

# COGNITIVE DISSONANCE: THE ADOPTION OF DISSONANCE REDUCTION STRATEGIES

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## ABSTRACT

The study evaluates the use of dissonance reduction strategies by motor vehicle consumers. The empirical analysis was undertaken on a sample of 200 buyers of new motor vehicles, using the proportionate stratified sampling technique. The findings of the study indicate that when consumers experience dissonance, the tension-state motivates them to adopt dissonance reduction strategies (e.g. post-purchase attitude change; trivialisation of foregone features; selective exposure and justification of purchases) in attempts to re-establish consonance. Informative results regarding the relationship between the magnitude of cognitive dissonance experienced and the dissonance reduction strategies adopted were obtained, an understanding of which will assist marketers in reducing post-purchase dissonance.

## OPSOMMING

Hierdie studie evalueer die gebruik van dissonansieverminderingstrategieë deur nuwe voertuig-eienaars. Die empiriese ontleding is uitgevoer op 200 nuwe motoreienaars en daar is gebruik gemaak van die gestratifiseerde steekproefnemingsstegniek. Die bevindinge van die studie dui daarop dat indien motoriste dissonansie ervaar na aankoop van hulle nuwe motor, hulle deur die spanningstoestand gemotiveer word om die teleurstelling te probeer oorkom deur van dissonansieverminderingstrategieë gebruik te maak (byvoorbeeld, na-aankoophoudingsverandering; trivialisering van voertuigeienskappe wat verbeur is; selektiewe blootstelling en regverdiging van besluite) as pogings om konsonansie te bewerkstellig. Insiggewende bevindinge is verkry, veral rakende die verwantskap tussen die omvang van kognitiewe dissonansie en die strategieë wat motoriste gebruik om dit te verminder. Hierdie inligting sal bemerkers ondersteun in die vermindering van na-aankoop dissonansie.

Among the basic needs which may have a significant effect on consumer decision-making and behaviour is the need for cognitive consistency. 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 maintains that behaviour and attitudes are not only consistent to the objective observer, but that individuals try to appear consistent to themselves. Human beings continuously receive stimulus information, which they perceive or interpret in a manner that reduces uncertainty and conflict. Hence, when inconsistencies arise, individuals try to rationalise them but attempts to achieve consistency may fail. Thus, inconsistency may persist, thereby causing psychological discomfort or dissonance. This cognitive interpreting process was explored by Festinger (1957) in the theory of cognitive dissonance and later revised by Aronson (1968). 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. In an earlier study, it was found that the dimensions that correlate significantly with the magnitude of cognitive dissonance experienced are awareness of expectations, unconfirmed expectation, reported dissonance, effort expended, incongruence with self-concept, price, perceived persuasibility of salesperson and level of confidence (Brijball, 1999).

These factors therefore, have the potential to arouse dissonance (Table I) and hence, trigger cognitive inconsistency.

Furthermore, the theory of cognitive dissonance postulates that "when an individual holds non-fitting cognitions about himself or his behaviour, as well as the environment, he will bring these into line, sometimes by behavioural shifts. 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, p. 10). It assumes that inconsistency is a noxious state setting up pressures to eliminate it or reduce it (Zajonc, 1960). The current research aims to assess the extent to which motor vehicle consumers will adopt the various dissonance reduction strategies (post-purchase attitude change, trivialisation of foregone features, selective exposure and justification of purchase) in an attempt to reduce the tension state.

The goals of the research are:-

- To assess the extent to which dissonance reduction strategies (attitude change, trivialisation of foregone features, selective exposure and justification of purchase) are adopted by motor vehicle consumers.
- To determine whether significant intercorrelations exist amongst the dissonance arousal factors and dissonance reduction strategies studied.

TABLE 1  
DISSONANCE AROUSAL FACTORS

DISSONANCE AROUSAL FACTOR	EXPLANATION
Awareness of expectations	The more aware motor vehicle consumers are of their needs and expectations before engaging in the act of purchase, the more likely they are to experience post-purchase dissonance if their needs are not met.
Unconfirmed expectations	Before the act of purchase, consumers develop expectations regarding the consequences of the purchase. 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, dissonance, an uncomfortable condition, arises.
Reported dissonance	This dimension refers to the extent to which motor vehicle consumers recognise that they regret choosing the motor vehicle that they did. It evaluates the confession of the buyer expressing dissonance.
Effort expended	Effort refers to the resources, such as, material, intellectual and psychological resources, a consumer invests in a purchase (Geva and Goldman, 1991). The greater the effort expended, the greater the magnitude of cognitive dissonance if needs remain unmet.
Incongruence with self-concept	This dimension refers to the extent to which motor vehicle consumers experience dissonance because of a discrepancy between their self-concept and actions taken or choice made. Hence, it measures perceived violation of the self-concept.
Price	This factor measures the degree of post-purchase regret or dissatisfaction experienced by the motor vehicle consumer due to the opportunity cost of having made a particular choice or decision.
Perceived persuasibility of salesperson	Sometimes consumers feel pressurised by the salesperson into buying a motor vehicle that they do not want or do not consider to be the right price to pay, and this may be a cause of dissonance.
Level of confidence	The level of confidence of the consumer is determined by the ease felt when making the purchase decision.

