

**THE EFFECTIVENESS OF ADVERTISING MATCHING PURCHASE
MOTIVATION: AN EXPERIMENTAL TEST**

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Abstract	<p>Several authors have proposed frameworks to help advertisers predict and plan advertising effectiveness. Rossiter and Percy's advertising grid (1997) recommends that the ad appeal should match the purchase motivation or attitude base. They suggest that for utilitarian brands informational advertising is more effective than transformational advertising. Likewise, for hedonic brands transformational advertising is more effective than informational advertising. These recommendations were tested in an experiment with different products and different ads. Advertising effectiveness was measured by brand and ad evaluations.</p> <p>In contrast with Rossiter and Percy, we find that advertising that mismatches rather than matches the motivation for the brand is more effective. Our finding can be explained in two ways. Firstly, schema theory suggests that a moderate degree of incongruity between advertising and brand perceptions and unexpected but relevant information in the mismatching ad results in favorable evaluations, as compared with a matching ad. Secondly, research on attitudes and persuasion suggests that, if typical product category ads are associated with negative affect, the particular ad functions as a counterattitudinal message, which is more persuasive in the case of a mismatch rather than a match with the category ads. We find evidence for both explanations.</p>	
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MOTIVATION: AN EXPERIMENTAL TEST

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ABSTRACT

Several authors have proposed frameworks to help advertisers predict and plan advertising effectiveness. Rossiter and Percy's advertising grid (1997) recommends that the ad appeal should match the purchase motivation or attitude base. They suggest that for utilitarian brands informational advertising is more effective than transformational advertising. Likewise, for hedonic brands transformational advertising is more effective than informational advertising. These recommendations were tested in an experiment with different products and different ads. Advertising effectiveness was measured by brand and ad evaluations.

In contrast with Rossiter and Percy, we find that advertising that mismatches rather than matches the motivation for the brand is more effective. Our finding can be explained in two ways. Firstly, schema theory suggests that a moderate degree of incongruity between advertising and brand perceptions and unexpected but relevant information in the mismatching ad results in favorable evaluations, as compared with a matching ad. Secondly, research on attitudes and persuasion suggests that, if typical product category ads are associated with negative affect, the particular ad functions as a counterattitudinal message, which is more persuasive in the case of a mismatch rather than a match with the category ads. We find evidence for both explanations.

INTRODUCTION

Advertising grids have been developed to assist professionals and researchers in assessing the effectiveness of product-ad combinations. The Rossiter-Percy (RP) advertising grid states that the effectiveness of advertising depends on the type of purchase motivation (informational versus transformational) and the level of involvement (Rossiter, Percy & Donovan 1991; Rossiter & Percy 1997). The RP grid suggests that informational advertising is more effective than transformational advertising for utilitarian brands, because informational advertising reflects the purchase motivation associated with utilitarian brands (informational motivation). Likewise, transformational advertising is more effective than informational advertising for hedonic goods (transformational motivation). Another well-known advertising grid is the FCB grid, developed at the advertising agency Foote Cone & Belding (Vaughn 1980, 1986). The FCB grid distinguishes between products on a think/feel dimension reflecting the type of information processing associated with the product. Contrary to the RP grid, the FCB grid does not clearly distinguish between brands and products. However, brand choice motives can differ from product choice motives depending on the brand's positioning in the product category (Rossiter & Percy 1997). Only if a brand is positioned on a benefit that is related to the main purchase motive associated with the product category, brand choice and product choice motives will be largely the same.

The advertising grids state that there is no single way in which ads work, but that it depends on the advertising situation. The normative recommendation from both grids is that the ad appeal should match the attitude base. However, Dubé, Chattopadhyay & Letarte (1996) note that the evidence in support of this recommendation is anecdotal at best and neither systematically nor empirically

investigated. Furthermore, they state that research in psychology on attitudes and persuasion provides inconclusive findings with respect to the matching hypothesis. In the light of their remarks, the purpose of this study is to test the matching hypothesis of the RP advertising grid by means of an experiment. The RP grid is better suited for testing than the FCB grid because it offers specific advertising tactics for different advertising situations, while the FCB grid only gives general recommendations.

In the next section, we describe the RP grid in more detail, and deal with alternative predictions from schema theory and the theory of attitudes and persuasion. We then describe our experiment and its results. Contrary to RP predictions, we found that mismatching advertising is more effective than advertising matching the purchase motivation. We discuss our findings in the final section.

THEORY

In this section, the concepts and terminology used in the RP grid are explained and related to similar distinctions made in the marketing and advertising literature. Next, predictions of the RP grid are compared with findings from two streams of research that yield further insights into the relationships between advertising and purchase motivation. This review of psychological research on attitudes and persuasion, and schema theory leads to the identification of conditions in which the matching hypothesis is likely to hold. Finally, schema theory is discussed to arrive at hypotheses about information processing associated with ads matching or mismatching the purchase motivation.

Concepts and terminology of the RP grid.

The RP grid specifies that the effectiveness of advertising depends on the type of purchase motivation (informational versus transformational) and the level of involvement. Rossiter et al. (1991) define informational motives as "negatively originated purchase motivations that can be satisfied by providing information about the product or brand" (p. 16). Transformational motives are defined as "purchase motives that promise to enhance the brand user by effectuating a transformation in the brand user's sensory, mental or social state" (p. 16).

Low-involvement decisions are characterized by trial experience, whereas high-involvement decisions require search and conviction prior to purchase. In the RP grid, the attitude toward the brand is considered to be the main indicator of advertising effectiveness, given awareness of the brand. When transformational motives prevail, the attitude toward the ad may mediate the attitude toward the brand, especially for low-involvement brands. However, in the case of informational motives, the processing of the advertising message is more likely to determine the brand attitude, rather than the attitude toward the ad.

In their advertising tactics, Rossiter et al. (1991) recommend that ads for low-involvement informational products should use simple problem-solution formats and include only one or two (extremely stated) benefits. For high-involvement informational products, benefit claims should be convincing enough to change the initial attitude toward the brand into a positive direction. Ads for low-involvement transformational products should display emotional authenticity, which is related to the brand by association. For high-involvement transformational products, both emotional authenticity and personal identification with the product in the ad is advised. These advertising tactics are generally referred to in the advertising literature

as informational and transformational advertising, respectively (Puto & Wells 1984, Aaker & Stayman 1992).

Holbrook & Hirschmann (1982) introduced a similar distinction between utilitarian and hedonic goods in marketing. Utilitarian goods are primarily bought for informational reasons, including instrumental and utilitarian reasons, whereas hedonic goods are mainly purchased for transformational reasons, including consummatory affective (hedonic) gratification (Batra & Ahtola 1990).

Irrespective of whether attitude toward the ad or informational processing influences the brand attitude, it is plausible that both attitude toward the ad and brand attitude are determined by the match or mismatch of product type and ad type. The matching hypotheses can now be restated as follows:

H1: For utilitarian products, informational ads will lead to more favorable brand and ad evaluations than transformational ads.

H2: For hedonic products, transformational ads will lead to more favorable brand and ad evaluations than informational ads.

Conditions in which the matching hypothesis is likely to hold.

