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Source: *Journal of Advertising*, Vol. 9, No. 2 (1980), pp. 10-16

Published by: [Taylor & Francis, Ltd.](#)

Stable URL: <http://www.jstor.org/stable/4188301>

Accessed: 21-04-2015 15:46 UTC

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ATTITUDE CHANGE THROUGH VISUAL IMAGERY IN ADVERTISING



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ABSTRACT

A new theory of the way in which advertising can influence consumers' attitudes toward products is proposed. The theory is based on visual imagery and classical conditioning rather than on the typical verbal belief summation approach to attitude. A supportive experiment is presented and the persuasive function of visual imagery in advertising is discussed.

INTRODUCTION

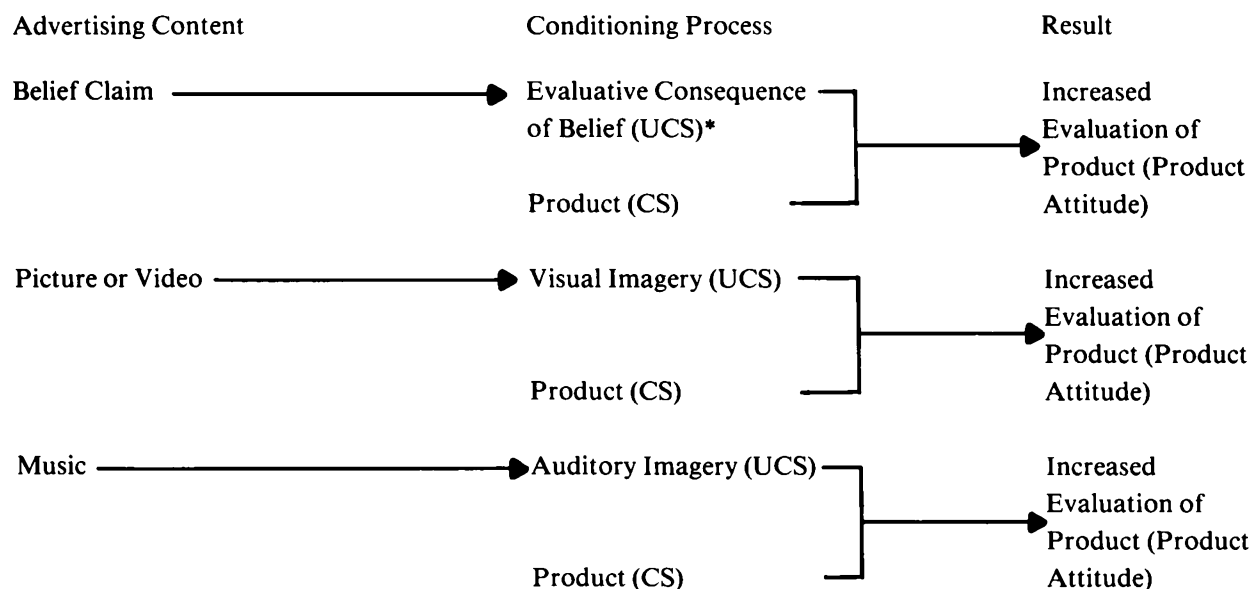
Advertising, with the exception of radio advertising, can present a product to the consumer both visually and verbally. Indeed, advertisers expend considerable effort in selecting appropriate visual content for product presentation in addition to preparing effective copy. But little is known about the extent to which this visual content is instrumental, relative to the verbal message, in increasing product evaluation and persuading the consumer to buy. We know that visual factors can affect recognition and recall of the advertisement itself (5; 9; 13) but not whether visual factors can actually affect the consumer's attitude toward the product. One reason for this has been the lack of a theoretical explanation as to how visual content might affect product evaluation.

The present writers have developed a theory in which visual content is hypothesized to be potentially as effective as verbal content in creating a favorable product attitude and persuading the consumer to purchase the product (14). Our earlier paper introduced the conceptual foundations of the theory and provided an initial validation study. The present paper restates the theory in clearer but necessarily less detailed form, contrasts the theory with the currently popular multiattribute approach, illustrates its application through further analysis of our 1978 data, and discusses broader implications of the theory for other aspects of advertising.

First we should identify the type of advertising to which the theory applies. Advertising may persuade consumers to buy products primarily by serving as a vehicle for price deals and sales promotions which operate directly on purchase behavior rather than on product attitude; most retail advertising is of this type. Alternatively, advertising may persuade consumers by creating or maintaining a favorable product attitude which then forms the basis for subsequent purchase behavior; this is the process underlying most consumer advertising. It is the attitudinal approach to advertising that we shall be concerned with here.

