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Factors affecting cognitive dissonance among automobile magazine subscribers

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FACTORS AFFECTING COGNITIVE DISSONANCE AMONG AUTOMOBILE MAGAZINE SUBSCRIBERS

A Thesis

Presented to the

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ABSTRACT

This thesis examines the factors that help induce cognitive dissonance which may be dramatically reduced in new and used vehicle-buyers. The research uses a quantitative method to investigate whether vehicle owners experience cognitive dissonance when making decisions, influenced by others, getting good or bad deals when purchasing automobiles and being satisfied with their vehicles.

The participants of this study were automotive magazine subscribers. The survey was made available via electronic mail and 1,141 participants volunteered to take it. The data was then transferred to a statistical program (SPSS), where the data was analyzed.

The results indicated the following: vehicle owners' cognitive dissonance levels are affected, as the more satisfied they are with their vehicles' features and characteristics (H_1), the average amount of money that vehicle owners spend on their vehicles is between $751 and $1,750 and their cognitive dissonance levels are minimal (H_2), the amount of money that vehicle owners spend buying accessories for their vehicles is not related to their satisfaction levels (H_3) and the more satisfied vehicle

owners are with their vehicles, their levels of cognitive dissonance increase as well (H_4).

ACKNOWLEDGMENTS

As to be expected, anyone would be indebted to the people that helped bring to an end a study such as this one. I am very grateful to my family, my mom, my dad and my husband, because without them, I would not have been able to start the program. Their financial and moral support provided me the necessary tools and strength to not only start, but finish this intense program of study.

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CHAPTER ONE

CARS, COGNITIVE DISSONANCE, AND THE ECONOMY

Consumers tend to be very vigilant when it comes to how, when and where they spend their money for one good reason: the amount of discretionary income available for most people is limited. Making the wrong choice may have long-term effects on the consumers' future spending habits. A dissatisfied consumer, for example, could be left with the choice of either remaining dissatisfied or spending additional money to attain satisfaction. Some expenditures, such as automobiles, not only command large portions of consumers' discretionary income but also can lead to varying levels of consumer satisfaction.

With limited discretionary income, many variables should be considered when looking at consumers' high dollar purchases. In the case of vehicles, for instance, these variables may include the accessories people buy for their vehicles. Consumers may spend their limited income to accessorize their vehicles, which could ultimately lead to dissatisfaction especially when cognitive dissonance is experienced. Cognitive dissonance includes regret or feelings of doubt consumers may experience after making

large purchases which may prevent buyers from making repeat purchases in the future. Therefore, it is salient that marketers better understand and handle consumers' behaviors by recognizing the causes of cognitive dissonance.

Elaboration Likelihood Theory (Petty & Cacioppo, 1986) postulates that when people evaluate information critically thinking occurs through the central route; for example, the more motivated people are about a purchase, the greater degree they will actively think about and weigh the available information. On the other hand, when consumers are not highly motivated, thinking occurs in the peripheral route; for example, the less motivated people are about a purchase, the greater the lack of critical thinking. Consequently, the greater the involvement consumers have in a particular product, the more likely they are to contemplate the purchase decision.

The theory of cognitive dissonance (Festinger, 1957)—one variable to consider when looking at consumer spending and buyers' influences—examines consumers' involvement and thoughts that take place in the buying behavior, which ultimately will have an effect on whether purchases actually occur. That is, by acknowledging the underlining

premises of cognitive dissonance, marketers can better predict consumers' purchasing activities.

Furthermore, cognitive dissonance is elevated when consumers place high levels of importance on products, such as vehicles, houses, boats, etc. Advertising and promotional strategies are used to increase awareness, teach consumers about products' positive attributes, and help consumers feel comfortable about purchases made, which is particularly valuable when consumers place high levels of importance into the advertised products. Since discretionary income is typically limited, advertisers need to make their products stand out in the sea of marketing messages. Human emotions, such as fear, excitement and humor, are often used in marketing in order to entice buying behavior.

An inexpensive purchase may draw less attention to feelings of joy, goodness, excitement, doubt, or guilt. However, these emotions are still present to some degree. An expensive purchase, on the other hand, tends to amplify these feelings. The excitement consumers may feel while making expensive purchases, such as automobiles, may be more measurable than the excitement felt during the purchase of less expensive products, such as toothpaste.

This may be especially true when consumers are confronted with alternative choices when making big-ticket purchases and cognitive dissonance will most likely ensue depending on the nature of alternatives present. For example, an individual may be more likely to experience cognitive dissonance if he or she were to decide between two attractive vehicles rather than an attractive one and a mediocre one. The consumer may then have to justify to him or herself whether the correct decision was made when confronted with two equally attractive choices and whether the money spent on the car was worthwhile because both choices enticed positive emotion which includes feelings of attractiveness toward the vehicles.

These feelings, thoughts, or regrets are not occasional occurrences limited to a specific type of consumer. Many people experience doubt or regret when making small or colossal purchases, and when they come in contact with these doubts, cognitive dissonance follows (Festinger, 1957). The theory of cognitive dissonance (Festinger, 1957) explains how consumers can cope with purchasing decisions and how they justify their purchases, thus explaining what occurs in consumers' minds before, during or after they purchase a product.

What takes place in people's minds after they spend a large sum of money on something they really desire? Are they satisfied with the purchase, or are they filled with regret? In many cases, both assurance and regret plagues a consumer's mind once a newly purchased product is brought home for the first time (Engel, 1963; Losciuto & Perloff, 1967). So, how does a consumer reconcile the thoughts preceding the purchase decision?

In the United States, consumers are faced with several choices of competing products at the time of purchase, and there is usually a myriad of marketing information supporting the decision to purchase any one of the several competing goods. After consumers purchase products and take them home, they may be thinking about the other competing products and alternative choices that were decided against during the time of purchase (Losciuto & Perloff, 1967). Oftentimes consumers justify their purchases by thinking about the positive attributes of their purchased product (Cohen & Goldberg, 1970; Cohen & Houston, 1972), or they view advertisements about products they recently bought that confirms the decisions they just made (Engel, 1963). All of these thoughts and behaviors are part of what Festinger (1957) called cognitive dissonance,

which in this case, involves consumers reconciling all of the "dissonant" or incongruent thoughts about their purchases by rationalizing, justifying and positively evaluating their purchase. These thoughts could stem from purchases of all price ranges —from expensive automobiles to low-priced toothpaste. Marketers even use their advertising budgets to create commercials aimed at recent buyers in order to help these consumers confirm their purchases and become repeat buyers in the future (Losciuto & Perloff, 1967; Mittelstaedt, 1969).

Among the many television commercials that consumers watch on a daily basis are those that advertise new automobiles. Auto manufacturers use commercials to showcase the new features and designs that have been integrated into their products with the goal of luring consumers into new vehicle dealerships, buying cars and feeling good about their newly purchased vehicles. One of the goals for advertisers is to address new car buyers' existing and potential cognitive dissonance, so the application of cognitive dissonance to automobile purchasing is significant for one primary reason: consumers buy numerous cars over their lifetimes, and multiplying

this over the number of new car buyers in the United States translates into billions of dollars spent each year.

Research on cognitive dissonance as applied to consumer buying behavior has been conducted for several decades now (e.g. Bell 1967; Cohen & Goldberg, 1970; Cohen & Houston, 1972; Engel, 1963; Hawkins, 1972; Herman, 2006; Holloway, 1967; Hunt, 1970; Kaish, 1967; Kanter, 1970; Losciuto & Perloff, 1967; Menasco & Hawking, 1978; Mittelstaedt, 1969; Oshikawa, 1969). Throughout the research, scholars have been conducting experiments, involving interviewing and surveying consumers in order to fully comprehend how cognitive dissonance operates. This research project is situated within this field of inquiry.

Statement of the Problem

In 2005 alone, consumers purchased 16,947,754 new vehicles in the U.S. (Ward's Auto, 2006a), spending approximately $102,499 million (Ward's Auto, 2006b). New vehicle buyers spent an average of $22,013 per vehicle in 2005 (Ward's Auto, 2006c). Consumers not only sacrifice a great deal of their discretionary income purchasing new vehicles, but they also spend an exorbitant amount of money on their new vehicles partially based on the necessity of transportation. In addition, new vehicles are considered

investments (i.e., resale value), means of making social statements (i.e., luxury and sports cars) and tools for many consumers' means to earning a living (i.e., pickup trucks used in construction, vans used for catering services, etc.). Therefore, consumers are selective about the types of vehicles they buy because a variety of vehicles' attributes (i.e., leather seats, horsepower, design, load capacity, etc.) are important factors to consider when purchasing a car. From safety ratings and vehicle utilities to how new automobiles look and feel when driving, consumers must carefully decide which vehicles are right for them. The many brands of vehicles to choose from and types of vehicles to drive (cars, trucks and sport utility vehicles) give consumers many alternative choices when purchasing vehicles and cognitive dissonance sets in shortly after consumers make their purchase.

Cognitive dissonance is inevitable (Bell, 1967; Herman, 2006; Holloway, 1967; Oshikawa, 1969). When people buy, they are bound to be affected by it. Consumers do experience cognitive dissonance at a greater or lesser degree. The problem is that when consumers experience cognitive dissonance they may be less inclined to continue buying new and used vehicles in the future, thus affecting

the United States economy. However, cognitive dissonance may be dramatically reduced in order to alleviate this problem. For example, if a consumer spends a great deal of money buying accessories in order to customize or modify his or her vehicle, will it make that consumer feel good, happy or just sad, thus, reducing cognitive dissonance? Also, will this uncomfortable state buyers are faced with become suppressed if they spend more money on accessories and are more satisfied with their vehicles?

Salespeople on dealership lots can also influence the degrees to which car buyers experience cognitive dissonance. During and after the vehicle buying process, salespeople can make sure that cognitive dissonance is experienced as little as possible by following up through the mail and reassuring the customer that the right choice was made.

Consumers' automobile purchasing dramatically contributes to and affects our economy. So, if people did not make as many high dollar purchases, then a much greater problem could arise. In theory, if people just bought automobiles out of necessity, then one can think that there is absolutely no harm to that. In practice, however, this could lead to less automobile purchases, which could

adversely affect the U.S. economy. In other words, cognitive dissonance reduction with respect to automobile purchases may be the key to ensuring growth in automobile sales, and ultimately, enhancing the economic welfare of the United States.

