The Influence of Ad-Evoked Feelings on Brand Evaluations: Empirical Generalizations

from Consumer Responses to More Than 1,000 TV Commercials

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Abstract

It has been observed that ad-evoked feelings exert a positive influence on brand attitudes. To investigate the empirical generalizability of this phenomenon, we analyzed the responses of 1,576 consumers to 1,070 TV commercials from more than 150 different product categories. The findings suggest five empirical generalizations. First, ad-evoked feelings indeed have a substantial impact on brand evaluations, even under conditions that better approximate real marketplace settings than past studies did. Second, these effects are both direct and indirect, with the indirect effects largely linked to changes in attitude toward the ad. Third, these effects do not depend on the level of involvement associated with the product category. However, fourth, the effects are more pronounced for hedonic products than utilitarian products. Finally, these effects do not depend on whether the products are durables, nondurables, or services, or whether the products are search goods or experience goods.

Keywords: advertising, emotions, feelings, involvement, motivation; empirical generalizations

1   Revisiting the Effects of Ad-Evoked Feelings on Brand Evaluations

Twenty-five years ago, an influential series of controlled lab studies seemed to indicate that feelings evoked by advertisements have a positive influence on consumers' brand attitudes (Aaker, Stayman, & Hagerty, 1986; Batra & Ray, 1986; Edell & Burke, 1987; Holbrook & Batra, 1987). Everything else being equal, participants in these studies typically reported more favorable brand attitudes after viewing ads that elicited pleasant feelings than after viewing ads that elicited less pleasant feelings. These early findings have been replicated in a large number of studies with both television commercials and print advertisements (e.g., Baumgartner, Sujan, & Padgett, 1997; Burke & Edell, 1989; Derbaix, 1995; Miniard et al., 1991; MacInnis & Park, 1991; Morris et al., 2002). In a meta-analysis, Brown, Homer, and Inman (1998) found that the average correlation between ad-evoked feelings and brand evaluations was around $r = .35$ to $.40$, an effect that typically would be considered "medium to large" (Cohen, 1988).

The finding that brand attitudes can be substantially influenced by the mere emotional pleasantness of brand advertisements has obvious managerial implications: It would suggest that everything else being equal, marketers should generally try to improve the emotional pleasantness of their advertising. However, before this finding and its marketing implications can be accepted at face value and acted upon by managers, it is important to assess its *empirical generalizability* within the real world of brand advertising. To this end, two sets of issues need to be addressed.

First, because previous studies have focused primarily on the theoretical explanation of the phenomenon and therefore prioritized concerns for internal and construct validity, these studies have tended to compromise the external validity of their methodologies. For example, an important limitation of previous studies is that they were usually conducted among college students as opposed to more broadly representative samples of consumers (e.g., Machleit &

Wilson, 1988; Madden et al., 1988; Moore & Hutchinson, 1983; Stayman & Aaker, 1988). However, it has been observed that the correlation between ad-evoked feelings and brand attitudes tends to be stronger among students than among nonstudents (Brown & Stayman, 1992).

In addition, most of the classic studies involved rather limited pools of advertisements. For example, Edell and Burke (1987) examined ten and six commercials across studies. The limited pool of advertisements used in prior studies raises issues of potential selection bias. In particular, if the ad stimuli were specifically selected because of their emotional richness, prior studies may overstate the influence of ad-evoked feelings on brand evaluations in the real world. This potential selection bias is compounded by the fact that a number of previous studies relied on fictitious or unfamiliar ads and brands (e.g., MacKenzie & Lutz, 1989; Miniard et al., 1990; Olney et al., 1991; Park & Young, 1986), which tends to further amplify the observed influence of ad-evoked feelings on brand evaluations (e.g., Brown et al., 1998; Derbaix, 1995; see also Bakamitsos, 2006; Ottati & Isbell, 1996).

Finally, most of the previous studies (e.g., Batra & Ray, 1986; Edell & Burke, 1987; Burke & Edell, 1989; Stayman & Aaker, 1998) solicited measures of ad-evoked feelings and brand evaluations from the same respondents. Such repeated measurements raise significant issues of shared method variance, again likely to exaggerate the true effects of ad-evoked feelings on brand evaluations (see Feldman & Lynch, 1988). In summary, given the questionable external validity of most previous studies of the phenomenon, it is difficult to gauge the true magnitude of the effects of ad-evoked feelings on brand evaluations in the real world, with a distinct possibility that these effects may have been overstated.

A second set of issues pertains to the boundary conditions of the phenomenon. In particular, an important question for marketing professionals is whether these effects are generally true across product categories or are instead limited to certain product categories. For example, does

an emotional ad have similar effects on attitudes toward a brand of automobiles as opposed to a brand of financial services? Surprisingly enough, this type of question has yet to receive an adequate empirical answer. This is because the relatively small, convenience samples of advertisements—and hence brands and product categories—used in previous studies preclude a rigorous analysis of the generalizability of the phenomenon across product categories. As a result, there is an important gap between what marketing professionals need to know about the scope of the phenomenon and what previous research is able to substantiate.

The purpose of our research is to provide managerially relevant empirical generalizations about the effects of ad-evoked feelings on brand evaluations by (a) addressing key external-validity shortcomings of previous studies, and (b) assessing the generalizability of the phenomenon across product categories. Our investigation departs from previous studies in four major respects. First, instead of soliciting responses from college students, we collected responses from 1,576 consumers who were broadly representative of the Belgian population. Second, instead of using a small, convenience sample of advertisements, we used a total of 1,070 TV commercials for existing brands, constituting a near census of all commercials shown on Dutch-speaking Belgian television over a three-year period. Third, we used a design that does not require the measurement of ad-evoked feelings and brand evaluations from the same respondents. Finally, we explicitly examined potential product-category-level moderators of the effects of ad-evoked feelings on brand evaluations.

Our results show that even when major issues of external validity are addressed, ad-evoked feelings do have substantial positive effects on brand evaluations, with an effect size that is roughly comparable to that uncovered in previous studies. These effects hold even after controlling for attitude toward the ad (Aad) and cognitive beliefs, suggesting that ad-evoked feelings have direct effects on brand evaluations. The effects appear to be stronger for products

typically associated with hedonic motives than for products typically associated with utilitarian motives. However, we found little evidence that these effects depend on whether the product is typically associated with high versus low consumer involvement, whether the product is a durable, a nondurable, or a service, and whether the product is a search or experience good.

2   Conceptual Background

2.1   *Major Theoretical Explanations*

Four major theoretical explanations can be advanced for the effects of ad-evoked feelings on brand evaluations. The first is that these effects are mediated by changes in consumers' attitude toward the ad. Ads that evoke more pleasant feelings are typically preferred to ads that evoke less pleasant feelings. Favorable attitudes toward the ad (Aad) translate into favorable attitudes toward the brand (Ab) through a carryover process known as "affect transfer" (MacKenzie, Lutz, & Belch, 1986). Consistent with this explanation, some studies have found that the effects of ad-evoked feelings on brand evaluations are fully mediated by their effects on Aad (e.g., Batra & Ray, 1986; Holbrook & Batra, 1987; MacInnis & Park, 1992). Other studies, however, have found only partial mediation (e.g., Burke & Edell, 1989; Stayman & Aaker, 1988), suggesting that additional processes may be at work.

