SEMANTIC CUES AND BUYER EVALUATION OF PROMOTIONAL COMMUNICATION

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ABSTRACT

This paper postulates that the way a deal is phrased impacts deal evaluations and purchase intent for economically and informationally equivalent deals. This "semantic effect" is moderated by the product price level. An empirical test across eight products using a mixed Latin Square design support the hypotheses.

INTRODUCTION

Semantic cues are expressions within the message that facilitate the buyers ability to evaluate the offer (Berkowitz and Walton 1980). Semantic cues in a promotional message are distinct from the intrinsic economic value of the deal. They deal with how one says something, rather than with what is said.

The question of whether deal semantics affects deal evaluation and purchase intent is not a new one (Berkowitz and Walton 1980). Research in the area of deal phrasing has primarily focused on reference price effects (e.g., Blair and Landon 1981) demonstrating semantic effects using the absence or presence of a variety of reference prices (e.g., Lichtenstein, Burton, and Karson 1991). An alternative explanation for these semantic effects is that they are due to the differential information content of the message rather than the pure semantic effect of how one phrases the deal. Little research has been conducted to examine the "pure" effects of deal semantics, holding economic value, information content and reference price effects constant.

In this paper we investigate such effects in terms of organic effects rather than as contextual effects (Lichtenstein, Burton and Karson 1991). We assess whether the way an offer is phrased (i.e., its semantics) will influence deal evaluations and purchase intent when (1) the economic value of the deal is held constant at a 25 percent discount level, (2) the reference price effect is held constant, using list price as the reference price for all messages. The generalizability of the above effects are investigated for eight products under two price conditions. The four semantic cues investigated are "25 percent off total when you purchase 2," "Buy 1, Get 1 at 1/2 price," "Save $ on purchase of 2" and "for $." The dollar value of the offer is constant across different messages in the same price condition ($1 and $5 for the low and high price conditions respectively). A constant reference price format, the original list price ($3.99 and $19.99), is used for all message types.

In the following sections relevant literature is re-viewed, hypotheses are presented, the methodology is detailed and results are discussed.

LITERATURE REVIEW

Reference Price Effects

A central issue is the inclusion of a reference price (e.g., prior price, competitive price, manufacturer suggested retail price) on perceptions of deal value. Lichtenstein et al. (1991) argue that in a comparative pricing context, the reference price and offering price are focal cues, i.e., they occupy the focus of attention in a perceptual situation. The semantic phrase is classified as a contextual cue (Lichtenstein et al. 1991), which includes all other behaviorally based stimuli. A third type of cue, organic cues are defined as those "cues that pertain to the inner physiological and psychological processes that affect behavior" (p. 381). The reference price semantic effect literature reviewed below has focussed on the contextual cue explanation of semantic effects.

The classic reference price effect is that promotional advertisements which cite some comparison increase consumers' estimates of the savings offered by advertised prices (Blair and Landon 1981; Della Bitta et al. 1981; Urbany, Bearden, and Weilbaker 1988; Lichtenstein and Bearden 1989) though the full claims made by the advertisement are not accepted (Liefield and Heslop 1985).

Lichtenstein, Burton and Karson (1991) found that semantic cues of the type "seen elsewhere $\ldots$, our price $\ldots$" influenced favorability of purchase evaluations in advertisements more than semantic cues like "was $\ldots$, now only $\ldots$" These two reference price formats prime different reference prices: comparative prices vs. past prices. Lichtenstein et al. (1991) explained their results in terms of the distinctiveness of the deal vs. its consistency across time. However, it can be argued that the two formats are different in more than just semantics. The first contains information about comparative pricing and the latter contains information about past prices. Thus, it may be that the differential information content, rather than the way the offer is phrased that could lead to the semantic effects found.

Framing Effects

Kahnean and Tversky (1979) demonstrated how choices are affected by the decision frame made salient in a judgment task, holding information content equal.
When a choice is framed in terms of gains (from a natural reference point) people show risk aversion, whereas when the same choice is framed in terms of a loss, people show risk seeking preferences. In this paper we focus on how different judgmental frames are activated by different semantics.

HYPOTHESES

Main Effect of Semantics

Deals can be valued in terms of the amount saved or the amount to be spent. They can also be thought of in terms of discount percentages, or packages where you need to buy something to get something on deal. Each of these decision frames can be activated using different message formats. When a decision criteria is made salient it exerts an involuntary, almost automatic effect on evaluation (Taylor and Fiske 1978).

