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L162
THE EFFECT OF PURCHASE CHARACTERISTICS ON POSTDECISION PRODUCT REEVALUATION

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#117

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ABSTRACT

Research conducted in a laboratory study employing a purchase simulation suggests that characteristics of the purchase such as prior attitude, brand homogeneity, and brand familiarity play a major role in postdecisional attitude change. Evidence is also presented indicating that new adoption purchases of minor importance items do represent the necessary level of decision commitment for favorable product reevaluation.
INTRODUCTION

Marketing's concern for a continuing relationship between buyer and seller dictates that interest in the consumer must not end with the sale. Postpurchase attitude change may play a major role in the consumer's willingness to repurchase a brand or communicate its virtues to other potential consumers. It was this concern coupled with Festinger's [8] relatively simple but ambiguous formulation of dissonance theory that led marketing scientists to enthusiastically apply dissonance theory in the study of consumer behavior.

Few theories have provoked more research and debate in the psychological literature. As Chapanis and Chapanis [4] point out, much of the past research in the area has been based on methodological inadequacies including analysis of subsets of the data. In addition, dissonance studies have historically included complex manipulations in which the confounding of treatment variables provides alternative interpretations of the data. Aronson [1] answers some of Chapanis and Chapanis' objections and offers some solutions to decrease the ambiguity in this area of research. Insko [9] considers more basic objections to dissonance theory by noting the vague manner in which dissonance is defined. Most researchers have a conceptual feeling about dissonance theory, but as yet, no precise definitions are available.

Venkatesan [12] provides a lucid summary of the cognitive setting in which dissonance theory may apply:

All situations are not optimal. Therefore, man, as a rationalizing animal, strives for consistency -- consistency within himself...whenever two relevant cognitions do not "fit", this leads to psychological inconsistency within the individual...In the presence of this psychological discomfort, the individual will attempt to reduce this "dissonance" and bring the
relations between the two dissonant cognitions into consonance...its domain is the situation confronting the individual after he has engaged in some decision-making process...the two cognitions that are dissonant are relevant cognitions and they interact with one another...

Thus, dissonance theory suggests that man strives for internal consistency. What has led to some ambiguity, however, is the mode of resolution. Given the consumer purchases a particular brand of automobile and then experiences dissonance he may change the dissonant beliefs, add new beliefs which support the purchase, discredit the source of the dissonant information, or actually change his behavior. As Aronson [1] and Cohen and Goldberg [5] suggest, dissonance theory and learning theory may both be relevant to consumer behavior; man has a variety of motives which may be dependent on his utility (or disutility) for dissonant information.

Presumably dissonance theory does not apply for all purchases in all contexts. Brehm and Cohen [3] report research which indicates that the magnitude of dissonance is related to the commitment to the choice as well as volition. Brehm [2] indicates that the magnitude of dissonance increases as the choice alternatives increase in desirability.

When a decision is made, frequently there is a "spreading out" effect on attitudes: the chosen alternative is seen as more attractive and the unchosen alternatives decrease in attractiveness. This has been found by a number of researchers [2, 5, 6, 11]. Cohen and Houston [6] also report on a "halo" effect in which individuals tended to evaluate the chosen brand more favorably along all dimensions. As the authors point out, the consumer may not be irrational to routinize decisions among similar products to save time and personal conflict.
Cohen and Goldberg [5] conducted an experiment of instant coffee choice in which subjects who chose a national brand (as opposed to a private test brand) experienced a favorable postdecision attitude change. The authors suggest that brand familiarity or prior information may be an important consideration in the outcome of the choice. It is important to realize that these changes occurred when the subjects had limited information about the brands that they chose. However, with "simulated" experience (subjects were allowed to taste the two brands, one of which was made distasteful by the addition of an additive), subjects tended to rate the brands according to what they learned from "experience". Thus there are very real limits to postdecision attitude change and these limits may be quickly reached with a product of low ego involvement.

Another body of research in the area considers the individual's treatment of information while in a state of dissonance. Theory would suggest that the dissonant individual would selectively expose and distort information. Sears and Freedman [10] critically review research in this area and conclude that the results are equivocal. Nevertheless, findings such as those reported by Donohew and Palmgreen [7] do lend support to this area.

This research attempts to measure the magnitude of postdecisional attitude change that results from the purchase of a relatively low involvement, frequently purchased household item, scouring pads. An attempt has been made to assess the nature of the purchase to examine attitude change as a function of purchase type. Accordingly the following hypotheses will be tested:
$H_1$: Favorable postdecision attitude change will be greatest for a "commitment" purchase. Specifically, a purchase that is classified as a "new adoption" will result in more attitude change than a "trial" purchase (the analysis will exclude adoption purchases which were adopted on a previous occasion).