The second explanation posits that these effects are mediated by differences in the beliefs and thoughts that consumers have about the brand. Compared to ads that elicit less pleasant feelings, ads that elicit more pleasant feelings may trigger more positive beliefs and thoughts about the brand, which, when integrated into summary evaluations, would result in more favorable brand attitudes (e.g., Burke & Edell, 1989; Fishbein & Middlestadt, 1995). This second explanation is consistent with research suggesting that immediate feelings toward a target tend to bias subsequent thoughts about the target in the direction of these feelings (e.g., Batra & Stayman, 1990; Pham et al., 2001; Yeung & Wyer, 2004), and with research showing that

affective states tend to activate affect-consistent materials in memory (Bower, 1981; Isen et al., 1978). In line with this explanation, some studies have found that the effects of ad-evoked feelings on brand evaluations are largely mediated by changes in brand beliefs and thoughts (e.g., Burke & Edell, 1989; Cho & Stout, 1993; Edell & Burke, 1987), although other studies indicate that the effects of ad-evoked feelings remain substantial after controlling for brand beliefs (Morris et al., 2002).

The third explanation is that the effects are due to a more automatic process of evaluative conditioning (De Houwer, Thomas, & Baeyens, 2001). Specifically, the mere pairing of a brand with the feelings evoked by an ad may result in the valence of these feelings being associatively incorporated into the brand evaluations (Gorn, 1982; Jones, Olson, & Fazio, 2010). This explanation would be consistent with studies indicating *direct* effects of ad-evoked feelings on brand evaluations after controlling for Aad and brand beliefs (e.g., Burke & Edell, 1989; Cho & Stout, 1993; Homer & Yoon, 1992).

A final explanation is a more inferential process of "affect-as-information" (Schwarz & Clore, 1983, 2007). Given that people often make judgments by inspecting their momentary feelings and asking themselves, "How do I feel about it?" (see Pham, 2004, and Schwarz & Clore, 2007, for reviews), it is possible that consumers interpret their momentary feelings experienced during ad exposure as being indicative of how much they like or dislike the advertised brand. This process is distinct from affect transfer and evaluative conditioning in that the how-do-I-feel-about-it (HDIF) process is inferential, whereas affect transfer and evaluative conditioning are purely associative. The HDIF process is also different from a belief- and thought-priming process in that feelings enter judgments directly, rather than indirectly through a change in beliefs and thoughts.

In summary, ad-evoked feelings can influence brand evaluations through at least four different processes. Given that these processes are probably not mutually exclusive and are instead likely to operate jointly, one would predict that *ad-evoked feelings are likely to have substantial positive effects on brand evaluations in the real world,* even when major threats to external validity are addressed. Moreover, *these effects are likely to be both direct and indirect*.

2.2 *Potential Product-Category-Level Moderators*

Given that the purpose of our research is to identify empirical generalizations that are actionable from a managerial standpoint, we focus our analysis of boundary conditions on potential moderators of the phenomenon that are at the product-category level rather than at the individual-consumer level. This is because marketing professionals typically do not know with precision the psychological states of individual consumers, but do know the general characteristics of the product category being advertised. In our study we investigate four potential category-level moderators of the effects of ad-evoked feelings on brand evaluations: (a) whether the product category is typically associated with low or high levels of consumer involvement; (b) whether the product category is typically associated with hedonic versus utilitarian consumption motives; (c) whether the advertised product is a durable, a nondurable, or a service; and (d) whether the product is a "search good," whose quality can be determined by examination prior to purchase (e.g., curtains, credit cards), or an "experience good," whose quality can only be determined through actual consumption (e.g., diet programs, pre-prepared meals) (Nelson, 1970).

With respect to a potential moderating role of involvement typically associated with the product category, some studies suggest that the effects of ad-evoked feelings on brand evaluations may be stronger under conditions of lower consumer involvement than under conditions of higher consumer involvement (Batra & Stephens, 1994; Brown & Stayman, 1992; MacInnis & Park 1991; Madden et al., 1988). If ad-evoked feelings operate as "peripheral cues,"

this finding would be consistent with a popular prediction in the persuasion literature that low involvement tends to increase the influence of peripheral or heuristic cues on attitudes (Eagly & Chaiken, 1993; Petty & Cacioppo, 1986). However, other considerations would suggest that when assessed at the product-category level (as done in popular planning frameworks) and examined under conditions of greater external validity, involvement many *not* moderate the effects of ad-evoked feelings on brand evaluations. First, the studies that found increased effects of ad-evoked feelings under low involvement have typically used strong instruction-based manipulations of consumer involvement (e.g., explicit instructions to evaluate the advertised brand vs. instructions to simply watch the ad). It is not clear that "natural" variations in involvement across product categories would be strong enough to produce the type of moderation effects observed in these studies. Second, while certain product categories (e.g., cars) are *on average* typically more involving than others (e.g., soaps), individual consumers may still vary considerably in their level of involvement with a given product category (e.g., cooking oil for a casual cook versus a professional chef) (Bloch & Richins, 1983). The considerable heterogeneity across consumers in their level of involvement with a given product category would tend to attenuate differences in typical involvement across product categories. Finally, some research suggests that feelings may influence judgments under conditions of *both* low involvement and high involvement, albeit through different processes. Whereas under low involvement, ad-evoked feelings may influence brand evaluations through heuristic mechanisms such as affect transfer, evaluative conditioning, or the HDIF heuristic, under high involvement, ad-evoked feelings may influence brand evaluations by shaping the beliefs and thoughts that consumers have about the brand (Albarracín & Wyer, 2001; Batra & Stayman, 1990; Forgas, 1995; Petty et al., 1993). In other words, involvement may affect the *process* by which ad-evoked feelings influence brand evaluations rather than the *extent* to which they influence brand evaluations. In summary, *it is not*

clear whether in real-world settings the effects of ad-evoked feelings on brand evaluations would depend on the level of involvement typically associated with the product category.

With respect to the type of consumption motive, hedonic versus utilitarian, typically associated with the product category, several considerations lead us to predict that it will moderate the effects of ad-evoked feelings on brand evaluations. Specifically, *the effects of ad-evoked feelings on brand evaluations are likely to be more pronounced for products that are typically associated with hedonic motives than for products that are typically associated with utilitarian motives*. Although this prediction makes intuitive sense and was the rationale for the distinction made in the FCB grid between "think" and "feel" products (Vaughn, 1980, 1986), it has received scant empirical testing in the academic literature. Nevertheless, indirect evidence consistent with this proposition can be found in the literature on incidental mood effects on consumer judgments, which consistently shows that consumers are more influenced by their mood states when they have hedonic motives than when they have utilitarian motives (e.g., Chang & Pham, 2013; Pham, 1998; Pham, Meyvis, & Zhou, 2001). This finding is also observed when comparing the evaluation of hedonic products to the evaluation of utilitarian products (Adaval, 2001; White & McFarland, 2009; Yeung & Wyer, 2004). Therefore, unlike with involvement, we expect to observe this greater influence of feelings among consumers with hedonic as opposed to utilitarian motives extended to settings where these motives are defined at the category level rather than at the individual consumer level. This is because we expect greater homogeneity across consumers in type of motives that they associate with different product categories than in level of involvement with these same product categories.

