The Role of Unsupported Brand Evaluation Cognitive Responses in the Persuasion Process

Manoj Hastak
BEBR

FACUTLY WORKING PAPER NO. 1324

College of Commerce and Business Administration

University of Illinois at Urbana-Champaign

February 1987

The Role of Unsupported Brand Evaluation Cognitive Responses in the Persuasion Process

Manoj Hastak, Assistant Professor
Department of Business Administration
The Role of Unsupported Brand Evaluation Cognitive Responses in the Persuasion Process.

ABSTRACT

Unsupported brand evaluation thoughts are frequently reported by subjects in cognitive response studies of persuasion. Common practice has been to include these thoughts in indices of counter/support argumentation, and treat them as mediators of communication effects on attitude. Wright (1974, 1980) has argued that brand evaluation thoughts provide a naturally occurring measure of attitude, and hence should not be treated as mediators of advertising effects on attitude. This proposition, and a second related one was tested in an advertising experiment. Neither received any empirical support. Implications for cognitive response research in general, and for future research on the role of brand evaluation thoughts in persuasion are discussed.
INTRODUCTION

In recent years, persuasion researchers in Psychology and Marketing have increasingly adopted a cognitive response approach for monitoring communication effects on the receiver (Greenwald 1968; Wright 1973, 1980; Petty, Ostrom and Frock 1981; Olson, Toy and Dover 1982). In this approach, spontaneous thoughts (i.e.; cognitive responses) generated by the receiver during ad exposure are hypothesized to be the causal mediators of ad effects on brand attitude, and other related elements of cognitive structure (e.g.; attribute beliefs, and behavioral intentions). Cognitive responses are usually measured either during, or immediately after ad exposure by asking subjects to verbalize or write down the thoughts they had as they viewed the advertisement. These reported thoughts are then classified into one of several predetermined categories by the subjects themselves, or by a panel of judges. Some subset of these categories is then chosen for further analysis, and the number of thoughts in each chosen category are related to measures of brand attitude and, less frequently, to belief and behavioral intention measures.

The choice of a categorization scheme rests primarily with the individual researcher, and depends on the mediation processes under investigation. For the most part, researchers have focussed attention on two types, or categories of cognitive responses -- counterarguments (CA), and support arguments (SA). (See Wright 1980 for a detailed discussion of alternative categorization schemes). CA and SA represent (respectively) negative and positive thoughts about the advertised brand, and/or some
specific claim about the brand made in the advertisement. There is growing evidence that CA and SA substantially mediate communication effects on attitude towards the advocacy object in the Social Psychology literature (Cook 1969; Costerhouse and Brock 1970; Insko, Turnbull and Yandell 1974; Petty and Cacioppo 1977; Cacioppo and Petty 1979) as well as in Marketing (Sterrthal, Dholakia and Leavitt 1978; Olson, Toy and Dover 1982). More recently, pro/con thoughts targeted at the advertisement itself have also been examined for their mediating effects on brand attitude and intention measures (Mackenzie and Lutz 1982; Lutz, Mackenzie and Belch 1983; Batra and Ray 1983). However, several other cognitive response types (e.g.; curiosity thoughts, neutral thoughts, unsupported brand evaluation thoughts) have received virtually no attention in the literature. Little is known about what these responses mean, or what role (if any) they play in the persuasion process.

In this paper, we focus on one such neglected cognitive response category; namely, unsupported brand evaluation thoughts. Brand evaluation thoughts (e.g.; "I like this brand", or "this is a crummy brand") are frequently reported by subjects in persuasion studies. Wright (1974, 1980) has argued that these thoughts reflect attitude towards the advertised brand. Thus, they should not be treated as mediators of post-exposure attitude, since that would be tantamount to treating one measure of attitude as a mediator of another. In particular, Wright cautions against treating brand evaluation thoughts as instances of counter and support argumentation. He suggests that CA and SA categories should be restricted to thoughts that are targeted at
a specific attribute/consequence of the advertised brand, or that challenge the validity of a claim made in the advertisement (Wright 1980, p. 153). Unfortunately, most persuasion researchers have chosen to include brand evaluation thoughts in their indices of CA and SA (e.g.; Cacioppo and Petty 1979; Petty and Cacioppo 1979, 1984; Petty, Cacioppo and Schuman 1983; Sternthal, Dholakia and Levitt 1978; Olson, Toy and Dover 1982; Patra and Ray 1983; Belch 1981, 1982; Rethans, Swasy and Marks 1986; etc.). No explicit rationale is ever given for adopting this procedure. The practice seems to be governed by convenience rather than by theoretical argument.