CHAPTER TWO

THEORETICAL CONSTRUCT: COGNITIVE DISSONANCE APPLIED TO EVERYDAY LIFE

Festinger (1957) explained Cognitive Dissonance Theory as "these two elements are in a dissonant relation if, considering these two alone, the obverse of one element would follow from the other" (p. 13). In other words, dissonance occurs when one element is not expected to follow from the other, thus creating incongruence. Elements, in this case, refer to decisions made within various situations, and the greater the importance of the situation, the greater dissonance will be experienced. For example, one will view deciding to buy a vehicle as a more important decision than deciding which program to watch on television. Hence, greater dissonance will be experienced during the vehicle buying process than when individuals decide which television show to watch. Little to no dissonance will result after an individual picks a particular television show to watch compared to the great amount of dissonance experienced after an individual chooses a vehicle because greater importance is placed on the vehicle purchase.

In addition to incongruent elements causing dissonance, decisions made among competing choices also play a part in the process of cognitive dissonance. The reason why dissonance becomes aroused is that the consumer will then need to justify whether the correct decision was made and whether the money spent on the car was worthwhile. Furthermore, cognitive dissonance can be applied through forced compliance (Festinger, 1957). For example, if a consumer was offered a generous amount of money to buy a vehicle with engine malfunctions instead of buying a perfect running one, the consumer would then more likely experience a great amount of dissonance from not buying the perfect running car, but would justify the fact that he/she will end up with the one that had engine troubles knowing that money will be received. Dissonance is ultimately reduced through this route of justification.

When people experience dissonance they consciously try to reduce it, and when they know that they are making the wrong choice, they then justify their decision. This may not apply to all buying situations. According to Festinger, when people experience dissonance, they will not only attempt to reduce it, but they will also avoid circumstances where more dissonance may be created.

Festinger's development of Cognitive Dissonance Theory reveals that dissonance arises at the very basic behavioral level of whether one should lie or tell the truth.

Festinger's (1957) work revolves around cognitive dissonance and how it affects humans. He posits that human beings try to live in harmony and they try to establish a consistency in their lives so they can be consonant with their beliefs, opinions, values and attitudes. Even though cognitive dissonance in a human's life is inevitable, people experience it in varying degrees.

Festinger's (1957) famous $20 experiment provides evidence for his work. The experiment that he conducted studied two groups of men who were given a repetitive, boring and tiring task to accomplish. After the two groups finished the task, the one group was given $1 to lie to women and to encourage them to complete the task. The second group was given $20 to also lie to women to do the task as well. Some of the men refused to lie, but the majority attempted to recruit women. The men who were given $20 confessed that the task was in fact boring and monotonous. The men who were given $1 said that the task was not that bad. Subsequently, the men with $1 experienced cognitive dissonance because they were

justifying the fact that the dollar they received was worth lying to other people to perform the task. On the contrary, the men who received $20 did not experience cognitive dissonance because the amount of money that they received was great enough that they did not have to justify anything. Besides whether an individual decides to lie or tell the truth, however, there are several ways dissonance may be increased or decreased among individuals.

In his research, Festinger (1957) posited four ways in which cognitive dissonance occurs; one is through logical inconsistency. Logical inconsistency occurs when one element is not expected to follow from another. For example, if people believed that we can travel by air, but if they also believed that we could not build an airplane, then these two cognitions are dissonant from one another. The second way that dissonance can occur is through cultural mores. For instance, if a woman were to be sexually active in ancient Greece, dissonance would exist simply because the culture defined that sexually active women are not socially acceptable. The third way that dissonance may arise is if one specific opinion is included in a more general opinion. For example, during an election, if a person is a member of the Republican party

but prefers a Democratic candidate, then the cognitive elements are dissonant with each other because being a member of the Republican party should favor Republican candidates. The fourth way that dissonance may come about is through past experience. For example, if one is playing with fire and yet there is no evidence that one is getting burned, then the two elements will be dissonant from each other because past experience suggests that when playing with fire someone ends up getting burnt.

Festinger (1957) suggests three elements in which dissonance can be eliminated by changing one of those elements. The first one is changing a behavioral cognitive element. For instance, people who smoke after discovering that smoking can cause serious health problems can choose to quit smoking and no longer experience dissonance. The second element is changing an environmental cognitive element. For example, in an abusive relationship between a husband and wife, the environmental cognitive element that she can change is to leave him, thus changing her environment by becoming surrounded by loving and caring people. The third element is adding new cognitive elements. For example, the way a smoker can reduce the importance of his existing dissonance caused by smoking is

to find out the death rates caused by car accidents and place greater importance in this matter than in the health concerns of smoking.

Festinger's (1957) experiment illustrates one of the ways which cognitive dissonance can take place. Although there are four ways, according to Festinger, where cognitive dissonance can occur, this current study concentrates on Festinger's elements in which cognitive dissonance can be eliminated. The third method of eliminating cognitive dissonance, adding a new cognitive element, involves brand familiarity in vehicle-buying in order to boost satisfaction. Brand knowledge may help consumers feel good after spending large sums of money. When buyers make purchases of brand-familiar products, including vehicles, they will be satisfied after the purchase, thus eliminating cognitive dissonance. In addition, when buyers go to stores that they have more favorable attitudes toward, because the retailer attempts to make the buyer feel better about the purchase, not only will there be higher intentions of future purchases but also the degrees of cognitive dissonance being experienced will be minimal to none.

Cognitive Dissonance as a Theory

While cognitive dissonance is an effective pathway to exploring consumers' underlying assumptions (Engel, 1963), it has also been used in several other areas of interest. For example, scholars have applied cognitive dissonance to health research (Beauvois, Joule, & Brunetti, 1993; Blazer, Hays, & Musick, 2002; Clark, McCann, Rowe, & Lazenbatt, 2004; Green, Scott, Diyankova, Gasser, & Pederson, 2005; Homer, Sheard, & Jones, 2000; Makela, 1997); social norms and reference groups (Whitley, 2001); family research (Akker, 2001); juvenile delinquency (Cassel, Chow, Demoulin, & Reiger, 2001); and people contradicting their own beliefs (Beauvois, Bungert, & Mariette, 1995; Burris, Harmon-Jones, & Tarpley, 1997; Cohen, 1959; Cooper & Duncan, 1971; Deutsch, Krauss, & Rosenau, 1962; Dietrich & Berkowitz, 1997; Fried 1998; Glass, 1964; Hobden & Olson, 1994; Joule & Touati Azdia, 2003; Kitayama, Snibbe, Markus, & Suzuki, 2004; Mahaffy, 1996; Rabbie, Brehm, & Cohen, 1959; Rosenfeld, Kennedy, & Giacalone, 1986; Ruiz & Tanaka, 2001; Spangenberg, Sprott, Grohmann, & Smith, 2003; Wigens 1997). Although, this literature review is certainly not exhaustive, it is designed to help the reader understand

the variety of contexts in which cognitive dissonance has been applied.

Furthermore, researchers have been applying the theory of cognitive dissonance in their studies from the inception of Festinger's theory in 1957 to more contemporary investigations (see e.g., Joule & Touati Azdia, 2003; Kitayama, et al., 2004). While this theory was created and tested over fifty years ago, it remains a useful and important subject of study because it can be applied and explain multiple areas of concern.

Contradicting Beliefs Publicly and Anonymously

People will say or behave in contrast to their own beliefs in many situations. Such circumstances exist in our work environment, telling jokes, our religious beliefs and our own sexuality. When this occurs, then the scale of cognitive dissonance elevates dramatically, especially when done publicly instead of anonymously. According to Festinger (1957), humans will actively seek to reduce cognitive dissonance.

Individuals who make inconsistent decisions under forced compliance situations or are forced to commit acts that go against their belief systems will experience cognitive dissonance because of the inconsistency between

forced and true beliefs. In addition, they also attempt to reduce the dissonance by verbalizing the incongruent judgment, but the magnitude of cognitive dissonance will only skyrocket because they publicly committed themselves to a decision they did not truly believe (Rabbie, et al., 1959). When people are forced to adopt different strategies for a variety of reasons, cognitive dissonance is unavoidable. To further apply cognitive dissonance in social psychology, researchers have engaged in a paradigm shift. Instead of just focusing on forced compliance (Beauvois, et al., 1995; Dietrich & Berkowitz, 1997; Wigens, 1997), researchers also suggested that cognitive dissonance is aroused when participants are asked to advocate positions they support but do not live up to, for instance, the hypocrisy paradigm (Fried, 1998).

In a study, Fried (1998) applied the hypocrisy paradigm to the advocacy of recycling programs. Hypocrisy was identified as whether test subjects advocated recycling but behaved in ways contrary to their stated beliefs. Fried found that subjects who anonymously stated their transgressions (i.e., when they did not recycle in the past) became aroused with dissonance by engaging in behaviors to advocate recycling, thus making up for past

transgressions. On the other hand, Fried (1998) found that subjects who individually identified with their transgressions (i.e., were asked to identify themselves when they stated their transgressions) did experience cognitive dissonance by forming more negative attitudes toward recycling in order to rationalize their past transgressions.

Forced Compliance in the Work Environment

Research has also evidenced how cognitive dissonance comes into play when individuals are forced to act opposite to their own beliefs (Wigens, 1997). When a group of nurses were forced to take up new policies known as "scientific management," which focuses on profitability, increased speed and minimizing labor costs rather than concentrating on quality of care and reduction in "routine" care, it came in conflict with the nurses' beliefs (Wigens, 1997). The results showed that since the nurses had no choice but to agree with the new policies, an environment of cognitive dissonance was created—the forced compliance situation was contrary to the beliefs that the nurses held. However, the nurses rationalized and accepted the situation for which they were forced to comply in order to reduce cognitive dissonance (Wigens, 1997). The nurses told

themselves that the orders came down from management and that nothing could be done to change the orders, so the nurses felt that compliance was necessary in order to remain employed.

In another study, researchers showed that commitment to compliance is a prerequisite of dissonance arousal, which in turn is reduced by commitment to activity (Beauvois, et al., 1995). This means that although subjects willingly agree to an undesirable activity (in this case, subjects were asked to take a survey) they still are susceptible to feelings of cognitive dissonance. However, when these same subjects were given a choice of topics to write about during the commitment to compliance situation, they saw this activity as a means to express their own opinion and, thus, the activity caused the subjects to rationalize their commitment to comply as favorable and cognitive dissonance arousal was reduced. In contrast, when subjects were not given a choice of topics but were forced to write about a single topic instead, cognitive dissonance arousal was not reduced. Those subjects placed in the commitment to a compliant situation will experience greater cognitive dissonance if forced to further comply by committing an additional undesirable act,

since they mistakenly thought that they were given the freedom to become committed to the compliance situation (Beauvois, et al., 1995).

Another study revealed that although commitment to compliance is a prerequisite to cognitive dissonance arousal, if researchers appeal to the test subjects with some kind of positive reassurance, dissonance is reduced (Dietrich & Berkowitz, 1997). For example, one study showed that people who are forced to act contrary to their beliefs but are delivered ego-enhancing feedback, their dissonance was reduced (Dietrich & Berkowitz, 1997). Hence, cognitive dissonance is produced when individuals are told to do something against what they believe. However, appealing to the subjects' self-concepts lead to reduction in the experience of cognitive dissonance.

