

RELATIONSHIPS AMONG AD-INDUCED AFFECT, BELIEFS, AND ATTITUDES

Another Look

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ABSTRACT: In spite of a wealth of empirical attention directed at understanding the structural relationships among affect, cognition, and attitude, the tasks and settings in many of these studies may have inflated the relative impact of cognition in the persuasion process. The studies reported here use an affectively driven advertising context (i.e., television commercials void of product-relevant information cues) to demonstrate (1) that positive and negative forms of affect operate differently, and (2) that their direct and indirect effects on attitude are influenced by brand familiarity. Cognition played a less dominant role in the attitude formation process for an unknown brand compared to situations in which consumers held preexisting impressions (i.e., for well-known brands). A means-end model approach is used to link concrete and abstract forms of cognition (i.e., brand beliefs) and attitude.

The importance of affect (e.g., emotional responses), cognition, and attitude to the field of advertising is undisputed. Much attention, across a broad range of disciplines (e.g., advertising/marketing, communication, psychology), has been directed at understanding the structural relationships among these critical concepts. (As is common in the literature, the term *affect* is used to refer to emotional responses and feelings engendered by an attitude object, whereas *cognition* represents thoughts, beliefs, and judgments about an attitude object [cf. Breckler and Wiggins 1989].) Advertising and marketing researchers have extended this stream of inquiry to include the effects of ad-induced emotions/feelings¹ and attitude toward the ad (A_{ad}) on brand attitude (A_b) formation/change (e.g., Batra and Ray 1986; Brown, Homer, and Inman 1998; Brown and Stayman 1992; Burke and Edell 1989). In spite of a wealth of empirical evidence, attitude researchers are still divided on the relative role played by cognition versus affect in brand attitude formation/change. Although a few argue that evidence of nonbelief-based attitude change is primarily artifactual, resulting from inadequate measurement of beliefs and attitudes (Fishbein and Middlestadt 1995), numerous others contend that noncognitive factors, such as affect, have a significant impact on attitude formation, above that accounted for (mediated) by cognition (e.g., Bodur, Brinberg, and Coupey 2000; Miniard and Barone 1997; Priester and Fleming 1997).

This research has naturally been of special interest to advertisers in their continual quest to influence consumer beliefs and attitudes toward brands, but it has often been of

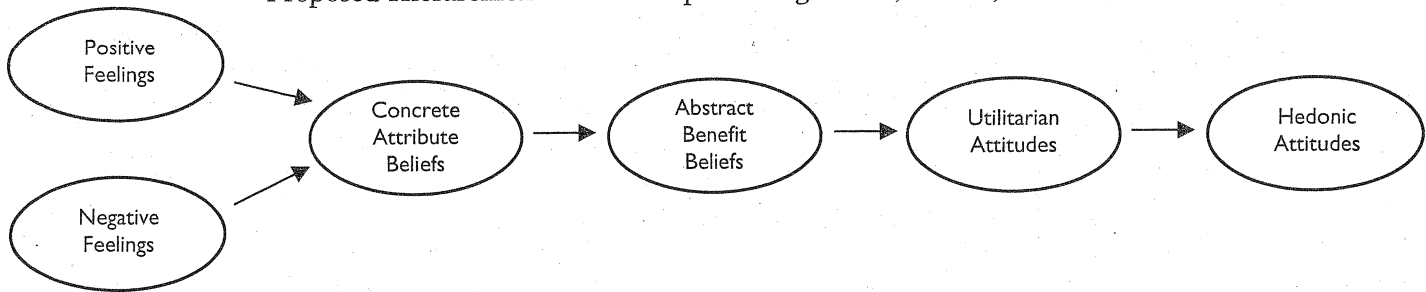
limited value to those uncertain of the relevance of empirical evidence performed in nonadvertising contexts. More often than not, studies in advertising- and brand-related settings include design characteristics (e.g., ads containing explicit attribute information, directed or verbal instructions) that favor central processing. Even those studies that purposefully induce peripheral processing in advertising contexts tend to rely on ads containing explicit brand attribute information (e.g., Miniard et al. 1991; Miniard, Sirdeshmukh, and Innis 1992), whereas others, as noted by Fishbein and Middlestadt (1995), use inadequate measures. In summary, the tasks, settings, and measures in many past studies may have inflated the relative impact of cognition in the persuasion process. Consequently, it is important to replicate these effects in settings that are more purely affective (using expectancy-value measures of brand beliefs) to determine whether this enhances (decreases) the relative impact of affect (cognition). The studies reported below use ads void of brand attribute information in an effort to induce an affect-laden context.

As noted by Cohen (1990) and others (e.g., Derbaix 1995), the origins of affective reactions may differ for novel and familiar brands. Those exposed to an advertisement for a familiar brand may experience a certain affective response as a result of brand-related thinking. In that case, attributing all positive and negative affective reactions to the advertisement—even one void of brand attribute information—does not successfully isolate the effects of advertisement characteristics from beliefs about the brand. Thus, stronger relation-

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FIGURE 1
Proposed Hierarchical Relationships Among Affect, Beliefs, and Attitude



Note: Paths involving the exogenous constructs and intercorrelations among the feeling constructs are omitted for parsimony. Similarly, some direct effects are omitted for visual simplicity, but were estimated (see Table 2).

ships between affect and A_b may be expected for unfamiliar brands (cf. Brown et al. 1998).

The primary goal of this paper is to assess the impact of ad-induced affective and cognitive responses on brand attitudes for known and unknown brands. Past efforts have typically neglected to account for the multidimensionality of affect, cognition, and attitude. For example, affect is often reduced to a single positive versus negative dimension (cf. Pham et al. 2001) that may include A_{ad} (cf. Machleit, Allen, and Madden 1993), and attitude is often reduced to an overall measure of liking. Thus, as an extension to extant knowledge on affect, cognition, and attitude relationships, each is treated as a multidimensional concept. In keeping with the most common (and parsimonious) factor structures presented in the literature, affect is decomposed into its positive and negative dimensions,² abstract benefit brand beliefs are included with more traditional utilitarian types of beliefs (here labeled as concrete attribute beliefs),³ and attitude is separated into utilitarian and hedonic components.

THEORETICAL FRAMEWORK AND HYPOTHESES

The guiding framework tested here (Figure 1) is an adaptation of past "means-end" structures reviewed in the literature (e.g., Gutman 1983; Olson and Reynolds 1983; Reynolds and Gutman 1984; Zeithaml 1988), in which level of abstraction is the fundamental mechanism defining hierarchical assignment for each of the affect, cognition, and attitude concepts. The means-end chain approach holds that consumers organize product information at various levels of abstraction, linked hierarchically from simple product attributes to complex personal values (Cohen 1979; Myers and Shocker 1981; Olson and Reynolds 1983). These models connecting product attributes, consumer consequences, and personal values have been applied by advertising researchers and strategists through a process called "laddering" (e.g., Reynolds and Gutman 1984, 2001; Reynolds and Olson 2001), shown ef-

fective across a variety of situations (e.g., segmentation, positioning, image management, sales force motivation; see Reynolds and Olson [2001]). Each element represents needs to be understood in developing message content, suggesting that effective advertising should consider all levels, not just physical product attributes (cf. Batra, Myers, and Aaker 1996).

Product attributes range from simple concrete brand attributes (physical characteristics such as "miles per gallon" and "ingredients") to more abstract brand benefits (subjective assessments such as "tastes good," "stylish," and "fun to drink or drive"). (See Johnson and Fornell [1987] for a detailed discussion of the concreteness-abstractness issue as it applies to product representations.) Thinking about benefits and consequences involves higher-order processing relative to thinking about basic product attributes, suggesting that beliefs about concrete brand attributes impact beliefs related to abstract brand benefits. Furthermore, lower-order beliefs (i.e., those associated with product-specific attributes) are less generalizable across product categories compared with higher-order brand beliefs (i.e., those associated with benefits that apply across multiple categories, or, as discussed by Johnson [1984] and Johnson and Fornell [1987], for "noncomparable" alternatives), which is also consistent with a hierarchical relationship. The development and maintenance of product-specific knowledge networks in memory facilitate higher-order processing whereby consumers evaluate noncomparable alternatives in terms of higher-order (abstract) criteria.

There is growing (multidisciplinary) support for the bidimensionality of consumer attitudes, based on the notion that consumption behaviors are driven by hedonic (or affective) gratification (e.g., sensations derived from the experience of using products) and utilitarian (or instrumental) motives (e.g., derived from functions performed by products; cf. Batra and Ahtola 1990; Voss, Spangenberg, and Grohmann 2003; Yoon et al. 1995). Relative to beliefs, attitudes are higher-level phenomena (Zeithaml 1988), which can also be arranged (based on level of abstraction) in a means-end framework: *utilitarian* attitudes → *hedonic* attitudes.