The treatment of brand evaluation thoughts in persuasion research should clearly depend on an understanding of the underlying states/processes that these thoughts indicate. If they reflect a summary attitude judgment about the advertised brand, then including these thoughts in CA and SA indices would lead to biased and inflated accounts of cognitive response mediation. However, if they capture some (as yet unspecified) aspect of the attitude formation process, then it would be desirable to treat them as potentially important mediators of advertising impact on post-exposure attitude. Thus, the critical issue is whether unsupported brand evaluation thoughts reflect or mediate communication effects on the receiver. We know of no empirical study in the Psychology or Marketing literature that directly addresses this issue.

HYPOTHESES

Two hypotheses are of research interest in this study. Both
are derived from Wright's (1974, 1980) position on the meaning of unsupported brand evaluation thoughts in cognitive response research:

F1: The presence of brand evaluation thoughts in a cognitive response protocol indicates that the subject engaged in attitude deliberation during the ad viewing episode. The absence of any such thoughts indicates the absence of attitude deliberation.

F2: Brand evaluation thoughts (when reported) directly indicate post-exposure attitude towards the advertised brand.

To understand the logic underlying tests for H1, assume that subjects are exposed to an advertising message, and generate counter and support arguments in response to the ad. Further suppose that some subjects (say, group 1) also integrate these responses to form an overall evaluation of the advertised brand, while other subjects (group 2) do not do so. Then, if all the subjects asked to report their brand attitude some time after exposure, group 1 subjects should simply retrieve their preformulated attitude judgment from memory. Since this judgment was based on message-induced counter and support arguments, indices of CA/SA should show strong correlations with the post-exposure attitude measures. In contrast, group 2 subjects would need to construct a judgment in response to the post-exposure attitude probe. These subjects may attempt to retrieve counter and support arguments from long term memory to formulate an attitude judgment. However, memory for CA/SA would
almost certainly be incomplete. Furthermore, these subjects may also retrieve some of the advertising content, and generate new CA/SA to assist in their attitude deliberation. Thus, measures of CA/SA based on spontaneous thoughts produced during ad exposure should show relatively weaker correlations with post-exposure attitude measures. Furthermore, subjects should evidence lower levels of confidence in their attitude judgment (relative to group 1 subjects) since the judgment is based on incomplete memory. The preceding discussion suggests that H1 could be tested by comparing the strength of correlation between CA/SA indices and brand attitude measures, and confidence in the attitude responses for subjects who report brand evaluation thoughts with the corresponding correlations and confidence measures for subjects who do not report any such thoughts.

H2 can be tested in several different ways. First, we could construct a measure of brand evaluation based on naturally occurring brand evaluation thoughts, and correlate it with standard measures of post-exposure attitude. We would then expect these correlations to be quite high -- almost as high as the intercorrelations among the attitude measures, and substantially higher than the correlations between indices of CA/SA and measures of post-exposure attitude. Second, we could examine the partial correlations between CA/SA indices and post-exposure attitude after the common variance between brand evaluation thoughts and attitude has been statistically removed. If brand evaluation thoughts truly measure attitude, then these correlations should be small and nonsignificant. On the other hand, large and significant correlations would provide evidence
There is a third way to test the validity of H2. Suppose that an experimental manipulation produces strong, reliable effects on brand attitude in an AFOVA model. If H2 is true, then including brand evaluation thoughts as a covariate in the model should reduce these effects to nonsignificant levels. However, if significant residual effects remain, then brand evaluation thoughts clearly do not capture all of the experimentally induced variation in brand attitude. Thus, H2 is not supported.

Furthermore, if including indices of CA/SA as additional covariates in the model leads to further reduction in the magnitude of treatment effects on brand attitude, then it is likely that both CA/SA and brand evaluation responses are only partially mediating message effects on attitude.

In sum, we propose to conduct multiple tests to examine the validity of each of the hypothesis under investigation. The intent is to provide convergent evidence that either supports or disconfirms these hypotheses.

METHOD

Experimental Design

The data came from a larger study designed to test alternative models of cognitive response mediation in an advertising context. Only relevant aspects of the design and measurement procedures are reported here. The design was a 2 (product) by 2 (message quality) factorial. Two products (white bread and ball point pen) were used to examine product specific differences. The message quality factor was designed to produce
large effects on post-exposure attitude, and thus provide an opportunity for examining mediation effects due to CA/SA indices and brand evaluation thoughts. Two versions of full color print ads for each of the two products were created by a professional artist. Both versions claimed that the advertised brand possessed a desirable characteristic (nutritional quality for white bread, consistency of ink flow for ball point pen), but gave either compelling or uncompelling reasons for accepting the claim (good versus poor quality message). This type of a "message quality" manipulation has been previously used by Petty and Cacioppo to polarize post-exposure attitude (e.g.; Petty and Cacioppo 1984).