Two additional product-category characteristics are examined here as potential moderators of the effects of ad-evoked feelings on brand evaluations: whether the product is a durable, a nondurable (e.g., FMCG), or a service; and whether the product is a search good or an experience

good. While the literature does not suggest strong a priori predictions about these two product characteristics as moderators of the effects of ad-evoked feelings, they are worth studying on an exploratory basis because they have proven to be important moderators of the impact of advertising in general (Vakratsas & Ambler, 1999; see also Hanssens, 2009). Indeed, it has been found that the impact of advertising is greater for experience goods than for search goods, and that this impact may be 50 percent higher for durable goods than for nondurable goods (see Vakratsas in Hanssens, 2009). It has also been found that marketers tend to use different types of advertising for search goods than for experience goods (Nelson, 1970, 1974). It is therefore conceivable that the effects of ad-evoked feelings on brand evaluations might be different depending on these two product-category characteristics.

3 Empirical Study

Our study examines (a) how emotional feelings evoked by a large pool of TV commercials influence the brand evaluations of a representative set of adult consumers, and (b) how this influence is moderated by four different product-category-level characteristics. Three important aspects of our investigation should be noted. First, our investigation seeks to better approximate marketplace settings than previous studies generally did. Second, our investigation focuses on the ads themselves, rather than the consumers, as the main units of analysis (as in Holbrook & Batra, 1987). This is because advertisers have greater control over the contents of their ads than over consumers' responses to these ads. Third, our investigation focuses on product-category-level moderators of the phenomenon, rather than on consumer-level moderators within a category. This is because marketers typically know the general characteristics of the product category but not the specific states of individual consumers. Thus, our research questions are considered at the following level: "Does the emotional pleasantness of ad X influence attitudes toward brand Y,

given that Y belongs to product category Z?," which is the way brand managers and advertising executives would contemplate such questions.

3.1 Method

As in Holbrook and Batra (1987), our study relied on an aggregate-covariation design in which the units of analysis were different TV commercials to which the consumers were exposed. A large sample of consumers watched a large number of TV commercials, then reported their attitude toward each advertised brand (Ab) and toward each ad (Aad). The emotions evoked by each commercial were coded by an independent set of judges, and the major characteristics of each product category (involvement, motive, durability, search/experience) were coded by another set of judges. The various responses were averaged across respondents and judges, and the covariation across these responses was modeled across commercials. In addition to being more relevant from a managerial standpoint, this design significantly reduces problems of shared method variance that arise when all the measures are collected from the same respondent (Holbrook & Batra, 1987; see also Pham et al., 2001).

3.1.1 Advertising Stimuli

The data were collected in two waves, with the help of a market research firm. For the first wave, we secured a census of all the different brand commercials that aired on a major Dutch-speaking Belgian TV channel over a two-year period. For the second wave, conducted three years later, we secured another census of all brand commercials that aired on a different Dutch-speaking Belgian TV channel over a one-year period. From each census, we excluded commercials directed at children (because respondents were adult consumers), as well as short promotional messages of less than 30 seconds. Ads for "umbrella" brands (e.g., P&G) that were not linked to a specific product category were also excluded. The final stimulus set consisted of a

total pool of 1,070 commercials (407 for wave 1 and 663 for wave 2), featuring 318 different

brands (national and international) across 153 different product categories (e.g., beer, credit

cards, diapers, coffee, laundry detergents, cars, computers, etc.). This pool of ads is broadly

representative of the full spectrum of brand commercials directed at adult Belgian consumers.

The dataset's summary characteristics are presented in Table 1.

3.1.2 Respondents

Respondents were 1,576 Dutch-speaking Belgian consumers who were recruited via TV

ads on the same channels and received about US$25 for their participation. The recruiting ads

generated more than 3,000 initial responses for each wave. Of the initial respondents, 1,000 were

selected in each wave and invited to participate in the study to form a broadly representative

sample of adult Belgian consumers. Of those invited, 854 consumers eventually participated in

wave 1 and evaluated the first pool of 407 commercials, and 839 consumers participated in wave

2 and evaluated the second pool of 663 commercials. However, due to a variety of factors

explained below, only 722 of the 839 wave-2 respondents were retained for the analyses. The

demographics of the 1,576 eventual consumer respondents are summarized in Table 1.

<div align="center">"Insert Table 1 about here"</div>

3.1.3 Procedure and Consumer-Response Measures

The procedure and measures were essentially parallel across the two waves, except for

slight differences. In both waves groups of 20 to 30 respondents were invited at regular intervals

to a research facility. Each group was shown a subset of the stimulus commercials, one

commercial at a time, and asked to rate their responses after viewing each commercial. Two

sequences of each subset of ads were used across sessions. Wave-1 respondents were shown

about 20 commercials on average ($M = 20.14$, $SD = 5.64$), whereas wave-2 respondents were

shown about 50 commercials on average, with the number of commercials varying considerably

across sessions ($M = 48.73$; $SD = 23.33$). (The substantially greater number of commercials shown to wave-2 respondents, which was beyond our control, resulted in lower data quality for the second wave, which necessitated some data purification, as explained below.)

As detailed in Table 2, the consumer respondents completed three main measures for each ad: (a) their attitude toward the ad (Aad), (b) their cognitive assessment of the ad (CogAss) to control for cognitive-belief effects of the ad, and (c) their attitude toward the brand (Ab) as the main dependent measure in this study. Each ad was rated by an average of 43 consumers. These Aad, cognitive assessments (CogAss), and Ab ratings were averaged across respondents to form 1,070 aggregate ad-level observations. To verify that the responses were sufficiently homogeneous across respondents, we computed α-coefficients of inter-respondent agreement for each individual item (Holbrook & Batra, 1987; Pham et al., 2001). As shown in Table 2, the inter-respondent agreement coefficients were high for all items in each of the two waves, thereby justifying an aggregation of the Ab, Aad, and CogAss responses across respondents.

<div align="center">"Insert Table 2 about here"</div>

3.1.4 Ad Emotional Content and Creativity

Two independent groups of judges (12 judges for wave 1 and 24 judges for wave 2)—graduate students in marketing who were blind to the study's hypotheses—rated the emotional content and creativity of each ad (see Table 3 for details). There were six judges per ad. Each wave-1 judge coded half of the wave-1 ads, whereas each wave-2 judge coded one quarter of the wave-2 ads. The ad sequence was rotated across judges. After viewing each ad, the judges first rated the extent to which the ad made them feel various emotions (e.g., excited, sentimental) on a series of 1 (not at all) to 7 (very much) scales, with the order of the items rotated across judges. Given that the vast majority of TV commercials in Belgium are positively valenced, we measured only positive emotions (i.e., warmth-type, excitement-type, and happiness/cheerfulness-type

feelings, cf. Burke & Edell, 1989; Edell & Burke, 1987; Holbrook & Batra, 1987). To control for the possibility that ratings of emotional responses to the ads may reflect some other aspects of the ads, such as their originality or creativity, the judges were also asked to rate the ads in terms of creativity.

Again, there was substantial inter-judge agreement in terms of how the different judges rated both the emotional content and the creativity of the ads, justifying their averaging across judges for each ad. Although the emotional-content items were expected to capture different types of positive emotions (warmth, excitement, and happiness), a factor analysis of the judges' average responses to the individual emotional items suggested a single dominant positive-emotion factor, accounting for 71.1 percent of the variance across items in wave 1 and for 77 percent of the variance across items in wave 2. Consequently, we computed a single-factor score of positive emotion for each ad, which served as the main independent variable at the aggregate level. With respect to the ad creativity items, the ratings across judges were also internally consistent across items and were therefore averaged to form a single score of creativity for each ad.