At these levels, as noted by Gutman and Reynolds (1979), we see closer linkages to self-developing. Voss, Spangenberg, and Grohmann (2003) propose that affective involvement predicts the hedonic dimension and cognitive involvement predicts the utilitarian dimension (i.e., utilitarian and hedonic attitudes are conceptualized as acting independently without a predefined order), but acknowledge that the scope of their nomological model was confined to central route processing, urging others to test more complex models (p. 319).

Thus, in keeping with the underlying notion that lower-order (or more concrete) concept development drives subsequent higher-order (or more abstract) concept development, reflected in Olson and Reynolds's (1983) functional consequences (e.g., tangible and direct experiences) → psychosocial consequences (e.g., emotional and personal experiences) connection, I argue (and test) that *utilitarian* attitudes influence *hedonic* attitudes. Relative to reflections of physical features, and even perhaps to utilitarian-based attitudes, hedonic attitudes are tied more closely to ideas of self (cf. Gutman and Reynolds 1979; Olson and Reynolds 1983) and are more distant from any physical referent, putting them at a higher level in the means-end chain. The proposed utilitarian attitude → hedonic attitude link has empirical support in a test where participants were exposed to an informative print ad for an unknown product under (verbally induced) moderate/high message involvement (Yoon et al. 1995). To my knowledge, however, there has been no other previously published empirical evidence that is broader in scope testing the relationship between these (utilitarian and hedonic) attitude constructs. A structural equation approach is used to explore the robustness of this relationship in a setting where consumers are shown commercials that lack specific product attribute information, thereby expanding the existing nomological network.

Figure 1 illustrates the hypothesized relationships that result when the various levels of abstraction for brand beliefs and brand attitudes are combined with the antecedent affect components. While the proposed linkages (among *concrete attribute* beliefs, *abstract benefit* beliefs, *utilitarian* attitudes, and *hedonic* attitudes) are in harmony with a variety of hierarchy-of-effects models used to explain "how advertising works" (see Vakratsas and Ambler [1999] for a complete review of such models), they may be most closely aligned with Olson and Reynolds's (1983) model of consumer cognitive structures, where concrete attributes → abstract attributes → functional consequences → psychosocial consequences. As with previous means-end approaches to consumer cognitive structure, concrete/lower-order constructs precede more abstract/higher-order phenomena.⁴ The fundamental connections among affect, brand beliefs, and attitude are also consistent with models of affect and cognition proposed by experimental and neuropsychologists (e.g., Berkowitz 1993; Epstein 1993; LeDoux 1995, 1996; Zajonc 1980; see Shiv and Fedorikhin [1999]

for a synopsis). For example, Berkowitz's (1993) model proposes three types of processing, beginning with lower-order stimulus-based reactions (sometimes accompanied by lower-order affective reactions), followed by higher-order cognitive processes that culminate with higher-order affective processes, noting that affective reactions can occur without an active role of higher-order cognitive processes. In a similar vein, LeDoux (1995, 1996) argues that stimulus exposure may induce (1) "low road" processes, and (2) "high road" cognitive processes, followed by (3) "high road" affective reactions. In summary:

H1: Ad-induced affect impacts brand attitude directly, and indirectly via cognition, in the following manner: affect → concrete attribute beliefs → abstract benefit beliefs → utilitarian attitudes → hedonic attitudes.

Positive Versus Negative Dimensions of Affect

Positive and negative affect have come to be viewed as representing nearly orthogonal independent factors (e.g., Brown et al. 1998; Diener and Emmons 1984; Isen 1993), although this conceptualization has been challenged by Green, Goldman, and Salovey (1993). However, there is overwhelming evidence supporting the theory that positive and negative affect (e.g., feelings and emotions) operate differently (e.g., Burke and Edell 1989; Murry and Dacin 1996), co-occur (e.g., Burke and Edell 1989; Edell and Burke 1987; Homer and Yoon 1992), and have independent effects on advertising responses (Brown et al. 1998; Edell and Burke 1987). In a study using commercials for unfamiliar brands, Burke and Edell (1989) found that negative feelings impact (overall) brand attitudes both directly and indirectly via A_{ad} and brand attribute evaluations (calculated as expectancy value measures), but upbeat feelings exhibited no direct effects. These findings were consistent with an earlier study (Edell and Burke 1987) in which negative feelings induced by exposure to an ad for a novel product maintained a strong contribution to brand attitudes after accounting for ad judgments, whereas positive feelings did not. Although questions remain regarding exactly how positive versus negative feelings operate (Brown et al. 1998), past research suggests that brand familiarity will moderate some of the relationships among affect, cognition, and attitude.

Brand Familiarity: Known Versus Unknown Brands

A body of literature acknowledges that brand familiarity is a critical element that can influence consumer processing⁵ (see Alba and Hutchinson [1987] for a nice review of the related concept of consumer expertise), including the relationships among affective responses and brand evaluations (Campbell and Keller 2003; Machleit, Allen, and Madden 1993; Machleit and Wilson 1988). "Familiar and unfamiliar brands differ in

terms of the knowledge regarding the brand that a consumer has stored in memory" (Campbell and Keller 2003, p. 293). These knowledge differences are typically associated with varying processing goals when consumers are exposed to ads for familiar versus unfamiliar brands, that is, less knowledgeable consumers attempt to learn about the advertised brand and form initial evaluations, whereas more knowledgeable consumers use ads to "update" their existing impressions (Campbell and Keller 2003; Snyder and Stukas 1999). If knowledgeable consumers possess significant amounts of brand-relevant information, the brand belief-related linkages may dominate. On the other hand, for less knowledgeable consumers, the direct link between affect and brand attitudes will be stronger than the indirect link via brand beliefs. Derbaix (1995) found stronger effects of feelings on brand attitudes (A_b) for novel brands, but Brown et al.'s (1998) meta-analysis of feeling- A_b correlations supports the theory that effects for positive feelings are moderated by product type (i.e., stronger relationships for novel versus familiar brands), but negative feeling effects are not.

The present study also tests whether those consumers lacking prior knowledge on which to form sound judgments rely more heavily on attitudes toward the ad (A_{ad}) when forming brand attitudes toward unknown brands (cf. Machleit, Allen, and Madden 1993; Machleit and Wilson 1988). Research suggests that the relationship between A_{ad} and A_b is moderated by brand familiarity. For example, Burke and Edell (1986) and Phelps and Thorson (1991) report stronger effects of A_{ad} on A_b for novel brands, whereas others find no significant relationship for familiar brands (e.g., Machleit and Sahni 1992; Machleit and Wilson 1988). The present study therefore proposes the following hypotheses:

H2a: For unfamiliar brands, the direct effect of affect on attitude will dominate over the indirect effect via brand-related beliefs. In addition, affect will indirectly impact brand attitude through A_{ad} .

H2b: For familiar brands, brand-related beliefs will dominate as mediators between positive affect and attitude over direct effects and indirect effects involving A_{ad} . Negative affect's direct effect on brand attitude will dominate over indirect effects via A_{ad} and/or brand-related beliefs.

METHOD-STUDY 1

Method

Overview and Development of Test Ads

To motivate more intense emotional responses and to enhance the role of affective processing relative to cognition-based

thinking, the audio tracks used in this study were musical soundtracks with no additional audio or verbal (product-relevant) cues (e.g., announcer voice-overs, actor conversations, video supers, etc.). Two professional beverage television ads (known brands of beer) were edited to achieve the desired effect. Beer became the target product category because of its relevance to the subject population and due to the availability of professional commercial tracks that met the research criteria. Based on the importance of *fit* between the musical track and its advertising message (e.g., Kellaris, Cox, and Cox 1993; MacInnis and Park 1991; Stout and Rust 1986) and *liking* of the music (Bruner 1990), careful attention was devoted to these factors in the music/commercial selection and editing process, as were other critical musical elements (i.e., music tempo [Holbrook and Anand 1990; Kellaris and Kent 1991; Milliman 1982], mode [Alpert and Alpert 1991; Stout, Leckenby, and Hecker 1990], and complexity [Russell 1987]).

To enhance generalizability, three replicates were created for each visual track. The particular ads were selected because (1) the musical tracks "fit" the visual elements and mood of the commercial, and (2) they did not necessitate a voice-over to be understood. Thus, "theme" commercials were used that featured fast-edit clips of people having fun in social situations. Thirty-second edits of each of the chosen songs⁶ were dubbed onto the two 30-second video commercial tracks. Pretests indicated that participants perceived the edited ads to be actual commercials and that there was a good "fit" between the audio track and the visual components.