Subjects and Procedure

Eighty student subjects took part in the experiment in small groups (group size never exceeded 8 ), and were paid five dollars for their participation. Subjects were exposed to five print ads in all, and were given 45 seconds to view each ad. Three of these were real ads and are of no concern in this study. Each subject viewed one ad version (containing either good, or poor quality arguments) for each of the two experimental products. The two experimental ads were rotated in positions 2 and 4 in the ad viewing sequence such that exactly half the subjects saw any one product ad in any one location. The ad viewing session was unexpectedly interrupted after the fourth ad (either the bread or the pen ad for exactly half the subjects), and cognitive responses were obtained for this ad only. Subjects were given exactly three minutes to list all their thoughts in response to the ad. The three minute time limit was judged adequate based on
pretest data. After viewing the fifth ad, subjects performed a short (approximately ten minute) intervening task, and then completed a structured questionnaire which measured (among other things) their attitude and behavioral intention towards the two experimental products. However, in this study we examine attitude/intention data for each subject for one of the two products only, i.e; the product for which the subject also provided cognitive response measures. Three bi-polar seven-point scales (good-bad, good quality-poor quality, like-dislike) were used to measure attitude. Intention to purchase the brand was measured on a single seven-point scale (not at all likely-very likely). Level of confidence in attitude and intention judgments was also measured on seven-point scales (not at all confident-very confident).

One special feature of the experimental procedure needs to be explained further. Note that since tests of H2 are based only on subjects who do report brand evaluation thoughts, one would ideally like the size of this group of subjects to be as large as possible. On the other hand, tests for H1 would have maximum power if roughly equal number of subjects do versus do not report brand evaluation thoughts. In either case, the worst scenario would be one where only a small fraction of subjects spontaneously report such thoughts. Unfortunately, previous cognitive response studies show this to be the case. For instance, only 4.4% of the subjects in the Olson, Toy and Dover (1982) study reported brand evaluation thoughts. This could be either because subjects did not engage in attitude deliberation, or because the absence of brand evaluation thoughts does not
indicate the absence of attitude deliberation. Either way, the implication is that extremely large sample sizes would be needed to test H1 and H2. Given the exploratory nature of our study, we decided to try an alternative approach. All subjects were given brand evaluation instructions before they viewed the ads. The intent was to encourage attitude deliberation during the ad viewing episode, and thus improve the quality of our tests for H2 at the expense of H1. Despite these instructions, however, only 35 of 80 subjects spontaneously reported brand evaluation thoughts. Thus, we ended up with ideal group sizes for testing F1, and still had a reasonable sample of subjects for testing F2. The implications of these orienting instructions are considered in greater detail in the discussion section.

Cognitive Response Coding

The cognitive responses were coded in two ways. First, each subject identified all of his brand-related thoughts (whether supported or unsupported) and rated each one on a seven-point bipolar (positive-negative) scale. Next, two independent judges coded these brand-related thoughts as either CA/SA (using Wright's 1973 criteria), unsupported brand evaluation thoughts, or other thoughts (e.g.; curiosity thoughts). The judges agreed on 92% of these classifications. Disagreements were resolved by mutual discussion.

Two indices of cognitive response were developed from these codings. First, the evaluation ratings for all counter and support arguments were summed and divided by the total number of counter and support arguments to yield an index of CA/SA. Second,
an index for brand evaluation thoughts was constructed in a similar manner. Both indices could take on values between -3 and +3 -- exactly the same range as for the attitude and intention measures.

RESULTS

Tests for H1

All subjects were first classified into two groups based on the incidence of brand evaluation thoughts in their cognitive response protocol. 35 of the 80 subjects (15 of 40 for white bread, 20 of 40 for ball point pen) reported at least one brand evaluation thought -- these were assigned to group 1. The remaining 45 subjects made up group 2. For group 1 subjects, the partial correlation between the index of CA/SA and brand attitude (represented by an average of the three rating scales) was .47. The partial correlation between the index of CA/SA and behavioral intention measure was .35. These correlations were computed after the effects of the two treatment factors on the correlated variables had been statistically removed. The corresponding correlations for group 2 subjects were .46 and .51 respectively. Since the correlations for group 1 subjects are not larger than the corresponding correlations for group 2 subjects, H1 is not supported. Zero order correlations were considerably higher than these partial correlations, but showed virtually the same pattern.