Undoubtedly the major trend in attitudinal approaches to advertising has been toward the multiattribute attitude models derived from social psychology (3). These models, applied to consumer behavior, define attitude as constituting the consumer's overall degree of affect or liking for the product. Behavior such as purchase is then seen as a process of "affect referral" in which the consumer selects

FIGURE 1
Major Ways in Which Advertising Content Can Form
or Change Product Attitude through Classical Conditioning



*The accompanying stimulus (UCS) is assumed in all cases to have a favorable emotional consequence which is thereby paired with the product (CS). However, the emotional consequence could be neutral or negative, with no change or a decrease in product attitude, respectively.

the product toward which he or she has the most favorable attitude, assuming that external factors at the point of purchase, such as price changes or out of stocks, do not intervene. The affect (attitude) is in the first place assumed to be caused by the information the consumer has received about the product's attributes, hence the multiattribute designation of this process. While the "affect referral" model has been correctly identified as only one alternative to various "belief referral" models (20) it remains the predominantly assumed attitudinal persuasion model for advertising strategists.

Confinement of the term "attitude" to refer to overall preference (affect) has helped to reduce the terminological inexactness that has characterized attitude research, particularly by distinguishing attitude from beliefs (cognition) and intentions (conation). However, acceptance of this distinction has too frequently been accompanied by acceptance of the notion, inherent in multiattribute models, that attitude is based solely on beliefs. Thus, the only way to form or change attitude, it follows, is to change beliefs, usually by providing verbal information directed to these beliefs.

We often lose sight of the fact that the reason why beliefs (cognitive) are capable of altering attitude (affective) is because of their own affective connotations. It is the affective or emotional feeling that accompanies the belief that is critical. Fishbein's model is written, for example, as

$A_o = \sum b_i e_i$, where A_o = the overall attitude toward the object o , b_i = belief about attribute i in relation to the object, and e_i = the evaluative consequence of the belief. In plain language, it is the "buzz" of satisfaction (the e_i) that we feel in learning that a product possesses a particular attribute that increases our attitude toward it, not the knowledge itself.

Critical readers will note that the attitude formation and change process therefore reduces, ultimately, to one of classical conditioning. In the belief-based approach, the favorable emotional consequence of the belief serves as an unconditioned stimulus (UCS) which is paired with the product as a conditioned stimulus (CS). As conditioning proceeds, the product alone becomes increasingly capable of eliciting a favorable emotional reaction, i.e., a favorable product attitude.

But there are ways other than through verbal beliefs that stimuli with favorable emotional consequences can be paired with a product. Visual imagery is one way, and is our primary focus here. Auditory imagery, especially through the use of music in broadcast advertising, is another. These alternatives are shown in Figure 1. Each is capable of increasing the consumer's overall evaluation of the product, i.e., product attitude.

In our theory it is hypothesized that visual content is especially capable of stimulating visual imagery. Words and

music can also produce visual imagery, as when we read a book and imagine the characters and settings, or listen to a reminiscent song. But pictures have the advantage of presenting visual images, already in appropriate modality, which the viewer may then internalize as a basis for personal imagery. Ingenious experiments by the psychologist Roger Shepard (16) have shown that visual imagery can be as effective as an actual experience in guiding behavior. Thus, in an advertising context, we may “see” ourselves behind the wheel of an attractively advertised automobile; “imagine” ourselves drinking that refreshing looking bottle of soda; and so forth. The visual imagery derived in this manner may serve as a favorable UCS which increases our attitude toward the product. Attitude can thereby be created or altered without any verbal belief process occurring and without the aid of advertising copy.

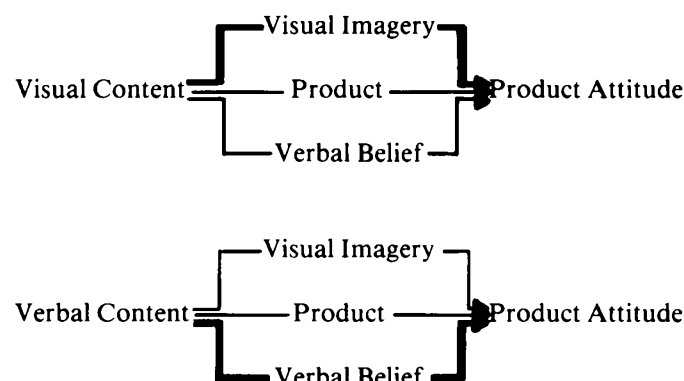
Advertisements entirely devoid of copy (other than the product name) are relatively rare, although campaigns such as the primarily visual one for Marlboro are a well-known exception. Even here a belief-based attitude theorist may argue that such campaigns work, not through the visual imagery process just described, but through the ability of visual content to imply verbal beliefs. The “Marlboro man,” for example, may lead consumers to experience subvocal verbal beliefs such as “Marlboro is a cigarette for rugged people.” This belief-based explanation was advanced in a recent study by Mitchell and Olson (11) in which it was found that a picture of a kitten paired with a fictitious brand of bathroom tissue was more effective than an explicit verbal claim in creating the belief that the brand was soft. However, the visual advertisement was also more effective in creating a favorable overall attitude (affective rating) toward the brand and it is by no means clear that this was achieved by operating first on the softness belief. It could have been at least partly the result of direct classical conditioning, i.e., through a favorable emotional reaction to the kitten paired with the presumably originally neutral reaction to the bathroom tissue.