Similar to the aforementioned studies that showed how forced compliance affects cognitive dissonance, consumers may be forced to comply when making purchases. For example, buyers may seek out particular brands when shopping, but may be forced to purchase an alternative brand. This could result from a lack of store selection of the sought out brand. This relates to the current research in that consumers may seek out a sports car, i.e., Nissan

350z, but due to the lack of affordability or practicality, consumers may opt for a less desired sedan, i.e., Nissan Altima, possibly leading to varying levels of dissatisfaction. As a result of their dissatisfaction, these consumers may easily turn to the purchase of after market accessories so that they become more satisfied with their purchase.

Coping Mechanisms, Religion and Sexuality

Cognitive dissonance not only applies to forced compliance but to religion and sexuality as well. A researcher investigated religious beliefs and the role cognitive dissonance plays among people to uphold or challenge these beliefs (Mahaffy, 1996). For example, the author found that these dual identities, religion (Christian) and sexuality (lesbian), caused cognitive dissonance which, in turn, led them to seek alternative ways to reducing this tension (Mahaffy, 1996). Women who identified as evangelical Christians prior to coming out as lesbians were more likely to experience cognitive dissonance than non-evangelical Christians. The reason behind this, Mahaffy (1996) explained, is that Christians view homosexuality as a sinful and immoral behavior. The participants were likely to resort to one of the following

dissonance reduction strategies: live with cognitive dissonance (i.e., their actions were dissonant to their beliefs), change their beliefs, or leave the church. Lesbians who experienced tension between their own beliefs and homosexuality (i.e., internal dissonance) were more likely to change their beliefs instead of changing their social location or even living with dissonance. Lesbians who experienced tension between someone else's beliefs (those of the church, their family, friends or the general public) and their sexuality (external dissonance) were more likely to live with that tension or leave the church. Also, Mahaffy suspected that the later in life a woman identified as a lesbian, the higher the likelihood she would change her beliefs or leave the church. In contrast, the earlier in life a woman identified as a lesbian, the higher the likelihood to live with the tension (Mahaffy, 1996). The results provide further evidence as beliefs become more engrained amongst people in general, social forces such as the church, for example, and have less likelihood of changing beliefs. In other words, strong beliefs serve as a coping mechanism for cognitive dissonance.

Researchers have also examined whether religious transcendence can have an effect on cognitive dissonance, and if so, is it reduced. In one study, researchers tested whether subjects with high levels of transcendence (the belief of submitting to a super-ordinate goal of religion in this case) lowered the amount of cognitive dissonance experienced when given information that challenged their beliefs (Burris, et al., 1997). Subjects that were allowed the opportunity to engage in transcendence, by committing to their beliefs prior to receiving the challenging information, experienced less cognitive dissonance compared to subjects not given the opportunity to engage in transcendence. Pointedly, religious beliefs superseded the challenging information. Also, when subjects endorsed higher levels of transcendence, lower levels of dissonance were measured. Burris, et al., (1997) demonstrated that when strongly held beliefs are challenged, cognitive dissonance is reduced when people are allowed to reaffirm those beliefs to themselves, thus reassuring one's own self-concept, but enhanced when those beliefs are either not reassured, tightly held, or both.

People in general will occasionally nonverbally distance themselves and reduce the importance of their

dissonant actions or thoughts. In the previously mentioned study, dissonance was reduced when subjects distanced themselves from their beliefs in religion for those subjects that already had weak religious beliefs. Furthermore, there is a reduction of that particular dissonance when an ego-enhancing message is delivered to the participants. According to Festinger (1957) dissonance can be reduced by adding or changing one of the dissonant elements; in this case there is an addition of a consonant cognition which reduced the overall inconsistency, hence, decreasing the importance of the elements involved. Furthermore, cognitive dissonance affects an individual's self-prophecy, which influences the decisions they make based on their own self-prediction (Spangenberg, et al., 2003). The researchers demonstrated that cognitive dissonance explains why people self prophesize because they use their previous dissonant behavior to justify why they should change and take positive action.

Consumers develop coping mechanisms as well when making purchases. As they place great importance on product attributes and characteristics, such as chrome exhausts, spoilers and 17'' wheels, they seek out those products that possess these desired qualities and cognitive

dissonance may be reduced. Hence, the research on cognitive dissonance and religion is important for this thesis since consumers' beliefs about a particular make and/or model of a vehicle could impact her or his levels of cognitive dissonance and the desire to purchase aftermarket accessories.

Confidence, Self-Image and Self-Esteem

When individuals are given ego-enhancing feedback or are forced to express ideas contrary to their own beliefs, the levels of cognitive dissonance fluctuate. Cognitive dissonance occurs among individuals who are faced with issues pertaining to their own self-esteem, self-confidence and self-image. For example, when people commit to decisions involving money, they express more confidence in their decisions (Rosenfeld, et al., 1986). In one study, researchers examined whether pre-decision moderation or post-decision enhancement occurred in situations that involved the chance of winning money (Rosenfeld, et al., 1986). The study involved sixty-two, male and female, participants who entered a "paid contest" guessing the number of gumballs in a 2-foot cube. The researchers then compared the participants' behavior to that of two other groups: people who were asked but refused to participate

and people in the general vicinity of the study. The results indicated that the participants who entered the contest expressed significantly more confidence in their decision, when asked to guess the amount of gumballs, compared to those who did not enter the contest. The findings suggest that since participants publicly expressed their decisions to the experimenter, these participants exhibited post-decision enhancement. When people commit to games of chance (i.e., paying to play) they become confident about their choice made within the game. On the other hand, if people do not commit to the game of chance but regardless are asked to submit a choice, they are less confident in their decision. Publicly committing to a decision also reinforces the decision.

People experiencing cognitive dissonance will be enticed to reduce it by helping others, but the actual actions of those in a dissonant state show that the dissonance reduces their willingness to help (Ruiz & Tanaka, 2001). The underlying premise that motivates them is the desire to reduce the unpleasant state they are in by restoring a favorable self-image and resolving the inconsistent feelings they have of themselves (Ruiz & Tanaka, 2001). Those subjects in dissonant conditions

changed their attitudes significantly more compared to subjects in non dissonant conditions. However, the scholars explained that less of those in the dissonance conditions actually helped the other individuals in need compared to those subjects in non dissonant conditions. The authors illustrated that cognitive dissonance decreases the subjects' helpfulness. The researcher also demonstrated that those more committed to the study were actually enticed to help more often than those less committed to the study. The reason why the dissonance-condition subjects helped less is a result of their tension experience and self-image, which made the participants overlook the victim's need, and the dissonance-condition subjects were compelled to feel self-preoccupied with their dissonant task. In addition to self-confidence and self-image, cognitive dissonance plays a role in affecting peoples' self-esteem (Ruiz & Tanaka, 2001).

Discrepancies in self-esteem issues caused by variances in one's statements to one's beliefs leads to cognitive dissonance among individuals (Cooper & Duncan, 1971). Cooper and Duncan (1971) confirmed that if a speech is discrepant with one's beliefs, it will arouse dissonance in subjects regardless of the level of self-esteem. If an

individual's belief (abortions should be legalized, for example) and the behavior (a speech arguing against legalization) are logically inconsistent, cognitive dissonance will become aroused. However, another investigation indicates that dissonance will be experienced to a greater degree when one's self-esteem is high and freely chooses to produce pain for another human being, especially when this act is contrary to one's beliefs (Glass, 1964). Research involving the administering of pain from a subject to a victim (in the experiment, the victim was the confederate) indicated that when a subject with high positive self-image had the option of choosing to administer a 100-volt shock, high amounts of dissonance was experienced. On the other hand, when the subject experienced lower levels of self-esteem, less dissonance was aroused. The subjects experiencing dissonance would then be motivated to reduce it, according to Glass (1964), so the subjects' attitudes and dislike or unfriendliness toward the victim would change, resulting in dissonance reduction. This was necessary so that the subjects' behaviors would match-up with their own self-image. Nevertheless, whether the subjects possessed high or low levels of self-esteem, they did not feel responsible for

their behavior because their perceived aggression was a consequence of situational oppression (Glass, 1964). The underlying message from the aforementioned study is that when people are forced to act in ways contrary to their own beliefs, justification for the behavior takes place in the form of cognitive dissonance reduction.

As evidenced, cognitive dissonance arises within individuals when faced with incongruent ideas and situations contrary to their initial beliefs (Cooper & Duncan, 1971; Glass, 1964). This occurs whether individuals have high or low perceptions about themselves. The researchers examined the formation of cognitive dissonance preceding incongruent actions. Certain elements occur prior to the formation of cognitive dissonance (Deutsch, et al., 1962). Dissonance is either not produced or it may be undetectable when choices are viewed as unimportant. Festinger does not define the word "importance," but according to Deutsch, et al., (1962) post-decision dissonance will occur after it stimulates the self-defensiveness about an individual's decision. This means that cognitive dissonance will be experienced based upon how important the decision is, which in turn means the

degree to which an individual will be apt to defending his or her decision.

As self-esteem varies among consumers, so does the involvement in their decision-making. During high levels of involvement and high levels of self-esteem, cognitive dissonance may rise when products that yield low satisfaction are purchased. Marketers can then enhance satisfaction and involvement by providing reassurance and ego-enhancing feedback after purchases are made. The findings in this portion of the literature review relate specifically to the current thesis. People who buy new and used vehicles may experience a range of cognitive dissonance and aftermarket accessory companies, such as American Racing Wheels, can reduce their cognitive dissonance by offering a variety of promotions targeted to specific vehicle buyers.

Forced Compliance and Anonymity Affect Cognitive Dissonance

Individuals who receive communication contrary to their beliefs experience cognitive dissonance which requires some sort of action to reduce and also defend the cognitive dissonance already produced. Through the use of communication materials, research has shown that when

individuals are placed under certain conditions where there is a greater perception of expended effort to defend their opinions, these individuals will experience cognitive dissonance when given new information counter to their previously held opinions (Cohen, 1959). For example, if an automotive consumer reads a bad car review from *Consumer Reports*™ about a car that he or she was previously passionate about purchasing, then that person may reduce the experienced cognitive dissonance by deciding to purchase a highly-reviewed car. Research has also shown that when people are made to feel obligated to read something that is contrary to their beliefs, engaging in inconsistent behavior is inevitable (Cohen, 1959). Also, the levels of cognitive dissonance fluctuate depending on whether people express their opinions in public or not (Kitayama, et al., 2004). Aside from beliefs, individuals can also experience cognitive dissonance when forced to assign preference to different choices, for example music (Kitayama, et al., 2004).