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- To evaluate whether dissonant motor vehicle consumers simultaneously adopt more than one dissonance reduction strategy in attempts to achieve consonance.
- To investigate whether significant relationships exist between the magnitude of cognitive dissonance experienced and the adoption of each dissonance reduction strategy.

The dissonance reduction strategies that may be adopted in attempts to reduce a tension state have been conceptualised in the following manner:-

- *Post-purchase attitude change*: People may reduce cognitive dissonance by changing their attitudes to make them consonant with behaviour. According to Gilovich (Internet, 1997, p. 1) "behaving contrary to your attitudes causes dissonance, which can be reduced by changing your attitude to make it consistent with the behaviour".
- *Trivialisation of foregone features*: Trivialisation refers to the dissonance reduction technique of decreasing the importance of the elements involved in the dissonant relations. Although cognitions can be added to help the individual reduce the perceived importance of the relevant cognitions, this trivialisation 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-behaviour relationship seem more logical or justifiable. In contrast, the purpose of trivialisation 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 and Brehm, 1995, p. 247). Second, "if, as Festinger posited, the importance of the cognitions is an initial determinant of dissonance, then, in trivialisation, rather than adding new cognitions, a basic characteristic of one or more of the relevant cognitive elements -its importance - is changed" (Simon, et al., 1995, p. 247). In this research, as in the study undertaken by Simon, et al., (1995), trivialisation refers to decreasing the importance of the elements involved in the dissonant relations.
- *Selective Exposure*: Selective exposure to new information avoids a dissonance confrontation. This research aims to assess the extent to which motor vehicle consumers are motivated to expose themselves to (attitude-) consonant information and to avoid (attitude-) dissonant information in order to stabilise a decision (or an existing attitude) so as to maintain consonance or reduce dissonance (Hewstone, Stroebe, Codd and Stephenson, 1989).
- *Justification of Purchase*: Justification refers to the extent to which reasons for performing a certain action outweigh the reasons against performing it (Wicklund and Brehm, 1976). Hence, the individual adopting this strategy might make the selected alternative seem even more favourable than it originally was.

#### **Cognitive dissonance as a motivating state: Tension**

To understand cognitive dissonance as a motivating state, it is necessary to have a clearer conception of the conditions that produce it. Cognitive elements are said to be dissonant when one implies the obverse of the other. Festinger maintains, "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 and Brehm, 1976, p. 253). This led to the conceptualization of cognitive dissonance as a functionally motivational state. Festinger (1957) points out that dissonance functions like a drive, need or tension. Its presence leads to action to reduce it, just as the presence of hunger leads to behaviour aimed at reducing the hunger (Lindgren, 1973). Hence, the state of tension is a condition of mental unrest that energizes cognitive processes in attempts to reduce or remove it (McNeal, 1982).

#### **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 that the choice made was the best decision. In other words, states of dissonance are transformed into states of consonance, and the inconsistencies are removed (Kassarjian and Cohen, 1965). 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 or driving force (Sanakian, 1982). Dissonance reduction is a fundamental motivating process in a person and may occur "either by a cognitive change concerning a person's behaviour, by altering his strategy concerning his action, or by a shift in knowledge (or opinion) concerning the effects of his action" (Sanakian, 1982, p. 436). The tension state may persist until cognitive change or cognitive modification takes place. This cognitive work can consist of adding consonant cognitions, increasing the importance of consonant cognitions, reducing dissonance cognitions and decreasing the importance of dissonant cognitions (Wicklund and Brehm, 1976). Hence, cognitive dissonance theory demonstrates that individuals who behave in a counter-attitudinal manner typically alter their attitudes thereafter to realign them with their behaviour (Wright, Rule, Ferguson, McGuire and Wells, 1992). The basic assumption of dissonance theory is that the greater the dissonance, the stronger is the dissonance reduction attempts (Oshikawa, 1972). The dissonance perspective does not argue that in general, tension must always be minimized, but rather that tension with regards to an ongoing commitment must be minimized (Forgas, 1981).

#### **Statement of the problem**

Since dissonance is a tension state, people adopt various strategies in attempts to reduce its effects. According to the theory of cognitive dissonance, dissonance is greater when the purchase involves a large capital outlay and the greater the dissonance, the stronger the dissonance reduction attempts (Williams, 1981). Since the purchase of a motor vehicle involves a substantial capital outlay, this study aims to determine whether motor vehicle consumers adopt dissonance reduction strategies. Whilst the relationship between price and the adoption of the dissonance reduction strategies is evaluated, the impact of the other dissonance arousal factors (Table I) on the urge to reduce post-purchase dissonance is investigated. Hence, this study assesses the extent to which motor vehicle consumers engage in post-purchase attitude change, trivialisation of foregone features of unselected alternatives, selective exposure and justification of purchase.