Rossiter and Percy (1991, 1997) have formulated their advertising tactics as general recommendations. However, two streams of research suggest that the matching hypothesis advanced in the advertising grid is likely to hold only under specific conditions. Research on attitudes and persuasion has provided conflicting findings with respect to the matching hypothesis (Dubé et al., 1996). In addition, several studies based on schema theory contradict the matching hypothesis. Findings from

both streams of research lead to the identification of conditions in which the matching hypothesis is likely to hold, and conditions in which the matching hypothesis may not hold.

Attitude and persuasion research. Like advertising grids, psychological research on attitudes and persuasion is concerned with the effectiveness of different types of arguments in changing different types of attitudes. This differs from the RP grid in two respects. Firstly, in psychological studies on attitudes and persuasion, a distinction is made between cognitive and affective attitudes. This distinction does not necessarily correspond with the distinction between utilitarian and hedonic attitudes made in the advertising grid. Millar & Millar (1990) classify attitudes as either affective or cognitive, based on consumers' statements about a drink, for instance. Statements such as "cola makes me feel refreshed" (positive) or "water is boring" (negative) lead to classification as an affective attitude, whereas statements such as "water is naturally low in calories" (positive) or "cola contains too many preservatives" (negative) lead to classification as a cognitive attitude. This example shows that an attitude toward a hedonic product such as a soft drink can be based on both cognitive and affective statements. However, when brand choice motives are examined, the two attitude distinctions are very similar. Drolet & Aaker (2001), for example, use consumers' associations with brands (either cognitive or affective in nature) to operationalize cognitive-based and affective-based attitudes. In their study, the Head & Shoulders shampoo brand represents a cognitive-based attitude and the Johnson & Johnson baby shampoo brand represents an affective-based attitude. Presumably, Head & Shoulders is bought primarily for utilitarian reasons (dandruff control) and Johnson & Johnson baby shampoo is bought primarily for hedonic reasons (soft and mild sensation of hair wash).

Secondly, attitude psychology mainly focuses on counterattitudinal information, whereas the RP grid and advertising studies in general are primarily concerned with pro-attitudinal information. In Edwards (1990), for example, subjects tasted a beverage resulting in favorable attitudes based on affect. Then they received either an affective type of persuasion (the drink's mildly aversive scent) or a cognitive type of persuasion (negative information about the drink), in both cases counterattitudinal in nature. In contrast, ads usually contain positive brand information. Consequently, only in the case of negative brand attitudes, advertising contains counterattitudinal information. Bearing in mind these differences with the RP grid, the most important findings from psychological studies on the effect of message type on persuasion will be discussed next.

Edwards (1990) finds that affective-based attitudes change more under affective than under cognitive means of persuasion, and vice versa for cognitive-based attitudes. Her data support the matching hypothesis: a message that is congruent with the attitude base is more effective than a message that is incongruent with the attitude base. However, Millar & Millar (1990) find that affective-based attitudes are more susceptible to rational than to affective arguments, whereas cognitive-based attitudes are more susceptible to emotional than to cognitive arguments. This implies that a message that is incongruent is more effective than a message that is congruent with the attitude base. Millar (1992) explains these conflicting findings by arguing that counterattitudinal information directly targeted at the base of the attitude leads to counterarguing for individuals with strong attitudes, while counterattitudinal information is likely to overwhelm individuals with weak attitudes. Drolet & Aaker (2001) find empirical evidence that individuals with weak attitudes, such as those used by Edwards (1990) are persuaded more by congruent appeals, while individuals

with strong attitudes, such as those used in Millar & Millar (1990), are persuaded more by incongruent appeals.

The studies discussed so far focused on counterattitudinal messages. Millar & Millar (1990) also investigated proattitudinal messages but they did not find evidence in their study for an argument type \times attitude type interaction. They say that this is understandable because it is difficult to characterize agreement with a proattitudinal advertisement as an attitude change when there is already a strong attitude present. However, this reasoning does not seem valid for weak attitudes. Consumers with weak attitudes may feel more confident about their attitudes when they are exposed to proattitudinal messages that match their attitude base than when they are exposed to proattitudinal messages that do not match their attitude base. In this case, matching may lead to more favorable attitudes. This review of research on attitudes and persuasion suggests that when consumers have weak brand attitudes, the matching hypothesis proposed in the RP grid is likely to hold. However, if consumers have strong negative brand attitudes the mismatching hypothesis may apply (see Table 1).

Schema theory. Schema theory provides an alternative perspective on how advertising is related to purchase motivation. The premise of schema theory is that an initially cued schema guides information processing and influences the way evaluations are formed. Although the focus is on the processing of schema-incongruent information, schema theory also deals with differences in the evaluation of congruent and incongruent information. Applied to the RP grid, this means that advertising information is related to the brand schema, which includes information about the purchase motivation associated with the brand. Advertising can either match or mismatch the brand schema, i.e., the ad features information that is either congruent or incongruent with the brand purchase motivation. Fiske & Pavelchak

(1986) distinguish between category-based and piecemeal processing, depending on whether the information matches or mismatches schema knowledge, without predicting brand evaluations resulting from information processing.

Mandler (1982) hypothesizes how evaluation of incongruent information will differ from the evaluation of congruent information. He states that a moderate degree of incongruity will be evaluated more positively than either complete congruity or extreme incongruity. Unlike Fiske & Pavelchak (1986), Mandler (1982) assumes that consumers will always try to process incongruent information in a schema-based manner by assimilation or accommodation, depending on the degree of incongruity. If incongruity is moderate it can be resolved by assimilation, which will be evaluated positively. In the case of extreme incongruity, Mandler (1982) predicts that consumers will attempt accommodation of the unexpected information through schema-based processing, which is usually accompanied by negative affect. Fiske & Pavelchak (1986) predict that consumers will switch from schema-based to piecemeal processing, which differs from the notion of accommodation in that restructuring of the initially cued schema is not assumed (Stayman, Alden & Smith, 1992).

Meyers-Levy & Tybout (1989) and Stayman, Alden & Smith (1992) find evidence for Mandler's (1982) inverted U-shaped relationship between incongruity and evaluation in the context of (new) product evaluation. Their findings suggest that moderate incongruity between brand schema and advertising will be evaluated more favorably if the ad mismatches rather than matches the purchase motivation. This contradicts the matching hypothesis from the advertising grid. Only in the case of strong incongruity, schema theory and the RP grid make similar predictions.

However, Lee & Mason (1999) suggest that moderately incongruent information may also be evaluated less favorably than congruent information

depending on whether the information is relevant to the brand. They employ a two-dimensional conceptualization of incongruity (Heckler & Childers 1992), which specifies that ads can be incongruent because they contain both unexpected and irrelevant information. Lee & Mason (1999) focus on congruity within the ad, while the RP grid emphasizes congruity between brand schema and advertising. In Lee & Mason (1999), incongruity is manipulated by pictorial information, which is unexpected and/or irrelevant to ad expectations cued by the focal benefit of the advertised brand. Lee & Mason (1999) find that incongruent ads with unexpected-relevant information are evaluated more favorably than congruent ads containing expected-relevant information. However, when incongruent ads contain expected-irrelevant information or unexpected-irrelevant information they are evaluated less favorably than congruent ads. The relatively favorable evaluation of incongruent information in the context of (new) product evaluation is consistent with these findings, because incongruity in these studies is likely to represent unexpected-relevant information to the consumer.

