An Experiment on Consumer Dissonance

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How can the theory of cognitive dissonance be applied or used by marketing practitioners? The theory itself is fairly well known—that there may exist dissonant or "nonfitting" relations among cognitive elements.

But how is this idea relevant to the field of marketing? Three articles dealing with cognitive dissonance have appeared in the Journal of Marketing; but even so, substantial research remains to be carried out before marketers can be sure of the value of the theory to marketing.

Consumers continually are receiving various kinds of information about products from friends, advertisements, and salesmen. These pieces of information are cognitions which, according to the theory of cognitive dissonance, consumers like to have consistent with one another. The theory is that if cognitions are inconsistent, consumers try to reduce the inconsistency, that is, to reduce dissonance, and that consumers try to reduce dissonance after making a buying decision.

Thus, a buyer who selects Brand A over other brands might experience dissonance because he is aware of attractive features of the rejected brand and unattractive features of chosen Brand A. One way for him to reduce dissonance would be to read advertisements of Brand A that would reinforce his buying decision.

However, an analysis of consumer behavior involves many interacting forces, and the post-decision emphasis of dissonance theory represents only one facet of the multi-facet problem. Even so, the theory may be useful.

Consider such questions as the following. Does dissonance relate to brand loyalty? Can marketers improve their position by helping consumers reduce any dissonance they might have developed? How does a salesman handle anticipated dissonance on the part of a potential customer? What can a salesman do in the pre-decision conflict period? How similar should alternatives be for the buyer? How many alternatives should be presented? Are impulse purchases apt to be dissonance-producing? Does planning on the part of the buyer aid the process of dissonance reduction?

Post-decision dissonance is caused by a number of factors

Factors affecting dissonance | Buying situation | Conditions with high dissonance expectation | Conditions with low dissonance expectation
---|---|---|---
1. Attractiveness of rejected alternative | A high-school graduate decides which of several pictures to order. | Three of the proofs have both attractive and desirable features. | One of the proofs clearly is superior to the rest.
2. Negative factors in chosen alternative | A man chooses between two suits of clothing | The chosen suit has the color the man wanted but not the style. | The chosen suit has both the color and style the man wanted.
3. Number of alternatives | A teacher shops for a tape-recorder. | There are eight recorders from which to choose. | There are only two recorders from which to choose.
5. Importance of cognitions involved | A child buys a present for her sister. | The sister has definite preferences for certain kinds of music. | The sister has no strong tastes for certain records.
6. Positive inducement | The son already has hobby equipment and does not need the enlarger. | The son never has had a true hobby and needs something to keep him occupied. | Fairly expensive watches had been important gift items in the man's family.
7. Discrepant or negative action | The man had never before paid more than $35 for a watch. | The housewife has no experience with the product, and has confidence in the manufacturer. | The housewife has read and heard a good deal about the product.
8. Information available | Housewife buys a detergent. | The housewife has no experience with the product, and has confidence in the manufacturer. | The housewife has read and heard a good deal about the product.
9. Anticipated dissonance | A small boy buys a model airplane. | The boy anticipates trouble at home because of the cost of the model. | The boy expects no trouble at home relative to the purchase.
10. Familiarity and knowledge | A family buys a floor polisher. | The item was purchased without much thought. | The item was purchased after a careful selection process.

Hypotheses

The following hypotheses were developed relative to the four main conditions.

1. Individuals with low inducement to buy will have more dissonance than those who have high inducement to buy. As an example, a person who needs a new pair of shoes (high inducement) should experience less dissonance than one who buys an extra pair (low inducement).

2. Individuals exposed to a condition of high anticipated dissonance will reflect greater dissonance.

Description of the Dissonance Experiment

It was decided to carry out an experiment in which several dissonance-producing factors could be manipulated: (1) inducement to buy, (2) anticipated dissonance, (3) information, and (4) cognitive overlap.

Each of these four conditions had two levels—one with high-producing dissonance features and one with low. A factorial design was used, and 80 persons were randomly assigned to the 16 experimental conditions—as shown in Figure 1.
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<table>
<thead>
<tr>
<th>Inducement</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated dissonance</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Additional information</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Cognitive overlap</td>
<td>High (1)</td>
<td>Low (2)</td>
</tr>
</tbody>
</table>

Figur 1. The experimental design. An example of 1 of the 16 conditions is: high inducement, low anticipated dissonance, no additional information, high cognitive overlap.

