The Differential Role of Characteristics of Music on High- and Low-Involvement Consumers' Processing of Ads

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This article examines the impact of two dimensions of music—its fit with the advertised message and its ties to past emotion-laden experiences (indexicality)—on low- and high-involvement consumers' ad processing. Previous research suggests that executional cues in an ad exert their influence primarily under conditions of low involvement in the form of peripheral-route processing. However, this view may be overly simplistic. Certain executional cues may influence central-route (message-based) and peripheral (non-message-based) processing of both high- and low-involvement consumers; however, the direction of this influence may depend on both the specific characteristic of the cue and the level of consumer involvement. The results of this research generally are consistent with these expectations.

Recent research has focused on the role that advertising executional cues (e.g., pictures, source characteristics, music, message sidedness) play in high- and low-involvement consumers' processing of ads. A basic conclusion from this research is that executional cues have their predominant effects on the attitude formation process of low-involvement consumers (Petty and Cacioppo 1986). Specifically, such executional cues create, affect, or stimulate inferences that, in turn, form the basis for low-involvement consumers' brand attitudes. In contrast, high-involvement consumers are thought to ignore such peripheral cues in forming brand attitudes, focusing instead on the advertised message and their reactions to it (Petty, Cacioppo, and Schumann 1983). This distinction has led to a widely accepted typology of processing: central (message-based) and peripheral (non-message-based) processing, with each mode of processing and usage of executional cues corresponding to a given level of involvement. This article raises concerns over this distinction, arguing that the presumed relationship among the types of processing (message- vs. non-message-based), level of involvement (high vs. low), and use of executional cues (low vs. high) is oversimplified.

A reason why this relationship has emerged from past research is that our understanding of executional cues is at present relatively superficial. While research has studied such factors as pictures, music, and sources, relatively little research has examined the differential impact of specific characteristics of the same executional cue on high- and low-involvement consumers' processing of ads. Such research is important, however, as some characteristics of an executional cue may affect both high- and low-involvement consumers' ad information processing through more message-based routes to persuasion (e.g., attention to message beliefs), while others may influence brand attitudes through more non-message-based routes (e.g., attention to the executional cue, emotion, and ad attitude [hereafter A_{ad}]).

It is possible, for example, that certain characteristics of an executional cue can enhance low-involvement consumers' processing of the advertised message and, as such, stimulate message-based processing. In contrast, other characteristics of the same cue may stimulate more non-message-based processing for low-involvement consumers, holding their attention on the ad execution or stimulating affective responses. Relatedly, although it is generally assumed that executional cues play a limited role in the brand-attitude formation processes of high-involvement consumers, there is suggestive evidence that certain cues may influence these consumers' brand attitudes by interfering with or enhancing message processing (Petty and Cacioppo 1986; Swasy and Munch 1985). Executional cues may also influence high-involvement consumers' affective processing.

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Mitchell (1986) and Park and Young (1986), for example, showed that executional cues, such as music and pictures, influenced even high-involvement consumers' brand attitudes through the mediating role of A_{ad}. However, little research has addressed which aspects of executional cues may have facilitative or distracting effects for high-involvement consumers.

Further study of this issue is, however, critical as previous research has alluded to the potential effects of specific characteristics of executional cues on high- and low-involvement consumers' processing of ads. Kahle and Homer (1985) found that two different source characteristics (attractiveness and likability) differentially affected brand attitudes for high- and low-involvement consumers. Miniard, Lord, and Dickson (1988) also found that two different characteristics of pictures (affect-laden and message-relevant) had different effects on brand attitudes for high- and low-involvement consumers. However, neither study examined the effects of these cue characteristics on ad processing and brand-attitude formation processes.

Among the many types of executional cues available in an ad, music is particularly important because of its preeminence in most commercials (Stewart and Furse 1986) and its potential to enhance viewer arousal (Dowling and Harwood 1986; Stout and Leckenby 1988) and affect (Alpert and Alpert 1986; Gorn 1982; Mitchell 1988; Park and Young 1986; Stout and Leckenby 1988). However, it is not known which characteristics of music may have distracting or facilitative effects on message- and non-message-based processing and, if operative, whether their effects are similar for both high- and low-involvement consumers. This study addresses these issues. Specifically, we examine the impact of two characteristics of music (fit and indexicality) on the message-based (e.g., attention to the message beliefs) and non-message-based (e.g., attention to ad executional cues, emotion, and A_{ad}) processing of high- and low-involvement consumers.