This review of schema theory suggests that the degree and nature of incongruity also determine the applicability of the matching hypothesis. The matching hypothesis from the RP grid is likely to hold when incongruity between brand schema and advertising is strong or when incongruity is moderate and the ad presents either expected-irrelevant or unexpected-irrelevant information about the brand. When the incongruity between brand and advertising is moderate and the ad presents unexpected but relevant information to the brand, the matching hypothesis may not hold (see Table 1).

Table 1 about here

Ad processing

Information processing is an important aspect of advertising, which is discussed in schema theory but not in the RP grid. Schema theory suggests that ads, which are incongruent with the brand schema (ads mismatching the purchase motivation) are processed more extensively than ads that are congruent with the brand schema (ads matching the purchase motivation). This is supported by findings from several studies, irrespective of whether they were intended to test Fiske & Pavelchak's (1986) or Mandler's (1982) conceptualization of processing. The number of thoughts elicited in mismatch conditions is generally higher than in match conditions (Goodstein 1993, Stayman et al. 1992). The focus of this more extensive processing is on the source of incongruity (Goodstein 1993, Meyers-Levy & Tybout 1989, Stayman et al. 1992, Sujan 1985). However, some studies have also found evidence that extreme incongruity is accompanied by limited processing (Ozanne, Brucks & Grewal 1992, Stayman et al. 1992) in line with Mandler's (1982) view. The focus in these studies is on the cognitive aspects of processing. This leads to the following hypotheses:

H3: For the utilitarian products, the transformational ad will lead to more thoughts in total and more incongruity-related thoughts than the informational ad.

H4: For the hedonic product, the informational ad will lead to more thoughts in total and more incongruity-related thoughts than the transformational ad.

In addition, an important part of Mandler's (1982) theory is concerned with the affective aspects of processing, which received only limited testing. Mandler (1982)

suggests that processing of incongruent information is accompanied by feelings of heightened arousal. Peracchio & Tybout (1996) find that consumers raised more questions and expressed more confusion as incongruity increased in the context of new product evaluation. This leads to the following hypotheses:

H5: For utilitarian products, the transformational ad will lead to more arousal than the informational ad.

H6: For the hedonic product, the informational ad will lead to more arousal than the transformational ad.

The hypotheses will be tested with respect to the motivational bases of attitudes for low-involvement products. This pragmatic choice of products allows for relatively simple experimental advertising stimuli. Also, for low-involvement products, prior brand attitudes are far less important than in the case of high-involvement products. This facilitates the use of fictitious brands in an experiment, which in turn enables us to observe the expected effects in the absence of potentially disturbing associations with real brands.

METHOD

Design

A 2 (purchase motivation) × 2 (advertising type) between-subjects design was employed. Both utilitarian and hedonic product descriptions of hypothetical deodorant and chewing gum brands were used to elicit the main purchase motivation associated

with the product category. Ad scenarios were constructed according to the tactics outlined in the RP grid, resulting in both an informational and a transformational ad description for each brand (see Appendix 1). Ad scenarios were employed because transcripts allow for more precise control of the ad stimuli than other preproduction versions of a television ad, and such a format is commonly used for testing alternative messages in the advertising industry (Wansink & Ray 1996). Ad scenarios provide a conservative test of the feelings generated in response to advertising, especially when ads are designed to generate high levels of feeling, such as transformational ads (Goodstein, Edell & Moore 1990).

Furthermore, the experimental stimuli were designed in agreement with the conditions in which the matching hypothesis is likely to hold. Since hypothetical brands were used, only weak brand attitudes would result. The utilitarian attributes included in both brand and ad descriptions were cognitive and the hedonic attributes included in both brand and ad descriptions were affective in nature, consistent with research on attitude and persuasion.

To ascertain that the incongruity between ad and brand perceptions was the only source of discrepancy, the ads were designed to prevent within-ad incongruity. To achieve this, advertising attributes were selected in accordance with the advertising tactics of the RP grid for informational and transformational ads, respectively. Consequently, the matching ads featured attributes in the brand description congruent with the purchase motivation. Mismatching ads featured attributes congruent with the alternative purchase motivation (not mentioned in the brand description). In terms of the two-dimensional conceptualization of incongruity (Heckler & Childers 1992), the matching ads represented expected-relevant information about the brand whereas the mismatching ads represented unexpected-

irrelevant information about the brand. Because the attributes of the mismatching ads were not uncommon for the products concerned, incongruity was likely to be moderate.

Pretests

Two pretests were carried out to verify whether the products selected for the experiment, deodorant and chewing gum, are successful in cueing the intended purchase motivations and eliciting the accompanying brand perceptions. In the first pretest, 24 subjects classified each of eight products in two categories representing either utilitarian or hedonic purchase motivations. The classification of the two experimental products was as intended. Deodorant was categorized as a product bought primarily for utilitarian reasons by 75% of the subjects and chewing gum was categorized as a hedonic product by 75% of the subjects.

Furthermore, the ad schema for deodorant and chewing was investigated in the first pretest. The presence of an ad schema was checked by five items from Goodstein's (1993) questionnaire concerning expectations about product category ads. An ad schema was deemed present when consumers had a clear idea of how ads in a particular product category were like. The results showed that there existed a stronger ad schema for deodorant than for chewing gum. The content of the ad schema was investigated by asking subjects to describe a typical ad from the product category. The findings showed that typical deodorant ads were either informational or transformational and typical chewing gum ads were transformational in nature.

In the second pretest, nine participants each tested four real deodorant brands, the container wrapped with tape, and two real chewing gum brands, presented without the packaging, in balanced order. For each brand, participants indicated which

description fitted best: the experimental brand description or a description based on the alternative purchase motivation. The experimental description was preferred to the alternative description for two of the four deodorant brands and for both chewing gum brands. Next, the participants evaluated the stimulus brands and indicated whether the brands possessed sensory characteristics consistent with the experimental brand description. From the two deodorant brands that satisfied the first criterion, the stimulus brand was evaluated more favorably than the other one (second in the preference ranking of the four brands) and received higher ratings on the relevant sensory characteristics. The selected deodorant brand was perceived to have a fresh yet neutral scent and left a pleasurable feeling on the skin. Of the two chewing gum brands, the stimulus brand was preferred and received higher ratings on the relevant sensory characteristics than the other brand. The selected chewing gum brand was perceived to have a strong, fresh taste and caused an enjoyable chewing experience.

Subjects

Subjects were 81 Dutch undergraduate students of psychology who received credit for their participation. Subjects were run in groups of eight persons at the most. Data were collected in October and November 2000 and January 2001.

Procedure

Subjects were told that they were about to participate in a product test and that the experimenter was interested in their evaluation of a new brand. First, participants received the brand description and the ad scenario. The first questionnaire included manipulation checks for brand perceptions, general questions about the product category, free elicitation of thoughts in response to the ad, ratings of feelings

associated with the ad scenario, and a global measure of attitude toward the ad. After returning the first questionnaire, subjects received the test product, which they could try. Then, they were given a second questionnaire containing questions on perceived product quality, manipulation checks for ad and incongruity perceptions, brand attitude measures and attitude toward the ad measures. After handing in the product and the second questionnaire, subjects were debriefed.