<center>"Insert Table 3 about here"</center>

3.1.5 Product-Category-Level Involvement and Motivation Type

To test potential product-category-level moderators of the effects of ad-evoked emotional feelings, two other sets of six judges (who were also blind to the hypotheses) coded the 153 product categories represented in the ads. The first set of judges coded the 93 product categories featured in the wave-1 ads, whereas the second set of judges coded an additional 60 categories featured in wave-2 ads that were not included in the wave-1 ads. Unlike the other judges, these judges did not watch the ads. Instead, they were simply given the names of the product/service categories (e.g., "cell phones," "employment agency," "pizza," "paper towels") and asked to rate

each category on five semantic differential items assessing product involvement (based on

Laurent & Kapferer, 1985; Zaichkowsky, 1985) and five semantic differential items assessing

hedonic versus utilitarian motives (adapted from Dhar & Wertenbroch, 2000, and Voss,

Spangenberg, & Grohmann, 2003) (see Table 3). The order of both the product category names

and the coding items was rotated across judges. Inter-judge agreement on each of these items was

again high, justifying an aggregation across judges. In both wave 1 and wave 2 a factor analysis

of the 10 averaged items revealed two separate factors: the five hedonic-utilitarian items loaded

on the first factor (wave 1: 45.7% and wave 2: 51.86% of the variance), and the five involvement

items loaded on the second factor (wave 1: 38.8% and wave 2: 31.57% of the variance). The

factor scores served as independent variables at the aggregate level.

3.1.6 Durable–Nondurable–Service and Search–Experience Product Categorization

Finally, another set of four judges was asked to categorize each of the 153 product

categories into (1) "a durable product, that is, a tangible product that lasts some time, such as

refrigerators," (2) "a nondurable product, that is, a tangible product that usually is fully consumed

in one or a few uses, such as beer or soap," or (3) "a service, that is, an intangible, inseparable,

variable, and short-term provided product such as a haircut or a phone subscription" (inter-judge

agreement = 97.4%; disagreements resolved by majority rule). The same four judges additionally

rated the extent to which each of the 153 product categories was a search good or an experience

good using two 5-point semantic differential scales inspired by Nelson (1970, 1974): (1) "This is

a product for which it is easy for the consumer to evaluate the quality before the purchase by

inspection (e.g., clothing, cookware, luggage, furniture, etc.)" versus "This is a product for which

consumers (who have not tried the brand before) can only evaluate the quality after the purchase

by consuming and experiencing the product (e.g., beer, food, movies, tennis rackets)"; and (2)

"the quality of this product or service is pretty obvious even without trying it" versus "The

quality of this product or service can only be determined by trying it and experiencing it." The order of both the product category names and the coding items was rotated across judges. Inter-judge agreement was $\alpha = .78$ for both items, again justifying an aggregation.

3.1.8 Data Purification of Wave 2

Although the overall pattern of data was generally consistent across data-collection waves, preliminary analyses indicated a substantially greater level of noise in the second wave. We attribute this greater noise to the fact that respondents in the second wave had to watch and evaluate on average more than twice as many commercials as respondents in the first wave (for example, many wave-2 respondents evaluated between 75 and 101 commercials). Because different respondents saw a different number of ads and because the order in which the ads were seen by individual respondents was not available to us, it was not possible to restrict our analyses to the first 20 or so advertisements that each wave-2 respondent evaluated. Therefore, in order to make the wave-2 data more comparable in terms of quality with the wave-1 data, the former were purified as follows. First, we eliminated any responses to a given ad by a given respondent that indicated a clear lack of care through either two or more missing values across items or identical responses across all items (e.g., 5, 5, 5, 5…). This resulted in the elimination of 8,325 out of 41,320 total observations (20.2%). Next, we estimated whether respondents were diligent in their responses or responded quasi-randomly by fitting, for each respondent, a regression model in which the respondent's attitude toward a given brand was to be explained by the respondent's attitude toward the ad (Aad) and the respondent's brand familiarity. Any respondent whose regression R^2 was less than .10 was considered to be a quasi-random responder and thus dropped from the data. This resulted in the further elimination of 2,794 observations (6.8%) from 77 respondents. Finally, we restricted the data to those respondents who showed a strong degree of internal consistency of .80 in Aad responses across advertisements. This resulted in the further

elimination of 1,522 observations (3.7%). The purified wave-2 data set thus consists of 28,679

observations (69.4%) from 722 respondents evaluating a total of 663 commercials.[i]

3.2   *Results*

Tables 4 and 5 report descriptive statistics for all the variables, along with the simple

correlations among them. Because a significant proportion of the brands had more than one

commercial and because different brands would often share the same product category (e.g.,

Nissan and Mercedes), the data were analyzed in a series of multilevel regression models in

which emotional responses and their potential mediators and moderators were treated as fixed

effects, and brand and product-category effects were modeled as random intercepts with the

brand effects nested in product category. These three-level models, with ads nested in brands and

brands nested in product categories, adjust for any data dependencies that may exist across ads

for the same brands and across brands within the same product category (simpler OLS regression

models produced largely similar results). All predictors in the models were mean-centered, with

the effects of ad-evoked feelings, involvement, and hedonic versus utilitarian motives being

additionally standardized as factor loadings.

<div align="center">"Insert Tables 4 and 5 about here"</div>

3.2.1   *Effects of Ad-Evoked Feelings*

Table 6 summarizes the results of four models testing the basic effects of ad-evoked feelings

on brand evaluations and the potential mediators of these effects. The results of Model 1, the

"basic-feeling-effect model," show that even under conditions of greater external validity, ad-

evoked feelings indeed have a substantial influence on brand evaluations ($\beta = .486$, $t = 13.69$, p

$< .001$). Interestingly, the simple correlation between ad-evoked feelings and brand evaluations

was $r = .331$, which is roughly of the same magnitude as what had been observed in a meta-

analysis of previous studies (Brown et al., 1998). Therefore, it appears that the basic effects are of

genuinely substantial size and are *not* driven by methodological artifacts such as the use of student respondents, a selection bias in the ads used, and shared method variance due to the repeated measurement of respondents. However, a significant interaction with wave ($\beta = .279$, $t = 8.16$, $p < .001$) indicated that the effects of ad-evoked feelings were substantially stronger in wave 1 than they were in wave 2 (see also Tables 4 and 5). The difference between the two waves could be due to a genuine difference in the strength of the effects depending on the pool of advertisements studied or to methodological differences between the two waves (e.g., in wave 2 respondents evaluated a much larger number of ads and ad-evoked feelings were assessed with fewer items). (As reported in Table 6, several other interactions with wave were uncovered in models 2-4. These interactions are not discussed here because of their lower theoretical and substantive importance.)