Procedure and Dependent Measures

Data were collected from a sample (65% females with a median age of 23) of undergraduates enrolled in business courses, in a small-group classroom setting ($n = 204$). Participants were instructed only that this was a pretest of a beverage commercial. Immediately after exposure to one of the test commercials (randomly assigned), affective and cognitive responses were collected through a verbal protocol using standard instructions (cf. Batra and Ray 1986). These thoughts and feelings were coded independently by two judges either as (positive, negative, neutral) ad-related cognitions, brand-related cognitions, music-related thoughts, source bolsters, source derogations, feeling responses, or "other" thoughts. Coder agreement was 95%, and disagreements were resolved by discussion. Brand and nonbrand cognition indices were created by summing the appropriate responses as a means to demonstrate that nonbrand processing dominated over brand-related processing (cf. Homer 1990; Homer and Yoon 1992; MacKenzie, Lutz, and Belch 1986).

In addition to the verbal protocols, the questionnaire included measures designed to assess feelings, brand-related beliefs, attitudes toward the brand, attitudes toward the ad

(A_{ad}), music-related judgments (e.g., attitudes toward the music in the ad, the degree of "fit" between the ad and the music), and ad and product involvement, in that order.

Emotion/feeling measures were adapted from the instrument used by MacInnis and Park (1991), modified from Edell and Burke (1987). For each emotion, participants indicated how they "personally felt while viewing the ad." For example, using a seven-point continuum anchored by "not at all" and "very," they responded to the statement "I felt ____ happy." Consistent with prior research (e.g., Burke and Edell 1989; Edell and Burke 1987; MacInnis and Park 1991), exploratory factor analysis supported the reliability/validity of a two (positive versus negative) factor approach. A positive factor loaded strongest on excited, happy, cheerful, alive, stimulated, playful, delighted, energetic, amused, exhilarated, sentimental, warmhearted, peaceful, affectionate, and moved ($\alpha = .96$); a negative factor was composed of anger, annoyed, disgusted, sad, lonely, and depressed ($\alpha = .84$).

Each brand-related belief (i.e., nine, seven-point measures of taste, ingredients, etc.) was also rated according to its importance as a decision criterion. For example, participants evaluated (1) the extent to which they believed Coors "tastes good," and (2) how important "good taste" was in their choice of a beer. Consistent with Johnson and Fornell's (1987) concrete versus abstract typology and other means-end models discussed above, two factors were distinguishable in the list of brand-related belief measures. A concrete attributes factor loaded on "has a long-lasting head," "is a good buy for the money," "is made of the finest ingredients," "is not bitter," and "has few calories" ($\alpha = .87$); an abstract benefits factor loaded on "is fun," "is refreshing," "is satisfying," and "tastes good" ($\alpha = .88$). Since we are predicting attitudes, it has been argued that the predictors of interest should be "adequacy importance" (AI) product terms (cf. Ahtola 1975; Ajzen and Fishbein 1980; Fishbein and Middlestadt 1995; Wilkie and Pessemier 1973), in which the belief about a particular attribute or benefit (e.g., "tastes good") is multiplied by the stated importance of that attribute/benefit in brand choice (not at all important/very important). These product (AI) terms were calculated for concrete attribute brand beliefs and abstract benefit brand beliefs.

Measures of brand attitudes included utilitarian (e.g., worthless/valuable, harmful/beneficial) and hedonic dimensions (e.g., agreeable/disagreeable, pleasant/unpleasant) (cf. Batra and Ahtola 1990; Voss, Spangenberg, and Grohmann 2003). A utilitarian factor loaded strongest on items of worthless/valuable, awful/nice, foolish/wise, useless/useful, and harmful/beneficial ($\alpha = .92$); a hedonic factor loaded strongest on unpleasant/pleasant, disagreeable/agreeable, and unfavorable/favorable ($\alpha = .97$). Three items provided a measure of overall attitude toward the ad (A_{ad}): negative/positive, unfavorable/favorable, and dislike/like ($\alpha = .95$).

Measures were incorporated to verify equivalence of the test commercials. The battery of bipolar scales assessing liking of the musical score in the commercials yielded a highly reliable index ($\alpha = .97$). Two (nine-point) measures of the "fit" assessed how relevant the music was to the ad and whether the music fit the ad overall (Spearman-Brown reliability coefficient = .82). The final scalar assessments captured involvement with the product (two, nine-point items, unimportant/important and not involving/involving, Spearman-Brown reliability coefficient = .84) and ad involvement (two, nine-point items, not involved/involved and no attention/a lot of attention, Spearman-Brown reliability coefficient = .85). At the conclusion, participants were asked to answer items designed to determine whether they knew the purpose of the experiment. It was apparent that no participants were aware of the purpose or guiding hypotheses.

Results

Manipulation Checks and Tests of Potential Covariates

The ads were specifically designed to convey little brand-related information, thus eliciting more nonbrand (peripheral) processing over brand-related processing. In terms of number of brand-related cognitions and nonbrand cognitions reported in the verbal protocols, there were no differences across the individual ads, and nonbrand processing dominated over brand-related processing, $M = 3.14$, versus $.74$ for nonbrand and brand cognitions, respectively, $t(203) = 16.92$, $p < .001$. Further support for the existence and dominance of peripheral/affective processing emerged for the scalar measures of ad involvement and brand involvement. There were no differences across ad exposure conditions for these measures, but participants indicated being more involved with the ad ($M = 6.52$) than with the decision to purchase the advertised brand, $M = 3.67$, $t(200) = 15.57$, $p < .001$. In conclusion, processing styles were not affected by the ad manipulations, and all available data suggests that affective processing exceeded brand-related (cognitive) thinking.

As mentioned earlier, the test commercials were purposefully designed to achieve a high (and equal) level of fit between the musical score and the visual elements, and to be well-liked (confirmed in pretests). Analyses revealed that the musical track in each of the test ads was well-liked and fit the other ad elements, with only minor variations. There were no significant differences in affect toward the Coors Light and Bud Light ads (A_{ad}), nor for liking of the musical tracks ($p > .05$). (Preliminary structural models included music/ad fit and liking of the music as covariates. Fit did not act as an antecedent to affect and did not change any of the specified relationships, and was therefore eliminated from further structural equation tests.) Based on the finding above and past evi-

TABLE I
Measurement Model Construct Intercorrelations

	Study 1						
	Positive	Negative	Concrete	Abstract	Hedonic	Utilitarian	A _{ad}
Positive feelings	1.00						
Negative feelings	-.59	1.00					
Concrete beliefs	.30	-.11	1.00				
Abstract beliefs	.48	-.27	.70	1.00			
Hedonic attitudes	.34	-.34	.35	.54	1.00		
Utilitarian attitudes	.36	-.34	.30	.51	.82	1.00	
A _{ad}	.78	-.66	.21	.40	.42	.42	1.00
Mean	4.03	1.85	16.42	25.39	5.68	4.36	6.25
Standard deviation	1.56	1.16	9.79	12.67	2.28	1.68	2.19

	Study 2						
	Positive	Negative	Concrete	Abstract	Hedonic	Utilitarian	A _{ad}
Positive feelings	1.00						
Negative feelings	-.08	1.00					
Concrete beliefs	.35	.22	1.00				
Abstract beliefs	.49	-.36	.15	1.00			
Hedonic attitudes	.56	-.30	.18	.53	1.00		
Utilitarian attitudes	.53	-.18	.32	.39	.80	1.00	
A _{ad}	.78	-.49	.19	.51	.68	.67	1.00
Mean	4.37	1.86	19.00	42.33	5.99	4.64	5.93
Standard deviation	1.55	1.08	10.99	17.43	2.06	1.57	1.89

Note: All correlations exceeding .12 are significant ($p < .05$).

dence that liking of music impacts emotional responses (e.g., Sweeney and Wyber 2002), it was included as an exogenous variable in the structural models reported below (for both theoretical and model identification/saturation purposes).⁷

Pooling tests for each dependent variable (Neter and Wasserman 1974) indicated that participants could be pooled across ad exposure levels. Ad dummy variables are included in all structural models presented below. They had no significant impact on the models' goodness-of-fit statistics, nor on the path coefficients.

