiving or minimizing the degree of health hazard involved".

Numerous researchers (Brown 1961; Ehrlick, Guttman, Schonbach & Mills 1957) substantiate the existence of enhanced advertising readership by recent automobile purchasers. Ehrlick et al. (1957: 90) found in a study undertaken, recent automobile buyers read car advertisements that supported their choices and avoided reading those that contradicted their decisions significantly more than non-purchasers. Similarly, Bell (1967) deduced, those who had recently bought new cars experienced cognitive



dissonance and "attempted to reduce the resultant anxiety by selectively exposing themselves to supporting advertisements". Lord, Ross & Lepper (1979) found people who hold strong opinions on complex social issues are likely to engage in 'biased assimilation', thereby examining relevant empirical evidence in a biased manner. Jones & Gerard (1967: 202) found, "the willingness of a person to expose himself to potentially damaging information is the amount of confidence he has in his ability to come to terms with that information". The frequency analyses undertaken in this study indicate, motor vehicle consumers engage in post-purchase selective exposure as a mechanism to reduce dissonance. The results show, 36.5 % of the respondents indicated they do not give attention to negative views about their selected motor vehicle. Furthermore, 50.5 % of the subjects reflected, after they purchased their vehicle they spoke to the salesperson/dealership who emphasized the wisdom of their decision. In addition, 59 % of the buyers indicated, after purchases they spoke to friends who own the same make of vehicle they selected, who reemphasized the correctness of their decision.

However, Lowe & Steiner (1968: 172) deduced in their study, "people prefer to receive whatever kinds of information will be most useful to them and that the utility of a specific type of information depends in part upon the reversibility and consequences of the decision they have made". From a study undertaken Engel (1963: 55) concluded, new car purchasers were highly sensitive to favourable information, but did not reject dissonance-arousing information, thereby implying, individuals will not necessarily avoid unpleasant information.

## ■ **JUSTIFICATION OF PURCHASES**

The results of the study indicate the adoption of dissonance reduction strategies by motor vehicle consumers. The tendency to continuously engage in justification of purchases is shown, in this study, to result in the reduction in the magnitude of cognitive dissonance experienced. Frequency analyses undertaken in this study show respondents engaged in post-purchase justification of purchases. The results indicate, 85 % of the consumers believed, considering their finances, the choice of vehicle made is the most suitable one. Furthermore, 83 % of the subjects felt, it is easy to explain why they

chose the vehicle they did and 75.5 % indicated the excellent performance of their vehicle outweighs the price and effort expended. Furthermore, a substantial 88 % of the motor vehicle buyers displayed, they believe they got 'good value to money' by choosing the make of car that they did.

Geva & Goldman (1991: 145) found when using justification of purchases to reduce dissonance, the individual "may retrospectively distort the experience, selectively recall pleasant aspects, or be convinced that the effort invested was minimal". Aronson (1961) found, subjects come to increase their liking for the colour of an object associated with nonreward, especially when the object was obtained only after a considerable amount of effort. Similarly, Baron & Byrne (1987: 145) concluded from their study, 'people may come to like the things they have suffered for, because the liking justifies the suffering - it is worth suffering for something if you like it'. Zajonc (1960) found the result of justification of purchases is an increase in the attractiveness of the selected alternative and a decrease in the attractiveness of the rejected one. Furthermore, Zajonc (1960) observed, the rejected option may even be devalued during the process of justification. Similarly, Frey, Kumpf, Irle & Gniech (1984: 447) found dissonance can be reduced by "focusing on the positive aspects of the chosen and the negative aspects of the nonchosen alternatives, hence increasing the attractiveness of the former and/or decreasing that of the latter". Greenwald (1969) refers to this type of dissonance reduction as 'spreading apart the alternatives', a technique commonly adopted when the two alternatives are close in their rated desirability (Wicklund & Brehm 1976), when the choice is irreversible (Brehm & Cohen 1962), when there is sufficient time to think about the choice (Frey et al. 1984) and when the expected consequences of the choice are imminent.

It can therefore be concluded, during motor vehicle decision-making the magnitude of cognitive dissonance experienced is higher when:-

- There exists a substantial degree of cognitive overlap between decision alternatives,
- The decision alternatives have features which are similar and equally attractive,
- The motor vehicle buyer feels overly confident about the purchase decision,
- The motor vehicle purchaser lacks product related information,

- The salesperson is persuasive,
- The motor vehicle is expensive and involves a tremendous amount of capital outlay and produces a financial strain,
- The incongruence between the selected motor vehicle and the individual's self-concept is high, that is, the motor vehicle selected fails to reflect the self-concept of the buyer,
- The motor vehicle purchase has psychological importance to the buyer,
- The motor vehicle buyer feels anxious about the purchase decision,
- The motor vehicle purchasers are extremely aware of their expectations.
- The motor vehicle purchaser engages in a tremendous amount of effort in search and evaluation,

Similarly, Freedman, Carlsmith & Sears (1970: 363) deduced, "the magnitude of the dissonance is a direct function of the amount of work, effort, or expenditure of any kind that the individual has undergone because of his expectations". Hence, Freedman et al. (1970: 363) concluded, the more effort one expends attaining something, the more dissonance there is if the consequences are less than expected. Furthermore, Loudon & Della Bitta (1984: 530) maintain, "dissonance becomes particularly strong when the consumer makes a large commitment to the purchase", not only in terms of money, but also the investment of time, effort and ego. In accordance with the results of this study, Markin (1974: 147) deduced the magnitude of dissonance is a product of many factors:-

- The attractiveness of the rejected alternative,
- The degree of importance attached to a specific decision,
- The number of negative characteristics of the chosen alternative,
- The degree of cognitive overlap between the alternatives available,
- The strongly held cognitions,
- Time.

It can be deduced from the results of this study, the greater the degree of unconfirmed expectations and reported dissonance, the greater the magnitude of cognitive dissonance experienced. Furthermore, during post-purchase evaluation the greater the magnitude of cognitive dissonance experienced, the smaller the degree of:-

- Justification of purchased make and model,

- Post-purchase selective exposure,
- Trivialization of foregone features of unselected alternatives which are also attractive,
- Post-purchase attitude change in favour of the selected make and model of motor vehicle,
- Reported satisfaction,
- Perception of 'good' quality service.

It can therefore be concluded from this study, **dissonance arousal** is a direct function of cognitive overlap between decision alternatives, attractiveness of decision alternatives, a high degree of confidence in the purchase decision, lack of product related information, persuasibility of the salesperson, price of the motor vehicle, incongruence of purchases with the self-concept, psychological importance of the purchase, level of anxiety experienced, awareness of expectations, perceptions of quality of service.

According to the theory of cognitive dissonance, a basic need impacting on consumer decision-making is the need for cognitive consistency. Human beings continuously received stimuli, which they perceive or interpret in such a way as to reduce uncertainty and conflict. The theory of cognitive dissonance proposes, "if a person held two cognitions that were psychologically inconsistent, he or she would experience dissonance and would attempt to reduce dissonance" (Aronson 1992: 304). Therefore, the attitude system is, in principle, a balanced system, and if a change in one component produces an imbalance or disequilibrium there is an inherent mechanism to redress that imbalance and create a new equilibrium" (Kelvin 1969: 70). In this study it is evident, individuals may engage in post-purchase attitude change, selective exposure, trivialization of unmet needs and of foregone features of unselected alternatives and justification of purchases to avoid inconsistency and to reduce the amount of dissonance experience. The tendency to continually adopt these dissonance reduction strategies is shown to result in a decreasing level of dissonance. Hence, the results lend support to Leon Festinger's (1957) theory of cognitive dissonance which claims, the individual consumer strives toward consistency within the self. The consumer's "attitudes, values, and beliefs are ordered into clusters that are internally consistent, and consistent with behaviour" (Kassarjian & Cohen 1965: 55 - 56). Furthermore, Westermann (1988: 218) found in a study undertaken, "the strength of the pressure to reduce the dissonance is a function of the magnitude of the dissonance". These findings coincide with those of

Lindgren (1973) who concluded, "the presence of dissonance leads to pressure to reduce the dissonance, the amount of pressure being consistent with the amount of dissonance that exists". Freedman, Carlsmith & Sears (1970) clarify this relationship further by emphasizing, the more effort one expends attaining something, the more dissonance there is if the consequences are less than expected and the more likely one is to increase the evaluation of it so as to reduce this dissonance.

#### **8.2.9.2 FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION: PROFILES BASED ON BIOGRAPHICAL DATA**

The nineteen factors influencing decision-making (awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service) and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure, justification, cognitive dissonance) were correlated with biographical data and 21 pairs of variables correlated significantly.

##### **■ GENDER**

The gender of the motor vehicle buyer impacts on the level of pre-purchase awareness of expectations, amount of effort expended when purchasing a motor vehicle and trivialization of foregone features of the unselected alternatives respectively. Further inferential analyses were undertaken, that is, tests of differences. It was deduced males and females differ significantly in their level of pre-purchase awareness of expectations.

##### **■ RACE**

Race influences the level of anxiety experienced when engaging in motor vehicle purchases and the level of psychological importance of the purchases.

##### **■ MARITAL STATUS**

The degree of attractiveness of decision alternatives perceived is influenced by marital status.

## ■ AGE

Age impacts on consumers' perceptions of the degree of persuasiveness of the salesperson when engaging in motor vehicle purchases.

## ■ EDUCATION

The level of education of the motor vehicle buyer correlated significantly with the among of product related information encountered during purchases and perceived quality of service respectively.

## ■ OCCUPATION

The occupation of the motor vehicle consumer influences perceptions of unconfirmed expectations, degree of salesperson persuasibility, perceived availability of information, level of confidence in the purchase decision, justification of purchases and the magnitude of cognitive dissonance experienced respectively. Further inferential analyses, namely, tests of differences, were conducted. It was observed, motor vehicle consumers in the different occupational categories significantly differed in the level of pre-purchase awareness of expectations, the level of anxiety experienced, the degree of reported dissonance, price perceptions, perceived lack of information, level of confidence in the purchases, perceived quality of service, degree of reported satisfaction, level of trivialization of foregone features of unselected alternatives during post-purchase and the magnitude of cognitive dissonance experienced respectively.

Evidently, those consumers not in employment, that is, housekeepers, reflected the least amount of awareness of pre-purchase motor vehicle expectations, the highest degree of perceived lack of information during purchases, the highest levels of lack of confidence in the purchases, the greatest level of dissatisfaction (the lowest level of satisfaction), the greatest degree of dissatisfaction with the price of the motor vehicle, the highest level of anxiety, reported dissonance and cognitive dissonance experienced. They therefore, experienced the greatest degree of dissonance arousal. Service workers perceived the quality of service to be unfavourable. Artisans adopted the dissonance reduction strategy of trivialization of foregone and attractive features of unselected alternatives to the least extent.

## ■ INCOME

The level of income of the motor vehicle buyer correlates significantly with the level of anxiety experienced when engaging in the purchases, the price of the motor vehicle and capital outlay demanded, the perceived availability of information, level of confidence in the purchase decision, the degree of cognitive overlap in decision alternatives and the extent of trivialization of foregone and attractive features of unselected alternatives respectively.

### 8.2.9.3 FACTORS INFLUENCING DECISION-MAKING AND POST-PURCHASE EVALUATION: PROFILES BASED ON MOTOR VEHICLE SPECIFIC DATA

The nineteen factors influencing decision-making (awareness of expectations, psychological importance, effort, self-concept, price, persuasibility, lack of information, confidence, attractiveness of decision alternatives, cognitive overlap, service) and post-purchase evaluation (unconfirmed expectations, anxiety, reported dissonance, reported satisfaction, attitude change, trivialization, selective exposure, justification, magnitude of cognitive dissonance) were correlated with motor vehicle specific data (make, model, dealership, month of purchase and range of motor vehicle purchased) respectively.

## ■ MAKE OF MOTOR VEHICLE

The results of the study reflect, there is a significant difference amongst consumers who purchased varying makes of cars with regards to amount of anxiety experienced, degree of reported dissonance, perceived availability of product related information, level of confidence in the purchase, perceived quality of service and magnitude of cognitive dissonance experienced respectively.

## ■ MODEL OF MOTOR VEHICLE

Consumers who purchased different models of the motor vehicle:-

- Reported varying levels of dissonance,
- Differed in the extent of post-purchase attitude change in favour of the selected alternative.
- Differed in the extent of justification of purchases of the selected alternative.

Furthermore, there is a significant relationship amongst consumers who purchased varying models of cars with respect to degree of anxiety experienced during purchases, level of reported dissonance, perceived congruence of purchases with the self-concept, perceived price of the motor vehicle, perceived degree of persuasibility of salesperson, perceived lack of product related information, level of confidence in purchases, perceived quality of service, degree of post-purchase attitude change and magnitude of cognitive dissonance experienced respectively, at the 5 % level of significance.

#### ■ **DEALERSHIP OF PURCHASES**

There is a significant difference in the degree of reported dissonance, perceived congruence of purchases with the individual's self-concept, perceived degree of salesperson persuasiveness, perceived quality of service, degree of post-purchase trivialization of foregone and attractive features of unselected alternatives and the magnitude of cognitive dissonance experienced respectively by consumers who purchased their motor vehicles at different dealerships, at the 5 % level of significance. The findings imply the dealership of purchases plays a pivotal role in ensuring satisfaction. The degree of persuasiveness of the salesperson and the perceived quality of service received influences the level of congruence the consumer perceives between the purchase and the self-concept and consequently, influences the magnitude of cognitive dissonance experienced as well as the extent of post-purchase trivialization of foregone and attractive features of unselected alternatives. Peterson & Wilson (1992: 68) undertook research on automobiles and found, "consumers who shop several dealerships report they are less satisfied after purchasing a vehicle than are consumers shopping only a single dealer".

#### ■ **MONTH OF PURCHASES**

The results of the study indicate there is no significant relationship between the month of purchases of the motor vehicle and the factors influencing decision-making and post-purchase evaluation. In other words, time does not influence the magnitude of cognitive dissonance experienced. These findings are contrary to Markin (1974: 147) who found, "the more recent the decision between alternatives, the greater will be the magnitude of dissonance because of the phenomenon of forgetting".



## ■ **RANGE OF MOTOR VEHICLE PURCHASED**

There is a significant difference amongst consumers who purchased varying ranges of cars with regards to the amount of anxiety experienced during purchases, degree of reported dissonance, perceived lack of information, perceived quality of service and magnitude of cognitive dissonance experienced respectively.

An analysis of the exact differences reflect:-

- Consumers who purchased the 'top of the range' motor vehicle reported the lowest levels of anxiety and dissonance, smallest degree of perceived lack of product related information and experienced the smallest degree of cognitive dissonance. However, these consumers also perceived the quality of service received to be inferior, that is, they expressed the greatest amount of dissatisfaction with the quality of service received.
- Consumers who purchased the 'middle of the range' motor vehicles reported the highest levels of anxiety and dissonance and experienced the greatest degree of cognitive dissonance. However, they also displayed the greatest degree of satisfaction with the quality of service received.
- Consumers who purchased 'the bottom of the range' motor vehicles reflected the greatest degree of perceived lack of product related information when engaging in purchases.

### 8.2.10 **POST-PURCHASE EVALUATION: REPORTED DISSONANCE**

Reported dissonance represents the motor vehicle consumer's confession of post-purchase regret, for example, 'I feel I have made the wrong decision'. It is evident from Table 7.42 and Table 7.44, the level of reported dissonance differs amongst consumers with varying occupations, varying makes and models, differing dealerships from which purchases were concluded and varying ranges of motor vehicles purchased.

