Can Cognitive Dissonance Theory Explain Consumer Behavior?

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Cognitive dissonance theory is applicable to very limited areas of consumer behavior according to the author. Published findings in support of the theory are equivocal; they fail to show that cognitive dissonance is the only possible cause of observed "dissonance-reducing" behavior.

Experimental evidences are examined and their weaknesses pointed out by the author to justify his position. He also provides suggestions regarding the circumstances under which dissonance reduction may be useful in increasing the repurchase probability of a purchased brand.

More than a decade has passed since the publication of Festinger's original book on the theory of cognitive dissonance. Marketing researchers and psychologists have conducted numerous experiments to test the theory. Whether dissonance theory can be applied to marketing is a question which has raised considerable interest among marketing writers. The theory asserts that a person has certain cognitive elements which are "knowledges" about himself, his environment, his attitudes, his opinions, and his past behavior. If one cognitive element follows logically from another, they are said to be consonant to each other. They are dissonant to each other if one does not follow logically from the other.

Dissonance can be aroused in three ways and can motivate the person to reduce this tension in a variety of ways. Dissonance may be aroused 1) after making an important and difficult decision, 2) after being coerced to say or do something which is contrary to private attitudes, opinions, or beliefs, and 3) after being exposed to discrepant information.

The theory does not specify the mode of dissonance reduction but indicates that there are many possible ways to reduce dissonance. Attitude change, opinion change, seeking and recall of consonant information, avoidance of dissonant information, perceptual dis-

tortion, and behavioral change are some of the common modes of dissonance reduction. Since the theory does not designate the expected mode of reducing dissonance, most researchers have adopted the experimental method in which subjects could reduce dissonance in only one predetermined way. When the subjects responded to the experimental manipulation in the manner predicted by dissonance theory, the dissonance researcher took the results as evidence for the support of the theory. However, some psychologists have suggested that many of the findings are the results of built-in artifacts (or biases) or can be explained by other competing theories, and that the affirmative result is not necessarily unequivocal evidence for the theory. This article will attempt to assess this possibility.

This article will also attempt to examine theoretical issues and experimental findings for each of the three dissonance arousal conditions mentioned above to determine the relevance of the theory to the study of consumer behavior. In general it appears that the findings are contradictory and are not always supportive of the theory; however, an attempt will be made to sort out and evaluate the evidence.

Post-decision Dissonance

A review of literature on the psychological study of decision making led Festinger to hypothesize that decision making almost always provokes dissonance because, after a decision is made to choose one alternative, a person has to cope with the cognitive elements concerning the attractive attributes of the rejected alternatives.

Since decision making entails the rejection of alternative(s), the theory asserts that post-decision dissonance is an inevitable consequence of decision making. The magnitude of dissonance depends upon the importance of the decision and the relative attractiveness of the rejected alternative(s). Therefore, the more important the decision and/or the more attractive the rejected alternative(s), the greater the dissonance.

One derivation of the theory is that the greater the number of alternatives a consumer considers before his purchase decision and/or the more equal the positive and negative attributes of the alternatives, the greater the post-purchase dissonance.

Equivocal Evidence for Post-purchase Dissonance

The experimental evidence frequently quoted to support the existence of post-purchase dissonance was reported by Ehrlich et al. They found that the larger number of alternative automobiles the consumer considered before his purchase, the greater the frequency of reading the automobile advertisements of the make he bought. This finding supported dissonance theory. They also found, however, that both recent and not-recent purchasers noticed and read more advertisements of considered-but-rejected makes of automobiles than those of not-considered makes. This evidence cast doubt on the hypothesis that purchasers experienced dissonance. According to dissonance theory they should have avoided the advertisements of the rejected makes.

It may be that, soon after the purchase of a new automobile, Ehrlich et al's consumers read automobile advertisements not because they experienced dissonance but because automobile buying was an infrequent undertaking and the topic of automobiles was relevant and useful to them. An experiment by Berkowitz and Cottingham supports the view that people tend to be interested in the topics which are relevant to themselves. They found that safety-belt users were more interested in communication on safety-belts than were nonusers because the topic was relevant to them, their interest having been aroused previously.

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5 Same reference as footnote 1.
Canon, Freedman, and Lowe and Steiner found that when information is dissonant but also useful, utility outweighs dissonance and the information will not be avoided. However, Berkowitz and Cottingham's relevance hypothesis and Canon's utility hypothesis explain the finding equally well and the evidence is not unequivocally supportive of dissonance theory.