Validity of the Affect, Belief, and Attitude Constructs

In keeping with the procedure recommended by Anderson and Gerbing (1988), a comprehensive measurement model was estimated that included all constructs (i.e., positive and negative feelings, A_{ad}, concrete attribute and abstract benefit brand beliefs, and utilitarian and hedonic attitudes) subsequently used in the testing of structural relationships, through a confirmatory factor analysis (CFA) using LISREL 8.54 (Jöreskog and Sörbom 1993). Although the χ^2 for this (seven-factor) model was significant (indicating a poor fit), the overall goodness-of-fit statistics for this comprehensive measurement model were acceptable: $\chi^2(758, n = 204) = 1,704.39$, $p < .001$; normed fit index (NFI) = .93, incremental fit index (IFI) = .96, comparative fit index (CFI) = .96, root mean square

error of approximation (RMSEA) = .07, standardized root mean square residual (SRMR) = .07. (Note that a large survey sample size typically leads to the high χ^2 and low p values of these models [Long 1983], making them a poor gauge of overall model fit. An IFI of .90 or better is considered good fit.)

All item factor loadings were statistically significant ($p < .001$), and the AVEs (average variance extracted) for each construct exceeded .50 (ranging from .55 to .85, average = .66), indicating high convergent validity. Discriminant validity among the latent constructs was also established by (1) a standard test that all correlations are significantly different from 1.0 (Anderson and Gerbing 1988), and (2) Fornell and Larcker's (1981) stricter test requiring that the variance extracted estimates for each construct exceed the square of the interconstruct correlations for that pair. (See Table 1 for results of the measurement model construct intercorrelations for Study 1 and Study 2.)

As further support for the proposed multidimensional framework, the seven-factor confirmatory model detailed above was compared to a simple four-factor model where affect, A_{ad}, beliefs, and attitude were specified as single-factor constructs. By all indications (e.g., model fit, factor loadings, AVEs, interconstruct correlations), this model was inferior to the more complex multidimensional specification, $\chi^2(773, n = 204) = 2,459.95$, $p < .001$; NFI = .89, IFI = .93, CFI = .92, RMSEA = .11, SRMR = .10. In summary, the CFA supported

TABLE 2
Summary of Standardized Structural Estimates for Study 1 and Study 2

Estimated path	Standardized path coefficients			
	Study 1		Study 2	
<i>Indirect effects of affect on attitude</i>				
Positive feelings → concrete beliefs	.364*	.273*	.403*	.246*
Negative feelings → concrete beliefs	.027	.105	.100	.243*
Positive feelings → abstract beliefs	.043	-.064	.344*	.363*
Negative feelings → abstract beliefs	-.064	.039	-.349*	-.372*
Positive feelings → A _{ad}		.431*		.552*
Negative feelings → A _{ad}		-.380*		-.517*
A _{ad} → concrete beliefs		.210**		.284*
A _{ad} → abstract beliefs		.274*		-.036
A _{ad} → utilitarian attitudes		.149		.608*
A _{ad} → hedonic attitudes		-.018		.126
Concrete beliefs → abstract beliefs	.605*	.574*	.380*	.383*
Concrete beliefs → utilitarian attitudes	-.006	-.004	.185*	.104
Concrete beliefs → hedonic attitudes	.030	.030	-.063	-.072
Abstract beliefs → utilitarian attitudes	.321*	.290*	.093	.108
Abstract beliefs → hedonic attitudes	.167*	.170*	.150*	.154*
Utilitarian attitudes → hedonic attitudes	.661*	.662*	.671*	.632*
<i>Direct effects of affect on attitude</i>				
Positive feelings → hedonic attitudes	-.044	-.038	.103**	.054
Negative feelings → hedonic attitudes	-.149*	-.155*	-.107*	-.049
Positive feelings → utilitarian attitudes	.112	.054	.361*	.050
Negative feelings → utilitarian attitudes	-.274*	-.220*	-.157*	-.172**
<i>Goodness-of-fit statistics</i>				
χ^2	4.81	42.18	16.70	34.94
df	4	5	4	5
p <	204	.001	274	.001
NFI	.307	.951	.010	.973
CFI	.991	.955	.979	.976
IFI	.998	.957	.983	.976
RMSEA	.999	.184	.984	.150
SRMR	.031	.044	.107	.031

Notes: NFI = normed fit index; CFI = comparative fit index; IFI = incremental fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.

* $p < .05$.

** $p < .10$.

the hypothesized multidimensional structure of affect, beliefs, and attitudes, and confirmed that they are distinct constructs.

Relationships Among the Affect and Belief Components of Attitude

Having established the validity of the affect, belief, and attitudinal constructs, the next task examined the (direct and indirect) relationships depicted in Figure 1. (Table 2 summarizes the structural estimates and goodness-of-fit statistics for Study 1 and Study 2.)

The model χ^2 ($[4, n = 204] = 4.809, p = .307$) is not significant, indicating acceptable fit of the data, and the other

seemingly more relevant fit indices (see Bollen 1989; Long 1983; Mulaik et al. 1989) are equally impressive (NFI = .99, IFI = .99, CFI = .99, RMSEA = .031, SRMR = .027). (See the first column of estimates in Table 2.) It is clear that positive affect impacts attitude indirectly through cognition for the familiar brands tested here, whereas negative forms of affect exhibit only direct effects on both utilitarian and hedonic attitudes ($= -.274$ and $-.149, p < .05$, respectively). The influence paths proposed in Figure 1 are all confirmed for positive forms of affect, that is, positive feelings → concrete attribute beliefs ($= .364$) → abstract benefit beliefs ($= .605$) → utilitarian attitudes ($= .321$) → hedonic attitudes ($= .661$).

The direct versus indirect effects of positive and negative affect on hedonic attitude (H2b) was further examined via Lisrel's "effects" option. To isolate the proposed indirect effects from all possible indirect effects (as specified in the full model described above), a "restricted" model constrained the nonhypothesized paths to zero. As predicted, positive affect had a significant indirect effect on hedonic attitude ($t = 3.16$), but no direct effect ($t = .09$). In contrast, negative affect exhibited a direct effect ($t = -2.38$) and no indirect effect ($t = .06$).

The fact that negative affect operated in a direct manner even for the very familiar brands tested here appears to contradict arguments made by Fishbein and Middlestadt (1995), but the relationships involving positive affect were in accordance with their predictions. These varying effects support the notion that positive and negative affect operate differently; they also highlight the importance of decomposing affect into (at least) its basic positive and negative components.

In summary, the data support the fundamental links proposed in Figure 1 (H1) and predictions in H2b. That is, for familiar brands, the relationship between positive feelings and attitude is dominated by the indirect effect via concrete attribute and abstract benefit brand beliefs, thus supporting the theory that cognition plays a dominant role in the attitude change process. This is noteworthy because these effects were elicited from an ad void of product attribute information. The dominant direct effects for negative feelings, while in opposition to those for positive feelings (and arguments made by Fishbein and Middlestadt 1995), are consistent with prior research (e.g., Burke and Edell 1989).

Alternative Structural Models/Theoretical Explanations

Attitude Toward the Ad. Considering the vast amount of research supporting the mediating role of A_{ad} in ad-based attitude formation/change persuasion contexts (e.g., Batra and Ray 1986; Edell and Burke 1987; Homer 1990; MacKenzie and Lutz 1989; MacKenzie, Lutz, and Belch 1986; Stayman and Aaker 1988; Yoon et al. 1995), and in response to Voss, Spangenberg, and Grohmann's plea that "[f]urther research should examine incorporating the hedonic and utilitarian dimensions of attitude in more complex models with constructs such as attitude toward the ad" (2003, p. 319), it is appropriate to determine whether A_{ad} makes a valuable contribution to the current study. To further test H2a and H2b, a model was developed that used the Dual Mediation Hypothesis⁸ (DMH) as its basis, while incorporating the antecedent effects of feelings (cf. Burke and Edell 1989; Homer and Yoon 1992), that is, A_{ad} was specified as a predecessor to brand beliefs. This expanded framework allows us to examine four alternative routes to attitude formation/change: (1) affect \rightarrow attitude, (2) affect \rightarrow brand beliefs \rightarrow attitudes, (3) affect $\rightarrow A_{ad}$ \rightarrow attitudes, and (4) affect $\rightarrow A_{ad}$ \rightarrow brand beliefs \rightarrow attitudes.