"Insert Table 6 about here"

The results of Model 2, the "Aad-mediation model," show that respondents' attitudes toward the ads (Aad) are strong predictors of their attitudes toward the brands (Ab) ($\beta = .692$, $t = 18.07$, $p < .001$) (cf. McKenzie et al., 1986; Mitchell & Olson, 1978). The results additionally show that the effect of ad-evoked feelings is substantially reduced when respondents' attitudes toward the ads are controlled for ($\beta = .486 \rightarrow \beta = .108$), though the effect remains significant ($t = 2.81$, $p = .005$). Thus, according to Alwin and Hauser's (1975) simple formula, as much as 78 percent of the effects of ad-evoked feelings on brand evaluations ($[.486 - .108]/ .486 = 0.78$) may be mediated by changes in Aad. This result is consistent with the notion that effects of ad-evoked feelings on brand evaluations are largely mediated by their effects on ad attitudes, as suggested by various authors (e.g., Batra & Ray, 1986; Holbrook & Batra, 1987; MacInnis & Park, 1992), but the mediation is not complete, as suggested by other authors (e.g., Burke & Edell, 1989; Stayman & Aaker, 1988).

The results of Model 3, the "cognitive-assessment and Aad-mediation model," show that while respondents' cognitive assessments of the ads influenced their brand evaluations ($\beta = .599$, $t = 8.83$, $p < .001$), these assessments did not attenuate the effects of ad-evoked feelings on brand evaluations ($\beta = .162$, $t = 4.31$, $p < .001$). Although these cognitive assessments of the ads are not actual measures of brand beliefs, this finding seems somewhat inconsistent with a pure belief-based explanation of the phenomenon.

Finally, the results of Model 4, the "ad-creativity-confound model," show that the direct effects of ad-evoked feelings on brand evaluations remain ($\beta = .199$, $t = 4.83$, $p < .001$) even after controlling for differences in ad creativity ($\beta = -.081$, $t = -2.32$, $p = .02$). This finding suggests that the observed effects of ad-evoked feelings are not confounded by executional elements of the ads such as their creativity.

Overall, the results of these initial analyses support two empirical generalizations. First, *even under conditions of greater external validity, ad-evoked feelings exert a substantial positive influence on brand evaluations* (EG1). Second, *ad-evoked feelings have both direct and indirect effects on brand evaluations, with the indirect effects being stronger and largely linked to changes in Aad* (EG2).

3.2.2   Product-Category Moderators of the Effects of Ad-evoked Feelings

Table 7 summarizes the results of five models testing the potential product-category-level moderators of the effects of ad-evoked feelings on brand evaluations. The results of Model 5, the "involvement-moderation model," indicate that while category-level involvement has a "main" effect on brand evaluations—brand evaluations were less favorable for high-involvement products than for low-involvement products ($\beta = -.408$, $t = -7.69$, $p < .001$)—it did not moderate the effects of ad-evoked feelings on brand evaluations ($\beta = -.021$, $t = -0.82$, $p = .414$).

<center>"Insert Table 7 about here"</center>

The results of Model 6, the "hedonic/utilitarian-moderation model," indicate that the effects of ad-evoked feelings on brand evaluations were marginally stronger for product categories typically associated with hedonic motives than for product categories typically associated with utilitarian motives ($\beta = .054$, $t = 1.75$, $p = .081$). This finding was not qualified by an interaction with wave ($\beta = .033$, $t = 1.09$, $p = .275$).

Because popular planning models such as the FCB grid and the Rossiter-Percy grid (Rossiter, Percy, & Donovan, 1991) generally conceptualize the advertising effects of product involvement and product motive (hedonic vs. utilitarian) in a two-dimensional space, Model 7, the "involvement- and hedonic/utilitarian-moderation model," tests jointly for the moderating effects of category-level involvement and type of motive. The results again indicate that product-category-level involvement does not moderate the effects of ad-evoked feelings on brand evaluations ($\beta = -.041$, $t = -1.49$, $p = .137$). However, the type of motive does moderate the effects of ad-evoked feelings on brand evaluations, with the effects being stronger for product categories typically associated with hedonic motives than for product categories typically associated with utilitarian motives ($\beta = .078$, $t = 2.49$, $p = .013$) (see Figure 1). Spotlight analyses (Aiken & West, 1996) show that the effect (slope) of ad-evoked feelings was significant for the relatively more hedonic product categories (slope $= .350$, SE $= .053$, $t = 6.57$, $p < .001$), but only marginally significant for the relatively more utilitarian product categories (slope $= .098$, SE $= .056$, $t = 1.74$, $p = .082$). Again, the effects were not qualified by an interaction with wave ($\beta = .049$, $t = 1.59$, $p = .112$). (There was no three-way interaction among feelings, involvement, and type of motive [$\beta = -.038$, $t = -1.10$, $p = .231$].)

"Insert Figure 1 about here"

Overall, the results of Models 5 through 7 support two additional empirical generalizations. First, *the effects of ad-evoked feelings on brand evaluations do not appear to depend on the level*

of involvement typically associated with the product category (EG3). Second, *the effects of ad-evoked feelings on brand evaluations are more pronounced for products typically associated with hedonic motives than for products typically associated with utilitarian motives* (EG4).

The results of Model 8, the "product-durability-moderation model," indicate that while brand evaluations were more favorable for nondurable products than for durable products ($\beta = .601$, $t = 3.15$, $p = .002$), the effects of ad-evoked feelings on brand evaluations did not depend on whether the product was a durable, a nondurable, or a service ($\beta = .111$, $t = 1.21$, $p = .226$; $\beta = .025$, $t = 0.25$, $p = .805$). Similarly, the results of Model 9, "the search/experience-moderation model," indicate that while brand evaluations were more favorable for experience products than for search products ($\beta = .250$, $t = 3.40$, $p = .001$), the effects of ad-evoked feelings on brand evaluations did not depend on whether the product was a search good or an experience good ($\beta = .047$, $t = 1.30$, $p = .195$). Thus, even though the two general product characteristics have been found to be important moderators of the overall effectiveness of advertising (Vakratsas in Hanssens, 2009), *product durability and the search-versus-experience nature of the good do not appear to moderate the effects of ad-evoked feelings on brand evaluations* (EG5).[ii]

The results of the final model, Model 10 (the "full model"), support the inferences suggested the more restricted models. Category-level involvement did not moderate the effects of ad-evoked feelings on brand evaluations ($\beta = -.043$, $t = -1.39$, $p = .165$), but the effects of ad-evoked feelings were marginally stronger for hedonic products than for utilitarian products ($\beta = .060$, $t = 1.72$, $p = .085$). (The three-way interaction among ad-evoked feelings, involvement, and motive was not significant: $p = .135$.) The interactions between ad-evoked feelings and the product-type dummies were not significant (t's < 1), suggesting that the effects of ad-evoked feelings did not depend on whether the product was a durable, a nondurable, or a service. Finally, there was no

interaction between ad-evoked feelings and whether the product was a search good or an experience good ($t < 1$).

4   General Discussion

Considering the practical significance of the effects of ad-evoked feelings on brand evaluations, it is somewhat surprising that the empirical generalizability of this phenomenon—in terms of both external validity and boundary conditions across product categories—had yet to be systematically investigated. Our study addresses this void by analyzing consumer responses to a total of 1,070 brand TV commercials from more than 150 different product categories. Unlike previous studies that often involved student respondents, limited albeit convenient samples of often fictitious ads, and repeated measurement of respondents, our study (a) examined the evaluation responses of a large and broadly representative sample of actual consumers, (b) was based on a virtual census of all ads (for real brands) shown by two national TV channels during a three-year period, and (c) used a design that reduces issues of shared method variance.