#### **Hypotheses**

##### *Hypothesis 1*

The dissonance reduction strategies (post-purchase attitude change, trivialisation of foregone features of unselected alternatives, selective exposure and justification of purchase) are significantly adopted by motor vehicle consumers.

##### *Hypothesis 2*

There are significant intercorrelations amongst the dissonance arousal factors (awareness of expectations, unconfirmed expectations, reported dissonance, effort expended, incongruence with self-concept, price, perceived persuasibility of salesperson, level of confidence) and the dissonance reduction strategies (attitude change, trivialisation, selective exposure and justification of purchase).

##### *Hypothesis 3*

There are significant intercorrelations amongst the dissonance reduction strategies adopted (attitude change, trivialisation, selective exposure and justification of purchase) such that the motor vehicle consumer may simultaneously adopt more than one dissonance reduction technique in attempts to achieve consonance.

**Hypothesis 4**

There is a significant relationship between the magnitude of cognitive dissonance experienced and the adoption of each dissonance reduction strategy (attitude change, trivialisation, selective exposure and justification of purchase) respectively.

**METHOD**

**Subjects**

A sample of 200 new motor vehicle buyers was drawn using a proportionate stratified random sampling technique. Only new motor vehicle buyers (within Kwa-Zulu Natal) who concluded their purchases in one major, reputable and leading motor vehicle manufacturing company and who owned the vehicle for a maximum period of seven months were considered, so as to prevent the effects of cognitive intrusion from impacting on the results of the study. The sample was stratified on the basis of four controls or criteria (range of motor vehicle purchased, month of purchase, gender and age of the buyer) since these subgroups are expected to have different parameters on the magnitude of cognitive dissonance experienced. However, the impact of these controls are not analysed in this paper. The adequacy of the sample was determined on the basis of the Kaiser-Olkin Measure of Sampling Adequacy (0.87062) and the Bartlett Test of Sphericity (21 059.071), which respectively showed suitability and significance. The results indicate that the normality and homoscedasticity preconditions are satisfied.

**Instruments**

The measuring instrument was a self-developed, precoded, standardised questionnaire comprising of Section A (Biographical data) and Section B (Dissonance arousal factors, dissonance reduction strategies, the magnitude of cognitive dissonance experienced), the latter measured using closed ended questions. Statements relating to factors which have the

potential to arouse dissonance and to influence the magnitude of cognitive dissonance experienced were constructed using the Likert scale (Table 2).

Furthermore, statements relating to potential dissonance reduction strategies regarding attitude change, trivialisation of foregone features, selective exposure and justification of purchase were developed to determine which, if any, of the strategies are adopted by subjects experiencing cognitive dissonance after the purchase of a motor vehicle (Table 3).

**TABLE 3  
MEASUREMENT OF VARIABLES USING THE LIKERT SCALE:  
EXAMPLES OF STATEMENTS MEASURING DISSONANCE  
REDUCTION FACTOR**

DISSONANCE REDUCTION FACTORS	1	2	3	4	5
<i>ATTITUDE CHANGE</i>					
I have grown to like the car I chose even more.					
Any doubts about the correctness of my decision has been overcome by positive feedback from advertisements reflecting the performance of the car I chose.					
<i>TRIVIALISATION OF FOREGONE FEATURES OF UNSELECTED MAKES</i>					
The positive features of unselected alternatives, that are nonexistent in my car, are not important to me.					
<i>SELECTIVE EXPOSURE</i>					
I only read motor vehicle advertisements reflecting the car I bought.					
I avoid people who are likely to talk negatively about the car I purchased.					
People who express negative views about the car I bought do so out of ignorance.					
I do not read advertisements reflecting other makes of vehicles, other than the one I selected.					
<i>JUSTIFICATION OF PURCHASE</i>					
I believe that 'I got good value for money' by choosing the make of car that I did.					

**TABLE 2  
MEASUREMENT OF VARIABLES USING THE LIKERT  
SCALE: EXAMPLES OF STATEMENTS MEASURING  
DISSONANCE AROUSAL FACTORS**

DISSONANCE AROUSAL FACTOR	1	2	3	4	5
<i>AWARENESS OF EXPECTATIONS</i>					
Before making my purchase decision I had a good idea of what motor vehicle features I was looking for					
<i>UNCONFIRMED EXPECTATIONS</i>					
The performance of the vehicle I bought fails to meet my expectations.					
The vehicle is not as economical as I thought.					
<i>REPORTED DISSONANCE</i>					
My choice of car has left me discontent.					
I wish I could return my car for another make.					
<i>EFFORT</i>					
I spent a considerable amount of time in evaluating alternative makes of cars before making a decision.					
I visited/obtained quotations from many dealerships before making my decision.					
<i>SELF-CONCEPT</i>					
I feel that the car I bought does not coincide with my knowledge, opinions and beliefs.					
I feel that the car I bought does not reflect 'the real me'.					
<i>PRICE</i>					
Considering the price, the car does not perform well.					
Considering the performance of the car, I feel that I have been overcharged.					
<i>PERSUASIBILITY OF SALESPERSON</i>					
I feel I have been talked into buying a car I do not like.					
I feel the salesperson imposed his/her views onto me.					
<i>CONFIDENCE</i>					
I felt uneasy when making my purchase decision.					
I often felt insecure about my own judgement.					