The results of the study indicate, there is no significant difference in the level of reported dissonance amongst consumers who varied in the number of alternative makes of motor vehicle considered at the 5 % level of significance. Furthermore, there is no significant difference in the post-purchase advertisement readership behaviour of consumers with differing degrees of reported dissonance. Hence, the level of reported dissonance does not

influence whether motor vehicle consumers read advertisements of selected makes only or those of other makes as well.

In addition, there is a significant relationship between the level of reported dissonance and intentions to engage in repeat purchases of the selected motor vehicle (or not) at the 5 % level of significance. Hence, those consumers who report low, if not insignificant, level of reported dissonance are more likely to engage in repeat purchases of the selected make and model of motor vehicle. Conversely, those consumers who reflect high and significant levels of reported dissonance have a greater probability of not engaging in repeat purchases of the selected motor vehicle. The results also enable one to conclude, there is a significant relationship between post-purchase communication and the level of reported dissonance, at the 5 % level of significance.

The relationship between reported dissonance and the level of mean ratings on pre-purchase and post-purchase evaluative criteria respectively, were analysed. It was found, there is a significant difference in the level of importance attached to the **pre-purchase** evaluation attributes of style and economy between those consumers who reported dissonance and those who did not at the 5 % level of significance (Table 7.20). Furthermore, there is a significant difference in the **post-purchase evaluation** of the fulfilment of pre-purchase expectations based on all evaluative criteria (price, style, economy, performance, roominess, popularity, colour) respectively, between consumers who reported dissonance and those who did not, at the 5 % level of significance (Table 7.26).

#### **8.2.11 POST-PURCHASE EVALUATION: MAGNITUDE OF COGNITIVE-DISSONANCE EXPERIENCED**

It is evident from Table 7.42 and Table 7.44 the magnitude of cognitive dissonance experienced differences amongst consumers with varying occupations, differing makes, models, the differing dealerships from which purchases were made and the various ranges of motor vehicle purchased. From the results it is evident, there is a significant relationship between the magnitude of cognitive dissonance experienced by consumers and the make of the motor vehicle purchased. Furthermore, there is no significant difference in the magnitude of cognitive dissonance experienced by consumers who vary in the number of

alternatives considered before purchases at the 5 % level of significance.

It can also be deduced, there is no significant difference in the after purchase advertisement readership habits of consumers who experience varying degrees of cognitive dissonance. Hence, the amount of post-purchase dissonance experienced does not influence advertisement readership behaviour.

The impact of the level of cognitive dissonance experienced on intentions to engage in repeat purchases of the selected motor vehicle (or not) was investigated. The mean rating on the magnitude of cognitive dissonance experienced was calculated. Those respondents with scores less than the mean rating were considered to report low, if not insignificant, levels of cognitive dissonance experienced during the purchases of the motor vehicle. Conversely, those consumers with scores greater than the mean rating were considered to display high levels of cognitive dissonance experienced during the motor vehicle purchases. These two classifications (low levels of experienced cognitive dissonance, high degrees of experienced cognitive dissonance) were correlated with intentions to engage in repeat purchases of selected motor vehicles, or not (Table 7.55).

In addition, there is a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle consumers and their intentions to engage in repeat purchases of the selected motor vehicle, or not, at the 5 % level of significance. Hence, those consumers who experienced low, if not insignificant, levels of cognitive dissonance are more likely to engage in repeat purchases of the make and model of motor vehicle bought. However, those consumers who experienced high levels of cognitive dissonance are more likely not to engage in repeat purchases of the selected motor vehicle.

The results also depict, there is a significant relationship between post-purchase communication and the magnitude of cognitive dissonance experienced by motor vehicle buyers, at the 5 % level of significance.

The relationship between the magnitude of cognitive dissonance experienced and the level of mean ratings on pre-purchase and post-purchase evaluative criteria respectively, were

analysed. It was found, there is a significant difference in the mean ratings on the level of importance attached to the **pre-purchase** selection attributes of price, style and economy between those consumers who experienced cognitive dissonance and those who did not, at the 5 % level of significance (Table 7.23). Furthermore, there is a significant difference in the **post-purchase** evaluation of the fulfilment of pre-purchase expectations based on all evaluative criteria (price, style, economy, performance, roominess, popularity, colour) respectively, between consumers who experienced cognitive dissonance and those who did not, at the 5 % level of significance (Table 7.27).

The appropriateness of the nineteen key dimensions, impacting on decision-making and post-purchase evaluation, used to determine the magnitude of cognitive dissonance experienced by motor vehicle consumers was also established (Table 7.57). Only eight dimensions (awareness of expectations, unconfirmed expectations, reported dissonance, effort, self-concept, price, persuasibility, confidence) significantly explain the variance in the magnitude of cognitive dissonance experienced.

The impact of these variables on the magnitude of cognitive dissonance in descending level of influence are unconfirmed expectations, perceived incongruence between selected motor vehicle and self-concept, degree of reported dissonance, extent of salesperson persuasiveness, level of effort exerted during purchased, perceived suitability of price, level of confidence in the purchase decision and awareness of expectations. These dimensions account for 99.16 % of the variance in magnitude of cognitive dissonance experienced.

Although not significant, it must be noted the impact of the degree of psychological importance of the motor vehicle purchases ( $p = 0.0567$ ) and the perceived attractiveness of decision alternatives ( $p = 0.0706$ ) on the magnitude of cognitive dissonance experienced respectively, is close to statistical significance.

#### 8.2.12 ECONOMETRIC MODEL: THE ECONOMIC THEORY OF INDIVIDUAL CHOICE

The results of the study support the behavioural postulate of the econometric model by indicating, when faced with a set of options consumers choose the option thought to deliver

the highest overall value. It was found, the majority of consumers (94.5 %) perceived greater utility out of the purchased make of motor vehicle, and therefore purchased it. Similarly, Simonson (1989: 158) found in a study undertaken, very often when decision makers experience difficulty in determining their preferences, they tend "to make the choice that is supported by the best overall reasons" or when they find "arguments strong enough for making a decision". In this study, 60.5 % of the respondents indicated, when considering the alternative makes of vehicles, they evaluated each one in terms of the array or special features that they considered important. Furthermore, 41 % of these motor vehicle consumers reflected, for fear of making the wrong decision, they have invested a substantial amount of time in evaluating the alternatives to make a choice.

Brehm (1992) emphasized, the positive cognitions of the rejected alternatives, and the negative ones of the selected option, are dissonant with the action taken. For example, a consumer may prefer the economy and performance of a sports car, but may desire the spaciousness of a larger car. Only a small segment of consumers (5.5 %) attached greater utility to the most favourable alternative considered but purchased another make of motor vehicle. Reasons for such behaviour were analysed and it was observed:-

- Although these consumers attached greater utility to the most favourable alternative considered they, purchased another make of motor vehicle because it was cheaper or was suitable on the basis of economy and price. In other words, the most favourable alternative considered had higher ratings on style, performance, roominess, popularity, colour and speed and lower ratings on price and economy than the purchased make. Hence, consumers who attached value to these product attributes purchased the most 'economical vehicle' and not the 'most favoured one'. Walters & Bergiel (1989) concluded, when purchasing a new car, the consumer may compare prices on different brands and models. Each of these has specific advantages and disadvantages, that is, prestige versus economy, style versus comfort, and combinations of accessories. Once the person selects the car, dissonance can develop "because economy may have been sacrificed for additional prestige, or the wrong combination of accessories was included. Of course, dissonance is inevitable if the consumer wants economy and prestige in equal amounts" (Walters & Bergiel 1989: 480).

- Although these consumers attached greater utility to the most favourable alternative considered, they purchased another make of motor vehicle because of better resale value.
- Although these consumers attached greater value to the most favourable alternative considered, they eventually decided to 'stay with the tried and tested'.

Therefore, the hypothesis is supported because when faced with a set of options, consumers choose that option thought to deliver the highest level of perceived gratification or utility. The result again reflects, consumers engage in rational decision-making. However, Brehm (1992) emphasizes, even when the individual makes a rational decision, there may subsequently be reasons (cognitions) that contradict the decision made. For example, even if a car buyer has chosen the best car, the fact that of all the alternatives considered, "it alone requires more expensive high-octane gasoline, is dissonant. If there are many such cognitions, then postdecision dissonance will be high even though the choice was the best possible" (Brehm 1992: 315). However, the results of this study reflect, motor vehicle consumers engage in sophisticated and complex decision-making when the purchases involves a tremendous amount of expenditure, for example, the purchase of a motor vehicle. These consumers engage in information search and use evaluative criteria to assess competing alternatives in order to select the option capable of yielding the greatest utility or degree of gratification.

### **8.3 QUALITATIVE ANALYSES**

From the results it can be deduced a significant number of motor vehicle consumers expressed satisfaction on the successful performance of the motor vehicle. Furthermore, consumers commented on the good quality of service received during purchases. These consumers commended the friendly, polite and supportive staff at the dealership and appreciated the availability of national network of dealerships. After-sales service was evaluated by these buyers as being good due to adequate post-purchase communication, suitable treatment by the dealership during motor vehicle service and the provision of courtesy transport when the vehicle is taken in for a service. Other consumers regarded the motor vehicle as being economical with good resale value.

Negative comments included the unavailability of colour, a long wait for the selected vehicle, the lack of product related information from the salesperson/dealership during purchases and poor after-sales service. The lack of information related to the inefficiency of the salesperson to provide information about the different colours of motor vehicle available and about the cost of accessories. Comments on poor after-sales were substantiated by the following:-

- Consumers have to telephone the dealership many times when the car is taken in for a service and often the car is still not ready at the expected given time.
- Personnel at the service division underestimate the knowledge of the buyer about motor vehicles when a complaint is made, that is, the complaints are poorly handled.
- Personnel at the dealership are not willing to listen to complaints.

The perceptions of the vehicle being uneconomical related to expectations in terms of mileage per litre of petrol not meeting expectations and being incongruent with information given by the salesperson, as well as the inconvenience of fueling unleaded petrol only.

Comments on mechanical problems related to poor gear change and faulty gear boxes.

Technical problems incorporated the following:-

- Faulty globe compartment lock.
- Non-functioning globe compartment light.
- Broken ash tray.
- Poor quality workmanship.
- Non-functioning air-conditioner and heater.
- Carpet not finished off properly.
- Humming sound in motor vehicle when in motion.
- Water seeps into motor vehicle.
- Poorly fitted front door.
- Defects to exterior trim and paint finish.
- Rear-view and door mirror not compatible.

Consumers commented that when complaints were made, human error is always blamed such that, small problems take forever to be rectified. Although these complaints are minor, they have the potential to trigger the magnitude of cognitive dissonance experienced when the

buyer engages in the purchases of an expensive purchases, such as a motor vehicle. Furthermore, due to the large amount of money expended consumers are easily disappointed when faced with problems on a brand new motor vehicle. However small the complaint may be, it has the potential to do damage to the self-concept of the individual, to set in dissatisfaction and regret and consequently, to bolster the degree of cognitive dissonance experienced.

Suggestions for improvement were also made:-

- Use better quality material on gear level.
- In bottom of range of motor vehicle too, a lever should be installed to open the boot from the inside of the car.
- In bottom of range of motor vehicle too, a clock should be installed.
- A wiper blade at the rear of the vehicle is necessary.
- An intermittent wiper feature for light drizzle is required.
  
- Colour of seats should match the colour of the car and should not be the same in colour irrespective of the latter.
- The safety of the motor vehicle should be upgraded. It should be made theft-proof.
- The motor vehicle should be balanced against the wind.

Other comments having the potential to induce post-purchase dissonance include the desire for a luxury car, the need for a performance car in the top of the range category, and the opportunity cost involved in the purchases, that is, using the money to purchase a motor vehicle which could otherwise be utilised for a holiday or overseas trip.

Whilst negative comments and suggestions for improvement were given, it can be noted the highest frequency of comment pertained to the successful running and excellent performance of the motor vehicle. Furthermore, a significant number of consumers commented they only purchased one make and will always do so in the future. These consumers like to stay with 'the tried and tested' to avoid experiencing post-purchase dissonance. They therefore, reflect a strong sense of satisfaction with the selected motor vehicle and consequent, degree of brand loyalty.



#### 8.4 CONCLUSION

Incorporated into this chapter are several marketing implications, based on the empirical results of the study, which when considered can result in the development of effective marketing strategies especially aimed at the motor vehicle consumer market. Findings concerning consumers' motivation to purchase, number of alternatives considered, evaluative criteria utilised, personal decision-making capabilities, post-purchase advertisement readership behaviour, intentions to repurchase, perceptions of the factors impacting on decision-making and post-purchase behaviour, level of awareness of expectations, the factors arousing dissonance and the strategies adopted to reduce dissonance, are fruitful contributions to understanding human behaviour and cognition.

Total application of the findings of this study demands future research be undertaken, not only to examine other aspects of consumer purchasing patterns but also to ensure an analysis of the changing profile and dynamic trends in the motor vehicle consumer market.

## **CHAPTER 9**

### **RECOMMENDATIONS AND CONCLUSION**

#### **9.1 INTRODUCTION**

The dynamic nature of consumer behaviour triggered by changes in the individual and environmental influencing variables and persuasive marketing stimuli, results in continuously changing trends in the consumer market. Furthermore, the never-ending and increasingly sophisticated needs of consumers, together with their demands and awareness of expectations, results in the target market being difficult to satisfy and maintain. These ever-changing circumstances necessitate updated and ongoing research be undertaken to keep abreast of time and develop and modify marketing strategies to effectively reach the desired consumer market. In addition, the detrimental effects of disconfirmation of expectations, dissatisfaction and the prevalence and magnitude of cognitive dissonance on repeat purchases makes it imperative for marketing managers to attain a deeper understanding of consumer cognitions and behaviour so as to secure a substantial market share, predominantly through customer loyalty. Magnifying this problem is the multitude of motor vehicle product features and combinations of them which increase the number of decision alternatives available and make them more attractive, thereby increasing the potential for dissonance arousal. An understanding of the theory of cognitive dissonance and the dimensions relating to dissonance arousal and reduction strategies, can help to ensure consumer satisfaction. Taking cognisance of the recommendations based on the results of this study will help in this regard. However, the varied and diverse nature of consumer behaviour and cognitions and the sophistication and variety of motor vehicles offered, made it impossible for all the dimensions of the discipline to be discussed, consequently creating the need for future research.

#### **9.2 RECOMMENDATIONS BASED ON THE FINDINGS OF THE STUDY**

A tremendous amount of attention is frequently given to the purchasing process, and little, if any, to the activities that follow the purchase decision. However, recently marketing researchers have applied a variety of behavioural science theories in order to better understand consumer buying processes. Customer satisfaction after the purchase has become the key factor in consumer decision-making and consumer behaviour. Marketing managers are becoming increasingly interested in how a new purchaser feels after buying. As Straits

(1964: 115) aptly describes, the latest fad in marketing has been the shift from "the thorny task of explaining consumer decision-making to that of studying consumers after their purchases". Relating attitude change, information seeking and brand loyalty to the concept of cognitive dissonance is perceived to be a fruitful venture.

Nevertheless, a consumer's concern over financing and credit arrangements can be an obstacle that delays or even prevents a purchase. This emphasizes the need for the development and implementation of aggressive marketing strategies. "The marketing strategist must determine the financial payment alternatives preferred by the relevant consumer segments and, to the extent possible, make them available" (Block & Roering 1976: 330).