In an attempt to reconcile the Ehrlich et al finding with dissonance theory, Mills hypothesized that automobile purchasers liked considered-but-rejected makes better than not-considered makes. He reasoned further that, if they preferred to read ads of a chosen (and liked) product to those of a considered-but-rejected (less liked) product, then the Ehrlich et al finding that considered-but-rejected makes were noticed more frequently than not-considered makes could be explained by their liking for the former makes.

In an experiment Mills proceeded to show that consumers preferred to read advertisements of the chosen product to those of the unchosen product. However, in this experiment the consumers had been promised that they would receive the chosen product as a free gift, but had not received it when they expressed their ad preferences. Consequently, their preference may have been influenced by their curiosity about the free gift. His findings would have been less ambiguous if the consumers had, in fact, received the gift. Even granting that Mills proved his hypothesis, the Ehrlich et al finding that considered-but-rejected makes were noticed more frequently than not-considered makes could be explained by their liking for the former makes.

Ehrlich and others ascribed their unexpected finding to the possibility that some recent purchasers sought the advertisements of unchosen makes in order to find faults and reduce dissonance. This, however, is not a satisfactory explanation regarding the behavior of the purchasers in their attempts to reduce dissonance. If the experimenter is allowed to do this, the findings will always support predictions and there is no room for the rejection of the theory. A better research approach would have been to clearly specify the predicted mode of dissonance reduction and to block other possible modes before the execution of the experiment.

Problems in Experimental Design

One of the criticisms raised by Chapanis and Chapanis and Janis and Gilmore was that some of the experimental findings in support of the theory were the results of built-in bias. They argued that some experiments were designed and manipulated in such a way as to produce supporting results. Consequently, the findings could not be accepted as evidence for dissonance theory.

An experiment reported by LoSciuto and Perloff illustrates this problem. Dissonance theory postulates that if a person, given a choice between two equally desirable products, chooses one and rejects the other, he will experience dissonance. Such dissonance will lead the person to evaluate the chosen product more favorably and the rejected product less favorably. In their experiment, LoSciuto and Perloff had their subjects rank nine phonograph records according to desirability. To arouse strong dissonance, one group of subjects was given a choice between the third- and fourth-ranked albums; the other group was given a choice between the third- and eighth-ranked albums.

The experimenters found that the first group of high-dissonance subjects tended to rerank the chosen albums as more desirable and the rejected albums as less desirable. The low-dissonance group did not show this tendency as strongly. According to dissonance theory, a greater proportion of high-dissonance subjects would show divergent changes in ranking (that is, reranking of the chosen albums as more desirable and the rejected ones as less desirable), while a greater proportion of low-dissonance subjects would show convergent changes. A chi-square test supported this prediction at the .001 level of significance.

Analysis of the design showed that the experiment was set up in such a way as to make it easier for high-dissonance subjects to show divergent changes and for low-dissonance subjects to show convergent changes. Since high-dissonance subjects chose between the third-ranked and fourth-ranked albums, the third-ranked albums had two places to move up, and the fourth-ranked albums had five places to move down, totaling seven places to move divergently. Seven (44%) of the total 16

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movements would be considered divergent and the remaining nine movements (56%) would be convergent. For the low-dissonance subjects, 13 of the possible 16 movements (81%) contributed to convergent changes and only three (19%) to divergent changes. If all subjects reranked the albums randomly, a greater proportion of low-dissonance subjects would show convergent changes and a greater proportion of high-dissonance subjects divergent changes. Although dissonance theory indicates that cognitive dissonance produces the above pattern of changes, an alternative explanation is that the observed pattern of changes is the result of the experimental design.

A Replication of the Experiment

This writer conducted an experiment to test this possibility.12 One hundred fifty-four undergraduate students were told that he was conducting a survey among college students on the popularity of nine record albums. The students were asked to rank each of the nine albums. One week later they were given the impression that the first preference questionnaires had been misplaced and were asked to rank the same albums again. Because the subjects were not asked to choose between any two albums, dissonance was not provoked.