Measures

The independent variables in this study were type of purchase motivation and ad type. Incongruity resulted from the interaction between product and ad perceptions, which were measured both. The dependent variables in this study were processing and evaluation measures (see Appendix 2).

RESULTS

Manipulation checks

In general, the experimental manipulations were as expected. The new deodorant Protect was generally perceived as a utilitarian brand, while the new chewing gum Coolchew was perceived as a hedonic brand. The transformational ads were perceived to feature transformational content, and the informational ads were perceived to contain informational content. For Protect, the informational ad was perceived as more congruent than the transformational ad, while the reverse was true for Coolchew.

The brands did not only differ in attitudinal base, but also in level of involvement. Furthermore, the mismatching ads represented unexpected but not

irrelevant information to the brands. The manipulation checks for brand, ad and incongruity perceptions are discussed in detail below (see Table 2).

Table 2 about here

Brand perceptions. Protect was rated significantly higher on utilitarian than on hedonic attributes ($p < .001$). Subjects thought it was relatively likely that Protect offers the utilitarian benefits "prolonged working" (5.15) and "good protection against perspiration" (5.34). They found it relatively unlikely that Protect would possess the hedonic attributes "having a seductive scent" (3.61) and "being helpful in making an attractive impression on others" (3.44).

Coolchew was generally perceived as a hedonic brand because it was rated higher on hedonic than on utilitarian attributes ($p < .001$). Subjects thought it was relatively likely that Coolchew caused one "to have a fresh and cool breath" (6.47) and that the brand had an "active and trendy image" (5.88). They found it relatively unlikely that Coolchew offered the utilitarian benefits "prevention of tooth decay" (3.75) and "contribution to dental hygiene" (3.80). Furthermore, both Coolchew and Protect were perceived as equally typical examples of the categories chewing gum and deodorant, respectively. Product typicality was measured quite reliably by the three scales ($\alpha = 0.79$), mentioned in Appendix 2 (brand perceptions). This indicates that the manipulation of brand perceptions was as intended. However, despite the fact that both chewing gum and deodorant are identified as low involvement products in the literature, respondents were significantly more involved with deodorant than with chewing gum (Protect = 4.72, Coolchew = 3.77, $p < .001$).

Ad perceptions. The ad type manipulation was examined on the base of the average informational and transformational ad content perceptions, which had reliability coefficients α of .61 and .70, respectively. Transformational ads carried more transformational content (5.37 vs. 4.21, $p < .001$) and less informational content (3.59 vs. 4.91, $p < .001$) than informational ads. The differences in transformational and informational ad content were also significant within each ad type (5.37 vs 3.59, $p < .001$ for transformational ads; 4.21 vs. 4.91, $p < .05$ for informational ads). Overall, transformational and informational ads did not differ significantly in their relevance of the ad for the brand or expectedness of the ad's message. This indicates that the manipulation of ad perceptions was as intended.

Incongruity perceptions. The ANOVA for ad typicality showed a significant product main effect. Overall, the Protect ads were perceived as more typical than the Coolchew ads (5.91 vs. 4.95, $p < .001$). Since the first pretest indicated that the ad schema for deodorant is stronger than for chewing gum, it can be concluded that the lower typicality judgments for Coolchew ads were caused by relatively weak ad expectations. The expected ad type \times product interaction effect was significant ($p < .001$) showing that the informational ad was more typical than the transformational ad for Protect ($p < .001$), while the reverse was true for Coolchew ($p < .05$).

The ANOVA for expectancy of the ad's message showed both a product main effect ($p < .01$) and an ad type \times product interaction ($p < .01$). Mirroring the findings for ad typicality, the main effect showed that Coolchew ads were less expected than Protect ads (5.58 vs. 6.44, $p < .01$). The interaction effect showed that the informational ad was less expected than the transformational ad for Coolchew ($p < .10$), while the reverse was true for Protect ($p < .05$).

The ANOVA for relevance of the ad for the brand showed a marginally significant ad type \times product interaction ($p < .10$). The interaction effect indicated that the transformational ad was more relevant for hedonic Coolchew than the informational ad, while the reverse was true for the utilitarian Protect. Based on these findings it can be concluded that the product \times ad type interaction was caused by incongruity.

Hypotheses

All hypotheses were tested using MANOVA's with product and ad type as independent variables. Product main effects should reflect differences resulting from the purchase motivation (utilitarian or hedonic) associated with the hypothetical brands, and ad type main effects should result from differences between informational and transformational ad types. Since the manipulation checks showed that product \times ad type interaction effects were due to incongruity, any interaction effects should reflect differences between ads matching the purchase motivation and ads not matching the purchase motivation. Next, the results concerning ad evaluation, brand evaluation and the processing measures will be presented.

Table 3 about here

Ad evaluation. Hypotheses 1 and 2 stated that for the utilitarian product the informational ad would be evaluated more favorably than the transformational ad, while the reverse was expected for the hedonic product. The MANOVA results for attitude toward the ad showed an ad type main effect ($p < .001$) and an ad type \times product interaction effect ($p < .01$). The transformational ad was judged more

favorably than the informational ad for both the hedonic Coolchew and the utilitarian Protect brands. Contrary to the hypotheses, inspection of the means suggested a mismatching effect. The mismatching ads had an above-adtype-average evaluation, while the matching ads had a below-adtype-average evaluation (see Table 3). Given the main effect of ad type, mismatching ads were evaluated more favorably than matching ads.

The mismatching result should be due to incongruity, as shown by the manipulation checks. This was investigated further by running separate regressions on ad evaluations for the Coolchew and Protect brands, with ad typicality, perceived informational and transformational content as independent variables (see table 4, A_{ad}). The negative coefficients for ad typicality showed that congruent ads were evaluated less favorably than incongruent ads, indicating the mismatching effect. In addition, transformational ad content led to higher evaluations for both products, whereas informational ad content led to lower evaluations for Protect.

In conclusion, hypotheses 1 and 2 on ad evaluations were not confirmed. Transformational ads were more effective than informational ads for both brands. There was a significant ad type \times product interaction although not in the expected direction. Possible explanations for the mismatching hypothesis are given in the discussion section.

Table 4 about here

Brand evaluation. The MANOVA results for brand evaluation showed that the hedonic brand was evaluated more favorably than the utilitarian brand (4.97 vs. 4.07, $p < .01$). This is consistent with the fact that the consumption of hedonic products is

generally associated with enjoyment, positive feelings and fun (Holbrook & Hirschman 1982). Neither the ad type main effect nor the ad type \times product interaction were significant, although a pattern similar to that found for the ad-related variables was expected. This suggested that brand evaluations were not influenced by ad evaluations. This was investigated further by separate regression analyses (not included in table 4) for each brand. In both cases, brand attitude was influenced significantly by perceived product quality but not by attitude toward the ad. Although the coefficient of attitude toward the ad was marginally significant for Protect ($p < .10$), a MANOVA showed that this was not due to an ad type \times product interaction effect. This means that subjects based their brand evaluations exclusively on the product trial and ignored the ad. An explanation of why the experimental manipulations failed to affect brand evaluations will be given in the discussion section.