Furthermore, since the purchase decision can trigger an interest in related products and services, marketers can capitalize on this opportunity. One strategy is to prepare accompanying literature suggesting possible accessories and companion products. The car dealer should recognise the purchase of a car triggers numerous other purchases such as, inspection, licences, insurance, and financing. "Even if the auto dealer is not able to provide all of these related items for the consumer, the dealer's assistance in obtaining them could certainly contribute to the consumer's satisfaction" (Block & Roering 1976: 330). The dealer might offer to arrange for the inspection and obtain and pay for the car licence. These activities may create minor cost increases, but might add tremendously to the satisfaction experienced by the consumer, resulting in favourable word-of-mouth communication to friends and family.

The recognition of a decision that triggers the purchase of related products can provide considerable opportunity for increasing the profitability of the organisation. The marketing manager needs to identify the various related items associated with the purchase of a given product, for example, sun-shields, rubber mats, radio and tape, compact disk players, spoiler, motor vehicle safety devices, seat covers. The identification of such can assist considerably in the development of a growth strategy, the identification of new product opportunities, and the more effective merchandising of existing product lines" (Block & Roering 1976: 330 - 331).

Manufacturers frequently assume their responsibilities to the consumer terminates with the decision to purchase. However, timely, proper installation and adequate instruction for the proper use of a product can enhance consumer satisfaction considerably. Once the consumer decides to purchase a product, the item needs to be prepared for use. For many products the preparation for use is a simple task. For example, the purchase of a garment typically requires that consumer to simply remove the package, remove any tags and possibly, iron it before use. Sometimes however, the preparation for use can be a complex task. In the case of a motor vehicle, especially for a first time owner, the consumer needs to be orientated on the operation of the vehicle. This is particularly necessary due to the ever-changing and improved interior designs of motor vehicles. Even a driver who has owned a motor vehicle previously needs to be orientated in terms of new product features and layout thereof. The lack of these post-purchase activities can result in consumer dissatisfaction and subsequent, negative word-of-mouth communication. Use considerations will increase product knowledge and safety as well as enhance the satisfaction of the new motor vehicle buyer. Furthermore, it is particularly important as use considerations can require considerable time, thought, and effort to say nothing of the consternation that can result if inadequate directions are provided" (Block & Roering 1976: 329). Hence, the marketing effort should be based "on how the product fits into the consumers' life-style and of the essential conditions of product use", such that the seller can facilitate the consumer's efforts so as to maximize product satisfaction experienced by the consumer (Block & Roering 1976: 331).

Consumers prefer to believe the purchase decision made was the best one, but the insufficient information encountered seldom allows such an unequivocal assurance. The lack of adequate information and the lack of technical knowledge makes it difficult for consumers to thoroughly evaluate alternative products available in the marketplace. This results in uncertainty regarding the correctness of the decision made. One consumer response related to these expectations is "purposeful delay of purchase" and hence, the occurrence of post-purchase evaluation (Holak, Lehmann & Sultan 1987: 243). Therefore, suitable strategies need to be developed to reinforce behaviour. For example, dealerships may obtain feedback from customers and potential buyers to ascertain what they do or do not like about the

product. It also enables the firm to identify consumer priorities with respect to modifications. In addition, such information can provide direction for promotional efforts.

Post-purchase evaluation typically results in some change in the consumer. The purchase experience impacts on future buying behaviour. Feedback or information transmitted to the central control unit, as a result of post-purchase evaluation, may range from complete satisfaction with the purchase to complete dissatisfaction. If the feedback is complete satisfaction, similar purchase behaviour will be reinforced and repeated to solve a similar problem in the future. Hence, the marketing manager should "monitor consumers' evaluation of the product to be certain the product continues to receive favourable evaluations on the evaluative criteria" (Block & Roering 1976: 339).

If the post-purchase evaluation results in complete dissatisfaction, two types of outcomes can result:-

- The consumer can discontinue this type of purchase behaviour.
- A change in purchase behaviour can occur. Hence, "the consumer might continue his search for a satisfactory solution in other locations, reevaluate the alternative solutions, or redefine the problem to increase the likelihood of locating a satisfactory solution" (Block & Roering 1976: 340).

If the feedback to the consumer's central control unit is partial satisfaction, "the outcome might be discontinuance of the purchase behavior, continuance of the purchase behavior but with some reservations, or modification of the purchase behavior" (Block & Roering 1976: 340).

Post-purchase evaluations resulting in partial satisfaction or dissatisfaction present benefits for the marketing manager who can convert these consumers into marketing opportunities. The marketer is able to identify consumer problems, and develop new product concepts to solve these problems. Hence, adequate attention to postpurchase considerations enables marketers to understand the various ways in which dissonance is aroused and provides "substantial profit opportunities to business organizations" (Block & Roering 1976: 341).

The likelihood of dissonance is one of the more useful types of information marketing managers have. It is the foundation for business efforts to lure consumers away from competitors. A firm can create dissonance in the minds of competitors' customers thereby luring them away. Personal selling and advertising may be designed to reflect a competitor's product unfavourably. Furthermore, advertisements may be designed to enhance repurchase of the product by reassuring the consumer as to the wisdom of the purchase and by emphasizing its desirable features. This will enable the marketing firm to differentiate its product offerings from competitors, lure competitors' customers and to reduce dissonance, thereby reinforcing purchases.

Dissonance disrupts the equilibrium or consistency within the consumer. Hence, marketing managers may take the opportunity to help consumers seek relief from such doubt. They may seek to reduce dissonance by supplying consumers with positive information about the product after the purchase. Strategies to provide supporting information after the purchase and thus, to reduce dissonance are suggested:-

- Provide additional product information and suggestions for product care and maintenance through brochures and advertising.
- Provide warranties or guarantees to reduce post-purchase doubt.
- Ensure good service and immediate follow-up on complaints to provide post-purchase support.
- Advertise reliable product quality and performance of motor vehicle to reassure recent buyers of product satisfaction. Advertising needs to be careful not to exaggerate the positive features of a product. Promotional messages need to create realistic expectations. If a product does not live up to the consumer's expectations, as derived from advertising, dissonance will occur, resulting in negative evaluation of the product and unfavourable word-of-mouth communication.
- Follow-up after the purchase with direct contacts to confirm the customer understands how to use the product features and to ensure satisfaction.
- Immediately after concluding the transaction, present the motor vehicle buyer with a service book incorporating a congratulatory message and service instructions. A congratulatory message which "compliments the buyer on his or her selection and carefully explains the high quality of the product" is especially useful even though the

message can only be read after the product has been purchased (Horton 1984: 186) This strategy is effective in influencing the process of post-purchases.

- Immediately after the conclusion of the deal, introduce the new motor vehicle purchaser to the Service Manager as a way of assuring continuous and efficient service in the future.
- Incentives such as, free rubber mats, should be given.

The aforementioned strategies are relevant in motor vehicle purchasers since the latter represents a high risk, high inducement product. These techniques are suggested in order to change attitudes toward the product by reducing post-purchase dissonance, thereby enhancing repurchase intentions and loyalty.

Often consumers search for information after purchases as a means to reduce uncertainty. This enhances the role of advertising and after-sales efforts. Companies need to therefore, design certain advertisements for recent purchasers in the hope that these advertisements will help to reduce dissonance, or bolster confidence in the correctness of their purchase decision. Furthermore, manufacturers, retailers or dealership may adopt the practice of contacting consumers shortly after purchases to assert the wisdom of their choice and to affirm their appreciation. Post-purchase letter and telephone calls may be particularly effective.

To simply theorize, consumers experience cognitive dissonance is of little value to the marketing manager. The practitioner needs guidance as to what can be done about dissonance, what should be done about dissonance and what benefits will be realized by doing something about dissonance. Hence, the above recommendations are presented in attempts to address the decision-oriented implication of the theory of cognitive dissonance. However, it must be remembered, Festinger's (1957) theory of cognitive dissonance is not a panacea to all business and other problems but provides a broader frame of reference for understanding human behaviour and cognitions.

### **9.3 RECOMMENDATIONS FOR FUTURE RESEARCH**

The conclusions in this study suggest areas for future investigation. Whether the findings will be replicated under different conditions with different subject populations awaits further research. The following thoughts, though conjectural, are offered to stimulate other

researchers' thinking on this important dimension of consumer behaviour.

### ■ **COMPOSITION OF SAMPLE**

Only motor vehicle buyers of one manufacturer or manufacturing brand was included in the study. Future studies may incorporate respondents who differ across motor vehicles of different manufacturing companies. Such an approach will enable the researcher to establish whether the magnitude of cognitive dissonance experienced differs significantly across manufacturing brands. Furthermore, comparative analyses regarding the factors impacting on decision-making and post-purchase evaluation (awareness of expectations, unconfirmed expectations, level of anxiety experienced, psychological importance of the purchases, effort, self-concept, price, persuasibility of salesperson, lack of information, level of confidence in purchases, attractiveness of decision alternatives, cognitive overlap, perceived quality of service received, reported satisfaction, post-purchase attitude change, trivialization of unmet needs, selective exposure, justification of purchases) may be undertaken.

### ■ **EVALUATIVE CRITERIA**

An investigation was undertaken into the level of importance attached by motor vehicle buyers to evaluative criteria when engaging in purchases. The evaluative criteria included in this study are style, price, economy, performance, roominess, popularity, colour and speed. Further studies may extend these features to incorporate others such as interior design. Such a strategy would be useful since the need for improvements to the interior design of the vehicle surfaced during the qualitative analyses of this study. Furthermore, an analysis of more product related attributes would be essential due to the development of sophisticated and improved motor vehicles entering the marketplace.

### ■ **MARKETING CONDITIONS**

The aim of this study was to determine the prevalence and magnitude of cognitive dissonance amongst motor vehicle purchasers. The motivation to purchase, number of alternatives considered, evaluative criteria used, perceptions of personal decision-making, range of motor vehicle purchased, post-purchase advertisement readership behaviour, perceptions of after-sales communication, interrelationships between dimensions of



decision-making and post-purchase evaluation, profile analysis based on biographical and motor vehicle data, level of reported dissonance and cognitive dissonance experienced, and the extent of rational decision-making, were analysed. These were studied to determine the relevance of the dimensions of the theory of cognitive dissonance and to establish which of these impact on the magnitude of cognitive dissonance experienced by motor vehicle consumers. However, future research may be directed toward specifying the marketing conditions under which dissonance theory would be most applicable.

## ■ ECONOMETRIC MODEL

The econometric model depicting the economic theory of individual choice was used to determine whether, when faced with a choice, an individual views each option as a bundle of attributes and evaluates and chooses that which is thought to deliver the highest overall value. The study confirms, consumers select those options that optimize utility function defined across the information set, that is, which maximizes gratification. However, future studies may use the econometric model as a predictive tool for purchases. Furthermore, the expression in the econometric model may be expanded to include higher-order cross products among attributes.

Research may also be undertaken on the key dimensions of the study to verify the results under similar conditions and determine the strengths of the conclusions drawn.

## 9.4 CONCLUSION

The goal of all marketing effort is to achieve maximum profitability and consumer satisfaction. These objectives can only materialise by developing effective marketing strategies via a proper analysis and evaluation of consumers and their behaviour and cognitions as they operate in the marketplace. In order to do justice to the spectrum of activities falling within the domain of consumer behaviour, cognisance has to be given to the central process underlying all consumer behaviour, that is, the consumer decision-making process, ranging from problem recognition, search for information, evaluation of alternatives, purchase and post-purchase. The consumer decision-making process incorporates both physical and mental activities, depicting behaviour and cognition.

Cognition refers to the mental processes of knowing, perceiving and judging which enables individuals to interpret persons, objects and events or stimuli in their environment. Humans are active processors of information. The focus of cognition is human mental processes, mental structures and information processing. Therefore, the central dimensions of cognitive psychology incorporate learning, memory and forgetting, language, decision-making and problem-solving. The developmental sequence of learning, thought and problem-solving skills is illustrated in Piaget's theory of cognitive development, which is a complex combination of genetic, psychological and environmental factors.

The cognitive map of the individuals, although real to them and may profoundly impact on personal relationships and activities, is a subjective view. Cognitive skills influence attitudes since attitudes are composed of cognitive, affective and behavioural components. Diverse forms of behaviour are generated by beliefs, attitudes and value systems held by people, all of which are shaped through the complex and dynamic multitude of stimuli operating in one's environment. Cognitive structure of these stimuli are accomplished by means of attention, encoding, attribution, thinking, reasoning, language, knowing, memory storage and retrieval, conceptual learning and strategy and problem-solving. An individual's cognitions therefore, impact on consumer decision-making, thereby influencing consumption patterns and lifestyles.

The decision whether to buy or not, is a product of the individual and environmental influencing variables impacting on a consumer's psychological field. Consumer needs and motivation to purchase are therefore, influenced by perception, learning and memory, personality and self-concept, culture and subculture, social class, social groups, family, personal influence and marketing strategies, which determine and shape the decision-making process.

Apart from understanding these influencing variables which lie at the core of modern marketing and the development of marketing programmes to maximize company profits, marketers have become increasingly aware and concerned about the widened gap between the producer and the consumer due to the process of industrialisation and large-scale production. Hence, a knowledge of consumer preferences, buying habits and an analytical

approach into the decision-making process became imperative. Researchers began to acquire comprehensive and reliable knowledge and sensitive insight into aspects of consumer behaviour. Consumer behaviour is viewed as an interactive function of the environment, behaviour, cognition, affection and marketing strategies, the outcome of which is depicted in the consumer decision-making process.

It is evident, once knowledge is obtained, attitudes are the intervening cognitive element before a purchase is made. An understanding of attitudes, how they operate and their measurement will enable marketing managers to predict consumer behaviour, determine preferences, describe consumer segments and evaluate marketing strategy. Furthermore, marketers will be able to efficiently and successfully reinforce and change attitudes in order to influence consumer choice and purchases. The attitude-behaviour relationship indicates attitudes cause, reflect or at least significantly correlate with behaviour. However, a crucial aspect of post-purchase evaluation is, the outcome is not always satisfaction. The consumer may experience doubt or anxiety especially after making a difficult, important and rather permanent decision. Hence, the consumer experiences post-purchase dissonance or an inconsistency in the psychological field. One strategy to reestablish consistency is to change attitudes. Attitude change strategies involve a change in either the cognitive, affective or behavioural elements in the attitude components triad. Therefore, an understanding of attitudes, attitude consistency and attitude change will not only assist marketers in evaluating new market opportunities, choosing market segments, positioning products, in new product development, marketing mix decisions, and enhance success of marketing strategies, but will also contribute to the reduction of post-purchase dissonance.

However, dissonance is a state of discomfort, disequilibrium or tension which demands reduction and once experienced can have detrimental effects on future purchases and word-of-mouth communication. Hence, whilst dissonance may be reduced by attitude change strategies, it is more beneficial for marketers to identify the factors impacting on the prevalence and magnitude of cognitive dissonance and then ensure the interplay between these dimensions are minimized, thereby reducing the occurrence of post-purchase dissonance and attaining consumer satisfaction.

The discrepancy between cognitions, or cognitive dissonance, arises when individual's expectations are not met, and when the individuals realize their behaviour has resulted in negative consequences for which they feel responsible. The magnitude of dissonance is enhanced when inconsistency among personally important cognitions exists and when the consumer, engaging in the purchases of a decision alternative, foregoes the attractive features of the unselected alternatives. In this study it was found, dissonance may also be significantly aroused by awareness of expectations and unconfirmed expectations, level of anxiety experienced, psychological importance of the purchases, amount of effort exerted, incongruity between the purchased product and the self-concept, the price of the product, the degree of persuasibility of the salesperson, lack of product-related information, level of confidence in the purchase decision, attractiveness of decision alternatives, cognitive overlap and perceived quality of service received. Any one of these factors or a combination of them have the potential to exasperate the magnitude of cognitive dissonance experienced. Furthermore, certain products like the purchases of a motor vehicle, represent high psychological significance to the individual and high positive inducement to purchase. When product involvement exists, the consumer is eager to expend material, intellectual and psychological effort. However, having undergone these processes and experiencing disconfirmed expectations, escalates the magnitude of cognitive dissonance experienced rapidly. Add to this an inborn sense of anticipated dissonance, the increasing number of alternatives available to the consumer, the recognition of volition and irreversibility of the commitment, and the magnitude of cognitive dissonance experienced becomes crucial.