The pattern of changes of the third-, fourth-, and eighth-ranked albums from the first to the second survey was studied. The chi-square test rejected the null hypothesis of independence between the pattern of changes and the initial location of albums at the .0005 level of significance ($\chi^2 = 25.58$). This finding showed that the experimental design ensured the statistically significant outcome even when subjects did not experience cognitive dissonance. Sheth’s experimental findings in support of dissonance theory can be largely explained as the result of the same built-in bias of using changes in rank positions as the dependent variable.13

Summary: Post-decision Dissonance

The Ehrlich et al study did show that new car owners sought out dissonance-reducing information, and supported dissonance theory. The difficulty, however, is that alternative explanations (or theories) predict the same results. Consequently, the findings were not unequivocal in support of dissonance theory. Furthermore, dissonance theory also postulates avoidance of dissonance-increasing information. Although some experiments supported this postulate, many others failed to do so. Thus, the theory has not fared too well in the area of information seeking and avoidance. In addition, problems associated with the experimental design may have produced a “built-in” bias for many post-decision dissonance studies.

Forced Compliance

Another way to create dissonance is to have a person verbalize or behave in a manner which is contrary to his original attitude, belief, opinion or conviction. In most experiments, subjects were forced to comply with the request of the experimenter to create dissonance. Hence, this process is called “forced compliance.”14 The theory has some support in forced compliance experiments.

As applied to automobile-purchasing behavior, forced compliance resulted in dissonance when a consumer clearly knew that a particular make was superior to other makes in relevant attributes but was induced, on his own volition, to buy an inferior make. The knowledge of superior attributes of rejected makes is dissonant with the knowledge that he bought an inferior make. The less the amount of inducement to buy the inferior make and the greater the freedom he had in rejecting superior makes, the greater his post-purchase dissonance.

The importance of volition cannot be overemphasized. Without it, the person will not experience strong enough dissonance to motivate a dissonance-reducing behavior. Its importance was well illustrated in the Festinger and Carlsmith experiment.15

Forced Compliance in Consumer Behavior

When the forced compliance paradigm is applied to consumer behavior, the consumer has to be induced to buy the make he knows is inferior if his dissonance is to be aroused. If he believes that one alternative is not a good one but is forced to choose that alternative, he will not experience dissonance because he can explain the poor choice as forced upon him. If, on the other hand, he has complete freedom in making the decision and chooses the wrong alternative, then he will experience dissonance as he cannot ascribe his poor choice to the force imposed upon him. The problem, however, is that in a realistic market situation it is impossible to force a customer to buy a product which he knows is inferior.

One methodological problem of the forced compliance experiment is that the subjects were induced to comply and those who did, in fact, comply reduced dissonance in a variety of ways as predicted by the experimenters. Even in the artificial experimental situations, however, experimenters have been plagued by a loss of subjects who refused to comply. In the


14 Same reference as footnote 3, pp. 84-91.

Festinger-Carlsmith experiment, 11 out of 71 subjects had to be discarded because of their refusal to comply. In another experiment, only 72 of the original sample of 203 subjects could be used.\textsuperscript{16} Experimenters must strike a balance between exercising too much force and not exercising enough. The implication of this methodological problem to marketing is that, in a natural setting, consumers are not likely to experience post-purchase dissonance via forced compliance because they will not behave in ways which they know will later arouse dissonance.

**Exposure to Discrepant Information**

Another set of circumstances under which dissonance may occur is when the consumer is exposed to new information not available to him at the time of decision making and which is obverse to the information he already has. This condition is called cognitive intrusion because new dissonant cognitions "intrude" upon one's cognitive structure.\textsuperscript{17}

For example, suppose a consumer studied extensively and carefully the attributes of different makes of automobiles and purchased a particular make which he judged to be the best. Will he experience dissonance when he is later exposed to new information describing unfavorable attributes of the chosen make and/or favorable attributes of unchosen makes?

Whether exposure to discrepant information will arouse dissonance depends upon a variety of factors. The most important of these is the degree of commitment and ego-involvement.

The findings of several experiments suggested that when the discrepant information is not salient and the degree of public ego-involvement is small, dissonance will not occur. For example, Rosen found that when students made decisions individually without announcing publicly, more (67\%) sought dissonance-producing information regarding the decisions made and less (33\%) sought dissonance-reducing information.\textsuperscript{18}

On the other hand, dissonance may be provoked because the consumer has publicly committed himself to the position that the choice he made is a good one. Public commitment results in ego-involvement which in turn increases the importance of that cognitive element on which one has committed himself.\textsuperscript{19} "The magnitude of dissonance is a function of the ratio of dissonant to consonant cognitions, where each cognitive element is weighted for its importance to the person."\textsuperscript{20} Consequently, public commitment tends to increase the magnitude of dissonance by increasing the relative weight of the dissonant cognitions.

Relating the above discussion to the Ehrlich \textit{et al} study, it should be noted that most automobile purchasers are not put in a position to publicly defend the adequacy of their purchase decision, and discrepant information which they read in the newspaper will not arouse strong enough dissonance to make them resort to a dissonance-reducing behavior.