Respondents were required to indicate their attitudes by responding on a 5 point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The greater the score, the greater the extent to which respondents reflect that they adopt the dissonance reduction strategy concerned.

**Procedure**

A mail survey was used and hence the questionnaires were self-administered. The questionnaires were numbered so as to follow up on non-responses. Non-respondents were subsequently contacted to ensure a suitable response rate. Moreover, a self-addressed, stamped envelope was provided to facilitate an increased return rate. 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).

**Statistical Analysis**

*Validity*

The validity of the questionnaire was determined using Factor Analysis. An iterated principal factor analysis was performed using SPSS with an orthogonal Varimax Rotation. Thirteen factors with latent roots greater than unity were extracted from the factor loading matrix. The eigenvalues and the percent of total variance explained by each factor are reflected in Table IV. When analysing the factor matrix, only items with loadings >0.5 were regarded as being significant. Furthermore, when items were significantly loaded on more than one factor only that with the highest value was acknowledged. The factors were then labelled in terms of the loadings of the items (Table 4).

**TABLE 4**  
**FACTOR ANALYSIS: TOTAL VARIANCE EXPLAINED BY DIS-**  
**SONANCE AROUSAL FACTORS, THE DISSONANCE REDUC-**  
**TION STRATEGIES AND THE MAGNITUDE OF COGNITIVE**  
**DISSONANCE EXPERIENCED USING THE PRINCIPAL COM-**  
**POONENT ANALYSIS EXTRACTION METHOD**

Factor	Eigen- value	% of variance	Cumulative %	Dimension
1	19,128	26,203	26,203	Magnitude of cognitive dissonance experienced
2	4,613	6,319	32,523	Effort expended
3	3,672	5,031	37,553	Post-purchase attitude change
4	3,301	4,522	42,075	Level of confidence
5	3,286	4,501	46,576	Trivialisation of foregone features
6	3,242	4,441	51,017	Selective exposure
7	2,722	3,729	54,745	Incongruence with self-concept
8	2,571	3,522	58,267	Justification of purchase
9	2,395	3,281	61,548	Unconfirmed expectations
10	2,307	3,161	64,709	Perceived persuasibility of salesperson
11	2,092	2,866	67,575	Reported dissonance
12	1,819	2,492	70,067	Price
13	1,311	1,795	71,862	Awareness of expectations

From Table 4 it is evident that the questionnaire measures 13 factors (eigenvalues are greater than 1) as originally identified. These factors cumulatively account for 71.862% of the total variance.

#### Reliability

The internal consistency of the questionnaire or the degree of homogeneity among the items was assessed using Cronbach's Coefficient Alpha (Table 5). Due to the multiplicity of the items measuring the dimensions (measured on a 5 point Likert scale), the Cronbach's Coefficient Alpha was considered to be the most suitable since it has the most utility of multi-item scales at the interval level of measurement (Cooper & Emory, 1995).

**TABLE 5**  
**RELIABILITY ESTIMATE: CRONBACH'S COEFFICIENT ALPHA**

Cronbach's Alpha	=	0,9080
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The closer the value of the Coefficient Alpha to 1, the greater the reliability of the questionnaire. Hence, the Coefficient Alpha of 0.9080 in Table 5 indicates that the questionnaire is highly reliable and can consistently measure the dissonance arousal factors, the dissonance reduction strategies adopted and 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.

#### Descriptive and Inferential Statistics

Descriptive statistics, using frequency analyses, percentages, means analyses and standard deviations, were undertaken to

evaluate the extent to which motor vehicle buyers adopt dissonance reduction strategies and to assess the magnitude of cognitive dissonance experienced by motor vehicle consumers. In order to determine the relationship between the dissonance arousal factors and the adoption of dissonance reduction techniques, the Pearson's Correlation Matrix was used. The relationship between the magnitude of cognitive dissonance experienced and the adoption of each dissonance reduction strategy was also evaluated using the Pearson's Product Moment Correlation Coefficient.

## RESULTS

### The adoption of dissonance reduction strategies in attempts to reestablish consistency

Consumers' perceptions of their motor vehicle purchase were analysed on the basis of dimensions having the potential to arouse dissonance, namely, awareness of expectation, unconfirmed expectations, reported dissonance, effort expended, incongruence with self-concept, price, perceived persuasibility of salesperson and level of confidence. Cognisance was also given to post-purchase dissonance reduction strategies adopted in an attempt to reestablish consistency. These factors relate to post-purchase attitude change in favour of the selected alternative, degree of trivialisation of foregone features of unselected alternative, extent of selective exposure and justification of purchase. The mean scores on these factors lie within the 95 % confidence interval and hence, indicate that these strategies are significantly adopted during post-purchase evaluations (Table 6).