As Festinger (1957) maintains in his theory of cognitive dissonance, the existence of dissonance, being psychologically uncomfortable, will motivate the consumer to reduce the dissonance and achieve consonance. Hence, dissonance is a motivating factor towards internal harmony or consistency. In this study it was found, motor vehicle consumers engage in post-purchase attitude change, trivialization of unmet needs and of foregone features of unselected alternatives, justification of purchases, and to a smaller extent, post-purchase selective exposure, to avoid inconsistency and to reduce the amount of dissonance experienced.

Dissonance reduction is needed to eliminate the tension state and reestablish harmony. This is an important implication for marketers since perceived performance by consumers exerts a direct, significant influence on satisfaction, which in turn influences purchase intentions as well as post-purchase attitudes. In this study, the majority of consumers indicated their intention to engage in repurchases and a significant percentage displayed loyalty. In addition, the study reveals a significant relationship between the magnitude of cognitive dissonance experienced by motor vehicle consumers and their intentions to engage in repeat purchases of the selected motor vehicle. Hence, those consumers who experienced low, if not insignificant, levels of cognitive dissonance are more likely to engage in repeat purchases of the make and model of motor vehicle bought. Furthermore, an analysis of the evaluative criteria utilised during purchases indicates, motor vehicle consumers engage in rational decision-making and select the option with the greatest level of perceived utility. This result was deduced in conjunction with the econometric model which reflected motor vehicle consumers optimize gratification after considering different makes of motor vehicles on a set or combination of evaluative criteria. Furthermore, in this study, motor vehicle consumers reflected confidence in the decisions they made, perceived themselves to engage in quality decisions and to be able to concur very good deals. A significant percentage of the respondents judged quality of service by after-sales communication. These results indicate, consumers acquire product knowledge and therefore, present marketers with an opportunity to secure a market share.

Significant intercorrelations between the dimensions impacting on decision-making and post-purchase evaluation were noted. The results of the study indicate, during motor vehicle decision-making the magnitude of cognitive dissonance experienced is higher when:-

- There exists a substantial degree of cognitive overlap between decision alternatives,
- The decision alternatives have features which are similar and equally attractive,
- The motor vehicle buyer feels overly confident about the purchase decision,
- The motor vehicle purchaser lacks product related information,
- The salesperson is persuasive,
- The motor vehicle is expensive and involves a tremendous amount of capital outlay and produces a financial strain,

- The incongruence between the selected motor vehicle and the individual's self-concept is high, that is, the motor vehicle selected fails to reflect the self-concept of the buyer,
- The motor vehicle purchase has psychological importance to the buyer,
- The motor vehicle buyer feels anxious about the purchase decision,
- The motor vehicle purchasers are extremely aware of their expectations.
- The motor vehicle purchaser engages in a tremendous amount of effort in search and evaluation,

It can also be deduced from the results of this study, the greater the degree of unconfirmed expectations and reported dissonance, the greater the magnitude of cognitive dissonance experienced. Furthermore, during post-purchase evaluation the greater the magnitude of cognitive dissonance experienced, the smaller the degree of:-

- Justification of purchased make and model,
- Post-purchase selective exposure,
- Trivialization of foregone features of unselected alternatives which are also attractive,
- Post-purchase attitude change in favour of the selected make and model of motor vehicle,
- Reported satisfaction,
- Perception of 'good' quality service.

It can therefore be concluded from this study, **dissonance arousal** is a direct function of cognitive overlap between decision alternatives, attractiveness of decision alternatives, a high degree of confidence in the purchase decision, lack of product related information, persuasibility of the salesperson, price of the motor vehicle, incongruence of purchases with the self-concept, psychological importance of the purchase, level of anxiety experienced, awareness of expectations, perceptions of quality of service.

The findings of the study reflect significant differences in the level of cognitive dissonance experienced amongst consumers who purchased different makes, models and ranges of motor vehicles and from different dealerships. The implication is, marketing managers need to reach these market segments with tailor-made appeals in accordance with their needs. Furthermore, the dealership of purchases plays a pivotal role in ensuring satisfaction. The degree of persuasiveness of the salesperson and the perceived quality of service received

influences the level of congruence the consumer perceives between the purchase and the self-concept and consequently, influences the magnitude of cognitive dissonance experienced as well as the extent of post-purchase trivialization of foregone and attractive features of unselected alternatives. These results were supported by the qualitative analyses which indicated, the majority of complaints or negative comments from motor vehicle consumers related to poor after-sales service by the dealership. Consumers complained, human error is always blamed such that, small problems take forever to be rectified.

Whilst negative comments and suggestions for improvement were given, it can be noted the highest frequency of comment pertained to the successful running and excellent performance of the motor vehicle. Furthermore, a significant number of consumers reflected a strong sense of satisfaction with the selected motor vehicle and consequent, degree of brand loyalty.

The results of the study and the theory of cognitive dissonance enables marketing practitioners to obtain a better understanding of the behaviour and cognitions of motor vehicle purchasers. The theory of cognitive dissonance is important because it emphasizes the essential interaction of motivation (the drive to reduce dissonance) and cognition (the relations between thoughts). Since consumer satisfaction is a key factor in consumer decision-making and consumer behaviour, marketers are becoming increasingly interested in how a new purchaser feels after buying, especially in the case of a durable good that requires extensive financial outlay. The existence of possible negative post-purchase feelings emphasizes the marketer might benefit from directing some of the communications to the recent buyer, rather than all of them to the potential buyer. Results of this study indicate, the concept of cognitive dissonance has interesting and important implications for attitude change, information seeking and brand loyalty. Hence, marketing managers need to focus on dissonance arousal, dissonance reduction strategies and the formulation of tactics needed to maintain a competitive advantage and to maximise market share.

## **BIBLIOGRAPHY**

Abelson, R.P. & Levi, A. 1985. Decision making and decision theory. In G. Lindzey and E. Aronson (Eds), **The Handbook of Social Psychology**, vol. 1, New York: Random House.

Achenbaum, A.A. 1972 (April). Advertising Doesn't Manipulate Consumers. **Journal of Advertising Research**, vol. 12, 3 - 13.

Alba, J.W., Broniarczyk, S.M., Shimp, T.A. & Urbany, J.E. 1994 (Sept). The influence of prior beliefs, frequency cues, and magnitude cues on consumers' perceptions of comparative price data. **Journal of Consumer Research**, vol. 21, no. 2, 219 - 235.

Alpert, F.H., Kamins, M.A. & Graham, J.L. 1992 (July). An Examination of Reseller Buyer Attitudes Toward Order of Brand Entry. **Journal of Marketing**, vol. 56, no. 3, 25 - 37.

Anderson, N.H. 1962. On the quantification of Miller's conflict theory. **Psychological Review**, vol. 69, 400 - 414.

Anderson, J.R. & Bower, G.H. 1980. **Human Associative Memory: A Brief Edition**. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers. 260p.

Aronson, E. 1968. Dissonance Theory: Progress and Problems in **Theories of Cognitive Consistency: A Sourcebook**, edited by R. Abelson, et al. Chicago: Rand McNally. 5 - 27.

Aronson, E. 1988. **The Social Animal**. 5th Edition. New York: W.H. Freeman & Company. 444p.

Aronson, E. 1992. The return of the repressed: Dissonance theory makes a comeback. **Psychological Inquiry**, vol. 3, no. 4, 303 - 311.



Aronson, E. 1992. Totally provocative and perhaps partly right. **Psychological Inquiry**, vol. 3, no. 4, 353 - 356.

Aronson, E. & Carlsmith, J.M. 1962. Performance expectancy as a determinant of actual performance. **Journal of Abnormal and Social Psychology**, vol. 65, 178 - 182.

Aronson, E. & Mettee, D. 1968. Dishonest behavior as a function of differential levels of induced self-esteem. **Journal of Personality and Social Psychology**, vol. 9, 121 - 127.

Assael, H. 1987. **Consumer Behaviour and Marketing Action**. 3rd Edition. Boston, Massachusetts: Kent Publishing Company. 700p.

Assael, H. 1992. **Consumer Behaviour and Marketing Action**. 4th Edition. Boston: PWS-KENT Publishing Company. 748p.

Atkinson, J.W. & Birch, D. 1970. **The Dynamics of Action**. New York: Wiley.

Baddeley, A. 1982. **Your Memory: A user's guide**. London: Sidgwick and Jackson. 222p.

Baddeley, A.D., Papagno, C. & Vallar, G. 1988 (Oct). When Long-Term Learning Depends on Short-Term Storage. **Journal of Memory and Language**, vol. 27, no. 5, 586 - 595.

Baddeley, A.D. & Hitch, G. 1993. The recency effect: Implicit learning with explicit retrieval. **Memory and Cognition**, vol. 21, no. 2, 146 - 155.

Bagozzi, R.P. 1991. The Role of Psychophysiology in Consumer Research. In T.S. Robertson & H.H. Kassarian (Eds), **Handbook of Consumer Behavior**. pp. 124 - 161. Englewood Cliffs, New Jersey: Prentice-Hall.

Bagozzi, R.P. & Baumgarten, J. 1989. An Investigation into the Role of Intentions as Mediators of the Attitude-Behaviour Relationship. **Journal of Economic Psychology**, vol. 10, 35 - 62.

Baker, M.J. 1991. **Research for Marketing**. London: MacMillan Education Ltd. 330p.

Baron, R.A. & Byrne, D. 1987. **Social Psychology: Understanding Human Interaction**. 5th Edition. Boston: Allyn & Bacon, Inc. 630p.

Bar-Tal, D. & Kruglanski, A.W. 1988. **The Social Psychology of Knowledge**. New York: Cambridge University Press. 399p.

Batra, R. & Ray, M.L. 1986 (March). Situational Effects of Advertising Repetition: The Moderating Influence of Motivation, Ability, and Opportunity to Respond. **Journal of Consumer Research**, vol. 12, 432 - 445.

Bearden, W.O. & Etzel, M.J. 1982 (Sept). Reference group influence on product and brand purchase decisions. **Journal of Consumer Research**, vol. 9, no. 2, 183 - 194.

Bearden, W.O. & Teel, J.E. 1983 (Feb). Selected Determinants of Consumer Satisfaction. **Journal of Marketing Research**, vol. 20, 21 - 28.

Beauvois, J.L. & Rainis, N. 1993 (Jan - Feb). Dissonance reduction and causal exploitation in a forced compliance situation. **European Journal of Social Psychology**, vol 23, no. 1, 103 - 107.

Behr, A.L. 1983. **Empirical Research Methods for the human sciences**. Pretoria: Butterworths. 193p.

Bell, G.D. 1967 (July). The automobile buyer after the purchase. **Journal of Marketing**, vol. 31, 12 - 16.

Bem, D.J. 1967. Self-perception: An Alternative interpretation of cognitive dissonance phenomena. **Psychological Review**, vol. 74, 183 - 200.

Bem, D.J. 1972. Self-perception theory, In L. Berkowitz (Ed), **Advances in experimental and social psychology**, vol. 6, pp. 1 - 62. New York: Academic.

Berger, I.E. 1992. The nature of attitude accessibility and attitude confidence: A triangulated experiment. **Journal of Consumer Psychology**, vol. 1, 103 - 123.

Berger, I.E. & Mitchell, A.A. 1989 (Dec). The Effect of Advertising on Attitude Accessibility, Attitude Confidence, and the Attitude-Behaviour Relationship. **Journal of Consumer Research**, vol. 16, no. 3, 269 - 279.

Berkowitz, L. 1992. Even more synthesis. **Psychological Inquiry**, vol. 3. no. 4, 312 - 314.

Berkowitz, L. & Devine, P.G. 1989. Research tradition, analysis and synthesis in social psychological theories: The case of dissonance theory. **Personality and Social Psychology Bulletin**, vol. 15, 493 - 507.

Bernstein, D.A., Roy, E.J., Srull, T.K. & Wickens, C.D. 1988. **Psychology**. Boston: Houghton Mifflin Company.

Bettman, J.R. 1986. Consumer Psychology. **Annual Review of Psychology**, vol. 37, 257 - 289.

Bettman, J.R., Johnson, E.J. & Payne, J.W. 1990. A Componential Analysis of Cognitive Effort in Choice. **Organizational Behaviour and Human Decision Processes**, vol. 45, no. 1, 111 - 139.

Bless, C. & Higson-Smith, C. 1995. **Fundamentals of Social Research Methods: An African Perspective**. 2nd Edition. Cape Town: Juta and Co, Ltd. 164p.

Bless, C. & Kathuria, R. 1993. **Fundamentals of Social Statistics: An African Perspective**. Cape Town: Juta and Co, Ltd. 367p.

Block, C.E. & Roering, K.J. 1976. **Essentials of Consumer Behaviour**. United States of America: The Dryden Press. 415p.

Bolton, R.N. & Drew, J.H. 1991 (Jan). A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes. **Journal of Marketing**, vol. 55, no. 1, 1 - 9.

Boote, A.S. 1981 (Feb). Market Segmentation by Personal Values and Salient Product Attributes. **Journal of Advertising Research**, vol. 21, no. 1, p. 29 - 35.

Bornstein, M.H. 1989. Information Processing (Habituation) in Infancy and Stability in Cognitive Development. **Human Development**, vol. 32, no. 2, 129 - 136.

Bower, G.H. 1959. Choice point behaviour. In R.R. Bush and W.K. Estes (Eds.), **Studies in mathematical learning theory**. pp 109 - 130. Stanford, CA: Stanford University Press.

Boyd, H.W.Jr., Westfall, R. & Stasch, S.F. 1977. **Marketing Research: Text and Cases**. 4th Edition. Homewood, Illinois: Richard D. IRWIN, Inc. 692p.

Branden-Muller, L.R., Gara, M.A. & Schneider, K. 1992 (July - Sept). The Development and Interrelationship of Affective, Cognitive and Social-Cognitive Skills in Children: Theoretical Implications. **Journal of Applied Developmental Psychology**, vol. 13, no. 3, 271 - 291.

Brehm, J.W. 1956 (May). Postdecision Changes in the Desirability of Alternative. **Journal of Abnormal and Social Psychology**, vol. 52.

Brehm, J.W. 1992. An Unidentified Theoretical Object. **Psychological Inquiry**, vol. 3, no. 4, 314 - 315.

Brehm, J.W. & Cohen, A.R. 1962. **Explorations in Cognitive Dissonance**. New York: Wiley and Sons.

Brewin, C.R. 1989. Cognitive Change Processes in Psychotherapy. **Psychological Review**, vol. 96, no. 3, 379 - 394.

Britt, S.H. 1966. **Consumer Behavior and the Behavioral Sciences: Theories and Applications**. London: John Wiley and Sons, Inc. 592p.

Brown, G.H. 1961. The Automobile Buying Decision within the family in Nelson, N. Foote ed. **Household Decision-making**. New York: University Press. 193 - 199.

Busemeyer, J.R. & Goldstein, W.M. 1992 (August). Linking together different measures of preferences: A dynamic model of matching derived from decision field theory. **Organizational Behaviour and Human Decision Processes**, vol. 52, no. 3, 370 - 396.