CONCEPTUAL MODEL

Indexical Associations to Music

We propose that whether music affects low- and high-involvement consumers' message- and non-message-based processing depends on its "indexicality." The indexicality of music is defined here as the extent to which music arouses emotion-laden memories. Music with high indexicality induces strong emotions that are tied to past experiences. According to Dowling and Harwood (1986), music can become associated with previous emotion-laden experiences. "Indexical representations" are created by "the direct association of a musical event with some extramusical object, so that emotions previously associated with the extramusical object come to be associated with the music" (Dowling and Harwood 1986, p. 204). In Dowling and Harwood's conceptualization, music becomes a conditioned stimulus for prior experiences, and emotions become the conditioned response. Although music may be associated with either positive or negative emotion-laden memories, we focus on the former.

As a characteristic of music, indexicality often is unrelated to the advertised message. It may, however, affect high- and low-involvement consumers' message-based processing. Specifically, the strong emotions that are associated with high-indexicality music may enhance low-involvement consumers' interest in the ad and its music and, therefore, stimulate incidental learning of the message. However, its impact on attention to the music and the retrieval of emotions may interfere with high-involvement consumers' message processing (Eysenck 1982). While indexicality may have different effects on the message processing of low- and high-involvement consumers, it may have similar effects on their affective processing. Specifically, it may retrieve favorable emotions from memory, influencing high- and low-involvement consumers' feelings and ad attitudes.

Music's Fit with the Advertised Concept

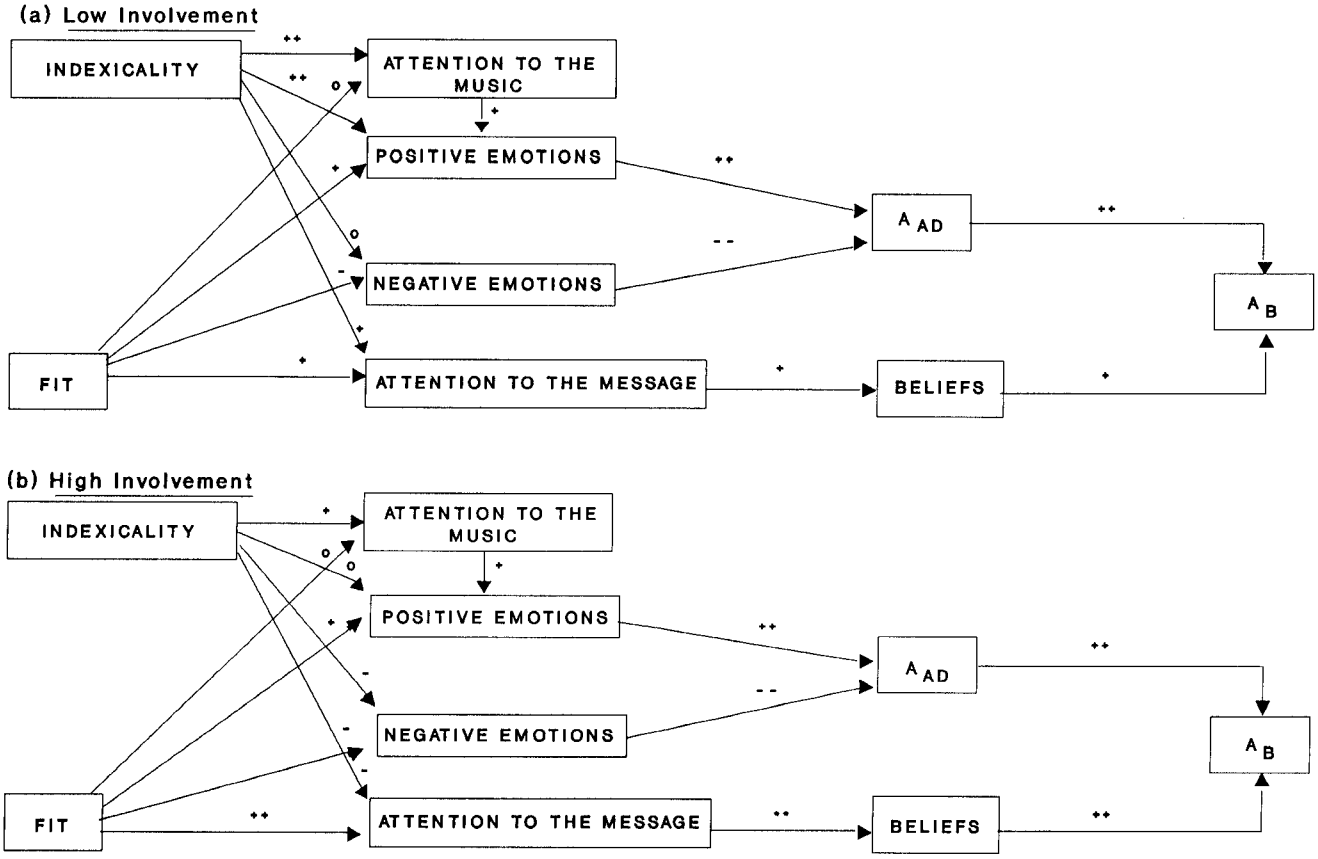
Several researchers note that music can be described according to its complementary relationship to other ad cues. Hecker (1984) proposes that music "augments words, colors pictures, and adds a form of energy available through no other source." Park and Young (1986) further argue that the complementary role of music with other ad elements may affect ad processing. Relatedly, we identify a characteristic of music called "fit." While music may fit with many ad elements, fit is defined here as consumers' subjective perceptions of the music's relevance or appropriateness to the central ad message. Thus, the construct of fit bears much in common with Kahle and Homer's (1985) discussion of message-relevant sources. Although it is part of the advertising execution, music that fits the ad can be conceptualized as a message-relevant executional cue because it supports and reinforces the basic advertising message.