Dissonance than those in the low anticipated dissonance condition. For instance, a buyer of a sports car, who wonders what comments his colleagues will make, should experience more dissonance than when he buys a traditional type of car which would likely not draw criticism (anticipated dissonance).

3. Individuals to whom additional positive information is provided to aid their decision-making will experience less dissonance than those to whom no additional positive information is provided. In other words, additional positive information concerning a purchased item should make a buyer more confident and less dissonant than when he was not given that additional information.

4. The high cognitive overlap condition will create more dissonance than the low cognitive overlap condition.

Hypotheses based on interactions among the four factors were not developed because we did not know what to anticipate. However, the following procedure was carried out.

Procedure

Male college students of the University of Minnesota were asked to play the role of buyers of automobile batteries. They were given class credit for participating, plus a chance of receiving a new automobile battery in the several drawings that were held. The four graduate students who conducted the experiments were systematically rotated over all 16 conditions.

Twelve brands of batteries were used in the experiment:

- Allstate
- Goodrich
- Penneys
- Atlas
- Goodyear
- Pure
- Delco
- Gould
- Riverside
- Fisk Ambassador
- National
- Wizard

Each participant in the experiment was asked to complete a rating form, indicating how favorable he considered each of the 12 brands. This rating form was actually the prerating score, later to be compared with an identical postrating score, so that the difference in the two rating scores would be a measure of the amount of dissonance reduction experienced.

After completing the form, each person was taken to another room for three minutes. On the walls of the room were diagrams of the electrical system of the automobile, annual sales figures for the battery industry, and a list of battery brands sold in Minneapolis and St. Paul. These materials were expected to help the person become involved in the study without biasing him in any way.

The person was next greeted with the purchase-decision situation which contained (1a) a high-inducement factor or (1b) a low-inducement factor, and (2a) a high-anticipated dissonance condition or (2b) a low-anticipated dissonance condition.

1. Inducement

a. High Inducement

You have been in northern Minnesota for the weekend and are driving back to the Twin Cities. After a stop for coffee, you find that you cannot
Objects received no additional information, and the other half were given a card on which appeared the rule in which brands rated very high or very low the person were selected according to a decision. The three brands shown were three batteries—the batteries available in mobile products, you cannot even guess what battery it is. At this point the garage attendant where you are now suggests that you look at several of the brands of batteries, and the thought runs through your mind that he will notice a new battery in your car the first time he checks under the hood. You follow him to his garage where he checks over your engine and battery. He believes that you may have a leaky cell in the battery and that, with a little luck, it may be possible for you to get along for a few weeks.

(2) Anticipated Dissonance

a. High-anticipated Dissonance

As the attendant checks your car, you notice the brand of the battery and you reflect that it has done a pretty good job. You also recall that your regular service station dealer is quite proud of his brands of batteries, and the thought runs through your mind that he will notice a new battery in your car the first time he checks under the hood.

b. Low-anticipated Dissonance

As the attendant checks your car, you notice that the battery is so encased and hidden that you cannot even see what brand of battery you now have. Since you normally trade at several stations and purchase several brands of automobile products, you cannot even guess what brand of battery it is.

Each person was then told orally:

“At this point the garage attendant where you are now suggests that you look at several of the new batteries he has in stock.”

The experimenter then stepped out of the room and wheeled in a battery-display cart on which were three batteries—the batteries available in the hypothetical situation. The three brands shown the person were selected according to a decision rule in which brands rated very high or very low in the pretest were excluded.

(3) The manipulation of the positive information factor occurred at this time; that is, half the subjects received no additional information, and the other half were given a card on which appeared the following:

<table>
<thead>
<tr>
<th>Battery</th>
<th>High Overlap</th>
<th>Low Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price</td>
<td>Warranty</td>
</tr>
<tr>
<td>A</td>
<td>$22.88</td>
<td>30 months</td>
</tr>
<tr>
<td>B</td>
<td>22.29</td>
<td>30 months</td>
</tr>
<tr>
<td>C</td>
<td>22.49</td>
<td>30 months</td>
</tr>
</tbody>
</table>

The batteries displayed here are conventional 12-volt batteries. They are heavy duty with plenty of reserve power. Specifications range around the 75-Ampere Hour Rating, which means the amount of power stored for normal driving needs. Their Zero Start Ratings range around 6.6 minutes—the number of minutes a battery will crank in zero cold without dying out.