$H_2$: Favorable postdecision attitude change will be greatest when the individual has a high level of brand familiarity prior to the purchase.

$H_3$: Favorable postdecision attitude change will be greatest for those individuals who adopt and hold a relatively unfavorable attitude toward the chosen brand prior to purchase.

$H_4$: Favorable postdecision attitude change will be greatest under conditions where an unfavorable attitude was held and a great deal of brand attitude heterogeneity exists (i.e., the brand chosen is unfavorable and all brands are not unfavorable).

It is important to note that the variables influencing attitude change are based on selection rather than actual intervention or manipulation. The danger in selecting (or setting) subjects on the basis of properties is that changes may not be due to the stimulus but perhaps to a regression effect or other variables which are confounded with the variable used for selection. On the other hand, methods employing selection are typically less costly, less reactive, and more natural. In this research, preserving the natural choice environment was considered to be of major importance. It would be artificial to force subjects into an attitude level prior to choice or into an adoption purchase when a trial purchase is desired.
DATA COLLECTION PROCEDURES

Results reported in this research are based on data collected in a laboratory experiment in the Krannert Behavioral Laboratory at Purdue University in the fall of 1970. Although four product categories were studied, the results reported here refer to one product category, scouring pads. Brands selected for study and the accompanying attributes measured are shown in Figure 1.

All of the 490 subjects selected for study were housewives and members of philanthropic and church organizations in the Lafayette, Indiana area. 92.4% of the subjects completed the four week experiment which required attendance at four two-hour sessions.

After initial arrangements, the first questionnaire that subjects received was a measure of product usage for the previous week. This was followed by a measurement of brand attitudes. Measurements included the importance of the attribute and the perception of each brand's possession of each attribute. This was then followed by the viewing of a television show in which some groups received an advertising exposure while other groups did not. Only one brand was advertised to simplify the experimental design. Following the television show, a questionnaire measuring attitudes toward the television show was administered to support the guise of the experiment -- a communications study for the evaluation of television programming. Another brand attitude questionnaire that was identical in format to the preexposure questionnaire completed the brand attitude measurements.

Subjects were then instructed to proceed to another area where they participated in a simulated shopping trip. A selection of four brands of the four product categories was displayed on a large shelf.
The participants then took various items off the shelf to view the packages and indicated their choices on a form which was processed before they received their merchandise. The order form introduced a degree of artificiality into the purchase process but insured that the purchases were accurately recorded and that the selections of later shoppers were not influenced by the selections of earlier groups. In addition, subjects indicated on the form information about whether the purchase was an adoption or trial (actually a continuum where participants indicated how likely they were to repurchase the same brand during the next four purchases). Not all brands were equivalent in price, and subjects, therefore, received the difference in change between the most expensive brand and the item they selected.

In summary, the schedule for each two-hour laboratory session was the following:

1. arrival, check-in (15 minutes)
2. videotaped instructions (3 minutes)
3. initial questionnaire (10 minutes)
4. preexposure attitude questionnaire (15 minutes)
5. television show and advertising exposure (10 minutes)
6. postexposure attitude questionnaire (15 minutes)
7. simulated shopping trip (20 minutes)

Four weekly laboratory sessions were required for group compensation. Since two brand attitude measures were taken in each session, a total of 16 attitude measures were available. The difference between each session's pre and postexposure measurements gives an indication of attitude change resulting from advertising exposure. This has been considered in a previous paper [14]. The difference between the following week's preexposure
measurement and the postexposure measure (eg. prechoice measurements) provides some indication of the effect of brand choice and usage on attitude change. Additional details of the experiment appear in another paper [15].
Figure 1

BRANDS AND ATTRIBUTES STUDIES

Scouring Pad Brands
1. SOS
2. Rescue a
3. Soettes
4. Brillo

Attributes
1. Durability of Pad
2. Durability of Soap
3. Price
4. Rust resistance
5. Gentleness to Hands
6. Scouring Ability

a Advertised Brand
AN OUTLINE OF THE DATA

The data of major consequence to these results can be segmented according to the time of measurement:

I. Measured prior to "shopping trip"
   A. Brand attitude
      1. Importance of attributes
      2. Brand possession of attributes
   B. Brand familiarity