Since the mean values evident in Table 6 lie within the specified confidence intervals (95 %) it can be concluded that the dissonance reduction strategies are significantly used by motor vehicle consumers in attempts to reduce the magnitude of cognitive dissonance experienced. Hence, Hypothesis 1 may be accepted. These four dissonance reduction strategies are attitude change (Mean = 19.180; SD = 3.781), trivialisation of foregone features of unselected alternative (Mean = 14.035; SD = 3.485), selective exposure (Mean = 19.535; SD = 4.692) and justification of purchase (Mean = 16.285; SD = 2.866).

Frequency analysis undertaken in this study indicate that the majority of the respondents displayed that they adopted the dissonance reduction technique of attitude change (Table 7). This means that 83 % of the respondents indicated that the car that they purchased now seems more desirable to them, 84 % reflected that they have grown to like the car they chose even more, 64.5 % reflected that any doubts about the correctness of their decision were overcome by positive feedback obtained from their family and 69.5 % of the subjects indicated that positive feedback from friends regarding the chosen motor vehicle convinced them of the correctness of their decision.

**TABLE 6**  
**DESCRIPTIVE ANALYSES: THE ADOPTION OF DISSONANCE REDUCTION STRATEGIES AND THE MAGNITUDE OF**  
**COGNITIVE DISSONANCE EXPERIENCED**

VARIABLE	MEAN	STANDARD DEVIATION (SD)	MINIMUM	MAXIMUM	CONFIDENCE INTERVAL - MEAN (95%)
<b>POST DECISION-MAKING</b>					
Attitude Change	19,180	3,781	5,000	25,000	18,655 - 19,704
Trivialisation	14,035	3,485	4,000	20,000	13,552 - 14,518
Selective Exposure	19,535	4,692	9,000	35,000	18,884 - 120,185
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

**TABLE 7**  
DESCRIPTIVE STATISTICS: DISSONANCE REDUCTION – ATTITUDE CHANGE

STATEMENT/VIEW	FREQUENCY	PERCENTAGE
The car I purchased, now seems more desirable to me.	166	83
I have grown to like the car I chose.	168	84
Doubts about the correctness of my decision were overcome by positive feedback obtained from family.	129	64,5
Positive feedback from friends regarding the chosen motor vehicle convinced me of the correctness of my decision.	139	69,5

Frequency analyses undertaken in this study indicate that respondents adopt the dissonance reduction tactic of trivialisation (Table 8). Results show that 64.5 % of the respondents reflected that 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 that the positive features of unselected alternatives, that are nonexistent in their selected motor vehicle, are trivial and 58 % of these consumers felt that the positive features of unselected alternatives were not part of their needs. In addition, 59.5 % of the respondents indicated that the positive features of unselected alternatives, that are nonexistent in their chosen motor vehicle, increase the price of the car.

**TABLE 8**  
DESCRIPTIVE STATISTICS: DISSONANCE REDUCTION – TRIVIALISATION OF FOREGONE FEATURES OF UNSELECTED ALTERNATIVES

STATEMENT/VIEW	FREQUENCY	PERCENTAGE
The positive features of the unselected that are non-existent in the motor vehicle I bought, are not important to me.	129	64,5
The positive features of the unselected alternatives, that are non-existent in the motor vehicle I bought, are trivial.	121	60,5
The positive features of the unselected alternatives are not part of my needs.	116	58,0
The positive features of the unselected alternatives, that are non-existent in the motor vehicle I bought, increase the price of the car.	119	59,5

The frequency analyses undertaken in this study indicate that motor vehicle consumers engage in post-purchase selective exposure as a mechanism to reduce dissonance. The results of this study show that 36.5 % of the respondents indicated that they do not give attention to negative views about their selected motor vehicle. Furthermore, 50.5 % of the subjects reflected that 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 that after the purchase they spoke to friends who own the same make of vehicle they selected, who re-emphasized the correctness of their decision (Table 9).

**TABLE 9**  
DESCRIPTIVE STATISTICS: DISSONANCE REDUCTION – SELECTIVE EXPOSURE

STATEMENT/VIEW	FREQUENCY	PERCENTAGE
I do not give any attention to negative views about the motor vehicle I purchased.	73	36,5
After I bought my motor vehicle, I spoke to the salesperson/dealership who emphasised the wisdom of my decision.	101	50,5
After I purchased my car, I spoke to friends who own the same make of motor vehicle, who emphasized the correctness of my decision.	118	59,0

Frequency analyses undertaken in this study show that respondents engaged in post-purchase justification of purchase (Table 10).