Kitayama, et al., (2004) investigated a non-traditional American culture where the students justified CD purchases by giving positive appraisal to the choice they made and negative appraisal for the one they left

behind. Data showed that cognitive dissonance behaviors deferred among the Japanese students depending on whether they were in the company of others, whereas, the European-American students experienced the same level of cognitive dissonance regardless of any company (Kitayama, et al., 2004). The Japanese students gave more negative appraisal for the CD left behind when in the company of others compared to when they were alone.

The role of anonymity in the reduction of cognitive dissonance is shown in other studies as well (Hobden & Olson, 1994; Joule & Touati Azdia, 2003). For instance, people care about whether their inconsistent behaviors are viewed or listened to by others because they want to project a good impression about themselves (Joule & Touati Azdia, 2003). When participants were forced to write an article and give a speech about a particular subject that was contrary to their beliefs, cognitive dissonance was reduced when the speech was performed in anonymity. Furthermore, when people attempt to appear consistent with their values in order to make a good impression, they feel the need to "do a little more" after implementing behaviors that go against their beliefs (Joule & Touati Azdia, 2003). In addition, a similar study showed that subjects who

freely told belittling jokes of a target group yielded stronger evidence of a negative impact of disparaging humor when in private than they did in public (Hobden & Olson, 1994).

In the study, subjects were asked to rate their opinion about a target group (lawyers in this case) after telling the jokes. Those subjects who were free to tell the jokes formed less favorable attitudes toward the target group in order to justify telling the jokes. Those forced to tell the jokes expressed less negative attitudes toward the target group. Hence, subjects placed in this forced compliance situation did not feel that they had to justify telling the jokes because the knowledge of being forced was enough to reduce cognitive dissonance. Hobden and Olson (1994) also found that when the subjects were asked to tell the jokes anonymously, their negative attitudes were greater than those subjects forced to make their jokes publicly known. Those that had to go public with their joke felt pressure to express positive attitudes toward the reference group. Thus, Hobden and Olson illustrated that shifts in attitude occur among individuals in order to cope with cognitive dissonance under non-forced compliance situations, but in a public setting, pressure to form

favorable attitudes takes precedence over cognitive dissonance reduction. The scholars demonstrated the importance of anonymity and perception of freewill when seeking accurate opinions from individuals.

When consumers make purchases while accompanied by friends or family, cognitive dissonance may increase, if persuaded by them. However, this peer pressure could subside when consumers purchase brands with positive reputations. Therefore, it will be to marketers' benefit to provide information about brand reputation on which consumers can base their purchase decisions. This is important to consider for this current investigation because brand vehicle knowledge and its reputation could help to increase satisfaction and reduce cognitive dissonance.

Health Research

People develop mechanisms to cope with cognitive dissonance through altered states of anonymity, involvement and self-confidence. This principle also applies to the way people view their health. The theory of cognitive dissonance has been applied widely to the health profession as well. The field includes, but is not limited to eating disorders (Green, Scott, Diyankova, Gasser, & Pederson,

2005), surgical patients (Homer, Sheard, & Jones, 2000), smoking (Clark, McCann, Rowe, & Lazenbatt, 2004), and alcohol (Blazer, Hays, & Musick, 2002). The following section documents specific studies demonstrating that although people experience cognitive dissonance in these types of situations, they seek to reduce it because of their distressful state.

Eating Disorders. Research has shown that cognitive dissonance plays a very important role in people with eating disorders (Green, Scott, Diyankova, Gasser, & Pederson, 2005). The investigators evoked high levels of cognitive dissonance among the study subjects (i.e., people with eating disorders) using three conditions: they told the subjects that their participation was voluntary, that they would have to go public with the fact that they had an eating disorder, and that a high level of effort expenditure would be involved. Those subjects observed as showing high levels of dissonance reduced it by adopting attitudes and behaviors that would oppose the "thin ideal." The opposite was found to be true among subjects exhibiting low levels of cognitive dissonance: they actually showed greater tendencies of eating disorder attitudes and behaviors than those in the high dissonance level

condition. In other words, when people with eating disorders are forced to make their condition publicly known, thus eliminating anonymity, cognitive dissonance arises. Later subsequent reduction of cognitive dissonance takes place in the form of adopting new healthy ways of living.

Surgical Patients. In another study, researchers found that surgical patients exhibited high levels of dissonance prior to undergoing surgery, and those with higher self-involvement (i.e., placing high importance on the surgery) exhibited greater dissonance (Homer, et al., 2000). In addition, when the subjects were advised that their surgery would have great benefits, when they perceived a great amount of pain, suffering and inconvenience from the surgery, or when the actual surgery yielded little benefit, then higher levels of cognitive dissonance were measured. However, as time passed, the scholars found that cognitive dissonance diminishes as the memory of the perceived pain from the operation decreases. Patients who have to undergo surgery typically perceive pain resulting and ultimately fear the greatest loss of all - their lives. According to Homer, et al., (2000) the fear

of loss typically produces high levels of cognitive dissonance arousal.

Smoking. The effects of smoking have been a topic among researchers from various disciplines and backgrounds, including scholars interested in the theory of cognitive dissonance. Specifically, a group of researchers examined how nursing students used cognitive dissonance reduction to cope with their smoking (Clark, et al., 2004). They examined whether undergraduate nursing students were aware of the negative health impacts of smoking along with what the students' attitudes were toward smoking in general. Cognitive dissonance was experienced among those subjects whose knowledge about the harmful effects of smoking had increased. Since those participants became more aware about the effects of smoking, high levels of dissonance occurred along with psychological discomfort. The knowledge of the effects of smoking could motivate the participants to stop smoking in order to reduce the discomfort. Also, the study demonstrated that students who still smoked had a broad or "generic" understanding of the harmful effects of smoking and had less favorable attitudes toward anti-smoking promotions than did non-smokers. As the amount of information regarding the adverse health

effects of smoking available to the nursing students increased, so did the level of physiological discomfort and behavioral modification (i.e., cognitive dissonance reduction) needed to cope with their smoking habits. The objective was the manipulation of information given to subjects and its affect on cognitive dissonance.

In another project, researchers conducted two experiments to evidence whether information manipulation had any effect on the commitment of "costly acts" (Beauvois, et al., 1993). In the first experiment, Beauvois, et al., (1993) found that subjects who were given time to cognitively rationalize their first "costly act" (i.e., smoking deprivation for eighteen hours) were less likely to commit a second even more "costly act" (i.e., smoking deprivation for an additional three days) (Beauvois, et al., 1993). Subjects allowed to contemplate the effects of their first "costly act" rationalized that it would not be nearly as problematic to them compared to the second more "costly act." Those who were not given the time to think about the first "costly act", however, increased their chances of committing a worse, problematic and more "costly act."

In the second experiment, the researchers found that when subjects were given no information about a first "costly act," they were more likely to commit a second more "costly act" (Beauvois, et al., 1993). When the information about the first "costly act" was positive, the likelihood to commit the second "costly act" was lower compared to when the given information was negative.

The researchers suggested that subjects who received no information blocked cognitive dissonant thinking because the subjects did not think about the first "costly act" that they were committing. However, when participants were given negative information (such as being told that the results of the study are not eagerly expected and that this study will not be of great use) about the first "costly act", the subjects were led to cognitively rationalize that the second more "costly act" would be more advantageous to commit. On the other hand, when given positive information (such as being told that the results are very much expected and that the study would be of great use) about the first "costly act" the subjects were led to believe that the second "costly act" would not be necessary (Beauvois, et al., 1993). In other words, when given the time to think about a "costly act," or when given information to

contemplate prior to giving the option of a second more "costly act," participants were less likely to commit the second more "costly act."

Cognitive dissonance helps explain why smokers have their pro-smoking attitudes and beliefs because maintaining a broad level of knowledge and negative attitudes against smoking cessation reduces or eliminates any dissonant thoughts (Beauvois, et al., 1993). Information availability and/or time to contemplate acts seem to be the key to arousing cognitive dissonant behaviors, as shown by the two aforementioned studies. Information often comes from reference groups and researchers have also looked at how this affects cognitive dissonance. This portion of this literature review is beneficial because reference groups often dictate the vehicles and vehicle accessories consumers buy.

Alcohol. Another area of study where researchers have applied the theory of cognitive dissonance is within the realm of alcoholism (Blazer, et al., 2002). As indicated in the literature review thus far, individuals who experience cognitive dissonance attempt to reduce it through various coping methods. In terms of alcohol consumption, one way of reducing dissonance is to agree

with the prohibition of alcohol use and cease consumption as dictated by the reference group. Another way is to view the prohibition as ancient and to not accept this anti-alcohol use belief while accepting all other general standards of the reference group and participate in any other activities. However, there was no relationship between non-conforming behavior and adverse health conditions in those particular individuals (Blazer, et al., 2002).

Alcohol, smoking and drug use cause attitudes and actions that are aimed at reducing cognitive dissonance experienced by those engaging in these activities. Data shows that people who engage in alcohol, smoking and drug use reduce cognitive dissonance, already resulting from their own alcohol and drug use consumption, by reporting that their partners use more than they do (Makela, 1997), thus reducing the significance of their own problem. Again, the two dissonant elements (continued substance abuse and the knowledge of social unacceptance) are managed by adding a new element (the significant others' alcohol consumption).

Much like how the drug users wish to find a way to cope with their experienced dissonance (by saying that

their significant other does the same activities), vehicle owners may also try to do the same. They may also avoid experiencing cognitive dissonance by making purchases similar to past ones or by turning to family or friends. For example, if vehicle owners are satisfied with their vehicles and their characteristics, then they will be more likely to make comparable future purchases and recommend that purchase to their family or friends. Consumers in general experience less cognitive dissonance when they perform actions similar to those close to them.

Social Norms and Reference Groups

Social rules and reference groups play an important role in guiding people from doing what is right and what is wrong. For example, in today's health-conscious society, norms often dictate that smoking or drinking alcohol excessively constitutes an anti-conforming behavior. People identify with reference groups that create rules on how to live, and those who defy social rules often justify their behavior to cope with subsequent cognitive dissonance. In a general sense, social norms serve as a reference of which people identify.

People who identify with reference groups experience cognitive dissonance when performing non-conforming

behaviors, which in turn, leads to adverse mental and physical health conditions (Blazer, et al., 2002). Social norms often dictate that people should engage in honest behavior, but one study showed that this can vary to some degree. More specifically, Whitley (2001) illustrated how cognitive dissonance can apply to academic dishonesty and confirmed that women and men are about equally likely to engage in academic dishonesty-cheating at the same rate-but women will hold more negative attitudes toward cheating than men. Women experience more guilt over having cheated and more shame concerning intentions to cheat than men. The fact that women experience more negative attitudes was attributed to violations of social norms and such violations could result to harm women's nurturing role obligations. Also, "women are less likely to engage in deviant behavior because girls are strongly socialized to avoid it. Boys may be socialized to see deviance in a positive light. Boys are more likely to be rewarded and less likely to punished for behaving aggressively than are girls and taught that aggressive games are fun" (p. 256). Furthermore, women are more likely to experience cognitive dissonance because they not only view the behavior as voluntary (making an internal self-attribution for the

cause of the behavior) and see themselves as honest (an important part of the self-concept), but also, they did not feel compelled by circumstances to cheat as compared to men (Whitley, 2001).