Busemeyer, J.R. & Townsend, J.T. 1993. Decision Field Theory: A Dynamic-Cognitive Approach to Decision Making in an Uncertain Environment. **Psychological Review**, vol. 100, no. 3, 432 - 459.

Carlsmith, M. & Aronson, E. 1963. Some Hedonic Consequences of the Confirmation and Disconfirmation of Expectancies. **Journal of Abnormal and Social Psychology**, vol. 66, 151 - 156.

Catania, A.C. 1992. **Learning**. 3rd Edition. Englewood Cliffs, N.J.: Prentice-Hall International.

Chaffee, J. 1990. **Thinking Critically**. 3rd Edition. Boston: Houghton Mifflin Company. 599p.

Chaiken, S. & Stangor, C. 1987. Attitudes and Attitude Change. **Annual Review of Psychology**, vol. 38, 575 - 630.

Chapanis, N. & Chapanis, A. 1964 (Jan). Cognitive Dissonance Five Years Later. **Psychological Bulletin**, vol. 61.

Chapman, M. 1988. Contextuality and Directionality of Cognitive Development. **Human Development**, vol. 31, no. 1, 92 - 106.

Chisnall, P.M. 1975. **Marketing Research: a behavioural analysis**. London: McGraw-Hill Book Company (UK) Limited. 308p.

Chisnall, P.M. 1981. **Marketing Research: Analysis and Measurement**. 2nd Edition. London: McGraw-Hill Book Company (UK) Limited. 391p.

Chorn, N. 1984 (Aug). Brand Loyalty - what it's worth and how to get it. **Brandtastic. Marketing Mix**, vol. 3, no. 8, p. 14 - 18.

Churchill, G.A. & Surprenant, C. 1982. An investigation into the Determinants of Customer Satisfaction. **Journal of Marketing Research**, vol 19, 491 - 504.

Cohen, J.B. & Chakravarti, D. 1990. Consumer Psychology. **Annual Review of Psychology**, vol. 41, 243 - 288.

Cohen, J.B. & Houston, M.J. 1972 (Feb). Cognitive Consequence of Brand Loyalty. **Journal of Marketing Research**, vol. 9, 97 - 99.

Collins, B.E. 1992. Texts and subtexts. **Psychological Inquiry**, vol. 3, no. 4, 315 - 320.

Conway, A.R.A. & Engel, R.W. 1994. Working Memory and Retrieval: A Resource-Dependent Inhibition Model. **Journal of Experimental Psychology: General**, vol. 123, no. 4, 354 - 373.

Coombs, C.H. & Avrunin, G.S. 1988. **The structure of conflict**. Hillsdale, N.J.: Erlbaum.

Cooper, J. 1971. Personal responsibility and dissonance: The Role of foreseen consequences. **Journal of Personality and Social Psychology**, vol. 18, 354 - 363.

Cooper, J. 1992. Dissonance and the return of the self-concept. **Psychological Inquiry**, vol. 3, no. 4, 320 - 323.

Cooper, J. & Croyle, R.T. 1984. Attitudes and attitude change. **Annual Review of Psychology**, vol. 35, 395 - 426.

Cooper, D.R. & Emory, C.W. 1995. **Business Research Methods**. 5th Edition. Chicago: IRWIN. 681p.

Cooper, J. & Fazio, R.H. 1984. A new look at dissonance theory. In L. Berkowitz (Ed). **Advances in experimental social psychology**, vol. 17, pp. 229 - 266. Orlando, FL: Academic.

Cooper, J. & Mackie, P. 1988. Cognitive Dissonance in an Intergroup Context. In David A. Schroeder, David E. Johnson & Thomas D. Jensen (eds), **Contemporary Readings in Social Psychology**. Chicago: Nelson-Hall Publishers. 415p.

Cooper, J. & Worchel, S. 1970. Role of undesired consequence in arousing cognitive dissonance. **Journal of Personality and Social Psychology**, vol. 16, 199 - 206.

Cotman, C.W. & Lynch, G.S. 1989 (Nov). The neurobiology of learning and memory. **Cognition**, vol. 33, no. 1 - 2, 201 - 241.

Cowan, N. 1993. Activation, attention and short-term memory. **Memory and Cognition**, vol. 21, no. 2, 162 - 167.

Cozby, P.C. 1981. **Methods in Behavioral Research**. 2nd Edition. USA: Mayfield Publishing Company. 306p.

Cozby, P.C. 1989. **Methods in Behavioral Research**. 4th Edition. USA: Mayfield Publishing Company. 328p.

Cronbach, L.J. 1951. Coefficient alpha and the internal structure of tests. **Psychometrika**, vol. 16, 197 - 334.

Crosby, L.A. & Taylor, J.R. 1983 (March). Psychological Commitment and its Effects on Post-Decision Evaluation and Preference Stability among Voters. **Journal of Consumer Research**, vol. 9, no. 4, 413 - 431.

Croyle, R.T. & Jemmott, J.B.,III. 1990. Psychological reactions to risk factor testing. In J.A. Skelton & R.T. Croyle (Eds), **The mental representation of health and illness**, pp. 121 -157. New York: Springer-Verlag.

Cummings, W.H. & Venkatesan, M. 1975. Cognitive Dissonance and Consumer Behaviour: A Review of the Evidence in Mary Jane Schlinger ed. **Advances in Consumer Research**, vol. 2, Ann Arbor: Association for Consumer Research, 21 - 31.

Cummings, W.H. & Venkatesan, M. 1976 (Aug). Cognitive Dissonance and Consumer Behaviour: A Review of the Evidence. **Journal of Marketing Research**, vol. 13, 303 - 308.

Day, R. 1977. **Consumer satisfaction, dissatisfaction and complaining behaviour**. Aiello, A. etal.

Definitions Committee, American Marketing Association. 1948 (October). "Report of the Definitions Committee. **Journal of Marketing**, vol. 13, 202 - 217.

DeShon, R.P. & Alexander, R.A. 1996 (Jan). Goal Setting Effects on Implicit and Explicit Learning of Complex Tasks. **Organisational Behaviour and Human Decision Processing**, vol. 65, no. 1, 18 - 36.



Dhar, R. & Simonson, I. 1992 (Nov). The effect of the focus of comparison on consumer preferences. **Journal of Marketing Research**, vol. 29, no. 4, 430 - 440.

Dickerson, C.A., Thibodeau, R., Aronson, E. & Miller, D. 1992 (June). Using cognitive dissonance to encourage water conservation. **Journal of Applied Social Psychology**, vol. 22, no. 11, 841 - 854.

Doob, A.N., Carlsmith, J.M., Freedman, J., Landauer, T.K. & Tom, S. 1969. Effect of initial selling price on subsequent sales. **Journal of Personality and Social Psychology**, vol. 11, 345 - 350.

du Plessis, P.J., Rousseau, G.G. & Blem, N.H. 1990. **Consumer Behaviour: A South African Perspective**. Halfway House: Southern Book Publishers (Pty) Ltd. 319p.

du Plessis, P.J., Rousseau, G.G. & Blem, N.H. 1994. **Buyer Behaviour: Strategic Marketing Applications**. Halfway House: Southern Book Publishers (Pty) Ltd. 385p.

du Toit, L. 1986. Background study to learning problems in the severely mentally handicapped I. **UNISA Guide: Special Education**. Pretoria: University of South Africa. 135p.

Dunham, P.J. 1980. **Research Methods in Psychology**. New York: Harper & Row, Publishers. 349p

Durvasula, S., Andrews, J.C., Lysonski, S. & Netemeyer, R.G. 1993 (March). Assessing the Cross-national Applicability of Consumer Behaviour Models: A Model of Attitude toward Advertising in General. **Journal of Consumer Research**, vol. 19, no. 4, 626 - 636.

Eagly, A.H. & Chaiken, S. 1992. **The Psychology of Attitudes**. San Diego, CA: Harcourt Brace Janovich.

Eagly, A.H. & Chaiken, S. 1993. **The Psychology of Attitudes**. Fort Worth, TX: Harcourt Brace.

East, R. 1990. **Changing Consumer Behaviour**. London: Cassell Educational Limited. 252p.

Edwards, W. 1965. Optimal strategies for seeking information: Models for statistics, choice reaction time, and human information processing. **Journal of Mathematical Psychology**, vol. 2, 312 - 329.

Ehrlich, D., Guttman, I., Schonbach, P. & Mills, J. 1957 (Jan). Post Decision Exposure to Relevant information. **Journal of Abnormal and Social Psychology**, vol. 54, 98 - 102.

Eimas, P.D. & Galaburda, A.M. 1989 (Nov). Some agenda items for a neurobiology of cognition: An introduction. **Cognition**, vol. 33, nos. 1 - 2, 1 - 23.

Elkin, R.A. & Leippe, M.R. 1986 (July). Physiological arousal, dissonance and attitude change: Evidence for a dissonance arousal - a "Don't remind me" effect. **Journal of Personality and Social Psychology**, vol. 51, no. 1, 55 - 65.

Elliot, A.J. & Devine, L.G. 1994 (Sept). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. **Journal of Personality and Social Psychology**, vol. 67, no. 3, 382 - 394.

Ellis, H.C. 1978. **Fundamentals of Human Learning, Memory and Cognition**. 2nd Edition. United States of America: Wm. C. Brown Company Publishers. 340p.

Ellis, H.C. & Hunt, R.R. 1983. **Fundamentals of Human Memory and Cognition**. 3rd Edition. United States of America: Wm. C. Brown Company Publishers. 270p.

Engel, J.F. 1963. The Psychological consequences of a Major Purchase Decision in W.S. Decker ed. **Marketing in Transition**. Chicago: American Marketing Association. 462 - 475.

Engel, J.F. 1963 (Apr). Are Automobile Purchasers Dissonant Consumers? **Journal of Marketing**, vol. 27, 55 - 58.

Engel, J.F. 1965 (Apr). Further Pursuit of the Dissonant Consumer: A Comment. **Journal of Marketing**, vol. 29, 34.

Engel, J.F. & Blackwell, R.D. 1982. **Consumer Behavior**. 4th Edition. Chicago: The Dryden Press. 690p.

Engel, J.F., Blackwell, R.D. & Kollat, D.T. 1978. **Consumer Behavior**. 3rd Edition. Hinsdale, Illinois: The Dryden Press. 669p.

Engel, J.F., Blackwell, R.D. & Miniard, P.W. 1990. **Consumer Behaviour**. 5th Edition. New York: The Dryden Press. 633p.

Engel, J.F, Kollat, D.T. & Blackwell, R.D. 1973. **Consumer Behavior**. 2nd Edition. New York: Holt, Rinehart and Winston, Inc. 690p.

Evans, J.St.B.T. 1983. **Thinking and Reasoning: Psychological Approaches**. Boston: Routledge and Kegan Paul. 256p.

Evans, J.St.B.T. 1993. The Cognitive Psychology of Reasoning: An Introduction. **The Quarterly Journal of Experimental Psychology**, vol. 46A, no. 4, 561 - 567.

Fazio, R.H., Powell, M.C. & Williams, C.J. 1989 (Dec). The Role of Attitude Accessibility in the Attitude-to-Behaviour Process. **Journal of Consumer Research**, vol. 16, no. 3, 280 - 288.

Fazio, R.H. & Zanna, M.P. 1978. Attitudinal Qualities Relating to Strength of the Attitude-Behaviour Relationship. **Journal of Experimental Social Psychology**, vol. 14, no. 1, 398 - 408.

Festinger, L. 1957. **A theory of cognitive dissonance**. Evanston, IL: Row, Peterson.

Festinger, L. & Carlsmith, J.M. 1958. Cognitive Consequences of Forced Compliance. **Journal of Abnormal and Social Psychology**, vol. 58, 203 - 210.

Festinger, L. & Carlsmith, J.M. 1959. Cognitive consequences of forced compliance. **Journal of Abnormal and Social Psychology**, vol. 58, 203 - 211.

Fischhoff, B. 1977. Perceived informativeness of facts. **Journal of Experimental Psychology: Human perception and performance**, vol. 3, 349 - 358.

Folkes, V.S. 1988 (June). The availability heuristic and perceived risk. **Journal of Consumer Research**, vol. 15, no. 1, 13 - 23.

Forgas, J.P. 1981. **Social Cognition: Perspectives on Everyday Understanding**. London: Academic Press. 281p.

Foxall, G.R. 1990. **Consumer Psychology in Behavioural Perspective**. London: Routledge. 228p.

Frazier, G.L. & Sheth, J.N. 1985 (Summer). An Attitude-Behaviour Framework for Distribution Channel Management. **Journal of Marketing**, vol. 49, no. 3, 38 - 48.

Fred, van Raaij, W. 1991. The Formation and use of expectations in consumer decision making. In T.S. Robertson and H.H. Kassarian (Eds), **Handbook of Consumer Behaviour**, pp. 401 - 417. London: Prentice-Hall International (UK) Limited.

Freedman, J.L., Carlsmith, J.M. & Sears, D.O. 1970. **Social Psychology**. Engelwood Cliffs, New Jersey: Prentice-Hall, Inc. 493p.

Frey, D. 1982. Different levels of cognitive dissonance, information seeking and information avoidance. **Journal of Personality and Social Psychology**, vol. 43, 1175 - 1183.

Frey, D., Kumpf, M., Irle, M. & Gniech, G. 1984 (Oct - Dec). Re-evaluation of decision alternatives dependent upon the reversibility of a decision and the passage of time. **European Journal of Social Psychology**, vol. 14, no. 4, 447 - 450.

Gardner, M.P. 1985. Does Attitude Toward the Ad Affect Brand Attitudes Under a Brand Evaluation Set? **Journal of Marketing Research**, vol. 22, no. 2, 192 - 198.

Gati, I, & Tversky, A. 1987. Recall of common and distinctive features of verbal and pictorial stimuli. **Memory and Cognition**, vol. 15, no. 2, 97 - 100.

Gauvain, M. 1995 (Jan - Feb). Thinking in Niches: Sociocultural Influences on Cognitive Development. **Human Development**, vol. 38, no. 1, 25 - 45.

Geary, D.C. 1995 (Jan). Reflections of Evolution and Culture in Children's Cognition: Implications for Mathematical Development and Instruction. **American Psychologist**, vol. 50, no. 1, 24 - 37.

Geva, A. & Goldmann, A. 1991 (Mar). Duality in consumers post-purchase attitude. **Journal of Economic Psychology**, vol. 12, no. 1, 141 - 164.

Gigerenzer, G. 1991. From tools to theories: A heuristic of discovery in Cognitive Psychology. **Psychological Review**, vol. 98, no. 2, 254 - 267.

Gilovich, T. 1997 (March). Lecture Notes, 3 March 1997. **Internet**, <http://cbs1.cornell.edu/psych280/notes/LectureNotes3.4.97.html> 1 - 2p.

Ginter, J.L. 1974 (Feb). An experimental investigation of attitude change and choice of a new brand. **Journal of Marketing Research**, vol. 11, 30 - 40.

Ginter, J.L. & Bass, F.M. 1972. **An Experimental Study of Attitude change, advertising, and usage in new product introduction. Paper No. 358.** Lafayette, Indiana: Institute for Research in the Behavioural, Economic, and Management Sciences. 20p.

Goethals, G.R. 1992. Dissonance and self-justification. **Psychological Inquiry**, vol. 3, no. 4, 327 - 329.

Goethals, G.R. & Cooper, J. 1975. When dissonance is reduced: The timing of self-justificatory attitude change. **Journal of Personality and Social Psychology**, vol. 32, 361 - 367.

Gold, R. 1987. **The Description of Cognitive Development: Three Piagetian Themes.** Oxford: Clarendon Press.