When a promotion is phrased as a dollar saving ("$off..."), then the total amount of the saving becomes salient. When the same promotion is framed as a total outlay ("2 for $..."), the discount percentage is the salient decision frame. Likewise, when a promotion is framed as a percentage off ("25% off..."), the discount percentage is the most salient aspect of the deal and when it is framed as a package (e.g., "Buy 1, get 1 at 1/2 price"), then the decision criteria is in terms of number to be bought (e.g., "1") to avail of the promotional offer, and the promotional offer itself ("1 at 1/2 price"). It is hypothesized that these different judgmental frames activated by deal semantics lead to differences in deal evaluations and purchase intent.

H1: Deal semantics affect deal evaluation and purchase intent.

Main Effect of Price Level

Intuitively the greater the amount of the savings, the better the deal. Weber’s Law applied to price perceptions suggests that the width of the acceptable price range is directly proportional to the level of price acceptability (Monroe 1973). As prices are higher, the width of acceptable prices increases (Lichtenstein, Bloch, and Black 1988). If a deal on a higher priced product is compared to the maximum of the acceptable price level, then the higher the price level, the greater the perception of deal value.

Price level is a focal cue (Lichtenstein et al. 1991), the effect of which is greater than that of semantics (a contextual cue). Accordingly, the price effect is expected to be greater than the semantic effect.

Further, deals are typically valued in terms of what one pays vs. the value of what one gets, or “value for money” (Berkowitz and Walton 1980). The greater the difference in value received for amount paid, the greater the perceived value of the deal. Thus, for every message, deal value and purchase intent are hypothesized to be higher for high priced vs. low priced products.

H2: Deal Evaluation and Purchase Intent will be greater for higher priced items, given the same percentage off.

Semantic x Price Level Interaction

Different judgmental criteria (e.g., total savings vs. total expense) affect deal value perceptions differently. Take for example a product with initial price $3.99 and a "25 percent off purchase of 2" deal. The total savings are $2 and the total expense is $5.99. A total savings of $2 may be viewed as less attractive than a total outlay of $5.98. Accordingly, for a low priced product, the message making the savings amount salient may not be as well perceived as the message making the total outlay salient. The superiority of the ‘total expense’ frame may be less true for a product with an initial price of $19.99. Here the total savings are $10 and the total expense is $29.98. A saving of $10 may be perceived as no less valuable as a deal which requires a $29.98 total expense. The total savings frame has a greater effect on deal valuations as the amount of the savings rise. Thus,

H3a: Product Price level and semantic cues will interact such that a ‘dollar off’ frame will be rated higher than a ‘total expense’ frame for high priced products but not for low priced products.

Contrast the above with a frame which makes only the percentage off salient ("25% off..."), or frames the deal as a "Buy 1, Get 1..." offer. The greater the initial price, the greater will be the value of either of these deals for a given percentage off or total promotional offer. However, the price level will not make a difference to their relative evaluation.

H3b: Product Price level and semantic cues will not interact for the “25 percent off...” and “Buy 1, Get 1...” frames.

Relative Effect Size

Product price also impacts deal evaluation through its effect on motivation to process message content vs. message semantics. Semantics work through activating decision frames which then are most accessible in short term memory. The most accessible information may be used as a decision frame automatically (Fiske and Taylor 1991). However, a larger dollar value saved increases the motivation of the subject to analytically evaluate messages (Petty and Cacioppo 1986). The greater the original price, the greater the value the deal would offer and accordingly the less the effect of the most available decision frame. Thus, a larger semantic effect is hypothe-
sized for low vs. high priced products.

H4: Semantics have a greater effect for lower priced products.

To test these hypotheses a mixed 4 x 2 Latin Square experimental design was developed where subjects were presented with eight products advertised on different deals. Each deal was rated and purchase intentions measured. The procedure took 10 minutes.

METHOD

Choice of Messages

A pretest was conducted to see whether the way a deal is phrased affects the purchase ranking of a single product (Green Giant tinned peas). The messages used were (a) “2 for the price of $1,” (b) “Buy one, Get one at 1/2 price,” and (c) “25 percent off the purchase of 2” (identical at the list price of 67 cents). Students were asked to rank order deals. The sample was drawn from a doctoral student population (n=20). In so far as this sample is well aware of framing effects, and less likely to fall prey to them, this sample provides a strong test of the existence of semantic effects. Prior to debriefing, only 2/20 showed suspicion of the hypothesis.

The ANOVA results showed that semantics significantly impacted deal ranks (F=8.86, p<.0002). The rank orders were “2 for $1,” “Buy 1, Get 1 at 1/2 price,” and “25 percent off purchase of two.” Forty-five percent (9/20) of the subjects expressed preferences in this rank order. A fourth message type “$__ off,...” was added after perusal of supermarket flyers over a two week period.