Even though people are likely to perform non-conforming behaviors, they eventually will find ways to manage the effects after the fact. Whether that means buying well-known familiar brands or changing one's own beliefs or attitudes that do not go against the groups' rules, they will reduce their experienced cognitive dissonance. For example, if a vehicle buyer is prone to adhere to the reference group's advice but makes a purchase contrary to the reference group's recommendation, the vehicle buyer is more likely to experience cognitive dissonance. This finding is important to note since the study at hand addressed whether vehicle buyers were influenced by friends or family prior to making their vehicle purchase.

Family Research

Family dynamics is another discipline that has not gone unnoticed by researchers using cognitive dissonance theory. More specifically, much like choosing to purchase high-ticket items, choosing adoption may lead families to

experience cognitive dissonance. For example, one researcher asked whether families that adopt children experience cognitive dissonance (Akker, 2001). In his research, Akker concluded that families that consider adoption find it a more difficult choice to be made compared to alternative options offering a genetic link. Furthermore, cognitive dissonance was experienced, and simultaneously reduced, amongst those families and infertile individuals who accept the fact that adoption is not an option for them since they viewed the genetic link important. Also, cognitive dissonance occurred among individuals who chose other options to overcome infertility; family counseling was likely to ease that dissonance. Cognitive dissonance was shown to play a role in family-making decisions. Some individuals contemplating adoption experienced the need to justify their decision (i.e., they sought reassurance from either the adoption agency, family and/or friends that their choice was the right one) in order to reduce the level of cognitive dissonance produced (Akker, 2001). When people have certain ideas engrained into their belief system, dissonant and incongruent thoughts are aroused when new contrary ideas are presented.

The same basic idea occurs in purchasing behavior. When people buy, there is a need to make themselves feel good about the particular purchase. The need to justify one's decisions is necessary and important because it determines the levels of cognitive dissonance experienced; unless, of course the marketer has already taken the necessary precautions and made sure that the buyer's dissonance will be minimal to none.

Juvenile Delinquency. The formation of cognitive dissonance among individuals varies, and in some cases knowing whether some types of individuals are more prone to experience cognitive dissonance may help researchers better understand peoples' behaviors in general. Cassel, et al., (2001) examined whether some individuals actually have a greater propensity to experience cognitive dissonance than others (Cassel, et al., 2001). As a result of their work, they found that juvenile delinquent boys experienced greater levels of cognitive dissonance compared to typical high school students.

In addition, the scholars learned that the delinquent boys who experienced cognitive dissonance attempted to reduce it by turning to alcohol and drugs. In order for the boys to support the habit a large amount of money was

required, thus, leading them to more delinquency and crime. Furthermore, the delinquent boys' school played a significant role in their lives. When the school failed to cope with the boys' dissonance and neglected them, delinquency and crime were on the boys' mental agenda. The results of the study comparing typical high school boys to juvenile delinquent boys concluded that the latter group was more prone to experience cognitive dissonance, and in this case, turn to crime (Cassel, et al., 2001). The cognitive dissonance experienced by the delinquent boys was reduced when they changed their behaviors, i.e., turning to crime because perhaps they felt abandoned or neglected.

It is very important for people experiencing cognitive dissonance to try to cope with it. However, in some cases people cannot cope with their cognitive dissonance in a positive way. The juvenile delinquent boys were left to manage the dissonance experienced, but they did not, and as a result they turned to crime. The environment, family and friends play a significant role not only in the boys' lives but also in the buyer's life. If behaviors need to be changed or even beliefs to decrease the effects of cognitive dissonance, then it is imperative that people not only change their behaviors but also their beliefs. For

example, the car-buying behavior may be altered when consumers bring along friends or family to help eliminate cognitive dissonance from occurring. Their advice could help reassure the consumer's vehicle purchase and/or vehicle's accessories, thus helping to cope with cognitive dissonance.

Literature Summary

Based on this review of literature employing cognitive dissonance theory, it is evident that cognitive dissonance can be used in a wide range of scholarly investigations. Drawing from this review, researchers learn that cognitive dissonance plays an important role when one's beliefs are challenged (Beauvois, et al., 1995; Burris, Harmon-Jones, & Tarpley, 1997; Cooper & Duncan, 1971; Dietrich & Berkowitz, 1997; Fried, 1998; Glass, 1964; Mahaffy, 1996; Rabbie, Brehm, & Cohen, 1959; Wigens, 1997), from instances of when one commits acts opposed by his or her reference groups (Blazer, et al., 2002), to when one smokes (Clark, et al., 2004). Also, cognitive dissonance plays an important role in helping to justify telling belittling jokes about a target group when forced to do so (Hobden & Olson, 1994).

The study of human behavior is not complete without knowledge of how cognitive dissonance arises and is managed

among individuals facing all sorts of life situations. Understanding this behavior has many applications, from individual and family dynamics (Akker, 2001), to development of communication programs challenging and confirming popular beliefs (Cohen, 1959). Like many theories in the field of Communication, cognitive dissonance plays an important role in understanding and predicting the actions performed by the ever-communicating and diverse society. Scholars can continuously test this theory to further understand the different ways in which cognitive dissonance can increase and decrease. Predicated on cognitive dissonance theory, the current research examines how vehicle buyers may cope with cognitive dissonance that may come after their purchase.

Marketing and Cognitive Dissonance as a Topic of Investigation

Given the fact that cognitive dissonance is prevalent and the theory can help explain the phenomena at hand, it remains an important topic to investigate. This uncomfortable state of mind that consumers find themselves in is indeed heightened with higher priced items, such as automobiles. Therefore, the following section explores the degrees to which cognitive dissonance applies to automobile

purchases and why cognitive dissonance reduction in this area of study is an important problem to examine. While this theory was initially conceived in 1957, the following literature review draws from the early stages of the theory's development (Bell, 1967; Cohen & Goldberg, 1970; Cohen & Houston, 1972; Engel, 1963; Furse & Stewart, 1984; Holloway, 1967; Hunt, 1970; Kaish, 1967; Kanter, 1970; Losciuto & Perloff, 1967; Menasco & Hawking, 1978; Mittelstaedt, 1969; Oshikawa, 1969; Sheth, 1970; Straits, 1964). This literature builds a foundation as to how cognitive dissonance can further be applied to consumer behavior and ultimately to vehicle buying.

Advertising, Persuasion and Conflicting Information Coalesce with Cognitive Dissonance

Marketers are always eager to learn more about any type of consumer because turning people into future customers means larger profits. Knowing whether customers will experience cognitive dissonance or not while shopping helps marketers effectively design promotional programs that will enhance brand loyalty. For example, automakers produce radio, television, and print advertisements that not only promote their products, but also help reassure new buyers that they have made the right decision. Brand-loyal

car buyers may feel confident about their newly purchased vehicles and may consider the price they pay for their vehicles to be fair, thus exhibiting various levels of cognitive dissonance (Engel, 1963). Consumers become brand loyal to certain automobiles typically from personal experience or from observations of what friends and family purchase. Brand-loyal consumers, therefore, typically purchase the same brand upon their next vehicle purchase and may recommend that brand to others.

Advertising facilitates the reduction of cognitive dissonance in consumers, but some consumers have a greater chance of experiencing cognitive dissonance than others (Bell, 1967). Some consumers are more influenced by persuasion and are more likely to experience cognitive dissonance compared to others who are not as influenced by persuasion (Bell, 1967). If advertisers effectively use persuasion tactics in their promotional messages, then buyers are less likely to experience cognitive dissonance. However, the levels of cognitive dissonance experienced vary (Bell, 1967).

For consumers who are easily persuaded in buying new cars, and who are high on self-confidence when making a purchase, their experienced level of cognitive dissonance

is high. For consumers who are not easily persuaded, and who are high on self-confidence, their experienced cognitive dissonance is typically low. Finally, consumers who are easily persuaded and have little self-confidence experience a low dissonance level; whereas people who are not easily persuaded and have low self-confidence experience an increase in cognitive dissonance. So, consumers who lack confidence in the ability to make right decisions (but are easily influenced by others) will experience the least amount of cognitive dissonance after their purchase (Bell, 1967).

Consumers who do not have self-confidence in their buying ability often take their friends with them for shopping advice (Bell, 1967). Advertisers tend to capitalize on this idea by portraying consumers shopping in groups, showing that buying the advertised product is a social event. Perpetuating this idea (when individuals take friends with them for shopping advice) to consumers' minds encourages this behavior (shopping in groups), thus, mitigating the amount of cognitive dissonance experienced among buyers. However, persuasion alone is not the only factor contributing to cognitive dissonance.

Conflicting information about products is one of the factors that play a part in creating cognitive dissonance in consumers. Some other factors involved during the buying process include: inducement to buy, anticipated dissonance, and information and cognitive overlap (Holloway, 1967). In situations where high inducement to buy is involved, the levels of cognitive dissonance within individuals increase. Also, manipulating information about products or providing different levels of information that leads to cognitive overlap results in high levels of cognitive dissonance among consumers. In addition, when consumers anticipate high levels of cognitive dissonance before making a purchase, they ultimately experience cognitive dissonance regardless of the amount of information received about the purchased product (Holloway, 1967).

Cognitive dissonance arises among consumers, especially when anxiety is anticipated prior to making a purchase. However, researchers have shown that there are ways that dissonance may fluctuate among consumers. The following section documents a plethora of ways cognitive dissonance is manipulated for consumers.

Increasing and Reducing Cognitive Dissonance in Consumer Behavior

The possibility of dissonance existing is great when buyers purchase products they do not need or purchase products without sufficient information. Also, very similar product attributes may cause greater consumer dissonance than dissimilar ones. When faced with tough choices, consumers will reduce the dissonance experienced by adjusting their own attitudes and behaviors to fit with their decision (Losciuto & Perloff, 1967).

Cognitive dissonance plays a significant role in marketing. Retailers are very much interested in maintaining completely satisfied customers and providing ways to reduce cognitive dissonance so that consumers repeatedly select the same brand or visit the same store. Assuming that consumers frequently shop at the same stores, retailers need to ensure that their similar products are differentiated from each other. When retailers effectively differentiate their products, consumers can more easily decide on which products best suit them so cognitive dissonance will be minimized after a purchase. For example, differentiating amongst automobiles in a dealer's lot helps consumers make better decisions and, thus, the

amount of cognitive dissonance may be reduced (Kaish, 1967).