Gordon, W. & Langmaid, R. 1988. **Qualitative Market Research: A Practitioner's and Buyer's Guide.** Hong Kong: Gower Publishing Company Limited. 262p.

Greenberg, L.S. & Safran, J.D. 1984. Integrating affect and cognition: A perspective on the process of therapeutic change. **Cognitive Therapy and Research**, vol. 8, 559 - 578.

Greenwald, H.J. 1969. Dissonance and Relative versus Absolute Attractiveness of Decision Alternatives. **Journal of Personality and Social Psychology**, vol. 11, 328 - 333.

Greenwald, A.G. 1992. Dissonance theory and self theory: 15 more years. **Psychological Inquiry**, vol. 3, 329 - 331.

Greenwald, A.G. & Banaji, M.R. 1995. Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes. **Psychological Review**, vol. 102, no. 1, 4 - 27.

Greenwald, A.G. & Ronis, D.L. 1978. Twenty Years of Cognitive Dissonance: Case Study of the Evolution of a Theory. **Psychological Review**, vol. 85, 53 - 57.

Grewel, D. & Marmorstein, H. 1994 (Dec). Market price variation, perceived price variation and consumers' price search decisions for durable goods. **Journal of Consumer Research**, vol. 21, no. 3, 453 - 460.

Gronhaug, K. & Gilly, M.C. 1991 (Mar). A transaction cost approach to consumer dissatisfaction and complaint actions. **Journal of Economic Psychology**, vol. 12, no. 1, 165 - 183.

Halford, G.S. 1995 (Nov - Dec). Learning Processes in Cognitive Development: A Reassessment with Some Unexpected Implications. **Human Development**, vol. 38, no. 6, 295 - 301.

Harrison, M.R. 1993. Fraternity Hazing and Dissonance Theory. **Internet**, [ellsalive.com/users/hyama/mrh/CognFrat.html](http://ellsalive.com/users/hyama/mrh/CognFrat.html) 1 - 2p.

Hawkins, D.I. 1972 (July). Reported Cognitive Dissonance and Anxiety: Some Additional Findings. **Journal of Marketing**, 63 - 66.

Hawkins, D.I., Coney, K.A. & Best, R.J. 1980. **Consumer Behaviour: Implications for Marketing Strategy**. Dallas, Texas: Business Publications, Inc. 548p.

Hawkins, D.I., Best, R.J. & Coney, K.A. 1986. **Consumer Behaviour: Implications for Marketing Strategy**. 3rd Edition. Texas: Business Publications, Inc. 740p.

Hawkins, D.I., Best, R.J. & Coney, K.A. 1989. **Consumer Behaviour: Implications for Marketing Strategy**. 4th Edition. United States of America: Richard D. Irwin, Inc. 796p.

Heath, R.A. 1992. A general nonstationary diffusion model for two choice decision-making. **Mathematical Social Sciences**, vol. 23, 283 - 310.

Heaton, A.W. & Kruglanski, A.W. 1991. Person perception by introverts and extraverts under time pressure: Effects of need for closure. **Personality and Social Psychology Bulletin**, vol. 17, 161 - 165.

Hergenhahn, B.R. 1994 (Sept). Psychology's Cognitive Revolution. **American Psychologist**, vol. 49, no. 9, 816 - 817.

Hewstone, M., Stroebe, W., Codd, J.P. & Stephenson, G.M. 1989. **Introduction to Social Psychology: A European Perspective**. United Kingdom: Basil Blackwell Ltd. 555p.

Higgins, E.T. 1989. Self-discrepancy theory: What patterns of self-beliefs cause people to suffer? In L. Berkowitz (Ed), **Advances in experimental social psychology**, vol. 22, pp. 93 - 136. San Diego: Academic.

Hinkle, D.E., Wiersma, W. & Jurs, S.G. 1979. **Applied Statistics for the Behavioral Sciences**. London: Houghton Mifflin Company/Boston. 490p.

Holak, S.L., Lehmann, P.R. & Sultan, F. 1987 (Fal). The role of expectations in the adoption of innovative consumer durables: Some preliminary evidence. **Journal of Retailing**, vol. 63, no. 3, 243 - 259.

Hollander, E.P. 1971. **Principles and methods of Social Psychology**. 2nd Edition. New York: Oxford University Press. 711p.

Holloway, R.J. 1967 (Jan). An Experiment in Consumer Dissonance. **Journal of Marketing**, vol. 31, 39 - 43.

Horton, R.L. 1984. **Buyer Behaviour: A Decision-Making Approach**. United States of America: Charles E. Merrill Publishing Company. 517p.

Houston, J.P. 1981. **Fundamentals of Learning and Memory 2E**. New York: Academic Press. 639p.



Howard, J.A. & Sheth, J. 1969. **The Theory of Buyer Behaviour**. New York: Wiley Marketing Series.

Howe, M.L., Rabinowitz, F.M. & Grant, M.J. 1993. On Measuring (In)dependence of cognitive processes. **Psychological Review**, vol. 100, no. 4, 737 - 747.

Hoyt, M.F., Henley, M. & Collins, B.E. 1972. Studies in forced compliance: the influence of choice and consequences on attitude change. **Journal of Personality and Social Psychology**, vol. 23, 205 - 210.

Huber, J. & Klein, N.M. 1991 (Dec). Adopting cutoffs to the choice environment: The effects of attribute correlation and reliability. **Journal of Consumer Research**, vol. 18, no. 3, 346 - 357.

Hulse, S.H., Egeth, H. & Deese, J. 1980. **The Psychology of Learning**. New York: McGraw-Hill Book Company. 478p.

Hunt, E. 1989. Cognitive Science: Definition, Status, and Questions. **Annual Review of Psychology**, vol. 40, 603 - 629.

Hunt, H. Keith. 1991 (Spr). Consumer satisfaction, dissatisfaction and complaining behaviour. **Journal of Social Issues**, vol. 47, no. 1, 107 - 117.

Hunt, S.D. 1970 (July). Post-Transaction Communications and Dissonance Reduction. **Journal of Marketing**, vol. 34, 46 - 51.

Hunt, R.G., Krzystofiak, F.J., Meindl, J.R. & Abdalla, M.Y. 1989 (Dec). Cognitive Style and Decision Making. **Organizational Behaviour and Human Decision Processes**, vol. 44, no. 3, 436 - 453.

Hunter, L. 1988 (April - June). Estimating Human Cognitive Capacities: A Response to Landauer. **Cognitive Science**, vol. 12, no. 2, 287 - 291.

Hurford, J.R. 1991 (Sept). The evolution of the critical period for language acquisition. **Cognition**, vol. 40, no. 3, 159 - 201.

Huysamen, G.K. 1988. **Psychological Measurement: An Introduction with South African Examples**. Pretoria: Academica. 126p.

Huysamen, G.K. 1994. **Methodology for the Social and Behavioural Sciences**. Halfway House: Southern Book Publishers. 237p.

Huysamen, G.K. 1996 **Psychological Measurement: An introduction with South African examples**. Pretoria: J.L. van Schaik, Academic. 143p.

Inhelder, B., de Caprona, D. & Cornu-Wells, A. 1987. **Piaget Today**. London: Lawrence Erlbaum Associates, Publishers. 296p.

Jacobvitz, R.S., Wood, M.R. & Albin, K. 1991 (April - June). Cognitive Skills and Young Children's Comprehension of Television. **Journal of Applied Developmental Psychology**, vol. 12, no. 2, 219 - 235.

Jacoby, J., Speller, D.E. & Berning, C.K. 1974 (June). Brand Choice Behaviour as a Function of Information Load: Replication and Extension. **Journal of Consumer Research**, vol. 1, 33 - 42.

Jahoda, M. & Warren, N. 1986. **Attitudes**. England: Penguin Books Ltd. 375p.

Jamieson, D. & Zanna, M.P. 1989. Need for structure in attitude expression and formation. In A.R. Pratkanis, S.J. Breckler, & A.G. Greenwald (Eds), **Attitude structure and function**, pp. 73 - 89. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Jones, E.E. 1976. Forward. In R.A. Wicklund & J.W. Brehm (Eds), **Explorations in cognitive dissonance** (p.x.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Jones, E.E. & Gerard, H.B. 1967. **Foundations of Social Psychology**. New York: John Wiley & Sons. 743p.

Judd, C.M., Smith, E.R. & Kidder, L.H. 1991. **Research Methods in Social Relations**. 6th Edition. New York: Harcourt Brace Jovanich College Publishers. 573p.

Jussim, Lee. 1992. Dissonance: A second coming? **Psychological Inquiry**, vol. 3, no. 4, 332 - 333.

Kahneman, D. & Tversky, A. 1984. **Choices, values and frames**. *American Psychologist*, vol. 39, 341 - 356.

Kahney, H. 1986. **Problem Solving: A Cognitive Approach**. Philadelphia: Open University Press. 155p.

Kaish, S. 1967 (Oct). Dissonance and the Classification of consumer goods. **Journal of Marketing**, vol. 31.

Kasper, H. 1988 (Sept). On problem perception, dissatisfaction and brand loyalty. **Journal of Economic Psychology**, vol. 9, no. 3, 387 - 397.

Kassarjian, H.H. 1982. Consumer Psychology. **Annual Review of Psychology**, vol. 33, p. 619 - 649.

Kassarjian, H.H. & Cohen, J.B. 1965 (Fall). Cognitive Dissonance and Consumer Behaviour. **California Management Review**, vol. 8, 55 - 64.

Katona, G. 1960. **The Powerful Consumer**. New York: McGraw-Hill Book Company. pp. 80 - 83.

Katz, L.G. 1987. Early education: What should young children be doing? In S.L. Kagan & E.F. Zigler (Eds.), **Early Schooling: The national debate** (pp 151 - 167). New Haven: Yale University Press.

Kelvin, P. 1969. **The Bases of Social Behaviour: An Approach in terms of Order and Value**. London: Holt, Rinehart & Winston Ltd. 334p.

Key Terms and Concepts. 1997. **Internet**, <http://www.evansville.edu/~psycweb/key16.html> 1 - 3p.

Kerlinger, F.N. 1986. **Foundations of Behavioral Research**. New York: Holt, Rinehart and Winston.

Kiesler, C.A. & Pallak, M.S. 1976. Arousal properties of dissonance manipulations. **Psychological Bulletin**, vol. 83, 1014 - 1025.

Kinnear, T.C. & Taylor, J.R. 1991. **Marketing Research: An Applied Approach**. New York: McGraw-Hill, Inc. 856p.

Klatzky, R.L. 1980. **Human Memory: Structures and Processes**. 2nd Edition. San Francisco: W.H. Freeman and Company. 358p.

Knox, R.E. & Inkster, J.A. 1968. Post-Decision Dissonance and Post Time. **Journal of Personality and Social Psychology**, vol. 8, 319 - 323.

Kohlberg, L. 1987. **Child Psychology and Childhood Education: A Cognitive-Developmental View**. New York: Longman. 452p.

Kruglanski, A.W. 1990. Lay epistemic theory in social-cognitive psychology. **Psychological Inquiry**, vol. 1, 181 - 197.

Kruglanski, A.W. 1990. Motivations for judging and knowing: Implications for causal attributions. In E.T. Higgins & R.M. Sorrentino (Eds), **Handbook of motivation and cognition: Foundations of social behaviour**, vol. 2, pp. 13 - 37. New York: Guilford.

Kruglanski, A.W. 1992. To carry the synthesis a little further. **Psychological Inquiry**, vol. 3, no. 4, 334 - 336.

Kruglanski, A.W. & Freund, T. 1983. The freezing and unfreezing of lay inferences: Effects on impressional primacy, ethnic stereotyping and numerical anchoring. **Journal of Experimental Social Psychology**, vol. 19, 448 - 468.

Kruglanski, A.W. & Mayseless, O. 1987. Motivational effects in the social comparison of opinions. **Journal of Personality and Social Psychology**, vol. 61, 212 - 215.

Kunda, Z. 1987. Motivated inference: Self-serving generation and evaluation of causal theories. **Journal of Personality and Social Psychology**, vol. 53, 637 - 654.

Kunda, Z. 1990. The case for motivated reasoning. **Psychological Bulletin**, vol. 108, 480 - 498.

Kunda, Z. 1992. Can dissonance theory do it all? **Psychological Inquiry**, vol. 3, no. 4, 337 - 339.

LaBarbera, P.A. & Mazursky, D. 1983 (Nov). A Longitudinal Assessment of Consumer Satisfaction/Dissatisfaction: The Dynamic Aspect of the Cognitive Process. **Journal of Marketing Research**, vol. 20, no. 4, 393 - 405.

Lastovicka, J.L. & Bonfield, E.H. 1982 (Mar). Do Customers have brand attitudes? **Journal of Economic Psychology**, vol. 2, no. 1, 57 - 75.

Lavidge, R.L. & Steiner, G. 1961. A Model for Predictive Measurements of Advertising Effectiveness. **Journal of Marketing**, vol. 25, no. 6, 59 - 62.

Leahey, T.H. & Harris, R.J. 1985. **Human Learning**. New Jersey: Prentice-Hall, Inc. Englewood Cliffs. 448p.

Lefton, L.A. 1982. **Psychology**. 2nd Edition. London: Allyn and Bacon, Inc. 693p.

Lichtenstein, D.R., Ridgway, N.M. & Netemeyer, R.G. 1993 (May). Price perceptions and consumer shopping behaviour: A field study. **Journal of Marketing Research**, vol. 30, no. 2, 234 - 245.

Liebert, R.M., Wicks-Nelson, R. & Kail, R.V. 1986. **Developmental Psychology**. 4th Edition. New Jersey: Prentice-Hall, Englewood Cliffs. 548p.

Lindgren, H.C. 1973. **An Introduction to Social Psychology**. 2nd Edition. New York: John Wiley & Sons. 497p.

Link, S.W. 1992. **Wave theory of difference and similarity**. Hillsdale, NJ: Erlbaum.

Link, S.W. & Heath, R.A. 1975. A sequential theory of psychological discrimination. **Psychometrika**, vol. 40, 77 - 111.

Loken, B. & Hoverstad, R. 1985 (Sept). Relationships Between Information Recall and Subsequent Attitudes: Some Exploratory Findings. **Journal of Consumer Research**, vol. 12, no. 2, 155 - 168.

Lord, C.G. 1989. The "disappearance" of dissonance in an age of relativism. **Personality and Social Psychology Bulletin**, vol. 15, 513 - 518.

Lord, C.G. 1992. Was cognitive dissonance theory a mistake? **Psychological Inquiry**, vol. 3, no. 4, 339 - 342.

Lord, C.G., Ross, L. & Lepper, M.R. 1979. Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. **Journal of Personality and Social Psychology**, vol. 37, 2098 - 2109.

Losciuto, L.A. & Perloff, R. 1967 (Aug). Influence of Product Preference on Dissonance Reduction. **Journal of Marketing Research**, vol. 4, 286 - 290.

Loudon, D. & Della Bitta, A.J. 1984. **Consumer Behaviour: Concepts and Applications**. New York: McGraw-Hill Book Company. 567p.

Loudon, D. & Della Bitta, A.J. 1988. **Consumer Behavior: Concepts and Applications**. 3rd Edition. New York: McGraw-Hill Book Company. 726p.

Louw, D.A. & Edwards, D.J.A. 1993. **Psychology: An Introduction for students in Southern Africa**. Johannesburg: Lexicon Publishers.

Lowe, R. & Steiner, I. 1968. Some Effects of the Reversibility and consequences of Decisions on Post-decision Information Preferences. **Journal of Personality and Social Psychology**, 172 - 179.