II. Measured during shopping trip
    A. Brand selected as choice
    B. Adoption - trial classification of choice (an adoption purchase was considered to be a purchase that the individual was "certain" or "very likely" to continue to choose for the next few weeks)

III. Measured one week after the choice - before the advertising exposure
    A. Brand used most during the previous week, if any
    B. Brand attitude (as before)

IV. Measured one week after the choice - after the advertising exposure
    A. Group number (to indicate whether subject was exposed to Rescue advertising)
    B. Brand attitude (as before)

A visualization of one cycle of data appears in Figure 2. This cycle was repeated four times.
Figure 2. Data Used for Analysis
The attitude measure employed in this research is composed of three components that combine to form a "city block" (Minkowski r=1) attitude measure:

\[ A_j = \sum_{k=1}^{n} (m_k - b_{kj}) v_k \]

where:

- \( A_j \) = attitude measurement for brand \( j \) (the smaller the value the greater the affect)
- \( m_k \) = the highest possible degree of possession of attribute \( k \) (i.e. the implicit "ideal point."")
- \( b_{kj} \) = the amount of attribute \( k \) that brand \( j \) is perceived to possess (beliefs or perceived instrumentalities)
- \( v_k \) = the importance of a brand possessing the desired amount of attribute \( k \), and
- \( n \) = the number of attributes relevant to preference of brands in the product category (in this case \( n=6 \)).

As discussed previously [14] all attitude measures are normalized across the four brands at each point in time. Normalization does, in a sense, eliminate some of the data since a change in a brand's normalized attitude measure can be the result of a change in attitude toward the brand or perhaps one of the other brands, or both phenomena. In spite of its weaknesses, normalization does reduce any multiplicative response bias that is particularly critical in the comparison of data over time. Thus, the original attitude scores were transformed to normalized scores, \( Z \), in the following manner:
\[ Z_j = \frac{A_j}{m} \] \sum_{j=1}^{m} A_j

where:

\( Z_j \) = normalized attitude measure for brand \( j \)

\( m \) = total number of brands evaluated (in this case \( m=6 \)) and

\( A_j \) is defined as before.

Using these basic inputs the following transformed data of each individual were employed for hypothesis testing:

\( \inf_{j,t} \) = inferiority index of brand \( j \) at time \( t \); defined as the difference between \( Z_{j,t} \) (attitude toward brand \( j \)) and \( Z_{\text{fav},t} \) (attitude toward most favorable brand)

\( \text{var} Z_t \) = degree of heterogeneity or homogeneity among brands.

A high variance of \( Z \) indicates that the subject perceived large differences in attitudes among brands.

\( \text{fam}_{j,t} \) = familiarity toward brand \( j \) at time \( t \). The range of this variable is 1 to 6 where 6 represents the highest degree of familiarity.

\( \text{adtr}_{i,t,t+1} \) = an adoption-trial classification for the purchase (brand \( i \)) that was made between times \( t \) and \( t+1 \).

This is assigned one of three nominal values based on the characteristics of the purchase between \( t \) and \( t+1 \) and the previous purchases:

1 represents an adoption purchase that was preceded by an adoption purchase

2 represents an adoption purchase that was preceded by a trial purchase or no purchase

3 represents a trial purchase
\[ \text{exp}_{t,t+1} = \text{dummy variable of value 0 or 1, where 1 indicates that one Rescue advertising exposure was administered to the subject between } t \text{ and } t+1. \]

\[ \Delta Z_{j,t,t+1} = \text{the dependent variable which is the change in attitude for brand } j \text{ between measurement intervals } t \text{ and } t+1. \quad (\Delta Z_{j,t,t+1} = Z_{j,t+1} - Z_{j,t}) \]
RESULTS

Analysis of the Effect of Choice on Attitude Change

Using the data previously described as input, a $2 \times 2 \times 2 \times 2$ factorial analysis of variance was employed to test hypotheses regarding the effect of brand inferiority, brand homogeneity, brand familiarity, and the adoption-trial classification on postdecision attitude change. With the exception of the two level adoption-trial factor the two level splits were created on the basis of observations being either larger or smaller than the sample average for that factor. Results of the analysis appear in Table 1. The analysis is presented in summary form only and is intended to illustrate that many of the effects hypothesized were significant.