Consumers are willing to place more effort in purchasing one particular type of consumer good over another (Kaish, 1967). For instance, when a consumer intends to purchase a vehicle, he or she seeks to satisfy an important need (i.e., safe and reliable transportation) and must choose from a number of alternative vehicles in order to find the one that contains the most important functional differences. Since the vehicles are not designed by the buyer, the seller overlaps combinations of characteristics which may not be exactly as the buyer would have them if the buyer was customizing the product. Depending on the number of the product qualities on the vehicles that are conflicting (those that are needed and those that are not) the magnitude of post-decisional dissonance will vary (Kaish, 1967).

When consumers are faced with difficult decisions, cognitive dissonance arises because oftentimes the decision to choose a product is accompanied by the necessity to leave another product behind. Making difficult decisions during the time of purchase is one of the ways cognitive dissonance sets in among consumers (Oshikawa, 1969).

Cognitive dissonance may arise and subsequently may be reduced in one of three ways. The first way is after consumers make an important and difficult decision. When people spend a large amount of money on their purchases, i.e., a new car, they tend to pay close attention to the advertisements of the particular vehicle they purchased, in order to verify their choice and reduce dissonance. Also, people identify more with subjects that are relevant to them. That is, if a person is planning on buying a car, he or she will attend to car advertisements more than a person who has no intention of buying a car. Since buying a vehicle is a high involvement purchase, motivated consumers will critically think about their purchase and place a great deal of importance on the decision they will make. In other words, according to the Elaboration Likelihood Model (Petty & Cacioppo, 1986), consumers process car advertisements and related information through their central route of thinking.

The second way that dissonance may arise is after being forced to say or do something which is opposite to the consumer's attitudes, opinions, or beliefs. The problem with the above situation is that in a realistic market situation it is impossible to force consumers to buy

products which are inferior or not in demand, so there has to be a balance between too much and not enough force. New and used vehicle dealers are well aware of this and exercise measures to entice consumers to buy vehicles they may not have otherwise wanted to purchase. For example, during times of high gas prices, consumers tend to seek out fuel efficient vehicles. However, dealers offer cash back incentives on low-demand SUVs and pickup trucks in order to persuade consumers to purchase. These incentives are a form of forcing consumers to do something they may not have intended to do which could lead to cognitive dissonance.

The third way that dissonance may arise is after consumers are exposed to contradictory information. The issue here is that dissonance will occur based on the degree of commitment and ego-involvement. When consumers tell someone else of their intentions to purchase a product, the magnitude of dissonance tends to increase. Cognitive dissonance can be used to explain consumers' buying behavior after they make a purchase (Oshikawa, 1969). If marketers are able to predict some of the causes of cognitive dissonance, they can use that information to create marketing programs targeted to repeated business.

Studies have shown that cognitive dissonance decisions can be predicted and can lead to repeat business unless of course the buyer will actively seek to reduce the dissonance by changing the choice (Hunt, 1970; Menasco & Hawking, 1978). Cognitive dissonance will be experienced the most when consumers have to make a decision between the most desirable choices (high-conflict purchase decision), alternatively it will be eliminated if the decision that has to be made is between two dissimilar products (low-conflict purchase decision) (Mittelstaedt, 1969; Sheth, 1970). The level of dissonance will also be reduced when consumers are familiar with the brands of product considered for purchase.

Well-known brands cause various levels of cognitive dissonance in buyers compared to non-known brands; brand familiarity and satisfaction of a product after purchase affects cognitive dissonance (Cohen & Goldberg, 1970). Researchers (Cohen & Goldberg, 1970) have shown that well-known brands receive higher evaluations and higher purchase intentions compared to unknown brands. Cognitive dissonance influences consumers who are previously brand loyal to another brand. When the consumers' choices are confirmed after they purchase a product, they positively evaluate it,

but when those choices are disconfirmed they evaluate it negatively (Cohen & Goldberg, 1970). For example, vehicle owners are brand loyal when they purchase the same vehicle brand in the future or even recommend that particular brand to a friend or family member. However, brand loyalty could disintegrate when vehicle owners are dissatisfied with the brand. A concrete disconfirmation is required before the buyer admits that a wrong choice was made. Even when the right choice was made, consumers may still switch brands. However, retailers often try to prevent this from happening by communicating to their customers after the purchase, with the hopes of reducing cognitive dissonance and obtaining future business.

After a consumer buys a product, the retailer can make sure that the customer is reassured that the right choice was made; thus, reducing cognitive dissonance, via several means of marketing communications, such as a letter or a phone call from the retailer or by showing product advertisements on television. When consumers receive these communications, they normally experience dissonance at a lesser degree (Hunt, 1970). The likelihood of those particular consumers returning back to that same store is also greater. Hunt's (1970) study also suggests that when

consumers receive letters from the retailer, they experience less dissonance, have more favorable attitudes toward the store, and have higher intentions of future purchases. Consumers who receive the telephone call experience more dissonance, have less favorable attitudes toward the store, and have lower intentions of future purchases (Hunt, 1970). In other words, telephone communication aimed at reducing cognitive dissonance is not only ineffective but also counter-productive. Besides the fact that it takes more time to make follow-up phone calls than send out the same letter to multiple buyers, consumers perceive these calls as bothersome and annoying (Hunt, 1970). The retailer that follows-up with phone calls actually reduces the chance for repeat business (Hunt, 1970).

In addition to businesses attempting to actively reduce cognitive dissonance, consumers can consciously reduce cognitive dissonance themselves. This reduction can be achieved through avoidance of unfavorable information, high sensitivity to information favorable to the purchase decision, turning to advertising to support the current purchase decision, and turning to friends for purchase advice, especially those who make similar purchases

(Straits, 1964). Advice from friends is very effective in reducing the potential of cognitive dissonance because friends are viewed as familiar, credible and trustworthy sources of information. In most cases, friends do not profit from advising their friends what to buy as opposed to the bias of advertising.

Retailers should exercise great caution when entering a program designed to help reduce the dissonance experienced by recent buyers. Sometimes the program may be ineffective and sometimes it may upset the consumer (i.e., a telephone call) which, in turn, may dramatically increase the magnitude of cognitive dissonance. One aspect that retailers should keep in mind is that personal communication is much more effective than the mass media in influencing consumer purchases (Straits, 1964).

Marketing communication aimed at consumers comes in the form of audio and visual commercials (television, radio, internet, etc.) as well as in print advertisements (billboards, newspapers, etc.). How consumers react to these commercials will determine the level of cognitive dissonance and effect post-product evaluation (Kanter, 1970). Research has shown that consumers evaluate, think about, and react to certain television commercials in

different ways (Kanter, 1970). When consumers are interested in trying new brands they will react much more favorably to commercials showing a new brand compared to consumers not interested in trying new brands (Kanter, 1970). Brand loyal consumers including those not interested in viewing commercials showing new products defend their position by resisting the commercial's message.

Consumers predisposed to certain brands remain brand loyal and are not interested in trying new brands. This can affect any purchase-decision making process that individuals have to make, even when it comes to the stores consumers prefer to patronize. Attempting to sway brand loyal consumers toward a competing product is often the competitors' goal. For example, it is extremely important for car salespeople to be aware of what other dealerships their customers may be loyal to before trying to make a sale so that these salespeople can at least attempt to change their consumers' beliefs and get them to shop at their dealership. Retailers who successfully persuade competing-brand loyal consumers to their own store reap the benefits of added sales. Brand loyal consumers always perceive their preferred brand as superior. The brand

loyal consumer may very well rely upon cognitive reevaluation to justify the purchase of a new product. In addition, for consumers to avoid any degree of dissonance, they attempt to change their beliefs about the product in which they are brand loyal (Cohen & Houston, 1972). Consumers who are loyal to a vehicle brand will likely indicate their satisfaction for the various vehicle attributes and characteristics in order to justify their loyalty.

Cognitive dissonance in consumer behavior is often measured through the use of mail surveys (Furse & Stewart, 1984). People tend to resolve their dissonance that is created upon receiving a questionnaire (Furse & Stewart, 1984). This is important to researchers who wish to measure cognitive dissonance in consumers via mail surveys because it can be used to learn more about consumers who purchase products or how they feel about their purchase and the magnitude of cognitive dissonance experienced. This is an extremely important issue in terms of acquiring loyal customers.

Anxiety and Increased Cognitive Dissonance

Consumers are faced with several elements in their environment that impede the shopping experience. Anxiety

can arise among shoppers and can affect levels of cognitive dissonance experienced. However, there are ways retailers can alleviate this anxiety.

Reducing cognitive dissonance may be inevitable if consumers experience anxiety at the time of purchase. Retailers who exercise caution when interacting with brand loyal and non-brand loyal customers should work to reduce the potential of cognitive dissonance; however, some consumers who tend to frequently experience cognitive dissonance may actually be experiencing periods of chronic anxiety (Hawkins, 1972).

Hawkins (1972) examined whether direct measurements of cognitive dissonance actually measure chronic anxiety. In general, if consumers have a tendency to worry after making a decision, the worry is closely related to trait anxiety. Also, if consumers experience dissonance in a given situation, it will depend upon the interaction between the individual and the specific situation. For example, depending upon how the salesperson treats the customer (i.e., through a good relationship, incentives, a good deal on price, etc.), the level of cognitive dissonance the consumer may experience will vary (Hawkins, 1972). Hence, vehicle buyers who are satisfied with their vehicle buying

experience will be more likely to experience greater satisfaction for their vehicle.

As evidenced in this portion of the literature review, researchers have been investigating causes of cognitive dissonance as well as methods for reducing it for several decades now (Akker, 2001; Bell, 1967; Clark, et al., 2004; Cohen, 1959; Cohen & Goldberg, 1970; Cohen & Houston, 1972; Dommermuth & Cundiff, 1967; Engel, 1963; Hunt, 1970; Losciuto & Perloff, 1967; Menasco & Hawking, 1978; Straits, 1964). Today, marketers are using this information and are creatively positioning this knowledge to reduce cognitive dissonance. By telling consumers how to use products and providing some added benefits, marketers increase the brand loyalty for these products among consumers (Herman, 2006).

The Role of Cognitive Dissonance in Marketing

As illustrated in this extent literature review, cognitive dissonance is experienced among consumers, and it is the marketers' job to mitigate cognitive dissonance in order to make sure consumers keep buying their products or to encourage customers to become brand loyal. Advertisers devise marketing communication plans that define what they are selling, how their products are superior to competing products, and why consumers should want to purchase their

products. Despite the high costs of advertising, the payoffs can be substantial when communication strategies are properly executed. Research on the theory of cognitive dissonance as it applies to marketing has helped marketers construct strategies for increasing sales of their products. Reduction of cognitive dissonance among consumers increases the likelihood of post-purchase product evaluation and repeat business occurs, thus creating and strengthening brand loyalty.