The notion that fit facilitates information processing has a long history in Gestalt psychology. Pomerantz (1981; see also Bruner 1957) proposes that, when elements of a stimulus set complement other items in the set, the individual parts are not perceived as separable, do not compete with one another for cognitive resources, and hence create "emergent meaning." Each acts on the reinforcing and complementary properties of the other to guide stimulus perception. While these facilitating effects should be higher for high- than for low-involvement consumers, music's fit with the main theme of the ad may also enhance message processing for low-involvement consumers, helping to create emergent meaning for the message when processing capacity is relatively low.

The precise role of fit and indexicality on low- and high-involvement consumers' processing is elaborated below and depicted in Figure 1.

FIGURE 1

HYPOTHESIZED EFFECTS OF FIT AND INDEXICALITY FOR LOW- AND HIGH-INVOLVEMENT CONSUMERS



NOTE.—The plus and minus signs indicate the strength and direction of the hypothesized relationships: ++ indicates a strong positive effect, + indicates a modest positive effect, 0 indicates no expected effect, − indicates a modest negative effect, and − − indicates a strong negative effect.

Music and the Ad Processing of Low-Involvement Consumers

The Impact of Indexicality. Although low-involvement consumers generally pay little attention to an ad, various cue characteristics may affect their attentional resources. Specifically, the emotional associations that are tied to music with high indexicality may enhance low-involvement consumers' attention to the commercial and the music it contains (see Fig. 1*a*). Low-involvement consumers' focus on music with high indexicality should, in turn, activate and retrieve the emotional associations that are attached to such music. Since we focus on music that is associated with positive associations, indexicality is hypothesized to affect positive, but not negative, emotions (see Fig. 1*a*).

Because music with high indexicality enhances attention to the commercial and its music, it may create some attention to the advertised message, which may, in turn, affect beliefs (see Fig. 1*a*). However, because indexicality is a message-independent cue, and because low-involvement consumers are not highly motivated to process the advertised message, we do not expect these effects to be strong.

The Impact of Fit. Although low-involvement consumers are not highly involved with the ad, they may be able to perceive a lack of fit by noting the impressions obtained from the tone of the music versus the visuals and message in the ad. Although this general perception of incongruity may affect their attention to the ad, low-involvement consumers' attention is likely to be diffusely focused on the ad execution as a whole as opposed to any particular element (e.g., music). However, since low-involvement consumers do not have high motivation, ability, or opportunity to resolve incongruity among ad elements, no effort will be made to do so. Such incongruity is, therefore, likely to create more negative and fewer positive emotions (see Fig. 1*a*).

Music fit may also affect low-involvement consumers' attention to the message. Specifically, when it is well integrated into the ad, music becomes less distinctive from other ad elements, including the message. In a

global sense, this "good" form may, in fact, make the ad as noteworthy as the "poor" form (e.g., low fit). However, unlike the poor form, the good form will facilitate some message processing and the formation of beliefs on the basis of such processing (see Fig. 1*a*).

It should be noted that the impact of fit on low-involvement consumers' processing depends heavily on the absolute level of fit and low involvement (how "high" the fit is and how "low" the low involvement is). When the level of fit is not high or the level of involvement is very low, the above predictions may not hold. Since this information is not known a priori, the above predictions are speculative.