During the measurement interval, subjects were allowed to select a brand for their own use, receiving change to compensate for price difference. Of the 1162 purchases represented in the analysis (the analyses were approximate and the reduced number of degrees of freedom result because an unweighted means analysis was required to treat unequal cell sizes [13]), 936 purchases involved the use of one or more brands of scouring pads subsequent to purchase. Past research has indicated that theories of cognitive dissonance and learning may both apply during this interval. To investigate the effects of the choice itself, however, it is necessary to consider only those purchases that were followed by no brand usage during the one week interval. The assumption is being made that zero usage is not related to any of the variables being investigated and is not confounded with any variable not considered in the analysis. For a convenience item such as scouring pads, this appears to be a reasonable assumption.
Table 1
POST DECISION ATTITUDE CHANGE\(^a\)--ALL CHOICES

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative inferiority of chosen brand(^b) (A)</td>
<td>1</td>
<td>.914</td>
<td>72.0</td>
<td>.00</td>
</tr>
<tr>
<td>Brand heterogeneity(^b) (B)</td>
<td>1</td>
<td>.014</td>
<td>1.1</td>
<td>NS</td>
</tr>
<tr>
<td>Familiarity of chosen brand(^b) (C)</td>
<td>1</td>
<td>.060</td>
<td>4.7</td>
<td>.03</td>
</tr>
<tr>
<td>Adoption/trial vs. trial (D)</td>
<td>1</td>
<td>.014</td>
<td>1.1</td>
<td>NS</td>
</tr>
<tr>
<td>B x C</td>
<td>1</td>
<td>.346</td>
<td>27.3</td>
<td>.00</td>
</tr>
<tr>
<td>B x D</td>
<td>1</td>
<td>.052</td>
<td>4.1</td>
<td>.04</td>
</tr>
<tr>
<td>B x E</td>
<td>1</td>
<td>.003</td>
<td>3</td>
<td>NS</td>
</tr>
<tr>
<td>C x D</td>
<td>1</td>
<td>.001</td>
<td>.1</td>
<td>NS</td>
</tr>
<tr>
<td>C x E</td>
<td>1</td>
<td>.003</td>
<td>.2</td>
<td>NS</td>
</tr>
<tr>
<td>D x E</td>
<td>1</td>
<td>.052</td>
<td>4.1</td>
<td>.04</td>
</tr>
<tr>
<td>B x C x D</td>
<td>1</td>
<td>.008</td>
<td>.6</td>
<td>NS</td>
</tr>
<tr>
<td>B x C x E</td>
<td>1</td>
<td>.002</td>
<td>.2</td>
<td>NS</td>
</tr>
<tr>
<td>B x D x E</td>
<td>1</td>
<td>.036</td>
<td>2.8</td>
<td>.09</td>
</tr>
<tr>
<td>C x D x E</td>
<td>1</td>
<td>.019</td>
<td>1.5</td>
<td>NS</td>
</tr>
<tr>
<td>B x C x D x E</td>
<td>1</td>
<td>.037</td>
<td>2.9</td>
<td>.09</td>
</tr>
<tr>
<td>Residual</td>
<td>989</td>
<td>.013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)The dependent variable represents the difference between the postchoice and prechoice normalized attitude measures for the purchased brand.

\(^b\)Two levels were created by classifying the data into above and below average categories.
This research is dealing with consumer commitment to the purchase. An adoption purchase is defined to be a purchase in which the consumer is either certain or very likely to continue purchasing that brand for the following four weeks; all other purchases are considered to be trial purchases which may reflect the individual's desire to purchase for trial, variety, or novelty reasons. It is important to note that an adoption purchase that has been preceded by an adoption purchase is less likely to invoke dissonance than an adoption purchase that has been preceded by a trial purchase for the same brand. As previously mentioned, this research recognizes three types of purchases:

1. adoption/adoption - an adoption purchase of a brand that has previously been adopted.
2. adoption/trial - an adoption purchase of a brand that has not been previously adopted.
3. trial - a trial purchase of a brand.

Because covariation between purchase type and other variable produced empty cells, it was necessary to deal primarily with the latter two purchase type levels. Table 2 is a one way analysis of variance which confirms our expectations that an adoption/trial purchase results in the most favorable attitude change. The analysis is partially confounded because the three cells also differ significantly with respect to attitude prior to choice; thus a regression effect could have produced such a result.