The results show that even under conditions that are closer to marketplace settings than most previous academic studies, ad-evoked feelings indeed have a substantial impact on brand evaluations (EG1). The effect size was in fact quite comparable to that found in a meta-analysis of these earlier studies (Brown et al., 1998). The results additionally show that the effects of ad-evoked feelings on brand evaluations are both direct and indirect, with the indirect effects being substantially stronger and largely linked to a change in Aad (EG2). The finding that ad-evoked feelings have *both* direct and indirect effects helps reconcile previously conflicting results that documented either one or the other.

Important additional results pertain to the category-level moderators of the phenomenon. First, we found little evidence of a moderating role of product-category-level involvement (EG3).

Given the very large number of observations in our study and the recorded reliability of the measures, we believe that this lack of moderating effect of category-level involvement is more than an artifact of poor measurement or low statistical power. Rather, it is a substantive and generalizable result. We suspect that natural variations in consumer involvement as a function of product category are not very strong in the real world due to substantial inter-consumer heterogeneity in involvement within a product category. In addition, it is possible that feelings can influence judgments under conditions of both low involvement and high involvement, albeit through different mechanisms.

Second, while the level of involvement with the product category does not appear to significantly moderate the effects of ad-induced feelings on brand evaluations, the type of motive typically associated with the category does. The effects of ad-induced feelings on brand evaluations appear to be significantly more pronounced when the product category is more hedonic than when it is more utilitarian (EG4). This is consistent with research in the affect-as-information literature indicating that consumers are more likely to rely on their momentary feelings in judgments and decisions when they have experiential motives than when they have instrumental motives (Pham, 1998; see also Adaval, 2001; Yeung & Wyer, 2004).

Although our study design does not allow for strong process inferences, this finding has potential theoretical implications for research on both the basic phenomenon and the affect-as-information framework. With respect to the former, our findings suggest that the robust effects of ad-evoked feelings on brand evaluations may not be driven solely by affect transfer, evaluative conditioning, and differences in brand beliefs and thoughts, as previously suggested. The phenomenon may also be driven by HDIF inferences during ad exposure, whereby consumers may interpret their feeling responses to the ad as indicative of how much they like or dislike the brand. With respect to the affect-as-information literature, it is important to note that in our

studies consumers who were not explicitly asked to assess their feelings toward the various brands nevertheless appeared to incorporate ad-evoked feelings selectively as a function of the type of motive typically associated with the advertised product category. This finding may suggest that the selective reliance on feelings as a function of their relevance for the judgment at hand is a very spontaneous and flexible process that is much more flexible than conceptualized in early affect-as-information research (Schwarz & Clore, 1983).

Finally, while product durability and the search-versus-experience nature of the good have been found to be important moderators of the overall impact of advertising, we found no evidence that these two general product characteristics play any role in moderating the effects of ad-evoked feelings on brand evaluations (EG5).

One obvious limitation of the study is that because the units of analysis were at the aggregate ad level, rather than at the individual respondent level, the results do not allow strong theoretical inferences about the actual psychological processes at work. In addition, it would have been useful to control for prior brand attitude, which we were unable to do with these data. Moreover, given evidence of qualitative difference among distinct emotions (e.g., Batra & Ray, 1986; Raghunathan, Pham, & Corfman, 2006), it would also have been interesting to distinguish among subtypes of ad-evoked feelings, which was not possible here because the subtypes of feelings that we assessed were too correlated.

Our findings have obvious managerial implications. Advertisers do benefit substantially from advertisements that elicit pleasant emotional feelings, not only in terms of greater ad liking, but more importantly in terms of more favorable brand attitudes. The total effects of ad-evoked feelings on brand evaluations are substantial. In addition, they appear to be rather general across product categories. They apply equally to (a) low- and high-involvement products, (b) durable products, nondurable products, and services, and (c) search and experience products. However,

the effects are more likely to occur in product categories typically associated with hedonic motives than in product categories typically associated with utilitarian motives. While one could think that the latter proposition should be obvious to advertisers, there is evidence that it is not. For example, it has been found that although food products are typically associated with hedonic and experiential motives in consumers' minds, food advertisers still tend to rely on informational appeals rather than more emotional ones (Dube, Chattopadhyay, & Letarte, 1996). Hence the importance of revisiting what is assumed to be known, even after 25 years.

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TABLE 1.

Dataset Characteristics

		WAVE 1	WAVE 2	TOTAL
# ads		407	663	1070
# products		93	122	153
# brands		197	312	318
# respondents		854	722	1576
Gender	% men	46.7	44.7	45.8
	% women	53.3	55.3	54.2
Age	% 15-24	46.9	23.5	36.3
	% 25-34	20.0	22.2	21.0
	% 35-44	21.6	34.7	27.5
	% 45-55	11.5	19.6	15.2
Education	% vocational school degree	40.3	23.7	31.2
	% high school degree	37.8	55.2	47.3
	% technical or community college degree	17.5	12.9	15.4
	% university degree	4.4	8.1	6.2

TABLE 2.

Consumer Respondent Measures

	WAVE 1		WAVE 2	
	Inter-respondent agreement (range)	Inter-item consis-tency	Inter-respondent agreement (range)	Inter-item consis-tency
Aad		.91		.94
▪ "I like this ad"	.80 - .96		.77 - .98	
(Wave1: 1=not at all; 10=very much; Wave2: -3= totally disagree, +3=totally agree)				
▪ "The ad is well made"	.81 - .96		.76 - .94	
(Wave1: 1=totally disagree; 7=totally agree; Wave2: -3=totally disagree, +3=totally agree)				
▪ "My general evaluation of the ad is…"	.81 - .97		.77 - .93	
(Wave1: 1=very negative; 7=very positive; Wave2: -3=very negative, +3=very positive)				
Cognitive assessment		.81		
▪ "The ad gives useful information"	.81 - .94		.79 - .93	
(Wave1: 1=totally disagree; 7=totally agree; Wave2: -3=totally disagree, +3=totally agree)				
▪ "The ad is believable"	.77 - .94			
(Wave1: 1=totally disagree; 7=totally agree; Wave 2: item not measured)				
Ab		.74		.85
▪ "My evaluation of the brand is…"	.68 - .94		.68 - .93	
(Wave 1: 1=very negative; 7=very positive; Wave 2: -3=very negative, +3=very positive)				
▪ "If I need the product, I would buy this brand" [#]	.77 - .95		.79 - .96	
(Wave 1: 1=certainly not; 4=certainly; Wave 2: -3=totally disagree, +3=totally agree)				

[#] Although this item can be seen as a measure of behavioral intention, we treat it as a measure of brand attitude because of its high correlation with the other Ab item and the notion that attitudes also have a behavioral (conative) component.

TABLE 3.