Selection of Products and Price Levels

Criteria for choice of products included those products which were likely to be (a) purchased by a student population, (b) independent of gender, (c) bought in pairs, and (d) approximately available at the experimental price. The two price levels were chosen such that (a) they were significantly different, (b) buying two items at the higher price level was within a student budget, and (c) at least four products at each price level ($3.99 and $9.99). 20 products were pretested on a student sample of 5 for adherence to the above criteria. From this list, eight products were chosen, four each at the two price levels. These were further pretested on a sample of 9 students. The low priced products chosen were wine, underwear, cookies and socks. The high priced products chosen were CDs, video cassettes, t-shirts and jeans.

Dependent Variables

Subjects recorded deal evaluations and purchase intent on multiple 7 point scales. The standard deal valuation operationalisation: “perceived worth,” “price acceptability,” “perceived savings” and “value for the money” (Berkowitz and Walton 1980) was found difficult to understand and interpret during pretesting. Accordingly, three commonly used semantic differential scales anchored by “Valuable-Worthless,” “Attractive-Unattractive” and “Good-Bad” were used. The scale for purchase intent was anchored by “Definitely will buy” to “Definitely will not buy” (Aaker and Day 1990).

The eight deal valuation scales had Cronbach’s alphas of .94 (range = .93 to .96). The average correlation between deal value (DV) measures and purchase intent (PI) was .86 (range from .77 to .90, p<.01 for all).

Design & Sample

The design was a mixed Latin Square experimental design with 4 messages x 4 products x 2 price levels requiring 4 treatment groups (see Chart 1). Each of the four products at the two price levels received one of the four promotional messages in a fully counterbalanced manner. Different groups rated a given product on a different promotional message. The four groups received repeated measures of different product-message combinations. Price was manipulated within subjects. Product and message type were manipulated both between and across subjects. Subjects were randomly assigned to groups and groups were randomly assigned to treatments using a randomized block design (Fleiss 1986). The Latin Square is designed to provide an internal replication of the results. The square itself was replicated over 16 times (Fleiss 1986). Order of deal statement in the questionnaire was randomized and controlled across subjects by using four permutations of order of presentation.

Undergraduate and graduate students at Long Island University were the subjects for the study (n=73).

DATA ANALYSIS AND RESULTS

Measures on deal proneness and average purchase quantity were collected for potential use as covariates. However, these were non-significant and were not used for further analysis. The random effect of the products chosen was not significant after adjusting for the price effects (for deal value F(3,207)=.21, p=.889; for purchase intent F(3,210)=.68, p=.566). The product effects were not analyzed further.

Semantic Message Effect

Hypothesis 1 which predicted a main effect of message type, was marginally supported (F(3,207)=2.46, p=.064) for perceptions of DV, but not for PI (F(3,210)=1.30, p=.277). Table 1 summarizes the mean DV and PI scores for the different messages across the two price conditions.
CHART 1
Experimental Design

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Wine</td>
<td>Underwear</td>
</tr>
<tr>
<td>25% off...</td>
<td>I</td>
<td>IV</td>
</tr>
<tr>
<td>Buy 1,...</td>
<td>II</td>
<td>I</td>
</tr>
<tr>
<td>Save $...</td>
<td>III</td>
<td>II</td>
</tr>
<tr>
<td>2 for $...</td>
<td>IV</td>
<td>III</td>
</tr>
</tbody>
</table>

1. Numbers in the matrix from I to IV denote the 4 experimental groups.
2. Rows represent the main effects of semantics.
3. Columns are the Price effects, with products nested in price.

TABLE 1
Means of Deal Evaluation and Purchase Intent by Message Type and Price Level

<table>
<thead>
<tr>
<th>Dependent Measures &amp; Price levels</th>
<th>25% off...</th>
<th>Buy 1,...</th>
<th>Save $...</th>
<th>2 for $...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deal Evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Price</td>
<td>3.7 a</td>
<td>4.1 b,e</td>
<td>3.8 a,b</td>
<td>4.3 c,d,e</td>
</tr>
<tr>
<td>High Price</td>
<td>4.1 b,e</td>
<td>4.5 c,e</td>
<td>4.4 c,e</td>
<td>4.3 c,e</td>
</tr>
<tr>
<td>Purchase Intent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Price</td>
<td>3.6 f</td>
<td>3.9</td>
<td>3.6 f,g</td>
<td>4.1 h</td>
</tr>
<tr>
<td>High price</td>
<td>3.9</td>
<td>4.1</td>
<td>4.0 h</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Means are on a scale of 1 to 7, where higher numbers denote more favorable evaluations and higher intentions. Numbers which do not share a common subscript are significant at the .05 level.