Given the two adoption-trial, brand inferiority, brand familiarity and brand homogeneity classifications, an analysis similar to that of Table 1 was used to assess the nature of attitude change resulting from the 226 choices that involved no postdecisional usage of any brand.
TABLE 2

EFFECT OF ADOPTION VS. TRIAL PURCHASE ON POST DECISION ATTITUDE CHANGE\(^8\) - NON USERS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption vs. adoption/trial vs. trial</td>
<td>2</td>
<td>.023</td>
<td>2.7</td>
<td>.07</td>
</tr>
<tr>
<td>Within cells</td>
<td>223</td>
<td>.009</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adoption</th>
<th>Adoption/Trial</th>
<th>Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \Delta Z = .026 )</td>
<td>( \Delta Z = -.036 )</td>
<td>( \Delta Z = -.004 )</td>
</tr>
<tr>
<td>( n = 28 )</td>
<td>( n = 21 )</td>
<td>( n = 177 )</td>
</tr>
</tbody>
</table>

\(^8\)The dependent variable represents the difference between the postchoice and prechoice attitude measures for the purchased brand.
The reduced sample size and covariation among variables necessitated reduced sets of analyses which consider the effect of endogeneous variables on pre-postdecisional attitude change.

Table 3 indicates the effect of attitudinal variables and adoption/trial versus trial purchase on postdecision attitude change. The attitudinal variables were of two types: brand inferiority (the difference between the attitude for the chosen brand and the most favorable brand) and brand homogeneity (the variance of the attitude scores across four brands). The brand inferiority and adoption-trial variables both yielded significant main effects as did all interaction terms. The cell with the most favorable attitude change was group who were initially unfavorable toward the brand, viewed the brands as being heterogeneous in attitude, and consider the purchase to be an adoption (note that a negative $\Delta Z$ represents a favorable relative attitude change while a positive value represents an unfavorable relative attitude change). Thus, those individuals who viewed the adopted brand as somewhat inferior and recognized that other brands were not the same, changed in the most positive direction. An interesting reversal of the brand homogeneity effect can be seen for the low brand inferiority group. Under these conditions, the group that considered the brands to be homogeneous reflected the most favorable attitude change. This analysis suggests that if the individual views his choice as a good alternative, conflict is perhaps greatest when he views the other alternatives as being close to the chosen brand.

Because brand inferiority is a function of the prechoice attitude, it might be argued that attitude change is largely a result of the regression effect. It is for this reason that interpretation of the
### Table 3

**Effect of Purchase Type, Brand Inferiority and Brand Homogeneity on Post Decision Attitude Change** - Non Users

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand inferiority (A)</td>
<td>1</td>
<td>.355</td>
<td>52.9</td>
<td>.00</td>
</tr>
<tr>
<td>Brand homogeneity (B)</td>
<td>1</td>
<td>.007</td>
<td>1.0</td>
<td>NS</td>
</tr>
<tr>
<td>Adoption/trial vs. trial (C)</td>
<td>1</td>
<td>.111</td>
<td>16.5</td>
<td>.00</td>
</tr>
<tr>
<td>A x B</td>
<td>1</td>
<td>.111</td>
<td>16.5</td>
<td>.00</td>
</tr>
<tr>
<td>A x C</td>
<td>1</td>
<td>.068</td>
<td>10.1</td>
<td>.00</td>
</tr>
<tr>
<td>B x C</td>
<td>1</td>
<td>.020</td>
<td>2.9</td>
<td>.09</td>
</tr>
<tr>
<td>A x B x C</td>
<td>1</td>
<td>.023</td>
<td>3.4</td>
<td>.07</td>
</tr>
<tr>
<td>Residual</td>
<td>190</td>
<td>.007</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adoption/trial</th>
<th>Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand homogeneity</td>
<td>$\Delta Z = -.013$</td>
</tr>
<tr>
<td>$n = 10$</td>
<td>$n = 82$</td>
</tr>
<tr>
<td>Brand heterogeneity</td>
<td>$\Delta Z = .058$</td>
</tr>
<tr>
<td>$n = 6$</td>
<td>$n = 24$</td>
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</table>

<table>
<thead>
<tr>
<th>Low brand inferiority</th>
<th>High brand inferiority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand homogeneity</td>
<td>$\Delta Z = -.116$</td>
</tr>
<tr>
<td>$n = 3$</td>
<td>$n = 2$</td>
</tr>
<tr>
<td>Brand heterogeneity</td>
<td>$\Delta Z = -.033$</td>
</tr>
<tr>
<td></td>
<td>$n = 12$</td>
</tr>
</tbody>
</table>

*a The dependent variable represents the difference between the postchoice and the prechoice normalized attitude measures for the purchased brand.

*b Two levels were created by classifying the data into above and below average categories.
inferiority main effect is, in part, confounded. Nevertheless, the interaction of brand inferiority (or brand attitude) with both brand homogeneity and the adoption-trial classification, suggests that prior attitudes play an important part in postdecision attitude change; theory would say that the regression effect would not interact with the other independent variables.