**TABLE 10**  
DESCRIPTIVE STATISTICS: DISSONANCE REDUCTION – JUSTIFICATION OF PURCHASE

STATEMENT/VIEW	FREQUENCY	PERCENTAGE
Considering my finances, my choice of motor vehicle is the most suitable one.	170	85,0
I find it easy to explain why I chose the motor vehicle that I did.	166	83,0
The excellent performance of my motor vehicle outweighs the price expended.	151	75,7
I got "good value for money" by choosing the make of car that I did.	176	88,0

The results reflected in Table 10 indicate that 85 % of the consumers believed, considering their finances, the choice of vehicle made is the most suitable one. Furthermore, 83 % of the subjects felt that it is easy to explain why they chose the vehicle they did and 75.5 % indicated that the excellent performance of their vehicle outweighs the price expended. Furthermore, a substantial 88 % of the motor vehicle buyers displayed that they believe they got 'good value for money' by choosing the make of car that they did.

The prevalence of cognitive dissonance experienced is also evident (Mean = 59.755; SD = 22.504) with a significant magnitude (95 % Confidence Interval: 56.635 – 62.874) (Table 6).

#### The relationship between the dissonance arousal factors and the dissonance reduction strategies

Intercorrelations between the dissonance arousal factors and the four dissonance reduction strategies adopted were studied (Table 11). Thirty eight pairs of factors were correlated and thirty five pairs (92.11 %) depicted significant relationships. Hence, Hypothesis 2 may be accepted. Only three pairs (7.89 %) portrayed no significant relationships at the 5 % level of significance:-

- No significant relationships were noted between awareness of expectations and justification of purchase, selective exposure and attitude change respectively.

The significant relationships between the dissonance arousal factors and the dissonance reduction strategies produced interesting results in terms of the theory of cognitive dissonance:-

Table 11 indicates that there exists significant but inverse relationships between the adoption of the three post-purchase dissonance reduction strategies (post-purchase attitude change, selective exposure, justification of purchase) and the dissonance arousal factors (unconfirmed expectations, reported dissonance, effort expended, incongruence with self-concept, price, perceived persuasibility of salesperson and level of confidence) respectively. However, no significant relationships were noted between awareness of expectations and post-purchase attitude change, selective exposure and justification of purchase respectively.

Furthermore, it can be concluded from Table 11 that there is a significant but inverse relationship between trivialisation of foregone features of unselected alternatives and the dissonance arousal factors (unconfirmed expectations, reported dissonance, effort expended, incongruence with self-concept, price, perceived persuasibility of salesperson and level of confidence) respectively. However, there is a significant and direct relationship between trivialisation of foregone aspects and awareness of expectations. This implies that the less aware motor vehicle consumers are of their expectations, the less likely they are to trivialise the foregone qualities of unchosen alternatives.

**TABLE 11**  
**INTERCORRELATIONS: DISSONANCE AROUSAL FACTORS**  
**AND DISSONANCE REDUCTION STRATEGIES ADOPTED**

VARIABLES	AC	TRIV	SE	JUST
AC	1,000			
TRIV	0,5280 <b>0,000 *</b>	1,000		
SE	0,4496 <b>0,000 *</b>	0,3873 <b>0,000 *</b>	1,000	
JUST	0,6550 <b>0,000 *</b>	0,5117 <b>0,000 *</b>	0,3458 <b>0,000 *</b>	1,000
AE	0,0790 <b>0,266</b>	0,1760 <b>0,0013 *</b>	-0,0181 <b>0,799</b>	0,1366 <b>0,054</b>
UE	-0,5809 <b>0,000 *</b>	-0,5011 <b>0,000 *</b>	-0,2573 <b>0,000 *</b>	-0,6368 <b>0,000 *</b>
RD	-0,5747 <b>0,000 *</b>	-0,4195 <b>0,000 *</b>	-0,2357 <b>0,001 *</b>	-0,6364 <b>0,000 *</b>
EFFORT	-0,2203 <b>0,002 *</b>	-0,2890 <b>0,000 *</b>	-0,2826 <b>0,000 *</b>	-0,1779 <b>0,000 *</b>
SC	-0,4853 <b>0,000 *</b>	-0,4003 <b>0,000 *</b>	-0,3063 <b>0,000 *</b>	-0,4905 <b>0,000 *</b>
PRICE	-0,4719 <b>0,000 *</b>	-0,4387 <b>0,000 *</b>	-0,2916 <b>0,000 *</b>	-0,6373 <b>0,012 *</b>
PERS	-0,4703 <b>0,000 *</b>	-0,3496 <b>0,000 *</b>	-0,2301 <b>0,000 *</b>	-0,5481 <b>0,000 *</b>
CONF	-0,4945 <b>0,000 *</b>	-0,4850 <b>0,000 *</b>	-0,2866 <b>0,000 *</b>	-0,6279 <b>0,000 *</b>

\*  $p < 0,05$

**KEY:** AC – Attitude change  
 TRIV – Trivialisation of foregone features  
 SE – Selective exposure  
 JUST – Justification of purchase  
 AE – Awareness of expectations  
 UE – Unconfirmed expectations  
 RD – Reported dissonance  
 SC – Incongruence with self-concept

Table 11 also indicates that significant and direct intercorrelations exist amongst the four dissonance reduction strategies. This implies that motor vehicle consumers may adopt one or more technique(s) in attempts to reduce the tension experienced. Hence, Hypothesis 3 may be accepted. Therefore, the techniques to reduce post-purchase tension may be reduced or eliminated by adopting the strategies of attitude change, trivialisation of foregone features, selective exposure and justification of purchase either individually and/or simultaneously.