Ad-level and Product Category-level Codings

	WAVE 1			WAVE 2		
	Interjudge reliabilities[a]	Inter-item consis-tency	Mean (SD)	Interjudge reliabilities[a]	Inter-item consis-tency	Mean (SD)
Ad Emotional Content		.97	2.40 (.81)		.96	2.84 (.95)
Warmth[b]						
▪ "sentimental"	.76 - .78			.69 - .77		
▪ "emotional"	.75 - .78			.67 - .75		
▪ "moves me"	.78 - .81			.69 - .75		
▪ "warm-hearted"	.76 - .76					
▪ "touches me"	.73 - .75					
Excitement[b]						
▪ "energetic"	.61 - .79			.69 - .79		
▪ "excited"	.72 - .77			.68 - .78		
▪ "enthusiastic"	.65 - .74			.68 - .79		
▪ "upbeat"	.69 - .75					
▪ "stimulated"	.66 -.77					
Happiness/cheerfulness[b]						
▪ "cheerful"	.74 - .83			.70 - .79		
▪ "joyful"	.72 - .82			.71 - .81		
▪ "in a good mood"	.72 - .84			.71 - .81		
▪ "happy"	.75 - .82					
▪ "delighted"	.74 - .84					
Ad Creativity[b]		.99	2.90 (1.87)		.99	3.54 (1.29)
▪ "unique"	.80 - .83			.75 - .87		
▪ "original"	.77 - .86			.82 - .85		
▪ "creative"	.81 - .82			.78 - .86		
▪ "novel"	.79 - .84					
▪ "unlike other ads"	.83 - .84					

Table 3 (continued)

Product Involvement		.93	3.85 (.98)		.94	3.76 (1.04)
▪ "[x] means a lot/nothing to consumers"	.72			.82		
▪ "[x] is of great/little concern to consumers"	.68			.80		
▪ "choosing [x] is/is not an important decision"	.80			.90		
▪ "There is substantial/no risk involved with [x]"	.74			.83		
▪ "It is/is not a big deal if consumers make a mistake when buying [x]"	.78			.89		
Hedonic vs. Utilitarian Product		.96	4.01 (1.42)		.95	3.99 (1.42)
▪ "[x] is more a luxury than a necessity/more a necessity than a luxury"	.81			.93		
▪ "The benefits are primarily hedonic/functional"	.87			.92		
▪ "With [x] sensations and sensory stimulations play an important/minor role"	.81			.86		
▪ "The motivation for using [x] is mainly emotional/rational"	.87			.93		
▪ "This is a product/service consumers use for pleasure or to impress others/to address or avoid problems"	.86			.92		

[a] Entries represent the range of interjudge reliabilities across the different sets of judges for the measures of Ad Emotional Content and Ad Creativity. For Product Involvement and Hedonic vs Utilitarian Product only one set of judges was used.

[b] In wave 2, only three of the five items used in wave 1 were used to assess Ad Emotional Content and Ad Creativity.

TABLE 4.

Correlations (Wave 1, n = 407)

	Ab	Aad	Ad Emotional Content[a]	Cognitive Assessment	Ad Creativity	Product Involvement	Hedonic vs Utilitarian Product[b]	Durable or service (0) vs Non-durable (1)	(Non-)Durable (0) vs Service (1)	Search vs. Experience Product[c]
Ab	1	.607***	.453***	.590***	.222***	-.352***	.177***	.266***	-.107*	.422***
Aad		1	.676***	.692***	.609***	-.133**	.274***	.010	.011	.172***
Ad Emotional Content[a]			1	.358***	.650***	-.058	.334***	.050	-.039	.243***
Cognitive Assessment				1	.206***	-.033	.023	-.084	.173**	.110*
Ad Creativity					1	-.001	.126*	-.148**	.077	-.033
Product Involvement						1	.000	-.617***	.345***	-.430***
Hedonic vs. Utilitarian[b]							1	.242***	-.270***	.467**
Durable/Service (0) vs. Non-durable (1)								1	-.795**	.573***
Non-durable/Durable (0) vs. Service (1)									1	-.378***
Search vs. Experience[c]										1

Notes.
[a] A higher score indicates more positive emotions
[b] A higher score indicates more hedonic motives
[c] A higher score indicates relatively more experience goods
***p < .001; **p < .01; *p < .05 (two-tailed significance tests)

TABLE 5.

Correlations (Wave 2, n = 663)

	Ab	Aad	Ad Emotional Content[a]	Cognitive Assessment	Ad Creativity	Product Involvement	Hedonic vs Utilitarian Product[b]	Durable or service (0) vs Non-durable (1)	(Non-)Durable (0) vs Service (1)	Search vs. Experience Product[c]
Ab	1	.501***	.256***	.316***	.116**	-.351***	-.005	.262***	-.227***	.184***
Aad		1	.496***	.130**	.441***	-.015	.090*	-.032	-.036	-.120**
Ad Emotional Content[a]			1	-.162***	.584***	-.056	.120**	-.091*	.058	-.111**
Cognitive Assessment				1	-.324**	-.052	-.344***	.155***	-.077*	.129**
Ad Creativity					1	-.086*	.011	-.333***	-.245***	-.312***
Product Involvement						1	.000	-.574***	.297***	-.387***
Hedonic vs. Utilitarian[b]							1	.229***	-.261***	.241***
Durable/Service (0) vs. Non-durable (1)								1	-.712***	.697***
Non-durable/Durable (0) vs. Service (1)									1	-.347***
Search vs. Experience[c]										1

Notes.
[a] A higher score indicates more positive emotions
[b] A higher score indicates more hedonic motives
[c] A higher score indicates relatively more experience goods
***p < .001; **p < .01; *p < .05 (two-tailed significance tests)

TABLE 6.

Standardized Regression Coefficients and z-values (for random effects) and t-values (for fixed effects) (n=1070 ads)

	Model 1	Model 2	Model 3	Model 4
	Basic-feeling-effect Model	Aad-mediation Model	Cognitive-assessment-and-Aad mediation Model	Ad-creativity-confound Model
MODEL FIT				
AIC	3073.9	2781.8	2712.3	2705.2
BIC	3083.0	2790.9	2721.4	2714.3
Chi²	437.19***	493.58***	459.63***	446.33***
RANDOM EFFECTS				
Product	.750***	.523***	.442***	.433***
	(5.83)	(5.90)	(5.73)	(5.65)
Brand	.557***	.486***	.466***	.463***
	(8.88)	(10.23)	(10.53)	(10.56)
FIXED EFFECTS				
Emotional Content[a]	.486***	.108**	.162***	.199***
	(13.69)	(2.81)	(4.31)	(4.83)
Wave[b]	.030	.047	.038	-.019
	(.72)	(1.27)	(1.05)	(-.50)
Emotional content[a] x Wave[b]	.279***	.080*	.113**	.180***
	(8.16)	(2.11)	(3.04)	(4.46)
Aad		.692***	.445***	.510***
		(18.07)	(9.46)	(10.03)
Aad x Wave[b]		.216***	.022	.107*
		(5.71)	(.50)	(2.14)
Cognitive Assessment			.599***	.552***
			(8.83)	(7.90)
Cognitive Assessment x Wave[b]			.235***	.150*
			(3.71)	(2.28)
Ad Creativity				-.081**
				(-2.32)
Ad Creativity x Wave[b]				-.139***
				(-4.15)

Note. ***$p < .001$; **$p < .01$; *$p < .05$ (two-tailed significance tests)

[a] A higher score indicates more positive emotional feelings

[b] Wave 1 = 1; wave 2 = -1

TABLE 7.