The resulting model was seemingly "inferior" compared with the hypothesized means-end-based framework in Figure 1, $\chi^2(5, n = 204) = 42.18, p < .001$; NFI = .95, IFI = .96, CFI = .96, RMSEA = .184, SRMR = .044.⁹ What the findings (Table 2, column 2) indicate is that, overwhelmingly, positive affect's effect on brand attitudes is mediated by brand-related beliefs in this study, that is, the hypothesized chain of relationships is supported: positive feelings \rightarrow concrete attribute beliefs ($=.273$) \rightarrow abstract benefit beliefs ($=.574$) \rightarrow utilitarian attitudes ($=.290$) \rightarrow hedonic attitudes ($=.662$). Another (longer, A_{ad} -inclusive) processing path also emerges for both forms of affect: positive and negative feelings $\rightarrow A_{ad}$ ($=.431$ and $-.380$, respectively) \rightarrow concrete attribute beliefs ($=.210$) \rightarrow abstract benefit beliefs ($=.574$) \rightarrow utilitarian attitudes ($=.290$) \rightarrow hedonic attitudes ($=.662$). The inclusion of brand beliefs in the later sequence indicates that even when A_{ad} is involved, cognition may still maintain an important role in attitude change. Note, however, that A_{ad} does not lead directly to utilitarian or hedonic attitudes. Furthermore, the fact that A_{ad} is not entirely an "affective" construct, since it can reflect both affective and cognitive factors (Miniard and Barone 1997), suggests that even this (comparably) affective-driven pattern of links contains cognitive components. As reported above, negative feelings operate via a more affect-driven process. Negative feelings exhibit both direct and indirect effects via A_{ad} , but have no belief-driven (cognition-dominant) indirect effects (except those involving A_{ad}) on utilitarian or hedonic attitudes (direct paths $= -.220$ and $-.155, p < .05$, for utilitarian and hedonic attitude, respectively).

Per the above tests of Figure 1, the direct versus indirect effects of positive and negative affect on hedonic attitude was further examined via Lisrel's "effects" option. Using the longer A_{ad} -inclusive processing sequence (number 4, two paragraphs above) as the basis of the "restricted" model, findings indicate that positive affect had an indirect effect on hedonic attitude ($t = 3.00$), but no direct effect ($t = .04$). In contrast, negative affect exhibited a direct effect ($= -.16, t = -2.49$) along with a significant (but smaller) indirect effect (standardized indirect effect $= -.03; t = -2.84$).

In summary, for the familiar brands tested here, cognition plays a major role in the attitude change process when driven by positive forms of affect, dominating over the more affective-oriented paths to persuasion (H2b; e.g., the direct affect \rightarrow attitude paths and those involving A_{ad}). Even when A_{ad} is accounted for, the hypothesized impact sequence is upheld for positive forms of affect: positive feelings $\rightarrow A_{ad}$ \rightarrow concrete attribute beliefs \rightarrow abstract benefit beliefs \rightarrow utilitarian attitudes \rightarrow hedonic attitudes. However, the impact of negative feelings on attitudes toward known brands appears to be dominated by affective processes.

Other Plausible Models. Although past research (e.g., Johnson and Fornell 1987; Olson and Reynolds 1983) lends credence

to the logic that concrete attribute beliefs precede more abstract benefit beliefs, the modeled utilitarian attitude \rightarrow hedonic attitude link may be less apparent (Voss, Spangenberg, and Grohmann 2003). In response, a structural model that allowed for "co-occurrence" of the two attitude constructs was tested (the brand belief construct relationship in Figure 1 remained in tact). Not only was the model a poorer fit of the data— $\chi^2(5, n = 204) = 104.48, p < .001$; NFI = .81, IFI = .82, CFI = .81, RMSEA = .29, SRMR = .07; $\Delta \chi^2(1, n = 204) = 99.67, p < .001$ —but examination of the modification indices revealed that freeing up the path linking utilitarian attitudes to hedonic attitudes would significantly improve the overall fit (modification index = 86.63). A second "co-occurrence" model was built on Voss, Spangenberg, and Grohmann's (2003) proposition that utilitarian and hedonic attitudes operate essentially independently. That model specified affect as impacting concrete attribute and abstract benefit beliefs independently, each of which led to only one attitude component (utilitarian or hedonic, respectively). It also produced a poorer fit of the data— $\chi^2(8, n = 204) = 181.85, p < .001$; NFI = .67, IFI = .68, CFI = .67, RMSEA = .30, SRMR = .13; $\Delta \chi^2(4, n = 204) = 177.04, p < .001$ —and the modification indices for several omitted paths are substantial (e.g., 79.67 for the utilitarian \rightarrow hedonic attitude link; 53.22 for the concrete attribute belief \rightarrow abstract benefit belief link). Freeing up the concrete attribute beliefs \rightarrow hedonic attitude and abstract benefit beliefs \rightarrow utilitarian attitude linkages (thus removing causal inferences regarding the two belief constructs and two attitude constructs) had little impact on model fit, $\chi^2(6, n = 204) = 163.64, p < .001$; NFI = .70, IFI = .71, CFI = .70, RMSEA = .34, SRMR = .11; $\Delta \chi^2(2, n = 204) = 158.83, p < .001$.

Many argue that the relationship between affect and cognition remains an issue in psychology (see, e.g., Peter and Olson 2002). Some researchers suggest that the affective and cognitive systems are (at least partially) independent (e.g., Tomkins 1982; Zajonc 1984; Zajonc and Markus 1982), whereas others claim that affect is largely influenced by the cognitive system (e.g., Lazarus 1984, 1991). Yet others argue for an affect-dominant approach. Peter and Olson (2002, pp. 44–45) contend that the two systems are highly interdependent, that is, each system continuously influences the other. Acknowledging this debate in the literature, a final alternative model reversed the ordering of the affect and belief constructs, that is, the two belief constructs impacted each of the affect constructs, which, in turn, impacted each of the attitude constructs. This "reversed" specification produced an unacceptable fit of the data— $\chi^2(5, n = 204) = 96.45, p < .001$; NFI = .81, IFI = .82, CFI = .82, RMSEA = .31, SRMR = .13; $\Delta \chi^2(1, n = 204) = 92.15, p < .001$ —and examination of the modification indices revealed that the highest values were associated with the paths flowing from each affect construct to

concrete attribute beliefs (41.48 and 21.87 for positive and negative affect, respectively).

In conclusion, the data are more consistent with the linkages presented in Figure 1 than the "co-occurrence" or "reversed" specifications detailed above. Furthermore, while overall A_{ad} functioned as expected when incorporated into the basic model proposed, its inclusion did not alter any conclusions regarding the import of cognition.

Given the high degree of brand familiarity, it is impossible to rule out whether the ads cued the retrieval of certain product-relevant information in memory that led to the observed affect \rightarrow beliefs \rightarrow attitude relationships. Such concerns are addressed in a second study using an ad for an unfamiliar product.

STUDY 2

Overview of Purpose

As introduced above, a second study was conducted to formally test the notion that the hypothesized relationships will vary when the target of an ad is an unfamiliar brand about which consumers lack basic knowledge and impressions, which may ultimately "cloud" postexposure attitudes. As in Study 1, the test commercial (for an unknown brand of malt liquor) was a professional (never aired) 30-second spot void of product attribute information, with the only audio stimuli being an original musical track (designed to "fit" the ad/product and to appeal to the experimental audience). The ad depicted young people at a bar dancing and socializing (no erotic, violent, suggestive, or distasteful images).

Pretests and Measure Development

The primary goal of the first pretest ($n = 47$) was to assess fundamental associations that consumers associate with the malt liquor product category to develop a meaningful battery of (salient) brand beliefs (from which concrete attribute and abstract benefit beliefs could be extracted). The second pretest ($n = 101$) asked participants to rate their impressions of malt liquor using the resultant bipolar scales. Examination of the factor loadings and subsequent reliability tests produced reliable construct scales representing abstract benefit beliefs (pleasurable, fun, relaxing, enjoyable, refreshing, tastes good; $\alpha = .93$) and concrete attribute beliefs (thirst-quenching, nutritious, healthy, strong taste, all natural; $\alpha = .82$). These 11 (concrete attribute and abstract benefit) belief items became individual indicators measured in the main experiment (Study 2), along with a few additional items deemed relevant to these critical belief constructs.

Participants and Procedure

Data were collected from 274 (junior and senior) university students enrolled in an undergraduate introductory business course. Slightly more than half of the sample (54%) was female, with a mean age of 24 and a median age of 23. After consenting to participate in a "consumer research study," participants were told: "You will now view a 30-second television commercial for a new brand of malt liquor. We will show you the ad twice. Afterwards, we will ask you for your impressions of the ad and the advertised brand."

Measures

As per the hypotheses, the questionnaire included measures (nine-point scales) designed to assess brand awareness, feelings, attitudes toward the brand, brand-related beliefs and the importance of those beliefs, attitudes toward the ad (A_{ad}), music-related judgments (e.g., attitudes toward the music in the ad, the degree of "fit" between the ad and the music), in that order. The final section contained measures of processing style intermixed with ad evaluations, ad and product involvement, and product knowledge; last, this was followed by demand characteristics, gender, and age.