#### The relationship between the magnitude of cognitive dissonance experienced and the adoption of dissonance reduction strategies

Intercorrelations between the magnitude of cognitive dissonance experienced and the subsequent adoption of the four dissonance reduction strategies were studied (Table 12).

**TABLE 12**  
**INTERCORRELATIONS: DISSONANCE AROUSAL FACTORS AND**  
**MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED**

VARIABLES	AC	TRIV	SE	JUST
MAGNITUDE OF COGNITIVE DISSONANCE EXPERIENCED	-0,6764 <b>0,000 *</b>	-0,2848 <b>0,000 *</b>	-0,4855 <b>0,000 *</b>	-0,6080 <b>0,000 *</b>

\*  $p < 0,01$

**KEY:** AC – Attitude change  
 TRIV – Trivialisation of foregone features  
 SE – Selective exposure  
 JUST – Justification of purchase

Table 12 indicates that significant but inverse relationships exist between the magnitude of cognitive dissonance and the

adoption of the dissonance reduction strategies (post-purchase attitude change, trivialisation of foregone features of unselected alternatives, selective exposure and justification of purchase) respectively. Hence, Hypothesis 4 may be accepted. The results imply that the greater the degree of cognitive dissonance experienced, the less likely are motor vehicle consumers to adopt dissonance reduction strategies to reestablish consonance. The implication is that the greater the magnitude of dissonance experienced amongst motor vehicle buyers, the lesser the orientation of the individual to change attitudes after the purchase, to trivialise foregone features, to engage in selective exposure in favour of the selected option and to justify the purchase or vice versa.

The findings prove the premise of the theory of cognitive dissonance, that is, when consumers experience dissonance, the tension state motivates them to adopt dissonance reduction strategies in attempts to re-establish consonance.

## DISCUSSION

### Attitude change

Elliot and Devine (1994) found that dissonance is experienced as psychological discomfort which is alleviated on implementation of a dissonance-reduction strategy, attitude change. In the current study, it was found that there is a significant but inverse relationship between post-purchase attitude change and magnitude of cognitive dissonance experienced. Similarly, Cooper and Fazio (1984) concluded from their study that if dissonance arousal is attributed to the acceptance of responsibility for an aversive consequence, dissonance motivation occurs and attitude change is likely to result. Assael (1992) found that individuals tend to reinforce their decision by changing their attitudes in favour of the chosen brand.

Brehm (1956) observed, as predicted by dissonance theory, when subjects had to choose between two products which were similar in desirability, there was substantial attitude change in favour 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 and Venkatesan, 1975). Williams (1981) confirms that attitudes or beliefs can be changed so that they are consistent with behaviour. In addition, Zaltman and Wallendorf (1983) deduced that people change their attitudes to be congruent with their public behaviour when there is insufficient justification for that behaviour. However, Zaltman and Wallendorf (1983) maintain that the greater the inducement to perform the action, the less the magnitude of dissonance, and therefore, the less the attitude change. As evidenced, contrary to popular view, Kunda (1990) found that the mere inconsistency between two beliefs is insufficient to produce dissonance motivation and its resulting attitude change. However, Ginter (1974) deduced from his study that although attitudes change both before and after choice of the new brand, the post-purchase attitude change is greater in magnitude and correlated to a greater extent with choice.

Furthermore, it can be deduced from the current study that there is a significant, direct relationship between post-purchase attitude change and trivialisation of foregone features, selective exposure and justification of purchase respectively, thereby indicating that the dissonant motor vehicle buyer may adopt more than one dissonance reduction strategy.

### Trivialisation

Engel and Blackwell (1982) found that post-choice doubt is motivated by the awareness that one alternative was chosen and the existence that unchosen alternatives also have desirable features. 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.

It is evident from this study that there is a significant, direct

relationship between trivialisation of foregone features of unselected alternatives, selective exposure and justification of purchase respectively. There is also a significant, inverse relationship between trivialisation of foregone attributes and the magnitude of cognitive dissonance experienced. The results therefore, indicate that the greater the degree of trivialisation 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, et al., (1995) regarding the use of trivialisation as a method of dissonance reduction. The results jointly reflect that "people use trivialization to reduce dissonance and that attitude change and trivialization are alternative modes of dissonance reduction" (Simon, et al., 1995, p. 250). A significant and notable finding of Simon, et al., (1995) is that when the preexisting attitude is highly salient, people typically trivialise the cognitions rather than change their attitudes. The tendency to engage continually in trivialisation of unmet needs is shown to reduce the magnitude of cognitive dissonance experienced. The results of the current study emphasize that motor vehicle consumers adopt trivialisation as a method of dissonance reduction.