Analyses of confidence measures also fail to support H1. There was virtually no difference between the two groups in the mean confidence ratings for attitude (5.26 for group 1, 5.47 for group 2, 7 = very confident) and behavioral intentions (5.50 for
group 1, 6.07 for group 2). In separate three-way (product by message quality by group) ANOVA with the two confidence measures as the dependent variables, the group factor failed to produce significant main effects, and all interactions involving the group factor were also nonsignificant (p > .2 in all cases).

Tests for H2

These tests are based on subjects who reported at least one brand evaluation thought in their verbal reports (i.e., group 1 subjects, n = 35). Table 1 shows the within-cell correlations among the two cognitive response indices and the three post-exposure attitude scales. Note that the correlations among the attitude scales are quite high—generally around .75. In contrast, the correlations between the index of brand evaluation thoughts and these attitude scales are much smaller (between .50 and .55). Also, the correlations between the index of CA/SA and the attitude scales are almost as high the correlations between the index of brand evaluation thoughts and these scales in two of three cases. Thus, H2 is not supported.

As a second test for H2, recall that the within-cell correlations between the index of CA/SA and brand attitude (averaged over the three scales) and intention measures for group 1 subjects were .47 and .35 respectively. When the common variance between the index of brand evaluation thoughts and these attitude/intention measures is also partialed out, the correlations drop to .38, and .29 respectively, but are still statistically significant (p < .05). If H2 were true, then these residual correlations would have been quite small and
TABLE 1

PARTIAL CORRELATIONS AMONG COGNITIVE RESPONSE (CR) INDICATORS AND POST-EXPOSURE ATTITUDE MEASURES

<table>
<thead>
<tr>
<th>CR Index for:</th>
<th>Fr. Eval.</th>
<th>Attitude Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA/SA</td>
<td></td>
<td>good pr good-poor</td>
</tr>
<tr>
<td></td>
<td>CA/SA</td>
<td>dispr quality</td>
</tr>
<tr>
<td></td>
<td>Brand Eval. Responses</td>
<td>dislike</td>
</tr>
<tr>
<td></td>
<td></td>
<td>good-bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.31&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.28&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.52&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.55&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>good-bad</td>
<td>1.0</td>
<td>.69</td>
</tr>
<tr>
<td>good-poor</td>
<td>1.0</td>
<td>.70</td>
</tr>
<tr>
<td>quality</td>
<td>1.0</td>
<td>.72</td>
</tr>
<tr>
<td>dislike</td>
<td>1.0</td>
<td>.79</td>
</tr>
</tbody>
</table>

<sup>a</sup> These are within-cell correlations, n=35.
<sup>b</sup> p<.05. All other correlations are significant at p<.01.
nonsignificant. Since this is clearly not the case, these analyses also fail to substantiate H2.

Table 2 displays the results of our final test for H2. The first row of the table shows that the message quality factor produced strong, significant effects on post-exposure attitude and intention measures in a two-way (message quality by product) ANOVA model. The product factor also produced significant (though much smaller) effects on both dependent variables, but these are not of interest here. The two-way interaction was nonsignificant in both the cases (p>.15). Including the index of brand evaluation thoughts as a covariate in the model lead to a substantial (about 60%) reduction in the F-ratio for the message quality effect. However, since the residual F-ratios were still highly significant, brand evaluation thoughts clearly did not capture all of the treatment-induced variance in post-exposure attitude and intention measures. Thus, H2 is not supported.

Furthermore, adding the CA/SA index as a second covariate in the model resulted in further significant reductions in the F-ratio for the message quality effect (see Table 2, row 3). Both covariates were statistically significant, and mediated over 60% of the effects due to message quality variations on attitude and intention measures. It would thus appear that counter/support arguments and brand evaluation thoughts are both only partially mediating message effects on attitude and behavioral intentions.

DISCUSSION

Taken in their entirety, our results do not support Wright's (1974, 1980) position on the meaning of brand evaluation
TABLE 2

ANOVA TESTS WITH ATTITUDE AND INTENTION MEASURES AS DEPENDENT VARIABLES, AND INDICES OF COGNITIVE RESPONSE AS COVARIATES.\(^a\)

<table>
<thead>
<tr>
<th>Covariate(s)</th>
<th>Dependent Var.: Attitude</th>
<th>Dependent Var.: Feb. Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Covariate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index of Brand Eval. Responses</td>
<td>16.57</td>
<td>14.62</td>
</tr>
<tr>
<td>Both the Indices for Brand Eval.</td>
<td>7.87</td>
<td>7.63(^b)</td>
</tr>
<tr>
<td>Responses and CA/SA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) The design is a two-way (message quality by product) factorial, n=35.