Cognitive processing. Content analysis of thoughts showed that both thoughts about incongruity and thoughts about congruity (e.g., "this is just another standard deodorant ad") were elicited in response to the ads. Hence both types of thoughts were included in the analysis. Hypotheses 3 and 4 stated that for the utilitarian brand the transformational ad would lead to more thoughts in total and more incongruity-related thoughts than the informational ad, while the reverse was expected for the hedonic brand. In line with these hypotheses, more congruity-related thoughts can be expected for ads matching the brand purchase motivation than for ads not matching the brand purchase motivation. The MANOVA results for incongruity-related thoughts showed a significant ad type \times product interaction effect ($p < .001$). The pattern of means for incongruity-related thoughts (see table 3) supported the hypotheses. The transformational ad led to more incongruity thoughts for the utilitarian Protect than

for the hedonic Coolchew, while the reverse was true for incongruity thoughts associated with the informational ad. Furthermore, the MANOVA showed an ad type \times product interaction for congruity-related thoughts ($p < .05$). The transformational ad led to more congruity-related thoughts than the informational ad for the hedonic brand, while the reverse was true for the utilitarian brand (see Table 3). However, no effects were found for total number of thoughts. This might be explained from the fact that the degree of incongruity was too small to cause significant differences in the number of thoughts elicited. In conclusion, hypotheses 3 and 4 were partly confirmed.

Arousal. Hypotheses 5 and 6 stated that for Protect the transformational ad would lead to a higher level of arousal than the informational ad, while the reverse was expected for Coolchew. The MANOVA for arousal showed an ad type main effect ($p < .001$) and a marginally significant ad type \times product interaction effect ($p < .10$). The main effect indicated that for both Protect and Coolchew transformational ads led to more arousal than informational ads (see Table 3). The interaction effect supported the reasoning that incongruity led to more arousal. The mismatching ads had above-adtype-average levels of arousal, while the matching ads had below-adtype-average levels of arousal (see Table 3). Separate regression analyses for Protect and Coolchew were used to investigate the interaction effect due to incongruity (see Table 4, Arousal). The regression results for Protect showed that both lower levels of ad typicality (incongruity) and informational ad content led to higher levels of arousal. The regression for Coolchew was not significant, although the coefficient of ad typicality had the expected sign. In conclusion, hypothesis 5 for arousal was confirmed for Protect but not for Coolchew, although the results were in the predicted direction.

DISCUSSION

Three issues emerge from the analysis. First of all, the findings support a mismatching rather than a matching hypothesis for ad evaluation. Secondly, there is a strong ad type main effect on ad processing and ad evaluation in addition to the expected ad type \times product interaction. Thirdly, the experimental manipulations affected ad evaluations but not brand evaluations. These three issues will be discussed in this section.

Two explanations for the relatively favorable evaluation of incongruent ads are available from the literature. Schema theory states that a moderate amount of incongruity is evaluated more favorably than either congruity or extreme incongruity (Mandler 1982). With the experimental design used in this study it is not possible to determine the level of incongruity with certainty. We can only conclude that matching ads were more congruent than mismatching ads. However, since the information in the mismatching ads was only incongruent with brand perceptions and could be resolved by using product category knowledge, the degree of incongruity was likely to be moderate. This reasoning is supported by the small number of thoughts related to incongruity. Moreover, the incongruity can be qualified in terms of the relevancy and expectancy dimensions (Heckler & Childers 1992). The ad included unexpected and relevant information to the brands. The finding that incongruent ads including unexpected but relevant information to the brand were evaluated more favorably than congruent ads including expected and relevant information, corresponds with Lee & Mason's findings (1999).

The second explanation is based on research on attitudes and persuasion, where also evidence for a mismatching hypothesis has been obtained. However, this evidence was found in the context of counterattitudinal messages to strong attitudes. It

is not likely that our participants formed a strong attitude toward the new brands from reading the short brand descriptions. However, it is possible that the ad schema associated with the product category (Goodstein 1993) was cued when subjects read the ad scenarios. The results from the first pretest indicate that there was a strong ad schema for deodorant, which was supported by high ad typicality scores in the experiment. In this interpretation the (mismatching) transformational ad represented a counterattitudinal message to a strong (negative) attitude based on ad schema affect, which resulted in more favorable evaluations in line with the mismatching hypothesis from research on attitudes and persuasion. However, this explanation does not hold for the hedonic Coolchew brand. Neither the results from the first pretest nor the ad typicality scores in the experiment suggested a strong advertising schema for chewing gum. Moreover, there was no evidence of negative category affect associated with transformational chewing gum ads. In conclusion, the finding that mismatching ads were evaluated more favorably than matching ads can be explained by the fact that the incongruent ads were only moderately incongruent and the information in the ad was not perceived to be irrelevant to the brands. For Protect there was also evidence for the mismatching hypothesis from research on attitudes and persuasion. Both explanations suggest relatively high evaluations of mismatching ads, so it is not possible to distinguish between them. However, the observation that the favorable evaluation of the mismatching ad was stronger for Protect than for Coolchew suggests that both explanations are valid.

Another possible explanation of the mismatching effect is that the ad and brand descriptions in our study only incompletely matched or mismatched the purchase motivations. Unintendedly, the ad and brand descriptions might have appealed to other informational and transformational purchase motives (Rossiter et al.

1991, Rossiter & Percy 1997). The utilitarian Protect brand was meant to correspond with RP's problem avoidance motive, whereas the hedonic Coolchew brand was meant to correspond with RP's sensory gratification and social approval motives. However, Coolchew might also have appealed to a problem avoidance motive, e.g., preventing bad breath. The informational and transformational ads were intended to relate to the problem avoidance and sensory gratification/social approval motives, respectively. However, the informational Protect ad might also have appealed to a social approval motive, e.g., being like a successful businesswoman, while the transformational Protect ad might have appealed to a problem avoidance motive, e.g., it even works in a hot disco. Likewise, the transformational Coolchew ad might have appealed to a problem avoidance motive, e.g., preventing bad breath. Thus, the informational Protect ad might not have matched the purchase motivation completely, whereas the transformational Protect ad might not have mismatched completely. A similar reasoning applies to the Coolchew ads. Although our brand and ad manipulations were successful, these alternative interpretations cannot be ruled out completely.

The main effects of ad type on ad processing and ad evaluation indicate that transformational ads, as compared to informational ads, lead to feelings of arousal and consequently to more favorable evaluations. The results show that the type of ad strongly influenced ad processing and evaluation, independent of whether the ad matches or mismatches the attitude base. Ad content was salient to the subjects in the experiment, because they read the ad scenario twice. The transformational ads probably contained stronger heuristic cues than the informational ads (Chaiken & Eagly 1976). This may have led to heuristic processing of transformational ads, which in turn affected ad evaluations positively.