Standardized Regression Coefficients and z-values (for random effects) and t-values (for fixed effects) (n=1070 ads)

	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	Involvement-moderation Model	Hedonic/utilitarian-moderation Model	Involvement-and-hedonic/utilitarian-moderation Model	Product-durability-moderation Model	Search/experience-moderation Model	Full Model
MODEL FIT						
AIC	2630.6	2682.1	2637.2	2646.7	2665.7	2634.1
BIC	2682.1	2733.7	2713.0	2710.1	2717.2	2745.8
Chi²	326.63***	432.70***	310.09***	339.89***	344.37***	290.87***
RANDOM EFFECTS						
Product	.253***	.425***	.244***	.315***	.327***	.2369
	(4.93)	(5.63)	(4.80)	(5.04)	(4.99)	(4.76)
Brand	.452***	.458***	.451***	.457***	.462	.454
	(10.66)	(10.60)	(10.68)	(10.63)	(10.59)	(10.77)
FIXED EFFECTS						
Emotional Content[a]	.218***	.198***	.217***	.098	.174***	-.010
	(5.14)	(4.78)	(5.09)	(1.08)	(4.22)	(-0.06)
Aad	.479***	.522***	.472***	.484***	.490***	.468***
	(9.57)	(10.18)	(9.27)	(9.58)	(9.67)	(9.18)
Cognitive Assessment	.579***	.538***	.586***	.591***	.579***	.601***
	(8.47)	(7.62)	(8.41)	(8.50)	(8.34)	(8.55)
Ad Creativity	-.081*	-.085*	-.083**	-.057	-.059	-.074*
	(-2.38)	(-2.43)	(-2.37)	(-1.65)	(-1.68)	(-2.13)
Product involvement	-.408***		-.405***			-.350***
	(-7.69)		(-7.33)			(-4.58)
Emotional Content[a] x Involvement	-.021		-.041			-.043
	(-.82)		(-1.49)			(.165)
Hedonic vs Utilitarian[b]		-.063	.019			-.015
		(-.94)	(.33)			(-.24)
Emotional Content[a] x Hedonic/Utilitarian[b]		.054(*)	.078**			.060+
		(1.75)	(2.49)			(1.72)
Emotional x Involvement x Hedonic/Utilitarian[b]			-.038			-.049
			(-1.20)			(-1.51)
Durable/service (0) vs nondurable (1)				.601**		-.054
				(3.15)		(-.23)
Durable/non-durable (0) vs service (1)				-.032		-.275
				(-.15)		(-1.32)
Emotional content[a] x				.111		.091

Dur/serv vs nondur				(1.21)		(.78)
Emotional content[a] x				.025		.051
(non)Dur vs Service				(.25)		(.47)
Search/experience product[c]					.250***	.015
					(3.40)	(.23)
Emotional Content[a] x					.047	.039
Search/experience[c]					(1.30)	(.86)
Wave[d]	-.0162	-.036	-.017	-.219*	-.010	-.213
	(-.38)	(-.90)	(-.39)	(-2.28)	(-.27)	(-1.03)

Notes. ***$p < .001$; **$p < .01$; *$p < .05$; [+]$p < .10$ (two-tailed significance tests)

[a] A higher score indicates more positive feelings

[b] A higher score indicates more hedonic motives

[c] A higher score indicates relatively more experience goods

[d] Wave 1 = 1; wave 2 = -1. Although not included in the table, all interactions with wave were also modeled.
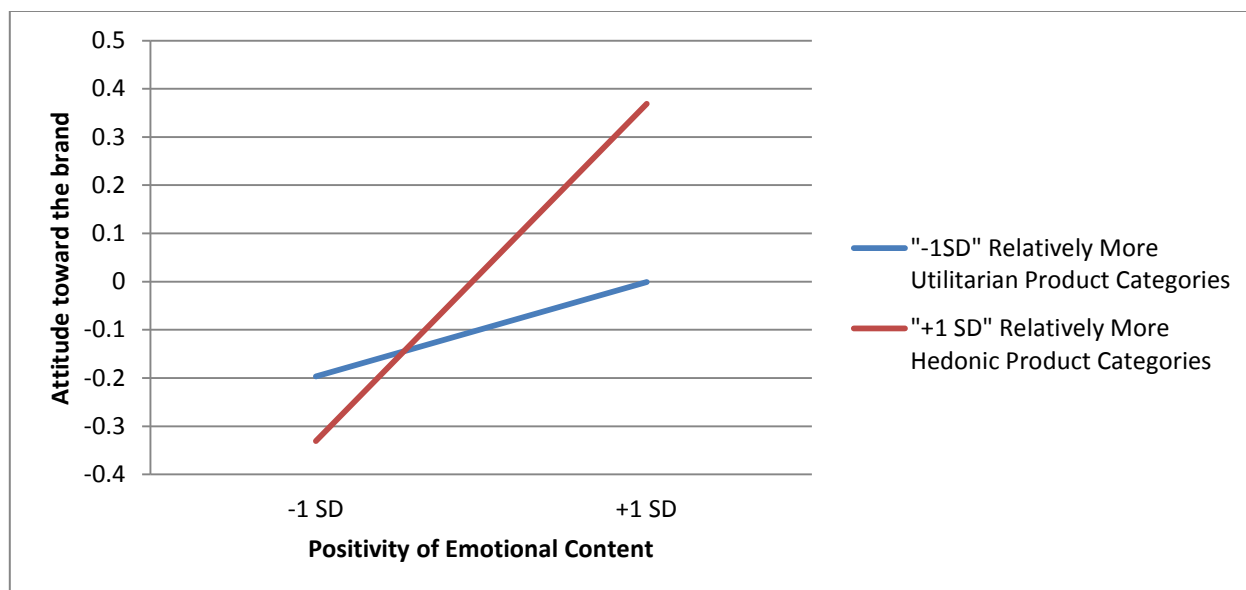
Fig. 1. Emotional Content × Type of Motive interaction on Brand Attitude

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FOOTNOTES

[i] If all wave-2 respondents are retained in the analyses, the results are directionally the same as reported in Tables 6 and 7, but are statistically weaker. The main difference in the results is that the emotion × hedonic/utilitarian motive interaction does not reach significance in Models 7 and 8 using hierarchical linear model regression, although it does reach significance in OLS regression.

[ii] Following a reviewer's suggestion, we also examined whether the effects of ad-evoked feelings depended on the familiarity of the brand. One would generally predict a greater influence of feelings for unknown or unfamiliar brands (e.g., Miniard et al., 1990; Park & Young, 1986). However, it has also been observed that affective ads are particularly effective for well-known, mature brands (MacInnis, Rao, & Weiss, 2002), leaving the possibility of a curvilinear effect of brand familiarity. Because brand familiarity was not assessed in Wave 1, we restricted our analyses to the second wave of data. We tested an extension of Model 1 that additionally included a (centered) term for brand familiarity, the square of that term, plus the interaction between familiarity and ad-evoked feelings and the interaction between familiarity-square and ad-evoked feelings. The results show that brand familiarity had a positive effect on brand evaluations ($\beta = 0.414$, $t = 9.75$, $p < .001$). However, neither the familiarity × feelings interaction ($\beta = 0.056$, $t = 1.52$, $p = .13$) nor the familiarity-square × feelings interaction ($\beta = 0.025$, $t = 1.07$, $p = .28$) emerged as significant. These null effects may be due to a lack of statistical power, or to a genuine possibility that the effects of ad-evoked feelings are equally pronounced for familiar and less familiar brands, which would explain the mixed results observed in previous studies.