Lundberg, O., Hartman, S.J. & White, M. 1991 (Nov). Cognition and the Planning Process: An Investigation of Stability of Effects and Decision Makers' Insights. **The Journal of Psychology**, vol. 126, no. 6, 689 - 706.

Lutz, R.J. 1985. Affective and Cognitive Antecedents of Attitude toward the Ad: A Conceptual Framework. In **Psychological Processes and Advertising Effects**, ed. Linda Alwitt & Andrew Mitchell, Hillsdale, N.J.: Erlbaum. 45 - 63.

Lycan, W.G. 1990. **Mind and Cognition: A Reader**. Cambridge, Massachusetts: Basil Blackwell, Inc. 683p.

Maccoby, E.E. & Martin, J.A. 1983. Socialization in the context of the family: Parent-child interaction. In M. Hetherington (Ed.), **Handbook of child psychology: Volume 4, Socialization, personality and social development**, (pp 1 - 101). New York: Wiley.

MacKenzie, S.B. & Lutz, R.J. 1989 (April). An Empirical Examination of the Structural Antecedents of Attitude Toward the Ad in an Advertising Pretesting Context. **Journal of Marketing**, vol. 53, no. 2, 48 - 65.

MacKenzie, S.B. & Spreng, R.A. 1992 (March). How Does Motivation Moderate the Impact of Central and Peripheral Processing on Brand Attitudes and Intentions? **Journal of Consumer Research**, vol. 18, no. 4, 519 - 529.

Madden, T.J., Allen, C.T. & Twible, J.L. 1988 (Aug). Attitude Toward the Ad: An Assessment of Diverse Measurement Indices Under Different Processing "Sets". **Journal of Marketing Research**, vol. 25, 242 - 252.

Madigan, S. & O'Hara, R. 1992 (Feb). Short-Term Memory at the Turn of the Century. **American Psychologist**, vol. 47, no. 2, 170 - 174.

Markin, Jr. R.J. 1974. **Consumer Behaviour: A Cognitive Orientation**. New York: Macmillan Publishing Co., Inc. 576p.

Marx, S. & Van der Walt, A. 1993. **Marketing Management**. Second Edition. Cape Town: Juta & Co. Ltd. 693p.

Massaro, D.W. & Cowan, N. 1993. Information Processing Models: Microscopes of the Mind. **Annual Review of Psychology**, vol. 41, 383 - 425.

Mayer, R.E. 1981. **The Promise of Cognitive Psychology**. San Francisco: W.H. Freeman and Company. 120p.



Mayer, R.E. 1983. **Thinking, Problem Solving, Cognition**. New York: W.H. Freeman and Company. 426p.

McCall, R.B. 1994. **Fundamental Statistics for Behavioral Sciences**. 6th Edition. New York: Harcourt Brace College Publishers. 469p.

McCormick, E.J. & Ilgen, D.R. 1985. **Industrial and Organizational Psychology**. 8th Edition. London: Allen and Unwin. 468p.

McFadden, D. 1981. Econometric Models of Probabilistic Choice in C.F. Manski and D. McFadden (Eds.). **Structural Analysis of Discrete Data with Econometric Applications**. Cambridge, MA: MIT Press. 198 - 272.

McNeal, J.U. 1969. **Dimensions of Consumer Behavior**. 2nd Edition. New York: Appleton-Century-Crofts, Meredith Corporation. 446p.

McNeal, J.U. 1982. **Consumer Behaviour: An Integrative Approach**. United States of America: Little, Brown and Company. 426p.

McQuarrie, E.F. 1988 (Oct). An Alternative to Purchase Intentions: The Role of Prior Behaviour in Consumer Expenditures on Computers. **Journal of the Marketing Research Society**, vol. 30, 407 - 437.

Medin, D.L. & Ross, B.H. 1992. **Cognitive Psychology**. Fort Worth, TX: Harcourt Brace Jovanovich.

Melville, S. & Goddard, W. 1996. **Research Methodology: An Introduction for Science and Engineering Students**. Cape Town: Juta and Co, Ltd. 167p.

Menasco, M.B. & Hawkins, D.I. 1978 (Nov). A Field Test of the Relationship between Cognitive Dissonance and State Anxiety. **Journal of Marketing Research**, vol. 15, 650 - 655.

Meyer, R.J. & Kahn, B.E. 1991. Probabilistic Models of Consumer Choice Behaviour. In T.S. Robertson and H.H. Kassarian (Eds.). **Handbook of Consumer Behaviour**. London: Prentice-Hall International (UK) Limited. 85 - 123.

Meyers, D.G. 1990. **Social Psychology**. 3rd Edition. New York: McGraw-Hill Book Company.

Mick, D.G. 1992. Levels of Subjective Comprehension in Advertising Processing and Their Relations to Ad Perceptions, Attitudes, and Memory. **Journal of Consumer Research**, vol. 18, no. 4, 411 - 424.

Mills, J. 1965. Avoidance of dissonance information. **Journal of Personality and Social Psychology**, vol. 2, 589 - 593.

Mitchell, A.A. 1986 (June). The Effect of Verbal and Visual Components of Advertisements on Brand Attitudes and Attitude Toward the Advertisement. **Journal of Consumer Research**, vol. 13, no. 1, 12 - 24.

Mitchell, A.A. & Olson, J.C. 1981 (Aug). Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude? **Journal of Marketing Research**, vol. 18, 318 - 332.

Mitchell, J.E. & Madigan, R.J. 1984. The effect of induced elation and depression on interpersonal problem solving. **Cognitive Therapy and Research**, vol. 8, 277 - 285.

Mittelstaedt, R. 1969 (Nov). A Dissonance Approach to Repeat Purchasing Behaviour. **Journal of Marketing Research**, vol. 6, 444 - 447.

Mynatt, C.R., Doherty, M.E. & Dragan, W. 1993. Information Relevance, Working Memory, and the Consideration of Alternatives. **The Quarterly Journal of Experimental Psychology**, vol. 46A, no. 4, 759 - 778.

Newport, E.L. 1990 (Jan - Mar). Maturational Constraints on Language Learning. **Cognitive Science**, vol. 14, no. 1, 11 - 28.

Nezu, M., Nezu, C. & Perri, G. 1990. Psychotherapy for adults within a problem solving framework: Focus on depression. **Journal of Cognitive Psychotherapy**, vol. 4, 247 - 256.

Niaz, M. 1992 (Dec). From Piaget's Epistemic Subject to Pascual-Leone's Metasubject: Epistemic Transition in the Constructivist-Rationalist Theory of Cognitive Development. **International Journal of Psychology**, vol. 27, Issue 6, 443 - 457.

Oliver, R.L. 1976. Hedonic Reactions to the Disconfirmation of Product Performance Expectations: Some Moderating Conditions. **Journal of Applied Psychology**, vol. 61, 246 - 250.

Oliver, R.L. 1977. Effect of Expectation and Disconfirmation on Postexposure Product Evaluations: An Alternative Interpretation. **Journal of Applied Psychology**, vol. 62, 480 - 486.

Oliver, R.L. 1980. A Cognitive Model of the Antecedents and Consequences of Satisfaction decisions. **Journal of Marketing Research**, vol. 17, 460 - 469.

Oliver, R.L. & Swan, J.E. 1989 (Dec). Equity and Disconfirmation Perceptions as Influences on Merchant and Product Satisfaction. **Journal of Consumer Research**, vol. 16, 372 - 383.

Olshavsky, R.W. & Miller, J.A. 1972. Consumer expectations, product performance and perceived product quality. **Journal of Marketing Research**, vol. 9, 19 - 21.

Olson, J.C. & Dover, P.A. 1979. Disconfirmation of Consumer Expectations Through Product Trial. **Journal of Applied Psychology**, vol. 64, 179 - 189.

Olson, J.M. & Zanna, M.P. 1993. Attitudes and Attitude Change. **Annual Review of Psychology**, vol. 44, 117 - 154.

Oshikawa, S. 1969 (Oct). Can Cognitive Dissonance Theory Explain Consumer Behaviour? **Journal of Marketing**, vol. 33, 44 - 49.

Oshikawa, S. 1972 (Jan). The Measurement of Cognitive Dissonance: Some Experimental Findings. **Journal of Marketing**, 64 - 67.

Overskeid, G. 1995 (Nov). Cognitivist or behaviourist - Who can tell the difference? The case of implicit and explicit knowledge. **British Journal of Psychology**, vol. 86, Part 4, 517 - 522.

Paivio, A. 1986. **Mental Representations: A Dual Coding Approach**. New York: Oxford University Press. 322p.

Paniagua, F.A. 1986. Synthetic behaviourism: Remarks on function and structure. **Psychological Record**, vol. 36, 179 - 184.

Parasuraman, A., Zeithaml, Berry, L.L. 1985 (Fall). A Conceptual Model of Service Quality and Its Implications for Future Research. **Journal of Marketing**, vol. 49, 41 - 50.

Park, C.W., Gardner, M.P. & Thukral, V.K. 1988 (Fall). Self-perceived knowledge: Some effects on information processing for a choice task. **American Journal of Psychology**, vol. 101, no. 3, 401 - 424.

Park, C.W., Jaworski, B.J. & MacInnis, D.J. 1986. Strategic Brand Concept-Image Management. **Journal of Marketing**, vol. 50, 135 - 145.

Payne, J.W. 1982. Contingent decision behaviour. **Psychological Bulletin**, vol. 92, 382 - 402.

Penney, C.G. 1989. Modality effects and the structure of short-term verbal memory. **Memory and Cognition**, vol. 17, no. 4, 398 - 422.

Pennington, D.C. 1986. **Essential Social Psychology**. Great Britain: Edward Arnold (Publishers) Ltd. 275p.

Pennington, N. & Hastie, R. 1993 (Oct - Nov). Reasoning in explanation-based decision making. **Cognition**, vol. 49, nos. 1 - 2, 123 - 163.

Perkins, D.N., Lockhead, J. & Bishop, J.C. 1987. **Thinking**. The Second International Conference. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers. 555p.

Perner, J. & Davies, G. 1991 (April). Understanding the mind as an active information processor: Do young children have a "copy theory of mind"? **Cognition**, vol. 39, no. 1, 51 - 69.

Peter, J.P. & Olson, J.C. 1987. **Consumer Behavior: Marketing Strategy Perspectives**. United States of America: IRWIN Homewood, Illinois. 698p.

Peter, J.P. & Olson, J.C. 1990. **Consumer Behavior: Marketing Strategy Perspectives**. United States of America: IRWIN Homewood, Illinois. 710p.

Peter, J.P. & Olson, J.C. 1996. **Consumer Behavior and Marketing Strategy**. 4th Edition. Chicago: Richard D. Irwin. 738p.

Peterson, R.A. 1988. **Marketing Research**. 2nd Edition. USA: Business Publications, Inc. 576p.

Peterson, R.A. 1988. **Marketing Research**. 2nd Edition. USA: Business Publications, Inc. 576p.

Peterson, R.A. & Wilson, W.R. 1992 (Win). Measuring customer satisfaction: Fact and Artifact. **Journal of the Academy of Marketing Science**, vol. 20, no. 1, 61 - 71.

Petty, R.E., Unnava, R. & Strathman, A.J. 1991. Theories of Attitude Change. In T.S. Robertson & H.H. Kassarian (Eds), **Handbook of Consumer Behavior**. pp. 241 - 280. Englewood Cliffs, New Jersey: Prentice-Hall.

Pierce, W.D. & Belke, T.W. 1988. Stimulus Control of Consumer opinion by Brand Names: A Social Conditioning Analysis. **The Psychological Record**, vol. 38, 227 - 236.

Raju, P.S. 1984 (Sept). Exploratory brand switching: An empirical examination of its determinants. **Journal of Economic Psychology**, vol. 5, no. 3, 201 - 221.

Ram, A., Narayanan, S. & Cox, M.T. 1995 (July - Sept). Learning of Diagnostic Knowledge for a Real-World Problem-Solving Task. **Cognitive Science**, vol. 19, no. 3, 289 - 340.

Rasmussen, J. & Rouse, W. 1981. **Human detection and diagnosis of system failures**. New York: Plenum Press.

Ratcliff, R. 1978 (Mar). A theory of memory retrieval. *Psychological Review*, vol. 85, no. 2, 59 - 108.

Reber, A.S. 1985. **The Penguin Dictionary of Psychology**. England: Penguin Books. 848p.

Reynolds, A.G. & Flagg, P.W. 1983. **Cognitive Psychology**. 2nd Edition. Boston: Little, Brown and Company. 490p.

Rice, C. 1995. **Consumer Behaviour: Behavioural Aspects of Marketing**. Oxford: Butterworth Heinemann. 414p.

Roberts, M.J. 1993. Human Reasoning: Deduction Rules or Mental Models or Both? **The Quarterly Journal of Experimental Psychology**, vol. 46A, no. 4, 569 - 589.

Robertson, T.S. & Kassarian, H.H. 1991. **Handbook of Consumer Behaviour**. London: Prentice-Hall International (UK) Limited. 614p.

Rosenberg, K.M. & Daly, H.B. 1993. **Foundations of Behavioral Research: A Basic Question Approach**. New York: Harcourt Brace College Publishers. 494p.

Roedder, D., Sternthal, B. & Calder, B. 1983 (Nov). Attitude-Behaviour Consistency in Children's Responses to Television Advertising. **Journal of Marketing Research**, vol. 20, no. 4, 337 - 349.

Roediger III, H.L. 1990 (Sept). Implicit Memory: Retention without Remembering. **American Psychologist**, vol. 45, no. 9, 1043 - 1056.

Rogoff, B. & Chavajay, P. 1995 (Oct). What's Become of Research on the Cultural Bias of Cognitive Development? **American Psychologist**, vol. 50, no. 10, 859 - 877.

Sadowski, C.J. 1993 (Jul). An Examination of the Short Need for Cognition Scale. **The Journal of Psychology**, vol. 127, no. 4, 451 - 454.

Sahakian, W.S. 1982. **History and Systems of Social Psychology**. 2nd Edition. New York: Hemisphere Publishing Corporation. 629p.

Sanitioso, R. & Kunda, Z. 1990. Ducking the collection of costly evidence: Motivated use of statistical heuristics. **Journal of Behavioural Decision Making**, vol. 4, 161 - 176.

Saunders, M., Lewis, P. & Thornhill, A. 1997. **Research Methods for Business Students**. London: Pitman Publishing. 429p.

Scheier, M.F. & Carver, C.S. 1988. A model of behavioral and self-regulation: Translating intention into action. In L. Berkowitz (Ed), **Advances in experimental social psychology**, vol. 21, pp. 303 - 346. San Diego: Academic.

Scher, S.J. & Cooper, J. 1997. Motivational Basis of Dissonance: The Singular Role of Behavioural Consequences. **Internet**, <http://panther1660.eiu.edu/psychology/Scher/dissons.html> 1p.

Schiffman, L.G. & Kanuk, L.L. 1991. **Consumer Behaviour**. Fourth Edition. United States of America: Prentice-Hall International, Inc. 680p.

Schlenker, B.R. 1980. **Impression management**. Belmont, CA: Wadsworth.

Schlenker, B.R. 1992. Of shape shifters and theories. **Psychological Inquiry**, vol. 3, no. 4, 342 - 344.

Schnaitter, R. 1987. Behaviourism is not cognitive and cognitivism is not behavioural. **Behaviourism**, vol. 15, 1 - 11.

Schuman, H. & Johnson, M.P. 1976. Attitudes and Behaviour. **Annual Review of Psychology**, vol. 2, 161.

Sears, D.O. & Abeles, R.P. 1969. Attitudes and opinions. **Annual Review of Psychology**, vol. 20, 253 - 289.