The experimental manipulations failed to affect brand evaluations, contrary to expectations. The findings suggested that product trials rather than the ad scenarios influenced brand evaluations. Hoch & Ha (1986) state that ads are likely to influence brand evaluation when trial experience is ambiguous. The attributes used in our brand descriptions were intended to be ambiguous in nature to enable the ad to influence brand evaluations. We assumed that it would be difficult to determine how well the brands performed in terms of prolonged protection against perspiration, making an attractive impression on others (deodorant), and propagating an active image, and contributing to dental hygiene and healthy teeth (chewing gum). On the other hand, the stimulus brands were selected to possess sensory characteristics associated with the experimental brand descriptions to ensure that incongruity could not be caused through disconfirmation from trial experience. Apparently this has led to an unambiguous trial experience with respect to the sensory characteristics of the brand. Furthermore, the subjects were only asked about these sensory characteristics in the second questionnaire and not about the other attributes mentioned in the ad and brand descriptions. This may have caused subjects to ignore these ambiguous attributes in trial and brand evaluations.

Future research

From the discussion of the results a number of issues for further research emerge. Firstly, advertising grids such as the RP and FCB grids assume that consumers relate the ad to brand perceptions. In this study, it appeared that even under circumstances in which brand perceptions were salient (a product test), ads were not only related to the brand schema but also to the ad schema. It is theoretically relevant to distinguish between brand schema and ad schema, but it is especially important in cases where a

specific advertisement matches the brand schema but mismatches the ad schema, and vice versa. This occurs when ad expectations based on the brand characteristics (brand schema) are different from ad expectations based on the ad schema.

Furthermore, the schema that is used to judge the ad may depend on the setting in which consumers view the ad. If a person is oriented toward buying a brand from a certain product category, it is likely that the brand schema is salient when an ad for such a product is shown. However, when somebody sees the ad while watching television, the ad schema for the product category is probably salient.

Secondly, brands and products were confounded in this study. Although it was assumed that incongruity between ad and brand perceptions caused the findings in this study, it was not possible to distinguish between brand and product effects. In future research it is important to separate brand effects from product effects. This might be done by using two different brands from the same product category.

Thirdly, it is interesting to investigate whether brands associated with different purchase motives also lead to different sensitivity to incongruity. In research on attitudes and persuasion, it has been suggested that affect-based attitudes are more susceptible to incongruity because these attitudes are unidimensional in nature, in contrast with cognition-based attitudes that are multidimensional in nature. Hence, it is harder to establish a complete mismatch with a cognition-based attitude than with an affect-based attitude. It seems likely that this argument also holds for hedonic and utilitarian attitudes. However, it has also been argued that the tolerance for incongruity-related phenomena such as arousal is greater for hedonic than for utilitarian products, which, for example, leads to higher potential for variety seeking for hedonic brands (e.g. Holbrook & Hirschman 1982). This seems to be an important issue for further exploration.

APPENDIX 1 Brand descriptions and ad scenarios

Utilitarian brand. Protect is a new deodorant that lasts all day long. Now you don't have to worry any more about the unpleasant effects of perspiration. This deodorant is available in both rollerstick and spray variants. The brand will be on sale in supermarkets and drug stores.

Informational Protect ad. A woman in her early thirties, wearing a suit looks in the camera and tells that she always has to look good in her job. She says: "I have to trust that I always make a self-assured impression, no matter how busy I am. Thanks to Protect deodorant I feel fresh and secure all day and can concentrate fully on my work." The voice-over ends with the claim "Protect deodorant protects you all day."

Transformational Protect ad. The camera shows images of a crowded disco with young people dancing on steamy R&B music. Then the camera zooms in on a seductive woman and follows her while she dances to the center of the floor with sensual movements. She immediately attracts attention and admiring looks from all the men she passes. The voice-over ends with the claim "Protect deodorant for an unforgettable impression."

Hedonic brand. Coolchew is a new chewing gum that gives you a fresh and cool breath. This active and trendy chewing gum is very tasty. It is available either separately or in five-piece packaging. The brand will be on sale in supermarkets from June 2001.

Informational Coolchew ad. A dentist sitting in his office looks in the camera and tells that dental care among young people is strongly decreasing since a few years. He says: "In my practice I'm confronted daily with the unpleasant effects of bad dental care. Hence my advice to young people: don't let it come that far. Except for

brushing your teeth regularly, the choice of your chewing gum also contributes to dental hygiene. That's why I recommend Coolchew chewing gum.” The voice-over ends with the claim “Coolchew for healthy gums and prevention of cavities.”

Transformational Coolchew ad. The camera shows images of two friends waiting for their dates. One of the boys is chewing a piece of chewing gum. Then their girl-friends come out the front door and both couples kiss. The girl-friend of the boy with the chewing gum winks to her girl-friend and smiles while she nods her head. In the meantime, the other boy is getting the car. Then the girl-friend of the boy with the car unexpectedly walks to the boy with the chewing gum and also kisses him. Then the three laugh and walk to the car. The voice-over ends with the claim “Coolchew for a fresh and cool breath.”

APPENDIX 2 Measures of brand and ad perception, processing and evaluation measures

1. *Brand perceptions.* Seven-point attribute belief ratings indicated the extent to which the brand was associated with utilitarian and hedonic purchase motives. Four attributes were rated, two from the brand description and two from the accompanying mismatching ad. Furthermore, the perception of the brand as a good example of the product category as identified in the pretest, was measured. This typicality judgment was measured with bipolar 7-point scales: “good example-poor example”, “typical-atypical”, “representative-unrepresentative” (Loken & Ward 1990). Finally, product involvement was measured with four bipolar 7-point scales: “important-unimportant”, “means a lot to me-means nothing to me”, “interested-uninterested”, “significant-insignificant”, taken from Zaichkowsky's (1985) PII-scale.

2. *Ad perceptions.* Informational ad content was measured with the following Likert-type scales: “the advertisement suggests the solution to a problem”, “the commercial is factual and informative”, and “the ad focuses on usage benefits associated with the brand” (adapted from Holbrook & Batra 1987, Olney, Holbrook & Batra 1991). Transformational ad content scales were “the advertisement presents a slice of life”, “the commercial tries to create a mood”, and “an enjoyment appeal is used in the ad”. This type of measurement was preferred to the Puto & Wells (1984) scale that uses the intended effects associated with informational and transformational advertising to measure ad type perceptions.

3. *Incongruity perceptions.* Ad typicality measured how well the adjectives “different”, “typical”, and “unique” describe the ad relative to other ads from the product category (Goodstein 1993). Typical ads for the product category do not necessarily match the general purchase motivation, but results from the first pretest

indicated that this was the case for both deodorant and chewing gum. Furthermore, two items were included in the statements about ad content (see 2.) to qualify incongruity in terms of the relevancy and expectancy dimension (Heckler & Childers 1992). The statement “the ad content is relevant to this brand” measured the relevancy of the ad for the brand. The statement “the way in which the ad communicates its message is unexpected” measured the unexpectedness of the ad message.

Processing measures. The cognitive aspects of processing were measured with free elicitation of thoughts, in response to the first reading of the ad. The affective aspects of processing were measured with rating of feelings, in response to the second reading of the ad.

4. *Cognitive processing.* Sujan (1985) developed a coding scheme to typify cognitive processing, with the total number of thoughts and a classification thought types as relevant indicators. Total thoughts and incongruity-related thoughts were used in this study to measure cognitive processing.