The same emotion/feeling responses were collected in both studies. As in Study 1, exploratory factor analysis confirmed the validity of the basic positive ($\alpha = .92$) and negative ($\alpha = .75$) dimensions, with similar loading patterns (i.e., all items loaded on the same factors in both studies). Two factors were distinguishable in the list of brand-related belief measures: A concrete attributes factor loaded on "is thirst-quenching," "is nutritious," "is healthy," "has fruit flavoring," "has a strong taste," "is cheap," "is made of the finest ingredients," "is not bitter," and "has few calories" ($\alpha = .86$); an abstract benefits factor loaded on "is enjoyable," "is exciting," "is refreshing," "is pleasurable," "is fun," and "tastes good" ($\alpha = .87$). The AI (brand belief \times their importance) terms were calculated for concrete attribute brand beliefs and abstract benefit brand beliefs.

As per Study 1 and the research objectives, the individual attitude indicators were reduced to two distinct constructs: A utilitarian factor loaded strongest on items of worthless/valuable, awful/nice, foolish/wise, useless/useful, and harmful/beneficial ($\alpha = .90$); a second hedonic factor loaded on not happy/happy, boring/exciting, not fun/fun ($\alpha = .94$). Five items provided a measure of overall attitude toward the ad (A_{ad} ; negative/positive, unfavorable/favorable, unpleasant/pleasant, disagreeable/agreeable, and dislike/like; $\alpha = .96$), and six reflected the entertainment and originality value of the ad (unoriginal/original, boring/exciting, not entertaining/entertaining, not unique/unique, unhip/hip, and not fun/fun; $\alpha = .93$).

Measures were incorporated to verify that the test com-

mercial satisfied the study goals. The battery of bipolar scales assessing liking of the musical score in the commercial yielded a highly reliable index ($\alpha = .97$). Three measures of the fit assessed how "relevant" and "appropriate" the music was to the ad and whether the music "fit" the ad overall ($\alpha = .87$), followed by scalar assessments designed to capture (1) participants' focus while watching the ad, (2) what respondents were thinking about while watching the ad, (3) the amount of product information in the ad and audio track, (4) involvement with the ad (not involved/involved and no attention/a lot of attention, Spearman-Brown reliability coefficient = .83), and (5) product knowledge (three items, $\alpha = .81$). Review of two final items indicated that all participants were unfamiliar with the advertised brand (initial question) and none were judged to be aware of the purpose or guiding hypotheses.

Tests of Commercial Elements and Processing Style

The test ad was specifically designed to convey little brand-related information, confirmed by data assessing such. When asked what type of information was contained in the commercial and the audio track (two separate questions), participants gravitated toward the "no real product information" endpoints (coded as "1") versus the "a lot of product information" endpoints (coded as "9") ($M = 3.36$ and 3.50 for the commercial and audio track measures, respectively). The commercial was also rated as being more "emotional/image oriented" (coded as "9") than "informational/containing product claims" (coded as "1") ($M = 7.39$). Respondents focused more on (1) "elements other than product attribute information" (coded as "1"), versus "product information such as brand attributes" (coded as "9") ($M = 3.92$), and (2) "other nonproduct elements in the ad" (coded as "9") rather than "the product" (coded as "1") ($M = 6.84$). In conclusion, these findings indicate that affective processing significantly exceeded any brand-related processing and that the ad video and audio tracks contained virtually no explicit product attribute information.

As desired, the ad was deemed to possess a good fit between the musical score and the visual elements ($M = 7.27$), to be entertaining/original ($M = 6.54$), and to be well-liked overall ($M = 6.00$). In addition, the musical score was sufficiently liked by the test audience ($M = 6.46$), and therefore was appropriate as an exogenous variable. To summarize, the above assessments demonstrate that the test commercial met all stimulus development goals.

Measurement Model of the Affect, Belief, and Attitude Constructs

Following tradition and the procedure outlined in Study 1, a comprehensive measurement model (CFA) was estimated that included all key constructs (i.e., positive and negative feelings,

A_{ad} , concrete attribute and abstract benefit brand beliefs, and utilitarian and hedonic attitudes). Although the χ^2 for this (seven-factor) model was significant (indicating a poor fit), the overall goodness-of-fit statistics were acceptable: $\chi^2(1,154, n = 274) = 3,077.47, p < .001$; NFI = .90, IFI = .94, CFI = .94, RMSEA = .08, SRMR = .10.

On balance, item factor loadings were statistically significant and impressively high (with one exception, ranging from .511 to .922, average = .739), as were the AVEs for each construct (ranging from .45 to .79, average = .58), indicating acceptable convergent validity. (Removal of four indicators [out of 50] increased the two low AVEs above or near the desired .50 standard. The fit statistics improved only slightly for that reduced model.) Discriminant validity among the latent constructs was confirmed: (1) All pairwise correlations (adjusted for measurement error) are significantly different from 1.0 ($p < .05$), and (2) the stricter test (Fornell and Larcker 1981) was met for all but one pair of the latent constructs, that is, the two attitude constructs (.58 and .79, not both $> .64$).

As in Study 1, the seven-factor model detailed above was compared with a simple four-factor model where affect, A_{ad} , beliefs, and attitude were specified as single-factor constructs. By all indications, this model was inferior to the more complex multidimensional specification, $\chi^2(1,169, n = 274) = 4,168.92, p < .001$; NFI = .87, IFI = .90, CFI = .90, RMSEA = .13, SRMR = .12. In addition to the unacceptable model fit, numerous low-factor loadings (as low as .006), accompanied by relatively lower AVEs, indicate questionable construct validity for the four-factor structure, and discriminant validity was not established for all constructs. On balance, the CFA supported the hypothesized multidimensional structure of affect, beliefs, and attitude for Study 2.

Relationships Among Affect, Beliefs, and Attitude

The model χ^2 (Figure 1: [4, $n = 274$] = 16.70, $p < .010$; Table 2, column 3) is significant, indicating unacceptable fit of the data, but the other seemingly more relevant fit indices are impressive (NFI = .979, IFI = .984, CFI = .983, RMSEA = .107, SRMR = .031). Whereas positive affect tends to have both a direct and indirect impact on attitude, negative affect has a direct effect on attitude. It is interesting that the longest indirect route involving positive feelings jumps one link, that is, positive feelings \rightarrow concrete attribute beliefs \rightarrow abstract benefit beliefs \rightarrow hedonic attitudes. However, a second (cognition-driven) indirect route is also evident: positive feelings \rightarrow concrete attribute beliefs \rightarrow utilitarian attitudes \rightarrow hedonic attitudes.

It is only positive emotions that demonstrate a direct link to both utilitarian (= .361, $p < .05$) and hedonic (= .103, $p < .10$) attitudes, along with an indirect effect via concrete attribute beliefs. It is interesting to note that both forms of

affect (positive and negative) are directly related to abstract benefit beliefs, but that route does not then transfer to utilitarian attitudes (i.e., abstract benefit beliefs \rightarrow hedonic attitudes). Consistent with Batra and Ahtola (1990), concrete attribute beliefs are (statistically) more closely aligned with utilitarian (versus hedonic) attitudes (= .185, versus $-.063$, $p < .025$), and abstract benefit beliefs (directionally) with hedonic attitudes (= .150, versus .093, not significant).

As for Study 1, the direct and indirect effects of (positive and negative) affect on hedonic attitude (H2a) were further examined via Lisrel's "effects" option. For the full model (Figure 1), the indirect effects exceed the direct effect for positive (standardized indirect effects = .372 [$t = 6.80$], versus direct effect = .103 [$t = 1.81$]) and negative affect (standardized indirect effects = $-.165$ [$t = -3.13$], versus direct effect = $-.107$ [$t = -1.88$]). When the proposed indirect paths were isolated from all possible indirect effects (as specified in the full model in Figure 1), as predicted, positive affect had a significant direct effect on hedonic attitude (= .179 [$t = 3.90$]) that exceeded the (significant) indirect effect (standardized indirect effect = .077 [$t = 4.30$]). In contrast, negative affect exhibited a direct effect ($t = -3.41$) and no indirect effect ($t = .94$).

In summary, based on the magnitude of relationships, overall, these findings indicate that the development/formation of attitudes toward unfamiliar brands is more affect-based compared with situations involving familiar brands, which tends to be more a process of "updating" existing impressions. Even when affective processing is encouraged, however, cognition still plays a valuable role (as a mediator) that must be acknowledged.