\(^b\) \(p<.05\). All other effects significant at \(p<.01\).
thoughts, and hence their role in the persuasion process. The experiment reported in this paper provided multiple opportunities for testing two hypotheses that directly followed from Wright's arguments. However, both hypotheses consistently failed to receive support in any of the tests. Our results suggest that the presence or absence of brand evaluation thoughts in a cognitive response protocol may say very little about whether or not the subject engaged in attitude deliberation as he/she viewed the product advertisement. In all probability, a failure to report brand evaluation thoughts may indicate just that—a reporting bias. Thus, it would be inappropriate to use information on the incidence of such thoughts to diagnose the underlying attitude formation/change process. Furthermore, our results also suggest that brand evaluation thoughts do not faithfully indicate post-exposure attitude towards the advertised brand. Instead, these thoughts seem to reflect some aspect of the persuasion process that is not fully captured in traditional measures of counter/support argumentation. Thus, our results are not inconsistent with the current practice of treating these thoughts as mediators of message effects on attitude.

What Do Brand Evaluation Thoughts Mean?

In sum, our results provide some indication of what brand evaluation thoughts don't mean. However, there are several alternatives to the hypothesized meanings of brand evaluation thoughts that were examined in this study. For example, these thoughts may reflect partial brand evaluations based on immediately preceeding CA and/or SA. In other words, subjects may
initially generate a few counter/support arguments, then elicit a brand evaluation thought that captures the evaluative flavor of these arguments, then report some new CA/SA, followed by another summary judgement based on these, and so on. Second, brand evaluation thoughts may capture the effects of counter and support arguments that are not reported during the thought listing task. Possibly, brand evaluation thoughts provide subjects with a simple alternative to an exhaustive reporting of all CA/SA experienced during the ad viewing episode. Third, these thoughts may reflect the effects of non-brand characteristics such as ad-execution or source attractiveness. In other words, they may partially measure attitude towards the advertisement, or the ad sponsor.

Sorting out these competing explanations for the role of brand evaluation thoughts is likely to prove difficult. We may need to begin examining the sequence in which various types of cognitive responses are elicited, and the precise location of brand evaluation thoughts vis-a-vis other types of thoughts in this sequence to address these issues. For instance, if a single brand evaluation thought is reported at the end of a particular cognitive response protocol, then it seems likely that this thought reflects a terminal attitude judgment. On the other hand, if these thoughts are interspersed at regular intervals throughout the report, then it is more likely that they indicate a summary evaluation based on a subset of (stated or unstated) cognitive reactions to the advertisement. Also, brand evaluation thoughts that are produced in close proximity to cognitive responses targeted at the advertisement itself may capture ad
evaluation (as opposed to brand evaluation) processes. In sum, we are suggesting that multiple brand evaluation thoughts may have different meanings for the same subject, and these meanings could best be studied by examining cognitive response sequences rather than simple frequency counts. Of course, information on the sequence of thoughts is only preserved if thought verbalization measures are taken concurrently, not retrospectively as in the present study. Although concurrent verbalization methods have some problems (e.g.; see Wright 1980) they may well provide the key to developing an understanding of the precise role of brand evaluation thoughts in the persuasion process.

Limitations.

All subjects in our study were given brand evaluation instructions before they viewed the experimental ads. The intent was to heighten the likelihood of attitude deliberation during the ad viewing episode, and thus increase the incidence of reported brand evaluation thoughts. Therefore, our results are probably not applicable to products and advertising messages where subject involvement is low. In the future, researchers may wish to examine the role of brand evaluation thoughts under relatively neutral (i.e.; non-directive) instructions. We should note, however, that the low incidence of brand evaluation thoughts in such contexts would necessitate very large sample sizes.

A second limitation of this study was that post-exposure attitude measures were obtained a relatively short time (about ten to twenty minutes) after ad exposure. This may have been
too short a time interval to expect decay of information from long term memory for group 2 subjects. Note that both the tests for H1 were based on the assumption that group 2 subjects would need to base their attitude judgment on incomplete memory for cognitive responses and/or message assertions. Longer time intervals between the ad-viewing and attitude reporting tasks would clearly allow for greater magnitudes of information loss from memory, and thus allow for more powerful tests for F2. This remains an empirical issue for future research.
REFERENCES


Osterhouse, Robert A. and Timothy C. Brock (1970), "Distraction Increases Yielding to Propaganda by Inhibiting Counterarguing," Journal of Personality and Social
Psychology, 15, 344-358.