### Selective exposure

To deal with dissonance resulting from the consequences of a decision, people tend to focus on the positive qualities of their choices and to emphasize the negative aspects of unchosen alternatives (Harrison, 1993). Selective exposure to new information prevents a dissonance confrontation (Kassarjian and Cohen, 1965).

The results of the study indicate that there is a significant, direct relationship between selective exposure and justification of purchase. 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 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. Kassarjian and Cohen (1965) found that 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) found that confirmed smokers justified their continuance of smoking by denying, distorting, misperceiving or minimizing the degree of health hazard entailed. However, Lowe and Steiner (1968) deduced from their study that people prefer to receive whatever kinds of information will be most useful to them and that the use of a specific type of information partially depends upon the reversibility and consequences of the decision they have made. Engel (1963) offers little evidence that the new car purchaser is a dissonant consumer engaging in selective behaviour and concluded that new motor vehicle purchasers were highly sensitive to favourable information, but did not reject dissonance-arousing information, thereby implying that individuals will not necessarily avoid unpleasant information. However, Engel and Blackwell (1982) maintain that it is more likely that a person experiencing dissonance will buttress choice by procuring additional information.

### Justification of purchase

When an attractive alternative is rejected, the dissonance which arises can be reduced by justifying the decision. To do this, one might make the selected alternative seem even more favourable than it originally was. It is therefore evident that people want to avoid cognitive dissonance, so they will often change their attitudes in order to justify their behaviour. Worchel and Cooper (1979, p. 130) describe the effort justification sequence (choice → effort → goal): 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 and Cooper, 1979, p. 130). The result is an increase in the attractiveness of the chosen alternative and a reduction in the attractiveness of the rejected alternative (Zajonc, 1960). The rejected option may also be devalued.

Geva and Goldman (1991) found that when using justification of purchase to reduce dissonance, the individual may retrospectively distort the experience, selectively recall pleasant aspects, or be convinced that the effort expended was minimal. Aronson (1968) found that 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 and Byrne (1987, p. 145) concluded from their study that "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". Goethals and Cooper (1975) studied the timing of self-justificatory attitude change following forced compliance. They found that "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 – if it is definite or if it is possible that their behaviour will produce unwanted consequences" (Goethals and Cooper, 1975, p. 365). Similarly, Frey, Kumpf, Irle and Gniech (1984) found that dissonance can be reduced by focusing on the positive features of the chosen and the negative qualities 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 and Brehm, 1976), when the choice is irreversible (Brehm and 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.

### Conclusion and recommendations

It can be deduced from the results of this study that 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,
- Trivialisation 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, or vice versa.

These results imply that when extreme levels of cognitive dissonance are experienced, the motor vehicle consumer becomes demotivated to attempt to reduce dissonance because achieving consonance may be perceived as being 'far-fetched'.

The study findings reflect that individuals may engage in post-purchase attitude change, selective exposure, trivialisation of unmet needs and of foregone features of unselected alternatives and/or justification of purchase to avoid inconsistency and to reduce the amount of dissonance experienced. The tendency to adopt these dissonance reduction strategies is shown to result in a decreasing level of dissonance. Hence, the results lend support to Festinger's (1957) theory of cognitive dissonance which claims that the individual consumer strives toward consistency within the self. Furthermore, Lindgren (1973) and Westermann (1988) deduced that the strength of the tension to reduce the dissonance is a function of the magnitude of the dissonance.

Dissonance disrupts equilibrium or consistency within the consumer. An interesting finding, for marketers, generated from this study, is that dissonant motor vehicle consumers may adopt one or more of the dissonance reduction strategies in attempts to reestablish consistency. Hence, marketing managers may take the opportunity to help consumers seek relief from such doubt by supplying them with positive information about the product after the purchase and by providing the appropriate information needed to facilitate the effectiveness of the dissonance reduction strategy adopted by the dissonant buyer. Strategies to provide supporting information after the purchase and thus, to reduce dissonance include:-

- Providing additional product information and suggestions for product care and maintenance.

- Providing warranties or guaranties to reduce post-purchase doubt.
- Ensuring good service and immediate follow-up on complaints.
- Advertising reliable product quality and performance of motor vehicle to reassure recent buyers of product satisfaction.
- Following-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, presenting the motor vehicle buyer with a service book incorporating a congratulatory message and service instructions as this strategy is useful in influencing post-purchase.
- Immediately after the conclusion of the deal, introducing 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 in attempts to increase satisfaction.

The aforementioned strategies play a pivotal role in motor vehicle purchases, which represent a high risk, high inducement product. 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. The objectives of marketing effort are to achieve maximum profitability and consumer satisfaction. These goals can materialise by developing effective marketing strategies via proper evaluation of consumers and their behaviour and cognitions as they operate in the marketplace.

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