Alternative Structural Models/Theoretical Explanations

Attitude Toward the Ad

Following procedures outlined for Study 1, the A_{ad} -inclusive model generates estimates to compare four alternative routes to attitude formation/change: (1) affect \rightarrow attitude, (2) affect \rightarrow brand beliefs \rightarrow attitude, (3) affect $\rightarrow A_{ad} \rightarrow$ attitude, and (4) affect $\rightarrow A_{ad} \rightarrow$ brand beliefs \rightarrow attitudes. The resulting model was acceptable (Table 2, column 4), but still "inferior" (based on χ^2) compared with the means-end framework detailed above, $\chi^2(5, n = 274) = 34.94, p < .001$; NFI = .97, IFI = .98, CFI = .98, RMSEA = .15, SRMR = .031. Consistent with previous research, however, the path estimates associated with A_{ad} indicate that it is an important factor that can't be ignored. Findings (Table 2, column 4) demonstrate that affect's effect on brand attitudes is mediated by A_{ad} in this study: positive and negative feelings $\rightarrow A_{ad}$ (= .552 and $-.517$, respectively) \rightarrow utilitarian attitudes (= .608) \rightarrow hedonic atti-

tudes ($=.632$). A second longer chain of influence that includes cognition also emerges: positive and negative feelings $\rightarrow A_{ad}$ ($=.552$ and $-.517$, respectively) \rightarrow concrete attribute beliefs ($=.284$) \rightarrow abstract benefit beliefs ($=.383$) \rightarrow hedonic attitudes ($=.154$). The only direct (marginal) relationship between affect and attitude is for negative feelings and utilitarian attitudes ($= -.172, p < .10$). When A_{ad} is incorporated into the framework, the direct affect \rightarrow attitude effects are rendered less important.

Although the full model analyzed above (after accounting for A_{ad}) downplays the importance of the direct effects of positive and negative affect on hedonic attitudes, a restricted model like that presented for Study 1 was estimated. Analysis of the direct versus indirect effect statistics for this reduced model reveals significant direct effects of positive ($.199, t = 4.3$) and negative affect ($-.202, t = -4.04$) on hedonic attitude (H2a). In addition, the indirect effects, while significant, are comparably less important: standardized indirect effects = $.032$ ($t = 3.64$) and $-.030$ ($t = -3.58$) for positive and negative affect, respectively.

On balance, these findings appear consistent (at least in part) with Machleit and Wilson (1988), who report a greater effect of A_{ad} on brand attitudes for unfamiliar brands versus familiar brands. The comparatively low coefficients associated with the brand belief \rightarrow attitude relationships in the A_{ad} -inclusive model mirror other findings in the literature (see, e.g., Brown and Stayman 1992).

Other Plausible Models

A structural model permitting “co-occurrence” of the two attitude constructs produced a poorer fit of the data— $\chi^2(5, n = 274) = 139.43, p < .001$; NFI = $.82$, IFI = $.83$, CFI = $.82$, RMSEA = $.29$, SRMR = $.08$; $\Delta \chi^2(1, n = 274) = 122.73, p < .001$ —and examination of the modification indices revealed that freeing up the path linking utilitarian attitudes to hedonic attitudes would significantly improve the overall fit (modification index = 105.00). The second “co-occurrence” model specified affect as impacting concrete attribute and abstract benefit beliefs independently, each of which led to only one attitude component (utilitarian or hedonic, respectively). As in Study 1, it also produced a poorer fit of the data— $\chi^2(8, n = 274) = 177.55, p < .001$; NFI = $.77$, IFI = $.78$, CFI = $.78$, RMSEA = $.26$, SRMR = $.10$; $\Delta \chi^2(4, n = 274) = 160.85, p < .001$ —and the modification indices for several omitted paths are substantial (e.g., 104.36 for the utilitarian \rightarrow hedonic attitude link, 33.44 for the concrete attribute \rightarrow abstract benefit belief link). Freeing up the concrete attribute beliefs \rightarrow hedonic attitude and abstract benefit beliefs \rightarrow utilitarian attitude linkages (thus removing causal inferences regarding the two belief constructs and two attitude constructs) did not improve the model fit, $\chi^2(6, n = 274) = 174.49, p < .001$; NFI = $.78$, IFI = $.78$, CFI = $.78$,

RMSEA = $.30$, SRMR = $.10$; $\Delta \chi^2(2, n = 274) = 157.79, p < .001$.

The final alternative structural model reversed the ordering of the affect and belief constructs. This “reversed” specification produced an unacceptable fit of the data— $\chi^2(5, n = 274) = 28.49, p < .001$; NFI = $.96$, IFI = $.97$, CFI = $.97$, RMSEA = $.13$, SRMR = $.04$; $\Delta \chi^2(1, n = 274) = 11.79, p < .001$ —and examination of the modification indices revealed high values attached with the paths flowing from each affect construct to concrete attribute and abstract benefit beliefs (16.34 and 4.72 , respectively, for both positive and negative feelings).

In conclusion, the data are more consistent with the linkages presented in Figure 1 than the “co-occurrence” or “reversed” specifications detailed above when the target brand is unfamiliar.

SUMMARY OF HYPOTHESIS TESTS FOR STUDY 1 AND STUDY 2

In affect-laden contexts, where information about a brand's functional properties is not apparent or unimportant and/or where an advertiser's primary goal is to touch consumers' hearts; the (overall) direct impact of affect on attitude varies across types of affect, and the direct and indirect relationships are influenced by brand familiarity. Based on the goodness-of-fit statistics and parameter estimates, the data provide evidence that, for familiar brands, only some forms of affect (i.e., negative feelings) have a direct effect, whereas positive forms of affect impact attitude via cognition and/or A_{ad} . When consumers are unfamiliar with the advertised brand, however, persuasion (e.g., attitude formation) is more of an affect-dominant process.

Furthermore, decomposing attitude into its hedonic and utilitarian components and brand beliefs into their concrete attribute and abstract benefit categories provided additional insight, the former being most critical to familiar brands, where consumers are more apt to “update” existing evaluations. For unfamiliar brands, the influence derived from cognitive factors is more attributable to abstract forms of cognition such as the abstract benefit beliefs measured here, and less from more concrete forms of cognition (such as the measured concrete attribute beliefs).

GENERAL DISCUSSION

The tasks and settings in past research of affect, cognition, and attitude relationships may have inflated the magnitude of cognition in the persuasion process; the current studies therefore purposefully maximized affective (versus cognitive) advertising responses to test the robustness of prior findings. Furthermore, many of these earlier empirical endeavors have looked at simple associations between the critical constructs

(e.g., correlations between affect and A_b). The structural equation approach used here examined all direct and indirect relationships among ad-induced affect, cognition, and attitude simultaneously, accounting for measurement error.

Using ads void of explicit brand attribute information, these studies demonstrate that the relative role of cognition as a mediator of the affect-attitude relationship is influenced by brand familiarity and varies for positive versus negative forms of affect. Positive affect operated in line with traditional wisdom (e.g., cognition played a significant mediative role for well-known brands), whereas negative affect displayed a (negative) direct effect on brand attitudes. The direct effects of ad-generated affect are not completely absolved by brand beliefs or A_{ad} . The fact that all the significant relationships involving negative affect are negative concurs with Burke and Edell's (1989) position that "there is no countervailing influence to offset the negative effects of negative feelings" (p. 78). The strong effect of negative affect for both familiar and unfamiliar brands suggests that advertisers should avoid executions capable of evoking substantial negative feelings that might damage brand equity. The test ads in these (and most previous research) studies were "positive" in nature, that is, they were created to elicit positive feelings and emotions among the audience. In the case of ads designed to elicit negative feelings (e.g., guilt and fear appeals), such (negative) affective responses may have positive effects on attitudes and behavior (e.g., Bagozzi and Moore 1994; Ray and Wilkie 1970). For example, a testimonial by a longtime smoker suffering from emphysema may have a stronger positive impact on young smokers' behaviors than on their evaluation of the ad or their evaluation of the tobacco industry or specific cigarette brands.

The data support previous evidence (e.g., Bodur, Brinberg, and Coupey 2000) for the uniqueness (i.e., construct and discriminant validity) and multidimensionality of the affect, cognition, and attitude constructs. It has been suggested that the predominance of A_{ad} over beliefs as a predictor of A_b in some prior research may have been due in part to the omission of nonutilitarian types of beliefs in the model (Mittal 1990). In response to this position, abstract benefit brand beliefs were included along with the more traditional concrete attribute beliefs. In this brand-related setting in which affective and cognitive responses were advertisement-induced, the data also indicate that attitudes have a hedonic and utilitarian component. While others have reported such utilitarian and hedonic distinctions (e.g., Batra and Ahtola 1990), the above studies offer nomological validity to these constructs in the form of a structural equation test proposing that utilitarian attitudes precede hedonic attitudes. Comparisons of alternative structural models in Study 1 and Study 2 indicating that utilitarian attitudes lead to hedonic attitudes are noteworthy. Further exploration into the robustness of the relationship is warranted, however. For example, Yoon et al.