This “verbal loop” possibility, however, led us to propose a “dual loop” theory in which both visual and verbal advertising content could influence attitude through the verbal belief process and the visual imagery process, i.e., a “visual loop”. This theory is an extension of a dual coding theory of information processing developed by Paivio (12). A feature of the theory is that it predicts that the visual loop is more likely to occur with visual content and that the verbal loop is more likely to occur with verbal content (Figure 2).

One way to test this theory would be to vary the relative salience or strength of the visual content and the verbal content in an advertisement. High visual emphasis (large picture relative to the ad as a whole as opposed to a small picture) should encourage the visual loop process, with visual imagery influencing product attitude. Strong verbal emphasis (explicit belief claims as opposed to vague ones) should

FIGURE 2

Visual and Verbal Loop Possibilities*



*Emphasis in loops indicates that visual content in advertising is more likely to stimulate the visual imagery loop, whereas verbal content in advertising is more likely to stimulate the verbal belief loop (see text).

encourage the verbal loop process, with verbal beliefs influencing product attitude. In particular, by combining high and low visual emphasis with explicit and implicit verbal claims we should obtain a resulting ordering of product attitude in which the high visual-explicit verbal claims combination is most effective and the low visual-implicit verbal claims combination least effective, with the other two combinations in between. An experiment was therefore designed to test this prediction.

METHODOLOGY

The product category selected for the experiment was beer. One reason for selecting beer was that it is the type of product which intuitively seemed amenable to favorable visualizing experiences, as witnessed by “the frosty mug of beer” approach often seen in beer advertising. A second reason was that previous research (1; 18) has shown that brand attitude is a very good predictor of actual purchase behavior for this product category.

Participants in this study were 88 adults (44 men and 44 women) recruited in intercept interviews at a typical Midwestern shopping center. All respondents were beer drinkers and a wide age range was represented.

Four print advertisements were prepared by the professional staff of a major advertising agency (Figure 3). The four advertisements varied in terms of (a) high visual versus low visual emphasis and (b) explicit versus implicit belief claims. The advertisements were black and white. Picture sizes and type sizes were adjusted slightly according to professional recommendations while preserving the experimental conditions.

FIGURE 3
Advertisement Variations Used in the Experiment: High vs. Low Visual Emphasis
(Columns) and Explicit vs Implicit Belief Claims (Rows)

BAUER BEER



Bavaria's number 1 selling beer for the last 10 years

Winner of 5 out of 5 taste tests in the U.S. against all major American beers and leading imports

Affordably priced at \$1.79 per six-pack of 12 oz. bottles

BAUER BEER



Bavaria's finest beer
Great taste
Affordably priced

LAUFER BEER

Bavaria's number 1 selling beer for the last 10 years

Winner of 5 out of 5 taste tests in the U.S. against all major American beers and leading imports

Affordably priced at \$1.79 per six-pack of 12 oz. bottles



LAUFER BEER

Bavaria's finest beer
Great taste
Affordably priced



The experimental design called for each participant to be exposed to two of the four (2 x 2) combinations such that each was exposed to every executional element once. This meant that the same (fictitious) brand name could not be employed for the two advertisements each subject saw. Two equivalent and neutral names were therefore selected as follows. With the aid of a German dictionary we chose nine two-syllable German words that sounded plausible as names for beer. The German word selection suited the cover for the experiment, in which the brands were introduced as possible new Bavarian imports, and seemed far preferable to using nonsense syllables or other meaningless identifiers. The nine words were pretested with a separate sample of 30 male and 30 female beer drinkers who rated them in random order in terms of how much they liked or disliked each name as a brand name for a new imported Bavarian beer. The two names in Figure 3, Bauer and Laufer, were selected on the basis of this pretest as being most equal and closest to the neutral midpoint, 4.0, of the 1 (dislike) to 7 (like) scale. Men's ratings produced a mean of 3.8 and a standard deviation of 2.0 for both names. Women's ratings produced a mean of 3.7 and a standard deviation of 2.1 for both names. The name Bauer was assigned by a coin toss to the high visual advertisements and the name Laufer to the low visual advertisements.