The Impact of Fit and Indexicality on Brand Attitudes. A number of studies have shown that positive and negative emotions strongly influence A_{ad} (Burke and Edell 1989; Edell and Burke 1987; Holbrook and Batra 1987). As fit is expected to influence positive and negative emotions and indexicality is expected to influence positive emotions, these two characteristics of music should influence A_{ad} through their impact on emotions (see Fig. 1*a*). Ad attitude should, in turn, influence low-involvement consumers' brand attitudes (Gardner 1985; Lutz, MacKenzie, and Belch 1983; Mitchell and Olson 1981; Park and Young 1986). As such, we expect this non-message-based (emotions, A_{ad}) route to brand-attitude formation to be operative and tied to both characteristics of music.

While fit and indexicality are each expected to exert some influence on beliefs (through their effects on attention to the message), the extent of such effects should depend on the absolute level of fit and indexicality. As these levels are not known a priori, the precise effects are difficult to predict. We do, however, expect lower contributions to brand attitudes from the message-based than from the non-message-based processing route (Park and Young 1986). This prediction does not, however, imply that message-based processing and its importance to low-involvement consumers' brand attitudes is negligible.

Music and the Ad Processing of High-Involvement Consumers

The Impact of Indexicality. As with low-involvement consumers, indexicality may also affect high-involvement consumers' attention. Specifically, high indexicality should attract attention to the music (see Fig. 1*b*). However, because high-involvement consumers are motivated to process the advertised message, the impact of indexicality on attention to the music may not be as strong as that predicted for low-involvement consumers (see Fig. 1*b*). Nevertheless, the fact that some attention may be focused on the music suggests potential interference in high-involvement consumers' message encoding (Eysenck 1982; see Fig. 1*b*). If such music does distract attention from the message, it should also weaken high-involvement consumers' beliefs. Consistent with this distraction hypothesis, Park and Young (1986) found that high-cognitive-involvement consumers remembered less about the brand when the ad contained music than when it did not. However, it was not clear from their study which aspect of the music caused this distraction effect.

Interference with message encoding may not only weaken beliefs, it may also affect high-involvement consumers' emotional responses. Because high-involvement consumers are motivated to process the advertised message, they may be less readily affected by music with high indexicality. Thus, the effect of indexicality on positive feelings may be minimal (see Fig. 1*b*). Moreover, music may disrupt their processing goals and, therefore, create negative emotions (see Fig. 1*b*). Again, the magnitude of music indexicality's effects on message encoding and emotions may depend on the level of indexicality that is associated with the music.

The Impact of Fit. Music that fits the ad should influence high-involvement consumers' attention and belief-formation processes (see Fig. 1*b*). To the extent that music fits the advertised message, it should facilitate consumers' focus on the message, which should, in turn, affect message encoding and learning. This effect is expected because the ad creates a coherent whole; as such, ad elements do not compete for processing resources (MacInnis and Jaworski 1989). This facilitating effect of music is also consistent with Hecker's (1984) notion that music may serve as a "message enhancer" or enhance "attribute/benefit communication."

As with low-involvement consumers, music that lacks fit need not attract attention to the music itself (see Fig. 1*b*). However, it may reduce attention to the message because cognitive resources are utilized to resolve incongruity. Thus, message learning and subsequent belief formation should be negatively affected. Consistent with this notion, Bither and Wright (1973) found that incongruent video and audio messages distracted subjects' attention from the message (see also Edell and Staelin 1983). Relatedly, researchers have found that executional cues (e.g., sexy models) reduce message learning when they are not message relevant (see, e.g., Bello, Pitts, and Etzel 1983). Thus, the greater the fit, the greater is the attention paid to the message and the stronger are consumers' beliefs about the brand.

Because music that lacks fit deviates from the overall message, high-involvement consumers may also react negatively (positively) to low (high) fit. Thus, the greater (lower) music's fit with other ad cues, the more positive (negative) consumers' emotional responses to the ad are (see Fig. 1*b*).

The Impact of Fit and Indexicality on Brand Attitudes. Previous research indicates that, even under conditions of high involvement, emotions strongly influence A_{ad} (Edell and Burke 1987). Because fit and indexicality are both expected to influence negative emo-

tions and fit alone is expected to influence positive emotions, each should influence A_{ad} through their influence on emotions (see Fig. 1*b*). If fit and indexicality influence A_{ad} through emotions, and influence beliefs through attention to the message, they should also influence brand attitudes indirectly (see Fig. 1*b*). Prior theory suggests that high-involvement consumers' brand attitudes are based on their beliefs. As such, we predict that beliefs have a strong effect on brand attitudes for high-involvement consumers (see Fig. 1*b*). Previous research, however, also indicates that A_{ad} strongly affects brand attitudes even under conditions of high involvement (Gardner 1985; Park and Young 1986). In fact, some research finds that A_{ad} affects brand attitudes more strongly than do brand-related cognitive responses (MacKenzie and Lutz 1989). Therefore, A_{ad} is hypothesized to influence brand attitudes strongly.