(1995) report evidence that the causal link between utilitarian and hedonic attitudes varies under low versus high message involvement.

Findings presented here suggest that the relative roles of affect and cognition are impacted by brand familiarity. Cognition mediates the impact of positive affect on hedonic attitudes for familiar brands, whereas negative forms of affect exhibit a direct effect. For unfamiliar brands, the direct effects between positive and negative affect and brand attitudes are all significant. When A_{ad} is incorporated into the model as a mediator, however, the direct effects of affect on hedonic attitudes are rendered insignificant for the unknown brand. This brand belief-based mediation is especially noteworthy because this advertising context purposefully omitted detailed brand attribute information, relying solely on musical and visual cues (which also did not convey product-relevant information). In spite of this, brand beliefs for the familiar brands had a powerful mediative influence in addition to any direct affect \rightarrow attitude relationship that may have occurred. This is consistent with the argument that knowledgeable consumers use ads to "update" existing impressions. It is unlikely that even a powerful, emotionally charged ad (or series of ads) will be able to override such cognitive thought processes.

Adding A_{ad} to the equation provided supplemental insight into the findings summarized above. While affect $\rightarrow A_{ad}$ for known brands, the only subsequent connection to hedonic attitudes was via brand-related beliefs and utilitarian attitudes. The dominant role of cognition over (1) A_{ad} , and (2) the direct (affect \rightarrow attitude) effect for familiar brands was reconfirmed (cf. Fishbein and Middlestadt 1995). This should serve as a warning for advertisers who seek certain emotional responses from viewers in the hopes of impacting brand attitudes. Even when ads lack explicit brand attribute information, consumers' affective responses will likely motivate a variety of cognition-based activities that in turn influence (preexisting) brand attitudes. For the unfamiliar brand (Study 2), inclusion of A_{ad} was meaningful and important, because the direct effects of affect on attitude were rendered insignificant ($p > .05$). As predicted, cognition was overpowered in the attitude formation process by affect and A_{ad} when the target was an unknown brand. This does highlight the importance of using creative and appealing ads for new brands. Once consumers are sufficiently familiar with a brand, advertisers can focus on cognitive selling points (such as brand attributes) to maintain and nurture positive attitudes.

The data also indicate that ad-based affect can serve as an antecedent to more sensory/subjective assessments (e.g., abstract benefit beliefs and hedonic attitudes), in addition to more instrumental/objective brand-related evaluations (e.g., concrete attribute beliefs and utilitarian attitudes). Measuring hedonic and utilitarian attitude dimensions affords advertisers/marketers a variety of benefits. For example, they

may be better able to predict consumer behaviors (Batra and Ahtola 1990), they can test the effectiveness of advertising campaigns that focus on experiential and functional positioning strategies, and they may identify brand differences not apparent when a single-dimension attitude assessment is used (Voss, Spangenberg, and Grohmann 2003). This bidimensional approach can also aid in pricing and sales promotion decisions since consumers tend to be less price-sensitive and less affected by promotional deals when hedonic motivations rule. It is also important to note that both studies offer empirical support for a hierarchical relationship between concrete and abstract forms of cognition and attitude that is consistent with past means-end chain models, that is, concrete attribute beliefs → abstract benefit beliefs → utilitarian attitudes → hedonic attitudes.

LIMITATIONS AND FUTURE DIRECTIONS

It is acknowledged that Figure 1 indicates the nature of possible path relationships, consistent with previous research, and supported by the structural equation analyses and tests of competing models. As noted above and by others (cf. Olson and Reynolds 1983), all links may not be present in all instances. In addition, the data are correlational, and thus, future research is needed to establish "causality" among the critical concepts. Furthermore, brand familiarity was varied across two separate studies. Manipulating affective versus cognitive processing and familiarity within one experiment would enable causal conclusions and would eliminate lingering alternative explanations concerning the effects of familiarity.

It is also appropriate to note that asking about feelings encourages cognitive processes and itself induces a cognitive bias (Sawyer 1981; Vakratsas and Ambler 1999). Unfortunately, noncognitive measures (e.g., projective techniques and the Facial Action Coding System developed by Ekman and Friesen [1978]) have yet to be shown to be reliable for measuring advertising affect (Scherer and Ekman 1982). The relatively rare use of various noncognitive measures in practice likely indicates that "they are not entirely satisfactory" (Vakratsas and Ambler 1999, p. 37). Future efforts might revisit this issue, that is, by developing/applying effective nonverbal forms of affect measurement.

The data only partially support the notion that utilitarian attitudes are more closely related to concrete forms of cognition and hedonic attitudes to abstract forms of cognition. This should be further explored by manipulating product/decision motivations (e.g., those driven by utilitarian/objective versus hedonic/subjective motives). The finding that utilitarian attitude is "skipped" (i.e., less important) in the belief-inclusive indirect chain (Figure 1) when processing an attribute-void commercial for an unknown brand appears to be consistent with the notions that utilitarian and hedonic attitudes may play

different roles and that all links may not be present in every case (Olson and Reynolds 1983), thus warranting further investigation.

Another obvious area for future research is to use ads designed to elicit negative emotions. Does the same (negative) affect → attitude relationship hold or is there a positive relationship?

Future efforts should consider testing the means-end framework on a wider variety of ads, with varying types of appeals (e.g., emotional versus informational) and exposure frequency levels. Finally, studies of other (nonbeverage) product categories and nonstudent samples will enhance external validity.

NOTES

1. Because affect, emotions, and feelings are often used synonymously in the literature, we do the same here. Note that measures of affect toward the ad (A_{ad}) are not included in this category as they can reflect cognitive factors (e.g., Miniard and Barone 1997).

2. While these are typically assessed via rating scales designed to capture a host of affective responses, the most common distinction to emerge across these studies of affect is the positive versus negative one, confirmed to represent two independent dimensions (rather than one bipolar continuum) in a meta-analysis by Brown et al. (1998). (For a good review of the typology literature as it relates to affective responses and categories of emotion, see Batra and Ray 1986.)

3. Researchers have offered a variety of typologies to categorize brand-related beliefs, including characteristic, beneficial, and image attributes (Lefkoff-Hagius and Mason 1993), abstract versus concrete attributes (e.g., Johnson and Fornell 1987; Olson and Reynolds 1983), factual and evaluative beliefs (Holbrook 1978), functional and user-imagery (Myers and Shocker 1981), lower-order attributes and higher-order attributes (Zeithaml 1988), image versus utilitarian brand attributes (Mittal 1990), and cognitive and affective brand belief concepts (Dubé, Cervellon, and Jingyuan 2003). (See Lefkoff-Hagius and Mason 1993 for a review of such distinctions.) In response to this growing acknowledgment of the multidimensional nature of the brand belief concept, the studies reported below incorporate concrete brand attribute and abstract benefit brand beliefs, confirmed in pretests.

4. As noted by Olson and Reynolds (1983), all links may not be present in every case. For example, a consumer may know that a product has certain characteristics, but may make little effort to develop abstract meanings associated with the benefits of using/owning the product.

5. Familiarity has been linked to a variety of consumer behavior concepts, including decision time, reliance on price information, choice confidence (the former all addressed by Park and Lessig 1981), information search (Brucks 1985), learning and organization of product information (Cowley and Mitchell 2003; Johnson and Russo 1984), and information processing (e.g., brand-name recognition, memory, problem solving, elaboration; Alba and Hutchinson 1987).

6. The songs (1) are mainstream Top 40 songs represented by mainstream Top 40 acts; (2) are fairly equal in speed (beats-per-minute); (3) are sung by male vocalists who were alive at the time of data collection; (4) are not tied to past music trends or crazes; (5) have innocuous lyrics, are equal in spirit, and have similar "relationship" and/or "fun" themes; and (6) are represented by recording acts who (at the time of data collection) were not considered "superstar" acts and have not been tainted in reputation since their popularity, are not "novelty" acts, are not currently experiencing a successful comeback, and are not now and have never been mythologized.

7. In the interest of parsimony, the links involving liking of the musical track and those for the affect intercorrelations are omitted from all tables and figures.

8. The DMH proposes that A_{ad} influences brand attitudes directly and indirectly via brand cognitions (as measured via thought protocols). The relationships have been shown to be robust across media and levels of involvement (e.g., Homer 1990; MacKenzie, Lutz, and Belch 1986).

9. These models are not "nested," and therefore a change in c^2 comparison is not appropriate.

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