5. *Affective processing.* The dimensions of arousal and pleasure are often used to distinguish feelings (e.g. Olney et al. 1991, Russell 1980). Arousal was measured with the items “stimulated-relaxed”, “excited-calm”, “frenzied-sluggish”, “jittery-dull”, and “wide awake-sleepy” (Olney et al. 1991). The items “happy-unhappy”, “pleased-annoyed”, “satisfied-unsatisfied” (Olney, Holbrook & Batra 1991), “in good mood-in bad mood”, “surprised-bored”, “enthusiastic-reserved” (Mano & Oliver 1993), “gloomy-cheerful” (Russell 1980) measured pleasure. The items from Mano & Oliver (1993) and Russell (1980) were adapted to obtain meaningful translations into Dutch.

Evaluation measures. Both brand and ad evaluation measures were included in this study. In addition to overall brand attitude and attitude toward the ad, a two-dimensional brand attitude and a three-dimensional attitude toward the ad measure were included. Also, perceived product quality was measured.

6. *Brand attitude.* The items “good-bad”, “positive-negative”, and “favorable-unfavorable” were used to measure overall brand attitude. The utilitarian component of brand attitude was measured with the items “useful-useless”, “valuable-worthless”, and “wise-foolish”. The hedonic component of brand attitude was measured with the items “pleasant-unpleasant”, “nice-awful”, and “agreeable-disagreeable”. Both overall and two-dimensional brand attitude measures were taken from Batra & Ahtola (1990).

7. *Attitude toward the ad.* The items “good-bad”, “like-dislike”, “irritating-not irritating”, “interesting-uninteresting” (Mitchell & Olson 1981) were used to measure overall attitude toward the ad. The three-dimensional attitude-toward-the-ad measure was taken from Olney, Holbrook & Batra (1991). The utilitarian component reflecting how informative and useful ads are, was measured with the items “informative-uninformative”, “helpful-not helpful”, and “useful-not useful”. The hedonic component, capturing how entertaining and pleasurable ads are, was measured with the items “pleasant-unpleasant”, “entertaining-not entertaining”, and “enjoyable-not enjoyable”. The interestingness component is a judgment of curiosity caused by the ad, measured with the items “makes me curious-does not make me curious”, “not boring-boring”, and “keeps my attention-does not keep my attention”.

8. *Perceived product quality.* Perceived product quality was measured with ratings of the brands’ sensory characteristics. Protect’s perceived quality was measured with six items related to the deodorant’s scent and four items related to the sensation of the

deodorant on the skin. Coolchew's perceived quality was measured with six items related to the chewing gum's taste and four items related to the chewing experience.

REFERENCES

- Aaker, David A. & Douglas M. Stayman (1992), "Implementing the Concept of Transformational Advertising," *Psychology & Marketing*, 9 (3), 237–253.
- Batra, Rajeev & Olli T. Ahtola (1990), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters*, 2 (April), 159–170.
- Chaiken, Shelly & Alice H. Eagly (1976), "Communication Modality as a Determinant of Message Persuasiveness and Message Comprehensibility," *Journal of Personality and Social Psychology*, 34, 605–614.
- Drolet, Aimee & Jennifer L. Aaker (2001), "Off-Target? Changing Cognitive-Based Attitudes," *Journal of Consumer Psychology*, forthcoming.
- Dubé, Laurette, Amitava Chattopadhyay & Anick Letarte (1996), "Should Advertising Appeals Match the Base of Consumers' Attitudes?" *Journal of Advertising Research*, 36 (6), 82–89.
- Edwards, Kari (1990), "The Interplay of Affect and Cognition in Attitude Formation and Change," *Journal of Personality and Social Psychology*, 59 (2), 202–216.
- Fiske, Susan T. (1982), "Schema-Triggered Affect: Applications to Social Perception," in *Affect and Cognition: The Seventeenth Annual Carnegie Symposium on Cognition*, ed. Margaret Sydnor Clark & Susan T. Fiske, Hillsdale, New Jersey: Lawrence Erlbaum, pp. 55–78.
- Fiske, Susan T. & Mark A. Pavelchak (1986), "Category-Based versus Piecemeal-Based Affective Responses: Developments in Schema-Triggered Affect," in

- Handbook of Motivation and Cognition: Foundations of Social Behavior*, ed. Richard M. Sorrentino & E. Tory Higgins, Chichester: John Wiley, pp. 167–203.
- Goodstein, Ronald C. (1993), “Category-based Applications and Extensions in Advertising: Motivating More Extensive Ad Processing,” *Journal of Consumer Research*, 20 (June), 87–99.
- Goodstein, Ronald C., Julie A. Edell & Marian Chapman Moore (1990), “When Are Feelings Generated? Assessing the Presence and Reliability of Feelings Based on Storyboards and Animatics,” in *Emotion in Advertising: Theoretical and Practical Explorations*, ed. Agres, Stuart J., Julie A. Edell & Tony M. Dubitsky, New York: Quorum Books, pp. 175–193.
- Heckler, Susan E. & Terry L. Childers (1992), “The Role of Expectancy and Relevancy in Memory for Verbal and Visual Information: What is Incongruity?” *Journal of Consumer Research*, 18 (March), 475–492.
- Hoch, Stephen J. & Young-Won Ha (1986), “Consumer Learning: Advertising and the Ambiguity of Product Experience,” *Journal of Consumer Research*, 13 (September), 221–233.
- Holbrook, Morris B. & Rajeev Batra (1987), “Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising,” *Journal of Consumer Research*, 14 (December), 404–420.
- Holbrook, Morris B. & Elizabeth C. Hirschman (1982), “The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun,” *Journal of Consumer Research*, 9 (September), 132–140.
- Lee, Yih Hwai & Charlotte Mason (1999), “Responses to Information Incongruity in Advertising: The Role of Expectancy, Relevancy, and Humor,” *Journal of Consumer Research*, 26 (September), 156–169.

- Loken, Barbara & James Ward (1990), "Alternative Approaches to Understanding the Determinants of Typicality," *Journal of Consumer Research*, 17 (September), 111–126.
- Mandler, George (1982), "The Structure of Value: Accounting for Taste," in *Affect and Cognition: The Seventeenth Annual Carnegie Symposium on Cognition*, ed. Margaret Sydnor Clark & Susan T. Fiske, Hillsdale, New Jersey: Lawrence Erlbaum, pp. 3–36.
- Mano, Haim & Richard L. Oliver (1993), "Assessing the Dimensionality and Structure of the Consumption Experience: Evaluation, Feeling, and Satisfaction," *Journal of Consumer Research*, 20 (December), 451–466.
- Meyers-Levy, Joan & Alice M. Tybout (1989), "Schema Congruity as a Base for Product Evaluation," *Journal of Consumer Research*, 16 (June), 39–54.
- Meyers-Levy, Joan & Prashant Malaviya (1999), "Consumers' Processing of Persuasive Advertisements: An Integrative Framework of Persuasion Theories," *Journal of Marketing*, 63 (Special issue), 45–60.
- Millar, Murray G. (1992), "Effects of Experience on Matched and Mismatched Arguments and Attitudes," *Social Behavior and Personality*, 20 (1), 47–56.
- Millar, Murray G. & Karen U. Millar (1990), "Attitude Change as a Function of Attitude Type and Argument Type," *Journal of Personality and Social Psychology*, 59 (2), 217–228.
- Mitchell, Andrew A. & Jerry C. Olson (1981), "Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude?" *Journal of Marketing Research*, 18 (August), 318–332.