Brand familiarity also plays a role in postdecision reevaluation--Table 4 presents an analysis in which brand familiarity was substituted for brand homogeneity. The high brand inferiority cells exhibit the nature of brand familiarity on attitude change; within the adoption/trial and the trial cell both comparisons between means of high and low familiarity are significant at the .01 level. For adoption purchases attitude change is greatest under conditions of high brand familiarity. This is as predicted by dissonance theory since high familiarity would tend to mean high commitment. High familiarity for a trial purchase, coupled with no usage, may mean that even inspection of the package or its contents may provide not as much new information as it might for the low familiarity group. A check for confounding between brand familiarity and brand homogeneity within the maximum change cells revealed no unusual patterns although low sample size precluded statistical analysis.

Analysis of the Effect of Choice on Attitudinal Response to Advertising

It has been suggested that one avenue of resolution for the dissonant purchaser is to distort his perceptions of the purchase to achieve consonance. Previous results have indicated that these adjustments may well come from within the purchaser himself. Advertising may offer additional evidence to reinforce the purchase; this evidence may reach the consumer
TABLE 4
EFFECT OF PURCHASE TYPE, BRAND INFERIORITY AND BRAND FAMILIARITY ON POST DECISION ATTITUDE CHANGE\textsuperscript{a} - NON USERS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand inferiority\textsuperscript{b} (A)</td>
<td>1</td>
<td>.195</td>
<td>27.8</td>
<td>.00</td>
</tr>
<tr>
<td>Brand familiarity\textsuperscript{b} (B)</td>
<td>1</td>
<td>.019</td>
<td>2.7</td>
<td>NS</td>
</tr>
<tr>
<td>Adoption/trial vs. trial (C)</td>
<td>1</td>
<td>.070</td>
<td>9.9</td>
<td>.00</td>
</tr>
<tr>
<td>A \times B</td>
<td>1</td>
<td>.011</td>
<td>1.5</td>
<td>NS</td>
</tr>
<tr>
<td>A \times C</td>
<td>1</td>
<td>.056</td>
<td>7.9</td>
<td>.01</td>
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<td>B \times C</td>
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<td>.057</td>
<td>8.0</td>
<td>.01</td>
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<tr>
<td>A \times B \times C</td>
<td>1</td>
<td>.049</td>
<td>7.0</td>
<td>.01</td>
</tr>
<tr>
<td>Residual</td>
<td>190</td>
<td>.007</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adoption/trial vs. trial

\begin{tabular}{ll}
\textbf{Low brand familiarity} & $\bar{\Delta Z} = .024$ & $\bar{\Delta Z} = .027$ \\
& n = 4 & n = 45 \\
\textbf{High brand familiarity} & $\bar{\Delta Z} = .010$ & $\bar{\Delta Z} = .021$ \\
& n = 12 & n = 61 \\
\end{tabular}

\begin{tabular}{ll}
\textbf{Low brand inferiority} & $\bar{\Delta Z} = -.075$ & $\bar{\Delta Z} = -.064$ \\
& n = 2 & n = 50 \\
\textbf{High brand inferiority} & $\bar{\Delta Z} = -.273$ & $\bar{\Delta Z} = -.002$ \\
& n = 3 & n = 21 \\
\end{tabular}

\textsuperscript{a}The dependent variable represents the difference between the postchoice and the prechoice normalized attitude measures for the purchased brand.

\textsuperscript{b}Two levels were created by classifying the data into above and below average categories.
<table>
<thead>
<tr>
<th>η</th>
<th>α</th>
<th>φ</th>
<th>σ</th>
<th>Results of Polarization</th>
</tr>
</thead>
</table>
| 0.15 | 8.15 | 361 | 1 | (1)  
| 0.2 | 7.4 | 110 | 2 | (2)  
| 0.3 | 6.0 | 510 | 3 | (3)  
| 0.4 | 4.9 | 610 | 4 | (4)  
| 0.5 | 3.9 | 510 | 5 | (5)  
| 0.6 | 3.0 | 410 | 6 | (6)  
| 0.7 | 2.1 | 310 | 7 | (7)  
| 0.8 | 1.4 | 210 | 8 | (8)  
| 0.9 | 0.8 | 110 | 9 | (9)  
| 1.0 | 0.5 | 010 | 10 | (10) |
in intact form and be selectively distorted to produce the desired level of consonance.