The selection of initially *neutral* brand names is important in that the experiment is thus clearly dealing with an attitude formation situation. Strong attitudes toward the new names themselves may have prevented the advertising effects from emerging.

Consumers participating in the main study first answered some preliminary screening questions pertaining to demographic background and beer preferences. Each participant was then shown one of the four advertisements in randomly determined order. After the respondent had finished looking over the advertisement he or she was asked "As best you can judge, based on this advertisement, how would you rate this brand?" The respondent was handed a card on which the name Bauer Beer or Laufer Beer, respectively, was printed, followed by four 7-point bipolar rating scales. The rating scales (good-bad, inferior-superior, unpleasant-pleasant and interesting-boring) were selected from previous psychological research for their high loadings on the semantic evaluation factor. The scales were scored on a -3 to +3 basis and summed to yield an overall index of product attitude with a range of -12 to +12. This type of multi-item index has been shown elsewhere (3) to be a highly valid measure of attitude. Its reliability in the present case (coefficient alpha) was .86. The respondent was next handed a card containing an 11-point scale with which he or she indicated an intention to try the new brand. The process was then repeated with the second advertisement assigned to each respondent's experimental condition, i.e., low visual if the first advertisement was high visual and implicit belief claims if the first

advertisement contained the explicit belief claims. Order of presentation was randomized across respondents.

FINDINGS

The effects of the four advertising variations on product attitude are shown in Table 1. The results were exactly as predicted. The "superior" combination of high visual emphasis with explicit verbal claims produced a mean product attitude rating of +5.95 (where a rating of just under zero would be expected for the brand names alone) whereas the "inferior" combination of low visual emphasis and implicit verbal claims produced a mean product attitude rating of only +2.07. Statistical comparison of these two means yields a *t* (42) of 3.49, which is significant beyond the .005 level. The two "middle" combinations, which each contained one of the hypothesized attitude increase components, produced nonsignificantly different mean product attitudes of +2.93; both of these were significantly lower than the superior combination at the .005 level but, although the predicted ordering was correct, they were not significantly higher than the inferior combination. Thus, the statistical results were mainly due to the clear superiority of high visual emphasis with explicit belief claims.

Inspection of the row and column means in Table 1 suggest that there were indeed two processes operating. Use of high visual emphasis to activate the visual imagery loop was almost equally as effective as use of explicit verbal claims to activate the verbal belief loop. Of course, this virtual equality may have been due to the fortuitous selection of a particular degree of visual emphasis, i.e., picture size,

TABLE 1

Product Attitude Scores by Type of Advertisement

Verbal Claims	Visual Emphasis		Verbal Means
	High	Low	
Explicit	+ 5.95*	+ 3.14	(+ 4.54)
Implicit	+ 2.93	+ 2.07	(+ 2.50)
Visual Means	(+ 4.44)	(+ 2.60)	N = 88

*Product attitude was measured on a -12 to +12 scale. Significance levels for the mean differences are given in the text.

and a particular degree of verbal explicitness, i.e., strength of copy claims. We cannot conclude from these selections that visual content manipulations are always as effective in increasing product attitude as are verbal content manipulations; only that they can be as effective.

The predicted ordering was replicated with the intention to try measure, as shown in Table 2. The mean differences are not as pronounced as they were with the product attitude measure. Specifically, the superior combination produced a significantly stronger intention to try the new brand at the .01 level while the other three combinations did not differ significantly from one another. The superior, middle and inferior order predictions, however, were obtained. Weaker effects on intention are a typical finding when consumers are asked to commit themselves to trying a product rather than just evaluating it. Also, theoretically speaking, intentions should be influenced more by operant learning, such as a low introductory price “reward,” rather than by classical conditioning. Overall, then, the intention results appear to be consistent with our theory.

TABLE 2
Intention to Try Scores by Type of Advertisement

Verbal Claims	Visual Emphasis		Verbal Means
	High	Low	
Explicit	7.02*	6.16	(6.59)
Implicit	6.14	5.75	(5.94)
Visual Means	(6.58)	(5.95)	N = 88

*Intention was measured on a 0 to 10 scale. Significance levels for the mean differences are given in the text.