Price Effect

Hypothesis 2 which predicted a main effect of price was strongly supported for DV perceptions (F(1,69)=8.27, p<.005) as well as for PI (F(1,69)=4.15, p<.045). The effect size was greater than the semantic effect size as expected. Thus, the same percentage off is valued more for higher priced products vs. lower priced products. This was directionally true of all the message types except the "2 for $__" message (t(73)=.10, p=.922). It was significant for the "25 percent off..." message (t(73)=2.04, p<.045) and strongly significant for the "Save $__..."

message (t(73)=2.71, p<.008). Similarly, for PI, the message was valued more highly at a higher price level than at a lower price for most messages (see Table 1).

Message x Price Interaction

Hypothesis 3 predicted a significant interaction for message with price. This was not supported overall for either perceptions of DV (F(3,207)=1.47, p=.224) or for PI (F(3,210)=.88, p=.452). Separate ANOVAS were done for the two types of messages where interactions were expected and for the two messages where these were not
expected. There was no interaction for “25 percent off...” and “Buy 1...” as expected (F(1,69)=.16, p=.687 for DV; and F(1,70)=.21, p=.647 for PI). However, for the ‘total expense’ frame and the ‘total savings’ frame, interactions were significant as expected (F(1,70)=4.21, p<.044 for DV; and F(1,70)=4.05, p<.048 for PI; Figures 1a and 1b). As conjectured, the ‘savings’ frame led to greater perceptions of DV as total savings increased (t(73)=2.71, p<.008). Perceived DV in the ‘savings’ frame equaled or overtook the perception of DV for the ‘total expense’ frame in the high price condition. On the other hand, the perceived DV in the ‘total expense’ frame stayed approximately constant across the two price conditions (t(73)=0.10, p=.922).

Effect Size

Hypothesis 4 argued that the semantic effect size would be larger in the low price condition as compared to the high price condition. Separate ANOVAs were done for the low price condition and the high price condition to assess the differential effect sizes. In the low price condition the message effect was significant for DV (F(3,210)=3.15, p<.026) but did not reach significance for PI (F(3,210)=2.04, p=.110). In the high price condition, on the other hand, the message effect was non-significant for DV (F(3,207)=.95, p=.417) and for PI (F(3,210)=.33, p=.807). The eta square for semantics in the low price condition is .0431 whereas in the high price condition it is .0136. The same pattern is apparent in the number of significant mean differences in the two conditions (Table 1), and the range of the means for DV and PI in the two conditions.

While not hypothesized, a smaller effect was found for PI vs. DV across all measures (main and interaction effects).

DISCUSSION

To summarize, we have demonstrated that “pure” semantic effects of promotional advertisements exist beyond the well researched reference price effects. The mere phrasing of a deal affects deal evaluation and purchase intent. Overall the “2 for $..” and “Buy 1, get 1 at 1/2 price” frames were most effective across price levels. Their effect is moderated by the price of the product. For example the “Save $..” frame is particularly effective at high price levels, but not at low price levels. These results are consistent with the “organic effects” explanation, i.e., can be explained in terms of the different judgmental frames semantics make salient. Further as suggested by the literature on involvement (Fiske and Taylor 1991), as price of a product increases, the semantic effect reduces. Semantic effects were also found to be stronger for deal evaluation than purchase intent.

The major limitations of this research is its use of a laboratory experiment with limited external validity. These findings need to be replicated in a field study before any strong conclusions can be drawn. They also need to be tested on different products at varying price levels. Only four different message types have been studied in this study. Generalizability would require the study of a larger set of message types.

Caution needs to be used in generalizing these results to choice situations. Given the dilution of the effect from evaluations to purchase intentions, a further dilution of the semantic effect for actual purchase may be expected. The moderating effects of distinctiveness and consistency (Lichtenstein and Bearden 1989), price consciousness (Lichtenstein, Bloch, and Black 1988) and reference price formats (Lichtenstein, Burton, and Karson 1991) need to be studied to draw the boundary conditions of
these findings.

The main contribution of this study is to demonstrate that “pure” semantic effects exist which cannot be explained by inclusion or exclusion of a reference price or differential information contained in the message. These effects are moderated by the price level of the product. These results have implications for differential promotional communication of a range of consumer products.

ENDNOTES

1 Thanks are due to an anonymous reviewer for this suggestion.

2 Thanks are due to an anonymous reviewer for pointing this out.

3 Two anonymous reviewers pointed this out.

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