**Alternative Theory Supported**

To test if dissonance theory can be applied in a more natural situation where individuals do not commit themselves publicly, this writer conducted an experiment and examined whether, after being exposed to dissonant information, strong dissonance leads individuals to convince themselves that the original decision was correct.\textsuperscript{21} Students were given the choice of essay type, objective type or any combination of both tests for midterm and final examinations. After indicating their preference, some were exposed to consonant information which supported their original choice while others were exposed to dissonant information.

They were also told either that they were committed to their original preference or that they could change their preference after reading the information.

Dissonance theory predicts that those who were committed to the original preference and were exposed to discrepant information would try to reduce dissonance by becoming more convinced of the wisdom of their original decision. Kurt Lewin's field theory asserts, on the other hand, that discrepant information reduces the desirability of the chosen test and increases that of the rejected test and predicts the opposite outcome from dissonance theory.\textsuperscript{22}

Experimental evidence supported Lewin's theory, showing that the students were positively influenced by both the discrepant and the consonant information regardless of their commitment. It appears that, under a natural circumstance, individuals do not respond to discrepant information in the way dissonance theory predicts.

**Evaluation of the Theory and Applicable Circumstances**

An attempt has been made to examine the experimental findings on the theory of cognitive dissonance.

\textsuperscript{16} Chapanis and Chapanis, same reference as footnote 10.


\textsuperscript{20} Same reference as footnote 6.


Many findings concerning exposure to discrepant information and post-decision dissonance arousal have been shown to be equivocal. In the forced compliance experiments, the artificial conditions under which compliance was obtained and some subjects' refusal to comply have reduced the usefulness of the experimental findings to the analysis of consumer behavior. It was shown, however, that if the subjects did comply, they attempted to reduce dissonance in a predicted manner.

Analysis of the theory and experimental findings suggested that the necessary condition for provoking dissonance strong enough to motivate dissonance-reducing behavior is that one be committed on his own volition to an undesirable product, position, or behavior and be unable to retract this commitment. However, consumers are unlikely to experience strong dissonance since they will not knowingly commit themselves to undesirable or inferior products in a natural market setting.

**Role of Advertising as Dissonance Reducer**

Dissonance theory sheds new light on the role of advertising of increasing the repurchase probability of the advertised product. A seller's product advertisement reassures the consumer as to the wisdom of the purchase by emphasizing its desirable features and therefore helps to reduce post-purchase dissonance. Dissonance reduction, in turn, reinforces his purchase. It may increase the probability of his purchasing the same brand.

Dissonance reduction may not operate as a strong reinforcer in the case of frequently-purchased merchandise. The more frequently the product is purchased, the less important becomes the question of which brand is purchased at any one time, and the less the post-purchase dissonance. The consumer who has purchased a convenience good usually would not experience strong dissonance because he knows that he is not irrevocably tied to that particular choice, but can easily switch brands. Since his dissonance is not strong, advertising's role in reinforcing the purchase is diminished.

On the other hand, the consumer who has just purchased an expensive specialty good is likely to experience strong dissonance if his purchase is irrevocable and if it is important in some psychological sense. For example, if a substantial financial outlay is involved or if his taste and intelligence are judged by the purchase, strong dissonance may be present. Under these circumstances, an advertisement which emphasized the desirable features of the chosen brand can reduce the dissonance which may lead the consumer to form a more favorable attitude toward the brand.

**Wearing-Out of Reinforcing Effect**

However, the longer the time lapse before product replacement, the less reinforcing will be the effects of the advertising. In the meantime, the seller's advertising must compete with that of his competitors, and it may not operate effectively as a reinforcing agent long after the purchase. By the time he is ready to replace the product, the effect of the firm's original advertising may have worn off and the attitude and preference of the purchaser may have been influenced by the more recent advertising efforts of the firm's competitors. Since dissonance is reduced over time,23 it is reasonable to expect that the greater the post-purchase dissonance, the longer the period during which the seller's advertisement operates as a reinforcer.

Thus, for the consumer who purchased an expensive product, advertising can act as a reinforcement for some period of time following the purchase. This reinforcing effect, however, does not necessarily insure a repeat purchase because of the counteracting effects of competitive advertisements.

In summary, the theory of cognitive dissonance is designed to explain and predict post-decisional behavior, but in most instances it is not adequate to explain consumer behavior before a purchase decision.

23 Same reference as footnote 6, p. 99.