In sum, the above hypotheses propose that different dimensions of a given executional cue can influence both message-based and non-message-based processing of high- and low-involvement consumers. The nature and magnitude of their effects on these two modes of processing may, however, depend on both the cue characteristic and the level of viewer involvement in the ad.

METHOD

Subjects and Design

The design of the study is a 2 (high vs. low involvement) × 2 (high vs. low indexicality) × 2 (high vs. low fit) between-subjects factorial design. One hundred seventy-eight undergraduate women who participated in the experiment for course credit were randomly assigned to each condition.[1]

Stimuli and Pretests

With the help of a leading advertising agency, we created four versions of a TV commercial for a fictitious shampoo, which was ostensibly made by a leading manufacturer. Commercials were identical except for the type of music. Loudness, sequence, and duration of music was constant for each condition. Music aired for five seconds at the beginning and seven seconds at the end of the commercial and, hence, was not concurrent with the verbal message.

The commercial's message was that the brand was a natural shampoo for a natural woman. The commercial showed a woman engaged in nature-related activities. The voice-over stated, "A natural woman like you needs a pure, wholesome, natural shampoo. That's why Estée Lauder introduced Shena shampoo. Shena has a natural, herbalescent formula that leaves hair shiny, soft, and healthy-looking. . . . Shena shampoo. For that very special natural woman of the eighties."

The musical selections that were used to operationalize fit and indexicality were selected through several rounds of pretesting involving a total of 26 songs. Several pretests were conducted initially to evaluate the potential fit and indexicality of songs with respect to the above commercial. A pretest was also conducted to evaluate the relationship between likability and indexicality. The 26 songs initially selected as potential operationalizations of fit and indexicality were rated by 20 subjects. Likability was assessed by a three-item index (likable, pleasant, good; $\alpha = .91$). Using the song as the unit of analysis, the results indicated significant correlations between likability and the various dimensions of indexicality that are described below ($r = .76$ with familiarity; $r = .66$ with relationship to past experiences; $r = .71$ with emotionality; $r = .75$ with the entire indexicality index). These results suggest that songs having high versus low indexicality are more likable because they are both familiar (Zajonc, Markus, and Wilson 1974) and associated with positive memories. This effect is discussed later.

In the final pretest, 20 additional subjects were asked to assess the fit and indexicality of seven songs that were identified from prior pretests as potential operationalizations of these constructs. The extent to which music fitted the ad was assessed by five items ($\alpha = .82$), each on a seven-point scale. Subjects were asked to indicate how unexpected the music was with respect to the remaining elements of the commercial, and how well the music fitted with the picture of the model, the picture of the outdoors, the notion that the brand is for a natural woman, and the notion that the brand has a natural, herbalescent formula. Since the main theme of the commercial was conveyed both visually and verbally, these items should adequately assess fit.

Assessment of three variables was necessary to ensure adequate manipulation of indexicality. First, to ensure that music either is or is not tied with past experiences, it was necessary to assess its familiarity. Unfamiliar music is likely to be low in indexicality. Familiarity was assessed by a seven-point item (1 = not familiar, 7 = very familiar). Second, it must be established that the music arouses memories. Five seven-point items assessed the degree to which the music in each selection (1) made consumers think about their past, (2) reminded them of a person, place, or time in their lives, (3) aroused memories, (4) was associated with people they have known or experiences they have had, and (5) was relevant to them personally. Finally, indexicality assumes that aroused memories are emotional. Subjects

[1] A previous study, not reported here, on the effects of fit and indexicality on ad processing was conducted by the authors. This study examined the joint impact of fit and indexicality on outcome measures of advertising effectiveness in an analysis-of-variance (ANOVA) framework. The study was developmental in identifying the potential operationalizations of fit and indexicality, and in developing measures of processing constructs. Furthermore, the results did serve to corroborate the basic logic underlying the present hypotheses. The study was also useful for identifying additional variables that would give insight into the processing impact of fit and indexicality (e.g., emotional responses), and in identifying additional issues that needed to be considered in selecting the operationalizations of music (e.g., equivalence in the valence of emotions generated from memory).

therefore indicated on two seven-point items the extent to which the music evoked an emotional response, and the extent to which it brought back emotions. The reliability coefficient for this eight-item index was .95.