Achieving brand loyalty is a characteristic of consumer behavior that marketers want for their products because a brand loyal consumer is not only profitable but it also costs less money to keep existing customers than to acquire new ones. Marketers are aware of this and use television, radio, and print advertisements to remind consumers of their products' positive attributes and alleviate or reduce any cognitive dissonance that may exist in consumers making a repeat purchase. From buying cars to something else, consumers are faced with numerous choices leading to dissonant thoughts after purchase. It is the savvy marketer that maneuvers his or her communication in a way to let consumers know they have indeed made the right choice.

Vehicle buyers may receive communication from their patronized car dealership, which is a move by these marketers to increase the likelihood of future repeat purchases and referrals to friends and family. In addition, vehicle owners may watch a commercial or read a magazine advertisement about their recently purchased vehicle, which could also increase brand loyalty.

Research Hypotheses

According to Engel (1963) those consumers who are confident about their purchases and believe the price they paid was fair, their levels of cognitive dissonance will be reduced. In addition, if consumers make purchases resembling purchases made by friends and family and if these consumers are not influenced by persuasion (Bell, 1967), then they will exhibit lower levels of cognitive dissonance. So, if vehicle owners reveal signs of confidence, believe that the price they paid to buy accessories is fair, family and friends make similar purchases, and the buyers are not influenced by persuasion, then cognitive dissonance will be experienced at reduced levels. Therefore, the following hypothesis is posed:

H_1: Cognitive dissonance will be affected by vehicle owners' satisfaction with their vehicle's features and characteristics.

Nevertheless, according to Kaish (1967), product differentiation contributes to consumers experiencing cognitive dissonance. This is due to the fact that consumers can more easily make decisions on what products best fit them. So, when retailers achieve product differentiation and when people spend large amounts of money, they tend to pay close attention to the advertisements of the particular product purchased, thus experiencing cognitive dissonance. With that said, I propose the following:

H_2: Cognitive dissonance is affected by the amount of money vehicle owners spend buying accessories for their vehicles.

When people make purchases that are familiar with or buy well-known brands, then not only do levels of cognitive dissonance are reduced, but they are also satisfied with their purchase (Cohen & Goldberg, 1970). So, when people buy accessories familiar to them for their vehicles and spend a lot of money, then they will be satisfied with

their purchase and the cognitive dissonance experienced will be reduced. Thus, based on these assertions:

H_3: The more money consumers spend buying accessories for their vehicles, the more satisfied they will be.

H_4: Consumers' satisfaction with their vehicles will be related to their levels of cognitive dissonance.

CHAPTER THREE

METHOD

Participants

In order to conduct this research, a non-random convenient sample was used. The participants totaled to 1,141 and were reached via an automotive magazine subscriber's electronic mailing list. The sample consisted of 99 percent male and the average age was 49. Of those, 99 percent attended at least some college, were married and white. The participant's occupation ranged from policemen and firemen to retired and 97 percent of them had an average household income around $63,000. The magazine subscribers opted-in for future Specialty Equipment Market Association, (hereafter SEMA) administered surveys prior to the current study. SEMA was contacted to use their database because it serves this type of the niche market and the goal of completed surveys would have been achieved.

SEMA was founded in 1963 by a group of small manufacturers and suppliers of hot rod performance equipment. It is a non-profit association that represents the specialty equipment industry for a variety of small, medium and large businesses. Currently, SEMA has 7,094

members that manufacture, distribute and sell automotive aftermarket parts (SEMA, 2008b). At the moment, the organization concentrates on the progress and planning for a wide range of programs such as market research, freight savings, credit card service programs, live seminars and webinars, lobbying against legislation, and many more.

At the time of the electronic survey, there were approximately 5,400 magazine subscribers who could be reached via electronic mail (SEMA, 2006). The magazine subscribers, the participants of this study, from which the sample was drawn, consisted of 99 percent male and the average age was 49. Of those, 99 percent attended at least some college, were married and white. The participant's occupation ranged from policemen and firemen to retired and 97 percent of them had an average household income around $63,000.

The participants responded to the survey via e-mail. Their responses remained confidential to the researcher and the SEMA Market Research staff.

Survey Design

The survey section consisted of seventeen questions, one of which was comprised of four sub-questions (see Appendix A). The first question was a contingency one to

distinguish the vehicle owners from the non-vehicle and motorcycle owners. The second question was measured on a Likert type scale from 1 to 7. The value of 1 corresponds to low cognitive dissonance levels on the survey. These values include always making right decisions, do not worry at all that the right decision was made, not influenced at all when making a decision and feeling that receiving a very good deal when buying automobiles. The value of 7 corresponds to high cognitive dissonance levels on the survey. These values include always making wrong decisions, worry very much that the wrong decision was made, very much influenced when making a decision and feeling that they received a very lousy deal when buying automobiles (survey questions 2A, 2B, 2C and 2D, respectively).

The questionnaire used to measure cognitive dissonance (Oshikawa, 1972) was used to develop the survey (see question 2). The reliability and validity of this scale is very good since $R^2 = 0.3080$, which means that 30.80% of the variance is explained by this measure (Oshikawa, 1972). Also, the analysis of variance for the multiple linear regression indicated $F = 8.9122$ which was a significant finding at the .05 level (Oshikawa, 1972).

The Product Satisfaction Question was retrieved from AutoPacific 2006 Future Vehicle Study (see questions 3-6). In this particular section, the respondents had the opportunity to indicate their level of satisfaction toward their vehicle based on certain characteristics. For example, a respondent may be completely satisfied with the vehicle's reputation but somewhat satisfied with the overall seating capacity. Also, additional questions were rated on a seven-point Likert type scale which asked respondents to indicate how satisfied or dissatisfied they were with their vehicle, how likely it was that they would purchase the same vehicle again in the future, and how likely they would be to recommend their vehicle to their friends and/or relatives.

Procedure

In order to be able to distribute the survey, an application was submitted to the Institutional Review Board (IRB). After the application has been reviewed, the Chair of the IRB at California State University, San Bernardino approved it and an approval letter was sent to the researcher (see Appendix B).

Preliminary contact was made with SEMA's marketing research department, who agreed to post the research survey

(see Appendix C). In return for accessing their database of magazine subscribers' e-mails, the company will be given the results of this research to better accommodate their members.

The survey was given to SEMA's market research staff, who then distributed it via electronic mail to about 5,400 automotive magazine subscribers. The market research staff monitored the number of completed surveys and, when 1,141 surveys were reached, the raw data was then delivered by SEMA market research staff in Microsoft Excel™ which was then imported to the Statistical Program of the Social Sciences (SPSS) for analysis.

CHAPTER FOUR

RESULTS

The first hypothesis, that cognitive dissonance will be affected by vehicle owners' satisfaction with their vehicle's features and characteristics, was supported. The Oneway ANOVA indicated that $F = 4.06$, $df = 48$, and $p < .000$. Therefore, a significant difference was evident for H_1.

The second hypothesis, that cognitive dissonance is affected by the amount of money vehicle owners spend buying accessories for their vehicles, was not supported. The Oneway ANOVA indicated that $F = 1.015$, $df = 8$ and $p = .423$. The average amount of money vehicle owners spent on their vehicles was between $751 and $1,750. The mean of cognitive dissonance levels was 2.78 and $SD = 2.168$.

The third hypothesis, that the more money consumers spend buying accessories for their vehicles, the more satisfied they will be, was not supported. A Pearson correlation indicated that $r = -.034$ and $p = .255$. Also, $M = 2.90$ and $SD = 1.491$.

The fourth hypothesis, that consumers' satisfaction with their vehicles will be related to their levels of cognitive

dissonance, was supported. A Pearson correlation indicated that $r = .134$ and $p < .000$. In other words, the more satisfied vehicle owners are with their vehicles, their levels of cognitive dissonance increases as well. However, only 2% of cognitive dissonance levels was explained by satisfaction ($R^2 = 0.02$).

CHAPTER FIVE

VEHICLE SATISFACTION AFFECTS CONSUMERS' COGNITIVE DISSONANCE LEVELS

The results of this study showed that two of the hypotheses were accepted. Vehicle satisfaction and its attributes affected cognitive dissonance levels as evident by H_1 and H_4. However, vehicle accessorization and money spent did not significantly affect cognitive dissonance levels, so H_2 and H_3 were rejected.

The first hypothesis yielded to significant results. As vehicle owners' satisfaction toward their vehicles approach "Completely Satisfied," their levels of cognitive dissonance will be reduced. Much like a golfer, who pays attention to the quality and attributes of golf clubs, the participants of this study, the automotive magazine subscribers, demonstrated similar attitudes toward their vehicles' features and characteristics. It is assumed that these consumers critically think about their vehicles as they are subscribers, and presumably, avid readers of magazines dedicated to automobiles. As they read about vehicles and gain knowledge about various vehicle attributes, they seemingly apply this information to their

own vehicles and form opinions regarding what is important to them. As a result, vehicle attributes and characteristics remain salient to these consumers. Due to the fact that these attributes are so important to these consumers who renovate their vehicles, a poor decision when accessorizing their vehicles could have dire consequences and induce different levels of cognitive dissonance.

Although vehicle attributes were shown to affect cognitive dissonance, spending money on accessories for these vehicles was not shown to significantly affect cognitive dissonance. This finding can be explained in several ways. First, these magazine subscribers are well informed when it comes to buying accessories for their vehicles (SEMA, 2008a). Within the magazines' pages, these readers are exposed to a variety of advertisements and product reviews regarding the accessories they may be planning to eventually purchase. As a result, they may feel they make educated decisions so the amount of money they spend suggests having no effect on cognitive dissonance. Second, vehicle accessory spending supplements these consumers' already affirmative attitudes toward their vehicles (SEMA, 2007). Therefore, the amount of money that they spend does not make them necessarily feel any better

or any worse because they already possess positive feelings toward their vehicles.

The third hypothesis was not supported. As far as spending money on accessories is concerned, not only does it have no affect on vehicle owners' cognitive dissonance, but also it has no affect on their satisfaction levels toward their vehicles. Luxury items, such as diamond earrings, may cause consumers to feel satisfied when they spend more money because higher quality is thought to be related to higher priced items. However, this is not true when it comes to buying vehicle accessories. The magazine subscribers who were surveyed indicated that they care about product quality along with the way accessories look and increased vehicle performance, which does not always necessitate high prices. In addition, the cost of accessorizing may be relatively inexpensive compared to the cost of the vehicle itself. For example, a $300 pinstriping job is a small expense compared to the cost of a $35,000 car. Therefore, the cost incurred from accessorization may have a negligible effect on cognitive dissonance compared to the cost of the vehicle.