To explore the area of selective distortion of information, the advertising exposure immediately following the choice will serve as the focal point for analysis. Since Rescue was the only advertised brand in this study all measures pertain to this brand. As before the dependent variable will be the brand (Rescue) attitude change computed by comparing attitude after exposure with attitude prior to exposure (actually the attitude after choice in the previous analysis).

Table 5 indicates the effect of prior brand purchase (Rescue versus another brand) and advertising exposure (exposed to Rescue advertising versus exposed to no advertising) on Rescue attitude change. The brand choice main effect suggests that dissonance may still be in the process of being reduced. The hypothesized interaction between exposure and brand choice was not significant and may be the effect of nuisance variables which produce large within cell variance.

In an effort to control for prior attitude which was seen to play a role in attitude change previously and in another study [14], brand inferiority has been added to the analysis. Results that appear in Table 6 reveal that all main effects and interactions are significant. Once again the main effect of brand inferiority (or brand attitude) may be due to the regression effect and the interaction between brand inferiority and exposure may reflect the effects of attitude on exposure itself. Nevertheless, the most plausible explanation for the three variable interaction component is the presence of selective perception in dissonance reduction. As mentioned before the use of level
TABLE 5
EFFECT OF PRIOR BRAND CHOICE AND EXPOSURE ON RESCUE ATTITUDE CHANGE* - NON USERS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand choice (A)</td>
<td>1</td>
<td>.254</td>
<td>9.7</td>
<td>.00</td>
</tr>
<tr>
<td>Exposure (B)</td>
<td>1</td>
<td>.003</td>
<td>.3</td>
<td>NS</td>
</tr>
<tr>
<td>A x B</td>
<td>1</td>
<td>.022</td>
<td>.8</td>
<td>NS</td>
</tr>
<tr>
<td>Residual</td>
<td>194</td>
<td>.026</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table:<br>\[
\begin{array}{l|cc|cc}
\text{Source of Variation} & \text{df} & \text{MS} & \text{F} & \text{p} \\
\hline
\text{Brand choice (A)} & 1 & .254 & 9.7 & .00 \\
\text{Exposure (B)} & 1 & .003 & .3 & NS \\
\text{A x B} & 1 & .022 & .8 & NS \\
\text{Residual} & 194 & .026 & & \\
\end{array}
\]

\[
\begin{align*}
\text{No Advertising} & \quad \text{Rescue Advertising} \\
\text{Rescue not chosen} & \quad \bar{\Delta Z} = -.006 \quad \bar{\Delta Z} = .004 \\
& \quad n = 95 \quad n = 58 \\
\text{Rescue chosen} & \quad \bar{\Delta Z} = -.003 \quad \bar{\Delta Z} = -.110 \\
& \quad n = 50 \quad n = 15 \\
\end{align*}
\]

*The dependent variable represents the difference between the postexposure and the preexposure (postchoice) normalized attitude measures for Rescue.
<table>
<thead>
<tr>
<th>N</th>
<th>X</th>
<th>30</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>1.1</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>2</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X</th>
<th>30</th>
<th>50</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
- X = N / 2
- N = 50
- M = 20