Eight items were also used to indicate the extent to which each song brought back positive or sad emotions. Such assessment of the valence of emotions for each song was necessary to ensure that the two high-indexicality songs were equally positive in the emotions that they triggered from memory. Differences in emotional valence could influence both the direction and strength of indexicality on feelings, A_{ad}, and brand attitude (hereafter A_b). Items indicating positive and sad emotions were positive, pleasant, upbeat, warm, playful, lighthearted ($\alpha = .84$), and sad, sentimental, and peaceful ($\alpha = .71$), respectively.

On the basis of pretest results, four songs were selected to operationalize the four fit and indexicality conditions. "You Make Me Feel Like a Natural Woman" was used to create the high-indexicality, high-fit condition ($\bar{X} = 5.95$, $\bar{X} = 4.79$). "Stop in the Name of Love" was used to create the high-indexicality, low-fit condition ($\bar{X} = 5.61$, $\bar{X} = 1.13$). The likability ratings were 6.08 and 5.85, respectively. The low-indexicality, high-fit condition was created by a song called "Mirage" ($\bar{X} = 2.71$, $\bar{X} = 4.07$), taken from a library of musical selections at a local TV production studio. The low-indexicality, low-fit condition was created by a song called "Mediterranean Sundance" ($\bar{X} = 3.37$, $\bar{X} = 2.40$). The likability scores were 4.05 and 3.80, respectively. On the basis of the results from the final pretest, it was also established that the two songs used to operationalize high indexicality did not differ from each other in the valence of emotions that they triggered from memory. Both evoked relatively strong positive emotions ($\bar{X} = 3.90$ for the high-indexicality, high-fit condition, and 4.00 for the high-indexicality, low-fit condition, $p =$ NS) and relatively few negative emotions from memory ($\bar{X} = 2.75$ and 2.52, respectively, $p =$ NS).

Commercials were placed in a seven-minute sequence of "The Oprah Winfrey Show" and shown twice, once at the beginning and once at the end of the program segment. Subjects were run in small groups of two to eight. The study was introduced as a faculty research project on TV viewing.

Involvement Manipulation

Involvement was manipulated by personal-relevance instructions. High-involvement subjects were told that Estée Lauder would soon market a new brand of shampoo locally. Before the brand's introduction, the company was interested in college students' reactions to the brand. Subjects were to pay close attention to brand information contained in the commercial and to consider their interest in buying the brand. Subjects were also told that, to create a normal viewing environment, they would see the commercial in a program.

Low-involvement subjects were told that they would see a segment from "The Oprah Winfrey Show" concerning life-styles of professional athletes and that they would be asked several questions about their views of professional athletes' life-styles after watching the tape. Subjects were told that, although the tape contained commercials, the advertised products were not available locally.

Constructs and Measures

Following exposure to the commercial and program, subjects completed questions that asked about brand and ad attitudes; emotions; attention to the commercial, the music, and the advertised message; and beliefs about the brand, in that order. Manipulation checks for fit and indexicality were then collected, as were additional measures regarding the music.

Brand attitudes were measured on a four-item, seven-point semantic differential scale (Cronbach's $\alpha = .95$), with subjects' evaluations of the brand ranging from very bad to very good, unfavorable to favorable, unappealing to appealing, and not at all likable to very likable. A factor analysis confirmed that each item loaded on a single factor (eigenvalue = 3.50; 87.5 percent of the variance explained). All loadings were above .90. The brand-attitude scale, and each of the scales described below, was computed by the average of the summated items.

Ad attitudes were measured using a four-item semantic differential scale ($\alpha = .95$) that asked whether the ad was very bad or very good, not at all likable or likable, unfavorable or favorable, and unappealing or appealing. Again, factor analysis indicated that these items loaded on a single factor (eigenvalue = 3.47, 86.8 percent of the variance explained). All loadings were again above .90.

Emotions were assessed by a 22-item, seven-point scale that was modified from Edell and Burke (1987). A factor analysis yielded positive- and negative-emotions factors, with each factor explaining 38 percent and 15.7 percent of the variance in emotions, respectively.[2] Each item had a factor loading above .49, and most had loadings above .70 on their respective factors. Items representing the positive emotions factor ($\alpha = .94$) were playful, happy, delighted, cheerful, excited, energetic, warmhearted, active, stimulated, affectionate, moved, sentimental, peaceful, and amused. Those representing the negative emotions factor ($\alpha = .84$) were angry, offended, disgusted, annoyed, sad, skeptical, and bored.