Even though, spending money on accessories does not affect vehicle owners' satisfaction levels, being satisfied

with their vehicles affects vehicle owners' cognitive dissonance levels. Despite playing a small role, vehicle satisfaction significantly affects cognitive dissonance. Since the consumers surveyed are automotive magazine subscribers, they are constantly exposed to new or used vehicles different than their own. This information could cause these consumers to second guess their satisfaction for their own vehicles. Although, they report that they are satisfied with the vehicles they currently own, new information can continuously trigger feelings of cognitive dissonance.

The implications of this study are that satisfaction of a vehicle and its attributes are related to cognitive dissonance. When marketers reduce cognitive dissonance consumer satisfaction will grow, thus repeat purchases will most likely ensue and recommendations of the vehicle brand shall occur. Therefore, marketers would want to reduce cognitive dissonance in order to attain possible future sales. However, money spent on vehicle accessories did not cause satisfaction and cognitive dissonance levels to vary. Therefore, marketers need not emphasize the accessories available, but rather they should highlight the vehicle's

features and characteristics, such as horsepower, gas mileage, etc.

Limitations

Any research, by nature, has limitations in regard to its method. A very important limitation lies in the sample. This research is based on a sample of automotive magazine subscribers that are, on average, 90 percent male. Glass (1964) posits that the levels of dissonance are due to the participant's sex. Glass's goal was not to explore the role of sex differences in dissonance-arousal, but he found that men and women cope with cognitive dissonance reduction in different ways. Therefore, since males and females are affected by decision-making differently then, if more female participants were sampled different results may have been yielded.

Another methodological limitation to this study occurs by using a non-random sample. By using the nonrandom convenient sample the external validity was confined to this particular population. The results cannot be generalized to other samples because a random sample was not used. However, regardless of this limitation, the results addressed today's consumers who have greatly

evolved and have become more independent compared to past consumers.

Future Research

Although the current study measured cognitive dissonance and vehicle satisfaction, future research is needed to uncover new elements that were not investigated. One area of research could be to survey vehicle owners to find out the reasons behind buying vehicle accessories. In the study, vehicle satisfaction and cognitive dissonance were not explained by the various amounts of money spent on vehicle accessories. Thus, future research in this area is needed to investigate why consumers buy accessories for their vehicles. Do they buy them to increase performance? Are they added for aesthetic reasons? Does the type of vehicle owned affect whether consumers will buy accessories? For example, will a Ford Mustang owner be more inclined to buy accessories compared to a minivan or SUV owner? Or, do they buy them to distinguish their vehicles from others on the road?

Another area that could be examined is the degree to which vehicle owners' brand loyalty is affected by their environment (i.e., other cars seen on the road, advertisements, recommendations, social status, etc.). For

example, if vehicle owners watch a commercial or read a magazine advertisement, would it increase the likelihood of future repeat purchases and referrals to friends and family?

Other factors could possibly affect consumers' cognitive dissonance levels besides the environment, such as psychological make-up. According to Menasco and Hawking (1978) temporary anxiety is significantly correlated with higher levels of cognitive dissonance when consumers are faced with difficult decisions. Hence, consumers who are about to make a purchase and have complex decisions to make will experience cognitive dissonance. What exactly happens to those consumers who have chronic anxiety? Do they still experience cognitive dissonance? Or, what happens when they have chronic anxiety and have difficult decisions to make? Do they experience cognitive dissonance then? In this current study, the results of cognitive dissonance were relatively low, does this mean that the sample suffers from chronic anxiety?

Another area that could be further explored resides in the method. First, Burris, et al., Tarpley, (1997) indicate that enough research has not been conducted to find alternative methods of dissonance reduction that may

be more likely to occur in everyday life. While the current study adds to the field "further work to understand the ways in which persons reduce dissonance, and how affect relates to dissonance, is encouraged" (Burris, et al., 1997, p. 29). Thus, if only the idea that more research needs to be carried out to find other methods or dissonance reduction, then how far has research been evaluated? Are scholars applying the current methods effectively? If so, or if not, how do researchers know that for a fact? In this current study, four questions are used to measure cognitive dissonance. Do these questions sufficiently measure that uncomfortable state of mind? Merely asking vehicle owners whether they feel confident about making the right decision may lead to inaccurate results. It is possible that consumers may say that they feel confident about making the right decision when in fact this may not be true. Perhaps, the new undiscovered methods of dissonance reduction may not only be more valid, but what if they can explain more behaviors than we currently are aware of? If in the future more constructive methods arise that are more likely to occur in everyday life, then established literature can become obsolete. All the above questions could be answered in future studies.

The underlying premise of this study is to understand how consumers view their current vehicles and make purchases related to them. The results discovered in this thesis provide a stepping stone into future insight of post-vehicle-purchase behavior. Alas, it remains salient to continue investigating vehicle buying behavior since the multi-billion dollar automobile industry significantly impacts the United States, as well as the world economy.

APPENDIX A

SURVEY

1. Please indicate by checking Yes or No whether you own a vehicle.

	Yes	No
Do you own a vehicle?	O	O

2. Please pick a number that best corresponds to your attitudes.

A. To what extent do you feel that you have been making right decisions?

Always right decisions						Always wrong decisions
1	2	3	4	5	6	7

B. To what extent do you worry whether or not you made the right decision?

Do not worry at all						Worry very much
1	2	3	4	5	6	7

C. To what extent do you feel you are likely to be influenced by persuasion when making a decision?

Very much influenced						Not influenced at all
1	2	3	4	5	6	7

D. Do you feel that in general you get a good deal or a bad deal in buying your consumer durable goods (like automobiles)?

Very good deal						Very lousy deal
1	2	3	4	5	6	7

3. Please indicate how satisfied or dissatisfied you are with your vehicle.

Very dissatisfied						Very satisfied
1	2	3	4	5	6	7

4. How likely is it that you purchase the same vehicle again in the future?

Very likely						Very unlikely
1	2	3	4	5	6	7

5. How likely would you be to recommend your vehicle to your friends/relatives?

Very likely						Very unlikely
1	2	3	4	5	6	7

6. Please rate your satisfaction of your vehicle with the following characteristics.

	1	2	3	4	5
	Completely Satisfied	Very Satisfied	Somewhat Satisfied	Completely Dissatisfied	Very Dissatisfied
Overall seating capacity					
Cargo space/capacity					
Image					
Vehicle's reputation					
Brand's reputation					
Exterior styling					
Interior styling					
Interior storage/compartments					
Power and acceleration					
Handling					
Reliable/dependable					
Fuel economy/gas mileage					
Quietness inside the vehicle					
Cupholder design and size					
Anti-theft features/security system					
Feeling safe while driving					
Overall quality					

7. Please indicate the amount of money spent purchasing accessories for the vehicles you currently own.

1	$0	O
2	$1 - $500	O
3	$501 - $750	O
4	$751 - $1750	O
5	$1751 - $3750	O
6	$3751 - $5750	O
7	$5751 - $8750	O
8	$8751 - $12,000	O
9	More than $12,000	O

8. Please indicate your gender.

Males	O
Female	O

9. Please indicate your marital status.

Single	O
Married	O
Divorced	O
Widowed	O

10. Please indicate your educational level.

Less than high school	O
High school graduate, no college	O
Some college	O
Bachelor's degree or higher	O

11. Please check all that apply.

Administrative, Clerical	O
Analyst / Researcher	O
Business Owner - Automotive Related	O
Business Owner - Non-Automotive Related	O
Car enthusiast	O
Factory Worker	O
Farming, Forestry, Fishing	O
Hospital / Health Care Worker	O
Lawyer	O
Mechanic	O
Middle Management - Automotive Related	O
Middle Management - Non-Automotive Related	O
Police, Fire, Postal, Military	O
Retired	O
Sales Occupation	O
Senior Executive	O
Service Worker	O
Skilled Trade	O
Student	O
Teacher, Educator	O
Technical Profession	O
Other	O

12. Please indicate your annual household income.

Less than $25,000	O
$25,000 to $49,999	O
$50,000 to $74,999	O
$75,000 or more	O

13. Please indicate your age.

18-24	O
25-31	O
32-38	O
39-45	O
45-52	O
53-59	O
60+	O

14. Please indicate your ethnic background.

African American	O
American Indian & Alaskan Native	O
Asian or Pacific Islander	O
Hispanic or Latino	O
White	O
Other race	O

APPENDIX B

IRB APPROVAL LETTER

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Academic Affairs
Research and Sponsored Programs • Institutional Review Board

November 28, 2007

CSUSB INSTITUTIONAL REVIEW BOARD
Exempt Review
IRB# 07033
Status
APPROVED

Ms. Petroulla Giasoumi
c/o: Prof. Heather Hundley
Department of Communication Studies
California State University
5500 University Parkway
San Bernardino, California 92407

Dear Ms. Giasoumi:

Your application to use human subjects, titled, "Automotive Consumers Remorse and Cognitive Dissonance" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino and concurs that your application meets the requirements for exemption from IRB review Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt review category. However, exempt status still requires you to attain consent from participants before conducting your research.

Although exempt from federal regulatory requirements under 45 CFR 46, the CSUSB Federal Wide Assurance does commit all research conducted by members of CSUSB to adhere to the Belmont Commission's ethical principles of respect, beneficence and justice. You must, therefore, still assure that a process of informed consent takes place, that the benefits of doing the research outweigh the risks, that risks are minimized, and that the burden, risks, and benefits of your research have been justly distributed.

You are required to 1) notify the IRB if any substantive changes are made in your research prospectus/protocol, 2) if any adverse events/serious adverse events (AE's/SAE's) are experienced by subjects during your research, and 3) when your project has ended. Failure to notify the IRB of the above, emphasizing items 1 and 2, may result in administrative disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Secretary. Mr. Michael Gillespie can be reached by phone at (909) 537-5027, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,

Samuel S. Kushner, Chair
Institutional Review Board

SK/mg

cc: Prof. Heather Hundley, Department of Communication Studies

APPENDIX C

INFORMED CONSENT FORM

Mailing Address:
P.O. Box 4910
Diamond Bar, Calif. 91765-0910

Shipping Address:
1575 S. Valley Vista Dr.
Diamond Bar, Calif. 91765-3914

Telephone: 909/396-0289
Fax, general offices: 909/860-0184
E-mail: sema@sema.org
Web Sites: www.sema.org
www.enjoythedrive.com

The Specialty Equipment Market Association Company's market research department has agreed to post a graduate student's survey, Petroulla Giasoumi, surveying the subscribers of automotive magazines.

10-15-07

Market Research Analyst date

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