Sekaran, U. 1992. **Research Methods for Business: A Skill-Building approach**. 2nd Edition. New York: John Wiley. 428p.

Service, E. 1992. Phonology, Working Memory, and Foreign-language Learning. **The Quarterly Journal of Experimental Psychology**, vol. 45A, no. 1, 21 - 50.



Settle, R.B. & Alreck, P.L. 1989. **Why They Buy**. United States of America: John Wiley & Sons. 351p.

Shafir, E., Simonson, I. & Tversky, A. 1993 (Oct - Nov). Reason-based choice. **Cognition**, vol. 49, nos. 1 - 2, 11 - 36.

Shallice, T. & Warrington, E.K. 1970. Independent functioning of verbal memory stores: A neuropsychological study. **Quarterly Journal of Experimental Psychology**, vol. 22, 261 - 273.

Shanks, D.R. 1995. Is Human Learning Rational? **The Quarterly Journal of Experimental Psychology**, vol. 48A, no. 2, 257 - 279.

Shapiro, M.A. 1997 (February). Cognitive Dissonance and Dissonance. **Internet**, <http://instruct1.cit.cornell.edu/Course/comm418/dissonance.1ec.html>  
1 - 6p.

Shaughnessy, J.J. & Zechmeister, E.B. 1997. **Research Methods in Psychology**. 4th Edition. New York: The McGraw-Hill Companies, Inc. 524p.

Shaver, K.G. 1985. **Principles of Social Psychology**. 2nd Edition. London: Lawrence Erlbaum Associates, Publishers. 572p.

Shavitt, S. 1989. Products, Personalities and Situations in Attitude Functions: Implications for Consumer Behaviour. **Advances in Consumer Research**, vol. 16, 300 - 305.

Sheth, J.N. & Frazier, G. 1982 (Winter). A Model of Strategy Mix Choice for Planned Social Change. **Journal of Marketing**, vol. 46, 15 - 26.

Sheth, J.N. & Talarzyk, W.W. 1972 (Feb). Perceived Instrumentality and Value Importance as Determinants of Attitudes. **Journal of Marketing Research**, vol. 9, 6 - 9.

Shiffrin, R.M. 1993. Short term memory: A brief commentary. **Memory and Cognition**, vol. 21, no. 2, 193 - 197.

Shrauger, J.S. 1975 (July). Responses to Evaluation as a Function of Initial Self-perceptions. **Psychological Bulletin**, vol. 82, 581 - 596.

Siegel, S. 1956. **Nonparametric Statistics for the Behavioral Sciences**. London: McGraw-Hill Kogakusha, Ltd. 312p.

Siegler, R.S. 1989. Mechanisms of Cognitive Development. **Annual Review of Psychology**, vol. 40, 353 - 379.

Simon, L., Greenberg, J. & Brehm, J. 1995 (Feb). Trivialization: The forgotten mode of dissonance reduction. **Journal of Personality and Social Psychology**, vol. 68, no. 2, 247 - 260.

Simonson, I. 1989 (Sept). Choice based on reasons: The case of attraction and compromise effects. **Journal of Consumer Research**, vol. 16, no. 2, 158 - 174.

Singh, J. 1990 (Spr). A typology of consumer dissatisfaction response styles. **Journal of Retailing**, vol. 66, no. 1, 57 - 99.

Sirgy, M.J. 1983. **Social Cognition and Consumer Behaviour**. New York: Praeger Publishers. 239p.

Sirgy, M.J. 1987 (Winter). A Social Cognition Model of Consumer Problem Recognition. **Academy of Marketing Science**, vol. 15, no. 4, 53 -61.

Smith, M.B. 1968. The self and cognitive consistency. In R.P. Abelson, E. Aronson, W.J. McGuire, T.M. Newcomb, M.J. Rosenberg, & P.H. Tannenbaum (Eds), **Theories of cognitive consistency: A Sourcebook** (pp. 366 - 372). Chicago: Rand McNally.

Smith, P.L. 1992. Multiple detector models of simple reaction time. In J.R. Busemeyer & J.T. Townsend (Eds.), **Decision Field Theory: A Dynamic-Cognitive Approach to Decision Making in an Uncertain Environment**. Psychological Review, vol. 100, no. 3, 432 - 459.

Smith, R.A. & Houston, M.J. 1982. Script-Based Evaluations of Satisfaction with Services. In L.Berry, G. Shostack & G. Upah (Eds), **Emerging Perspectives on Services Marketing**. Chicago: American Marketing, 59 - 62.

Smith, R.E. & Swinyard, W.R. 1983. Attitude-Behaviour Consistency: The Impact of Product Trial vs. Advertising. **Journal of Personality and Social Psychology**, vol. 34, no. 5, 1034 - 1041.

Smyth, M.M. & Pendleton, L.R. 1989. Working Memory for Movements. **The Quarterly Journal of Experimental Psychology**, vol. 41A, no. 2, 235 - 250.

Sommer, R. & Sommer, B.B. 1986. **A Practical Guide to Behavioral Research: Tools and Techniques**. 2nd Edition. New York: Oxford University Press. 2977p.

Spivack, G., Platt, J. & Shure, M. 1976. **The problem-solving approach to adjustment**. Washington, D.C.: Jossey-Bass.

Squire, L.R. 1987. **Memory and Brain**. New York: Oxford University Press. 315p.

Srinivasan, N. & Ratchford, B.T. 1991 (Sept). An empirical test of a model of external search for automobiles. **Journal of Consumer Research**, vol. 18, no. 2, 233 - 242.

Steele, C.M. 1988. The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed), **Advances in experimental social psychology**, vol. 21, pp. 261 - 322. San Diego: Academic.

Steele, C.M. & Spencer, S.J. 1992. the primacy of self-integrity. **Psychological Inquiry**, vol. 3, no. 4, 345 - 346.

Steffens, F.E. 1993. **Introductory Statistics**. Johannesburg: Lexicon Publishers. 351p.

Stigler, J.W., Shweder, R.A. & Herdt, G. 1990. **Cultural Psychology: Essays on Comparative Human Development**. Cambridge: Cambridge University Press.

Straits, B.C. 1964 (July). The pursuit of the Dissonant Consumer. **Journal of Marketing**, vol. 28, 62 - 66.

Stuart, O.D. 1984 (Jun). A note on the measurement quantification and use of consumer confidence. **Journal of Economic Psychology**, vol. 5, no. 2, 128 - 138.

Swann, W.B.Jr. 1984. Quest for accuracy in person perception: A matter of pragmatics. **Psychological Review**, vol. 91, 457 - 477.

Swann, W.B.Jr. 1990. To be adored or to be known? The interplay of self-enhancement and self-verification. In E.T. Higgins & R.M. Sorrentino (Eds.), **Handbook of motivation and cognition: Foundations of social behaviour**, (Vol. 2, 408 - 448). New York: Guilford.

Swann, W.B.Jr. 1992. Dance with the one who bring ya? **Psychological Inquiry**, vol. 3, no. 3, 346 - 347.

Sweller, J. 1988 (April - June). Cognitive load during problem solving: Effects on learning. **Cognitive Science**, vol. 12, no. 2, 257 - 285.

Sweller, J., Chandler, P., Tierney, P. & Cooper, M. 1990. Cognitive Load as a Factor in the Structuring of Technical Material. **Journal of Experimental Psychology: General**, vol. 119, no. 2, 176 - 192.

Tedeschi, J.T., Schlenker, B.R. & Bonoma, T.V. 1971. Cognitive dissonance: Private rationalization or public spectacle. **American Psychologist**, vol. 26, 685 - 695.

Tesser, A. 1988. Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed), **Advances in experimental social psychology**, vol. 21, pp. 181 - 227. San Diego: Academic.

Thomas, K. 1971. **Attitudes and Behaviour**. England: Penguin Books Ltd. 366p.

Thorson, E., Chi, A. & Leavitt, C. 1992. Attention, Memory, Attitude and Conation: A Test of the Advertising Hierarchy. **Advances in Consumer Research**, vol. 19, 366 - 379.

Tighe, T.J. 1982. **Modern learning Theory: Foundations and Fundamental Issues**. New York: Oxford University Press. 422p.

Todd, P. & Benbasat, I. 1994 (Oct). The Influence of Decision Aids on Choice Strategies: An Experimental Analysis of the Role of Cognitive Effort. **Organizational Behaviour and Human Decision Processes**, vol. 60, no. 1, 36 - 74.

Towse, J.N. & Hitch, G.J. 1995. Is there a Relationship between Task Demand and Storage Space in Tests of Working Memory Capacity. **The Quarterly Journal of Experimental Psychology**, vol. 48A, no. 1, 108 - 124.

Traylor, M.B. 1981 (Dec). Product Involvement and Brand Commitment. **Journal of Advertising Research**, vol. 21, no. 6, 51 - 56.

Tse, D.K. & Wilton, P.C. 1988 (May). Model of consumer satisfaction formation: An extension. **Journal of Marketing Research**, vol. 25, no. 2, 204 - 212.

Tulving, E. 1985. **Elements of Episodic Memory**. New York: Oxford University Press. 351p.

Tybout, A.M. & Artz, N. 1994. Consumer Psychology. **Annual Review of Psychology**, vol. 45, 131 - 169.

Tyson, G.A. 1987. **Introduction to Psychology: A South African Perspective**. Johannesburg: Westro Educational Books. 389p.

Vallacher, R.R. 1992. Come back to the future. **Psychological Inquiry**, vol. 3, no. 4, 348 - 350.

Vallacher, R.R. & Wegner, D.M. 1985. **Action Identification Theory**. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Van der Heijden, A.H.C. & Stebbins, S. 1990 (Spring). The Information-processing approach. **Psychological Research**, vol. 52, 197 - 206.

Van der Walt, A., Strydom, J.W., Marx, S. & Jooste, C.J. 1996. **Marketing Management**. Third Edition. Republic of South Africa: Juta and Company, Ltd. 620p.

Vanhehn, K. 1996. Cognitive Skill Acquisition. **Annual Review of Psychology**, vol. 47, 513 - 539.

Venkatesan, M. 1973. Cognitive Consistency and Novelty Seeking. In S. Ward & T.S. Robertson (Eds), **Consumer Behavior: Theoretical Sources**. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. pp. 354 - 384.

Wagenaar, W.A. 1988. Calibration and the effects of knowledge and reconstruction in retrieval from memory. **Cognition**, vol. 28, 277 - 296.

Walters, C.G. 1974. **Consumer Behavior: Theory and Practice**. 2nd Edition. Homewood, Illinois: Richard D. Irwin, Inc. 590p.

Walters, C.G. & Bergiel, B.J. 1989. **Consumer Behaviour: A Decision-Making Approach**. Cincinnati: South-Western Publishing Company. 608p.

Ward, J.J. & Werner, O. 1984. Difference and dissonance in ethnographic data. **Communication and Cognition**, vol. 17, nos. 2 - 3, 219 - 243.

Wegner, D.M. & Vallacher, R.R. 1986. Action identification. In R.M. Sorrentino & E.T. Higgins (Eds), **Handbook of motivation and cognition**, vol. 1, pp. 550 - 582. New York: Guilford.

Weikart, D.P. 1987. Curriculum quality in early education. In S.L. Kagan & E.F. Zigler (Eds.), **Early Schooling: The national debate** (pp 168 - 189). New Haven, CT: Yale University Press.

Wellman, H.M. & Gelman, S.A. 1992. Cognitive Development: Foundation Theories of core domains. **Annual Review of Psychology**, vol. 43, 337 - 375.

Wells, W.D. 1985 (Feb - March). Attitudes and Behaviour: Lessons from the Needham Life Style Study. **Journal of Advertising Research**, vol. 25, no. 1, 40 - 44.

Westbrook, R.A. 1987 (Aug). Product/consumption-based affective responses and postpurchase processes. **Journal of Marketing Research**, vol. 24, no. 3, 258 - 270.

Westbrook, R.A. & Oliver, R.L. 1991 (June). The dimensionality of consumption emotion patterns and consumer satisfaction. **Journal of Consumer Research**, vol. 18, no. 1, 84 - 91.

Westermann, R. 1988 (Aug). Structuralist reconstruction of Psychological research: Cognitive dissonance. **German Journal of Psychology**, vol. 12, no. 3, 218 - 231.

Wicklund, R.A. & Brehm, J.W. 1976. **Perspectives on cognitive dissonance**. Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc.

Wicklund, R.A. & Gollwitzer, P.M. 1982. **Symbolic Self-completion**. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Wilder, D.A. 1992. Yes, Elliot, there is dissonance. **Psychological Inquiry**, vol. 3, no. 4, 351 - 352.

Wiley, J.B. 1984. Toward Upgrading the Quality of Consumer Decision-Making. **Academy of Marketing Science Journal**, vol. 12, no. 1, 1 - 10.

Wilkie, W.L. 1986. **Consumer Behaviour**. New York: John Wiley & Sons. 705p.

Wilkie, W.L. 1990. **Consumer Behaviour**. 2nd Edition. New York: John Wiley and Sons. 699p.

Williams, K.C. 1981. **Behavioural Aspects of Marketing**. Oxford: Heinemann Professional Publishing Ltd. 235p.

Williams, K.C. 1989. **Behavioural Aspects of Marketing**. London: Heinemann Professional Publishing Limited. 235p.

Winter, F.L. & Rossiter, J.R. 1989. Pattern-Matching Purchase Behaviour and Stochastic Brand Choice: A Low Involvement Model. **Journal of Economic Psychology**, vol. 10, 559 - 585.

Wofford, J.C. & Goodwin, V.L. 1990. Effects of Feedback on Cognitive Processing and Choice of Decision Style. **Journal of Applied Psychology**, vol. 75, no. 6, 603 - 612.

Wood, G. 1983. **Cognitive Psychology: A Skills Approach**. Monterey, California: Brooks/Cole Publishing Company. 352p.



Woodruff, R.B., Cadotte, E.R. & Jenkins, R.L. 1983. Modelling Consumer Satisfaction Processes Using Experience-Based Norms. **Journal of Marketing Research**, vol. 20, 296 - 304.

Worchel, S. & Cooper, J. 1979. **Understanding Social Psychology**. Revised Edition. Homewood, Illinois: The Dorsey Press. 705p.

Wortman, C.B., Loftus, E.F. & Marshall, M.T. 1985. **Psychology**. 2nd Edition. New York: Alfred A. Knopf. 632p.

Wright, E.F., Rule, B.G., Ferguson, T.J. McGuire, G.R. et al. 1992 (Oct). Misattribution of dissonance and behaviour-consistent attitude change. **Canadian Journal of Behavioural Science**, vol. 24, no. 4, 456 - 464.

Zajonc, R.B. 1960 (Summer). The Concepts of Balance, Congruity and Dissonance. **Public Opinion Quarterly**, vol. 24, 280 - 296.

Zaltman, G. & Wallendorf, M. 1983. **Consumer Behaviour: Basic Findings and Management Implications**. New York: John Wiley and Sons. 684p.

Zanna, M.P. & Cooper, J. 1974. Dissonance and the pill: An attributional approach to studying the arousal properties of dissonance. **Journal of Personality and Social Psychology**, vol. 29, 703 - 709.

Zanna, M.P. & Rempel, J.K. 1988. Attitudes: A new look at an old concept. In **The Social Psychology of Knowledge**, ed. D. Bar-Tal, A.W. Kruglanski, pp. 315 - 334. New York: Cambridge University Press.

Zikmund, W.G. 1989. **Exploring Marketing Research**. 3rd Edition. Chicago: The Dryden Press. 824p.

Zikmund, W. & D'Amico, M. 1986. **Marketing**. 2nd Edition. New York: John Wiley and Sons. 764p.