To confirm that the two high-indexicality songs did not differ in the valence of emotions that they triggered from memory, subjects responded on a seven-point scale (1 = not at all, 7 = very) to the question: "If this song is associated with past experiences/memories, are they: positive pleasant, upbeat, warmhearted, peaceful, playful, sentimental, or lighthearted?" A factor analysis

[2]One item (calm) failed to load on either factor and was dropped from subsequent analyses.

yielded a two-factor solution with eight of the nine items loading on the positive memory factor. This factor had an eigenvalue of 6.11 and explained 67.9 percent of the variance in scores. Items representing the positive emotions memory factor were summed and averaged to form a composite scale (α = .93). A t-test comparison of the scores on this scale indicated that the high-indexicality, high-fit song did not differ significantly from the high-indexicality, low-fit song in the valence of emotions it generated from memory ($\bar{X}$ = 3.92 and 3.90, respectively, p = NS).

Attention to the music was assessed by a four-item scale (α = .85) that asked about the extent to which consumers paid very much (7) or not much (1) attention to the music in the commercial, and the extent to which they strongly agreed (7) or strongly disagreed (1) that they followed the music more than what was being said, sang along with the song in the commercial, and followed the music in the ad. A factor analysis indicated that all items loaded on a single factor (eigenvalue = 2.74, 68.7 percent of the variance explained). Each factor loading was above .80.

Attention to the message was assessed by a self-report measure of the amount of attention paid to the spoken message about the brand's performance (1 = not much at all, 7 = very much).

Beliefs were assessed by an averaged, summated scale (α = .79) that asked subjects how probable (7) or improbable (1) it was that the advertised brand was a natural shampoo, had an herbalescent formula, made hair shiny, made hair soft, and made hair healthy looking.

Manipulation-Check Measures. Involvement was assessed by several indicators. First, as high-involvement consumers should attend to an ad more than low-involvement subjects, involvement was indicated by an item that asked whether consumers paid not much (1) or very much (7) attention to the ad.

The total number of cognitive responses was also used to indicate attention to the ad. Three coders were trained by the experimenter. Training procedures, content categories, and the modal scoring procedure that was used to establish intercoder agreement were based on work by MacKenzie, Lutz, and Belch (1986). Statements were deleted if all coders disagreed on category membership. Overall coder agreement for the total number of cognitive responses was 92.2 percent.

A scale measuring relative attention to the music versus attention to the message was also constructed, based on the notion that low-involvement subjects devote greater attention to executional cues than to the advertised message (Petty and Cacioppo 1986). The relative attention scale was constructed by the ratio of the attention-to-the-ad to the attention-to-the-message measures. Finally, as high-involvement subjects should think about the advertised message more than low-involvement subjects (Petty and Cacioppo 1986), involvement was also indicated by the degree of message processing. The proportion of brand cognitive responses (support and counterarguments; 95 percent coder agreement for each) relative to total cognitive responses indicated this construct.

Fit and indexicality were assessed by the items described in the final pretest. For both constructs, a factor analysis indicated that items for each construct loaded on a single construct (for fit, eigenvalue = 2.86 with 57.3 percent of the variance explained; for indexicality, eigenvalue = 5.47 with 68.4 percent of the variance explained). Cronbach's alpha coefficients were .78 and .93, respectively.

RESULTS

Manipulation-Check Results

A series of 2 × 2 × 2 analyses of variance (ANOVAs) suggested that the involvement manipulation was successful. Both cognitive-response ($F(1,170)$ = 2.53, p < .10) and self-report ($F(1,170)$ = 35.54, p < .001) measures revealed that high-involvement subjects paid more attention to the commercial ($\bar{X}$ = 2.07 for cognitive response and 5.16 for self-report measures) than did low-involvement subjects ($\bar{X}$ = 1.78 and 3.92, respectively). High-involvement subjects also had a greater proportion of brand-to-total cognitive responses ($\bar{X}$ = .16) than did low-involvement subjects ($\bar{X}$ = .11; $F(1,170)$ = 4.01, p < .05).[3] Compared with high-involvement subjects ($\bar{X}$ = 1.20), low-involvement subjects allocated more attention to the music than to the message ($\bar{X}$ = 1.87; $F(1,167)$ = 16.53, p < .001).