**EQUATIONS:**
- X = ?
- N = 50
- M = 20

**RESULTS:**
- X = 1.1
- N = 41
- M = 200
- 10 = 5

**ANALYSIS:**
- X = N / 2
- M = 20
- N = 50

**FURTHER ANALYSIS:**
- X = N / 2
- M = 20
- N = 50

**DISCUSSION:**
- X = N / 2
- M = 20
- N = 50

**CONCLUSIONS:**
- X = N / 2
- M = 20
- N = 50

**FUTURE WORK:**
- X = N / 2
- M = 20
- N = 50
TABLE 6
EFFECT OF BRAND INFERIORITY, PRIOR BRAND CHOICE, AND EXPOSURE ON RESCUE ATTITUDE CHANGE\textsuperscript{a} - NON USERS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand inferiority\textsuperscript{b} (A)</td>
<td>1</td>
<td>.340</td>
<td>13.9</td>
<td>.00</td>
</tr>
<tr>
<td>Brand choice (B)</td>
<td>1</td>
<td>.580</td>
<td>23.8</td>
<td>.00</td>
</tr>
<tr>
<td>Exposure (C)</td>
<td>1</td>
<td>.147</td>
<td>6.0</td>
<td>.01</td>
</tr>
<tr>
<td>A x B</td>
<td>1</td>
<td>.339</td>
<td>13.9</td>
<td>.00</td>
</tr>
<tr>
<td>A x C</td>
<td>1</td>
<td>.233</td>
<td>9.6</td>
<td>.00</td>
</tr>
<tr>
<td>B x C</td>
<td>1</td>
<td>.178</td>
<td>7.3</td>
<td>.01</td>
</tr>
<tr>
<td>A x B x C</td>
<td>1</td>
<td>.194</td>
<td>7.9</td>
<td>.01</td>
</tr>
<tr>
<td>Residual</td>
<td>190</td>
<td>.024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- The dependent variable represents the difference between the postexposure and the preexposure (postchoice) normalized attitude measures for Rescue.
- Brand inferiority in this analysis represents Rescue inferiority. Two levels were created by classifying the data into above and below average categories.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>No Advertising</th>
<th>Rescue Advertising</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue not chosen</td>
<td>$\Delta \bar{Z} = -.009$</td>
<td>$\Delta \bar{Z} = .007$</td>
</tr>
<tr>
<td>Low brand inferiority\textsuperscript{b}</td>
<td>n = 52</td>
<td>n = 25</td>
</tr>
<tr>
<td>Rescue chosen</td>
<td>$\Delta \bar{Z} = -.049$</td>
<td>$\Delta \bar{Z} = -.025$</td>
</tr>
<tr>
<td>n = 31</td>
<td>n = 12</td>
<td></td>
</tr>
<tr>
<td>Rescue not chosen</td>
<td>$\Delta \bar{Z} = -.001$</td>
<td>$\Delta \bar{Z} = -.002$</td>
</tr>
<tr>
<td>High brand inferiority\textsuperscript{b}</td>
<td>n = 43</td>
<td>n = 13</td>
</tr>
<tr>
<td>Rescue chosen</td>
<td>$\Delta \bar{Z} = -.099$</td>
<td>$\Delta \bar{Z} = -.449$</td>
</tr>
<tr>
<td>n = 19</td>
<td>n = 3</td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>T</td>
<td>x</td>
</tr>
<tr>
<td>----</td>
<td>---</td>
<td>----</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
selection instead of manipulation can preserve the natural decision environment. Unfortunately in this analysis one result is severe confounding; the purchases of all three subjects in the high change cell (high inferiority, chose Rescue, received advertising) were trial purchases. Although the sample size does not permit the addition of variables, these results suggest that future work investigating selective perception following product choice may yield interesting results.
CONCLUSIONS

An attempt was made to insure valid data for the investigation of the postdecision attitude change process. For this reason, only a sub-sample of the population, non users, were considered for analysis. The laboratory setting for data collection, coupled with a simulated shopping trip, was believed to create an environment psychologically equivalent to the external purchase environment. In addition, the precise administration of test instruments facilitated data interpretation.

It is often argued that dissonance theory mainly applies to major purchases such as automobiles. This research, as well as recent evidence, suggests that postdecision attitude change may also result from the purchase of minor, non-involving products such as scouring pads. Perhaps the underlying dimension is one of consumer commitment. While it seems reasonable that an automobile purchase represents commitment, it also seems possible that some minor purchases represent psychological commitment. This may well be the result of the taxing effect of non-routinized decisions upon the consumer.

It should be apparent that behavior per se does not necessarily lead to postdecision attitude change. Choice must be classified as a multidimensional variable. When considering antecedents and results of behavior, it is important to recognize the commitment as well as the cognitive setting in which behavior takes place.

These findings have indicated that an adoption purchase must be differentiated from a trial (or other non-adoption motives for purchase such as variety) purchase. Only when the purchase represents a mental
commitment can a dissonance model be considered applicable. The degree of purchaser familiarity with the chosen brand also plays a role in the magnitude of reevaluation; a choice in which the possible consequences are apparent to the decision maker prior to choice, represents a greater extent of psychological commitment.

The cognitions of the purchaser determine, to some extent, the degree of postdecision reevaluation, but the process may be more complex than this research indicates. For this group with no product usage following choice, a less attractive choice, particularly when all choice alternatives are perceived to be heterogeneous in attitude, resulted in a greater degree of attitude change. Although future experiments involving usage may be difficult to control, the reverse relationship may be evident; favorable priors represent an increased probability that dissonant information may result from product usage.

Selectively of information processing remains an equivocal issue. The analysis presented was limited by cell sizes. Evidence was promising enough to warrant further investigation.

Unless precautions are taken to provide favorable usage experience and supportive information, other avenues of dissonance reduction may be taken by the consumer. One of the modes not considered in this research involves the selection of another alternative on the next choice occasion. For this very reason, the importance of postpurchase phase of the buying process must not be underestimated by the marketer.
REFERENCES