(4) The condition of cognitive overlap was handled by placing cards beside each of the batteries on the display rack. See Table 2.

The experimenter then said:

“Now look at these three batteries. We would like you to decide which one of these batteries you would buy under the conditions you are in, that is, in the garage talking to the attendant. Think about it carefully now and then tell me which one you would select. Take your time and make what you think would be your real decision.”

As soon as the person decided, the experimenter thanked him and reminded him that he had chosen Brand A, for example. The person was then asked for a “little more information,” which meant that he filled out the postrating form.

Following this the experimenter discussed the study with the individual, in an effort to determine his reactions, battery knowledge, and buying experience.

Results

Reduction of dissonance was measured by comparing the prerating and postrating scores. A higher postrating score for the chosen battery or a lower postrating score for the rejected batteries, or both, indicated dissonance reduction.

The overall mean change was 2.51, a statistically significant change, which indicated that dissonance had been experienced by the participants. The mean changes for each of the 16 conditions shown in Figure 1 ranged from a low of 0.8 to a high of 4.8.

Main Effects

Dissonance reduction was measured for each of the four independent variables. Three of the four results were in the direction predicted, although none of them was statistically significant.

However, the results concerning anticipated dissonance were contrary to expectations, and contrary to preliminary results.

Interaction

As to the results on interaction, two of the interactions were significantly different from the mean change and support two of the hypotheses.

In the first significant interaction, when high inducement interacted with the two levels of information, a significantly different amount of dissonance was measured. Thus, hypothesis 3 was in part confirmed, as the amount of positive information did affect dissonance somewhat.

When there was low inducement, the information effect was not apparent. The explanation probably

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is that because low inducement by itself produced substantial dissonance, a manipulation of information had no further effect.

In the second case, with low anticipated dissonance combined with cognitive overlap, a significant effect was measured. Thus, hypothesis 4 was in part confirmed, as the interaction showed the effect of high versus low cognitive overlap.

With high anticipated dissonance, however, the overlap manipulation produced no additional dissonance.

Several other results were in the anticipated direction but not statistically significant. As an example, the condition expected to produce the least amount of dissonance (high inducement—low anticipated dissonance—additional information—low cognitive overlap), yielded a change score of only 0.8, the lowest of all conditions and considerably below the 2.5 overall mean.

Generalizing from the experiment, there appears to be more possibility of dissonance when buyers purchase without need and without sufficient information, and when alternatives are similar to the point of making the decision difficult.

Implications

Although the results of the experiment were not as positive as anticipated, they did provide a number of tentative findings about dissonance and buying behavior:

1. Consumers who buy when they have strong inducement should experience less dissonance than those who buy without inducement.
2. Consumers who obtain adequate information probably will have less dissonance than those who buy without sufficient information.
3. Product alternatives with very similar attributes may cause greater consumer dissonance than dissimilar alternatives.
4. Interaction effects occur when various dissonance-arousing factors are combined in one buying situation.

MARKETING MEMO

The Problems of Marketing in a Foreign Country . . .

There are two elements, inherent in the very nature of marketing, which complicate an effective working relationship between American and foreign firms. The first lies in the nature of marketing problems and the environment in which they take place. While marketing problems can be real and pressing, they are somewhat intangible and elusive. . . . Moreover, the symptoms of marketing ills are often too subtle to be detected at an early stage. When they are recognized, they are likely to have developed major proportions.

Second, there are some important differences in the basic understanding of and attitude toward marketing between American and foreign executives. Potential local partners, particularly in developing countries, are likely to have indifferent or even hostile attitudes toward marketing. To the majority, manufacturing and marketing, or more accurately, selling, are two distinct activities to be performed by different agencies under different institutional settings. Manufacturers' functions end with the creation of form utility in the narrowest sense of the term. Some even view selling activities with disdain.