- Olney, Thomas J., Morris B. Holbrook & Rajeev Batra (1991), "Consumer Responses to Advertising: The Effects of Ad Content, Emotions, and Attitude toward the Ad on Viewing Time," *Journal of Consumer Research*, 17 (March), 440–453.
- Ozanne, Julie L., Merrie Brucks & Dhruv Grewal (1992), "A Study of Information Search Behavior during the Categorization of New Products," *Journal of Consumer Research*, 18 (March), 452–463.
- Peracchio, Laura A. & Alice M. Tybout (1996), "The Moderating Role of Prior Knowledge in Schema-Based Product Evaluation," *Journal of Consumer Research*, 23 (December), 177–192.
- Puto, Christopher P. & William D. Wells (1984), "Informational and Transformational Advertising: The Differential Effects of Time," in *Advances in Consumer Research*, Vol. 11, ed. Thomas C. Kinnear, Ann Arbor, Michigan: Association for Consumer Research, pp. 638–643.
- Rossiter, John R. & Larry Percy (1997), *Advertising Communications and Promotion Management*, Boston, MA: McGraw-Hill, second edition.
- Rossiter, John R., Larry Percy & Robert J. Donovan (1991), "A Better Advertising Planning Grid," *Journal of Advertising Research*, 31 (5), 11–21.
- Russell, James A. (1980), "A Circumplex Model of Affect," *Journal of Personality and Social Psychology*, 39 (6), 1161–1178.
- Stayman, Douglas M., Dana L. Alden & Karen H. Smith (1992), "Some Effects of Schematic Processing on Consumer Expectations and Disconfirmation Judgments," *Journal of Consumer Research*, 19 (September), 240–255.
- Sujan, Mita (1985), "Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgments," *Journal of Consumer Research*, 12 (June), 31–46.

- Vaugh, Richard (1980), "How Advertising Works: A Planning Model," *Journal of Advertising Research*, 20 (5), 27–33.
- Vaughn, Richard (1986), "How Advertising Works: A Planning Model Revisited," *Journal of Advertising Research*, 26 (1), 57–66.
- Wansink, Brian & Michael L. Ray (1996), "Advertising Strategies to Increase Usage Frequency," *Journal of Marketing*, 60 (January), 31–46.
- Zaichkowsky, Judit Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research*, 12 (December), 341–352.

TABLE 1 Conditions for the matching hypothesis

Conditions in which the matching hypothesis is likely to hold
<ol style="list-style-type: none">1. Weak brand attitudes2. Strong incongruity between brand and advertising3. Moderate incongruity between brand and advertising and advertising presents expected-irrelevant information4. Moderate incongruity between brand and advertising and advertising presents unexpected-irrelevant information
Conditions in which the matching hypothesis is not likely to hold
<ol style="list-style-type: none">1. Strong negative brand attitudes (assuming advertising contains positive brand information)2. Moderate incongruity between brand and advertising and advertising presents unexpected-relevant information

TABLE 2 Results of the manipulation checks

BRAND	Protect	Coolchew
PERCEPTIONS		
Utilitarian attributes	Protection against perspiration 5.34 Prolonged effect 5.15 ^a	Prevention of tooth decay 3.75 Contribution to dental hygiene 3.80 ^b
Hedonic attributes	Attractive impression on others 3.44 Seductive scent 3.61 ^a	Fresh and cool breath 6.47 ^c Active and trendy image 5.88 ^{b,c}
Product typicality	5.07	5.00
AD	Informational ads	Transformational ads
PERCEPTIONS		
Informational ad content	4.91 ^{d, f}	3.59 ^{e, f}
Transformational ad content	4.21 ^{d, g}	5.37 ^{e, g}
INCONGRUITY	Protect	Coolchew
PERCEPTIONS		
Informational ad	Ad typicality 6.61 ^h Expectancy 6.84 ^j Relevancy 4.21	Ad typicality 4.23 ^l Expectancy 5.10 ^k Relevancy 3.85
Transformational ad	Ad typicality 5.21 ^h Expectancy 6.05 ^j Relevancy 3.41	Ad typicality 5.68 ^l Expectancy 6.05 ^k Relevancy 4.35
Figures with the same superscripts differ significantly from each other.		

TABLE 3 Results of advertising effectiveness

Attitude towards the ad (Hypotheses 1 & 2)			
	Protect	Coolchew	Ad Type Average
Informational ad	3.08 (.237)	3.60 (.286)	3.34 (.186)
Transformational ad	4.84 (.220)	3.89 (.243)	4.37 (.164)
Brand attitude (Hypothesis 1 & 2)			
	Protect	Coolchew	Ad Type Average
Informational ad	4.07 (.298)	4.88 (.347)	4.48 (.229)
Transformational ad	4.06 (.277)	5.05 (.298)	4.56 (.203)
Total thoughts (Hypotheses 3 & 4)			
	Protect	Coolchew	Ad Type Average
Informational ad	3.58 (.280)	3.30 (.273)	3.44 (.195)
Transformational ad	4.14 (.260)	3.55 (.273)	3.84 (.188)
Incongruity-related thoughts (Hypotheses 3 & 4)			
	Protect	Coolchew	Ad Type Average
Informational ad	0.00 (.118)	0.45 (.115)	0.23 (.082)
Transformational ad	0.46 (.110)	0.00 (.115)	0.23 (.080)
Congruity-related thoughts (no hypotheses)			
	Protect	Coolchew	Ad Type Average
Informational ad	0.90 (.163)	0.30 (.159)	0.60 (.114)
Transformational ad	0.59 (.152)	0.75 (.159)	0.67 (.110)
Arousal (Hypotheses 5 & 6)			
	Protect	Coolchew	Ad Type Average
Informational ad	2.68 (.236)	3.26 (.285)	2.97 (.185)
Transformational ad	4.64 (.219)	4.35 (.243)	4.49 (.164)
Figures represent estimated marginal means (standard errors in parentheses).			

TABLE 4 Regression analyses of attitude toward the ad, and arousal

		PROTECT		COOLCHEW	
A_{ad}		β^a	p-value	β	p-value
	Constant	3.9	(.023)	3.352	(.002)
	Transformational	0.539	(.009)	0.228	(.073)
	Informational	-0.242	(.083)	-0.09	(.502)
	Ad typicality	-0.313	(.016)	-0.206	(.041)
R ² (adj.)		0.393		0.122	
F-Value		9.627	(.000)	2.756	(.057)
Arousal		β	p-value	β	p-value
	Constant	7.127	(.000)	3.070	(.024)
	Transformational	0.183	(.302)	0.304	(.065)
	Informational	-0.404	(.002)	-0.03	(.860)
	Ad typicality	-0.470	(.000)	-0.106	(.405)
R ² (adj.)		0.502		0.026	
F-Value		14.458	(.000)	1.333	(.279)

^a β denotes the non-standardized regression coefficient.

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