An interesting sex difference emerged in the findings, as shown in Table 3. Although the cell sizes by sex of respondent are too small to permit reliable statistical comparisons, inspection of the product attitude scores for men and women suggests that the men were somewhat more responsive to the verbal claims made about the beer whereas women were more responsive to the visual presentation. The combination of high visual emphasis and explicit belief claims produced the most favorable product attitudes in both sexes but particularly among women. The intention to try scores followed a similar pattern although, as with the overall results, the intention score differences by sex were not as pronounced as the attitude differences.

TABLE 3
Product Attitude Scores by Type of Advertisement by Sex

Type of Advertisement	Men	Women
High Visual-Explicit Verbal	+ 4.50	+ 7.41
High Visual-Implicit Verbal	+ 2.45	+ 3.41
Low Visual-Explicit Verbal	+ 3.54	+ 1.73
Low Visual-Implicit Verbal	+ 1.73	+ 2.41
	N = 44	N = 44

DISCUSSION

The experiment appears to provide relatively strong support for our visual and verbal loop theory. It was shown that visual content in advertising is just as capable of increasing the consumer's product attitude as is verbal content. We have inferred that this result was due to the dual loop process of classical conditioning and this inference requires further discussion. Several other questions are also raised by the findings. These include other parameters of visual and verbal content and the extension of the theory to other product categories and other types of advertising.

With the present experimental design we can only speculate that the hypothesized visual and verbal loop processes were responsible for the observed outcomes. It is possible, for example, that the high visual emphasis did not operate by stimulating visual imagery but, rather, by generating stronger beliefs, or even supplementary beliefs, which then had an evaluative effect on product attitude. A good way to test this would be to administer multiple belief scales in addition to the overall attitude scales. This should really be conducted with a separate experimental group as the possibility of a spurious belief-attitude consistency effect seems likely. An individual differences approach could alternatively be used. Some compelling evidence that it is a visual imagery loop and not a verbal belief loop that produces the visual content effect was obtained in an alternative analysis of these data (14) in which product attitude scores produced by the high visual emphasis advertisements were shown to be significantly correlated with a measure of visual imaging ability. This trait is slightly more characteristic of women than of men (17) which is consistent with the apparent sex difference found in the present analysis. Another way of testing the dual loop theory might be to employ a measure of “connections” (6) or “personal product response” (8). The resulting self-reports of reactions to the advertisement could be content analyzed for evidence of visual imagery experiences and verbal belief mentions, respectively. Less obtrusive, and far more esoteric, would be Krugman's (7) “brain wave” measures, in which imaging and thought are supposed to be separately detectable by electrophysiological means. The possibility of confirming separate processing functions for visual and verbal advertising content remains an exciting and challenging one.

On a more practical level the present experiment could be extended with a greater range of visual emphasis and different magnitudes of verbal copy strength. It would be interesting to discover, for example, whether there is a “threshold” in terms of absolute or relative picture size below which visual imagery is unlikely to occur. Types of visual content could also be varied to see, for example, whether product-in-use graphics would be more effective than a straightforward picture of the product, as we used. Simi-

larly, the explicitness of verbal product claims could be varied over a "belief strength" range by constructing statements that are somewhat more moderate than we employed in our explicit claims condition.

Other product categories could also be studied for their amenability to visual versus verbal advertising content. Product categories in which consumption or use is an enjoyable experience would seem to be most appropriate. However, there is no reason why the classical conditioning process would not operate for undesirable imagery as well; safety campaigns would be an obvious candidate. We would hasten to add, however, that the product category must be one in which product *attitude* is held to be an important determinant of subsequent behavior. The visual and verbal loop theory is based on classical conditioning and thus requires a target response of an evaluative or emotional nature, such as product attitude.

A final extension of visual and verbal loop theory might be to other media, notably TV. Readers may recall the intriguing study by Grass and Wallace (4) in which TV commercials were found to produce more favorable product attitudes and intentions than comparably derived print advertisements. TV commercials, with their succession of visual elements, may provide more opportunities than print for engaging the consumer in product-related visual imagery which, if favorable, may enhance product attitude.

The present study has focused on visual imagery in the context of visual and verbal loop theory and product attitude. It should be emphasized that visual imagery has many other potential applications to advertising, many of which are described in Lutz and Lutz (10), Bettman (2), Wright (19) and Rossiter and Percy (in press). In our view, it is essential that the developing interest in visual imagery be accompanied by sound theory to enable comparison of these new approaches with traditional approaches to advertising.

In summary, it is hoped that visual and verbal loop theory will encourage further theorizing and research on the relative importance of visual and verbal factors in advertising and that it will provide a useful alternative approach to multi-attribute models of product attitude. On a practical note, too, the present study may confirm what art directors have known all along: that strong visuals can complement good copy and produce synergistically effective advertisements.

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