Manipulation checks for fit and indexicality were also performed using ANOVA. As expected, subjects rated music fit as higher in the high- ($\bar{X}$ = 4.39) than in the low-fit ($\bar{X}$ = 2.88) conditions ($F(1,169)$ = 54.27, p < .001) and rated the indexicality of the music as higher in the high- ($\bar{X}$ = 3.93) than in the low-indexicality ($\bar{X}$ = 2.13) conditions ($F(1,169)$ = 73.27, p < .001). Note, however, that the absolute levels of fit and indexicality that were achieved through the manipulations for both constructs were somewhat low (i.e., "high" indexicality and "high" fit were just at or above scale midpoints).[4] Furthermore, a significant interaction between fit and indexicality on indexicality ($F(1,169)$ = 10.23, p < .01) indicated that the two high-indexicality songs were not equally calibrated on indexicality ($\bar{X}$ = 4.36 and 3.49 for high indexicality and high fit, and high indexicality and low fit, respectively). An interaction between fit and indexicality on fit ($F(1,169)$ = 9.78, p < .01) also revealed that the two low-fit songs were not equally cal-

[3]The proportion of brand responses to total cognitive responses was relatively small. Responses may have been limited by the fact that (*a*) the commercial was shown twice, (*b*) subjects reported cognitive responses from the second exposure, or (*c*) subjects had fewer cognitive responses for the second than for the first exposure.

[4]Note that the pattern of means between the pretest and main experiment are quite similar, although the latter is weaker in magnitude. In the main experiment, program involvement may have diffused consumers' attention to the ad as compared with the pretest where the program was not involved.

ibrated on fit ($\bar{X}$ = 2.46 and 3.35 for high indexicality and low fit, and low indexicality and low fit, respectively). This calibration issue presents problems in using the manipulations as exogenous variables in the models that are identified in Figure 1. As such, manipulation-check measures were used to indicate fit and indexicality. Using manipulation-check measures provides a more sensitive test of the hypotheses because it captures the effects of perceived indexicality and fit and eliminates the calibration problem.

Model Specification

Tested Model. Tests of the hypotheses specified in Figure 1 were conducted by a maximum-likelihood estimation procedure using LISREL (Jöreskog and Sörbom 1983). Each exogenous and endogenous construct was represented by a single indicator using the summated scales as indicators (see MacKenzie and Lutz [1989] for the advantages of indicating constructs by summated scales). Constructs were not assumed to be perfectly indicated. In accordance with Jaworski and MacInnis (1989), each factor loading was set at the square root of the reliability for that index, while the associated error term was set at one minus the square root of the reliability. Since attention to the message was measured by a single item, not a summated index, its reliability was set at .90, and its associated error variance at .10.

Analysis Strategy. As Figure 1 indicates, while fit and indexicality were hypothesized to influence both message- and non-message-based processing for high- and low-involvement consumers, for some structural paths the strength and direction of the effect was hypothesized to differ across groups. For these paths, an interaction between the variable and involvement is postulated. As such, it was necessary to assess both main and interaction effects in the analysis.

The first step in the analysis, then, was the specification of a main-effects model that assessed the model's fit when each structural path specified in Figure 1 was constrained to be equal across involvement groups. The moderating role of involvement was then tested by removing the equality constraint for a specific structural parameter. The existence of a moderating effect of involvement was indicated by a significant improvement in the fit of the interaction-based model compared with that of the main-effects model.

Model Results. The main-effects model was first tested by estimating the structural paths identified in Figure 1, constraining each path to be equal across involvement groups. This model resulted in a reasonably good fit of the data (χ^2 = 113.80, df = 65, $p < .001$), with the model's goodness-of-fit index close to the traditional .90 criterion for fit (GFI = .89). However, an analysis of the results, along with additional theory, identified several additional paths that would improve the model's fit and explanatory power. These represented the effects of (1) fit on A_{ad}, (2) attention to the music on A_{ad}, and (3) negative emotions on beliefs. These structural paths were estimated sequentially, with each addition culminating in a significantly improved fit.[5] Hence, the final main-effects model includes these additional structural paths. Overall statistical support for this final model was strong using traditional criteria (χ^2 = 78.44, df = 62, $p < .106$; GFI = .923, root mean square residual = .077). This main-effects model was used as a baseline for a series of models that removed the equality constraint for a given structural parameter across involvement groups. Those paths for which the removal of the constraint resulted in a significantly improved model (i.e., for which involvement played a moderating role) are represented by different coefficients across the two involvement groups in Figure 2 and Table 1.

In accordance with Labovitz (1968), a .10 standard for statistical significance is adopted for assessing all structural coefficients and for testing differences between low- and high-involvement consumers in the strength and direction of a given coefficient. This criterion is reasonable given the relatively weak manipulations of fit and indexicality, and the relatively small sample size per group.

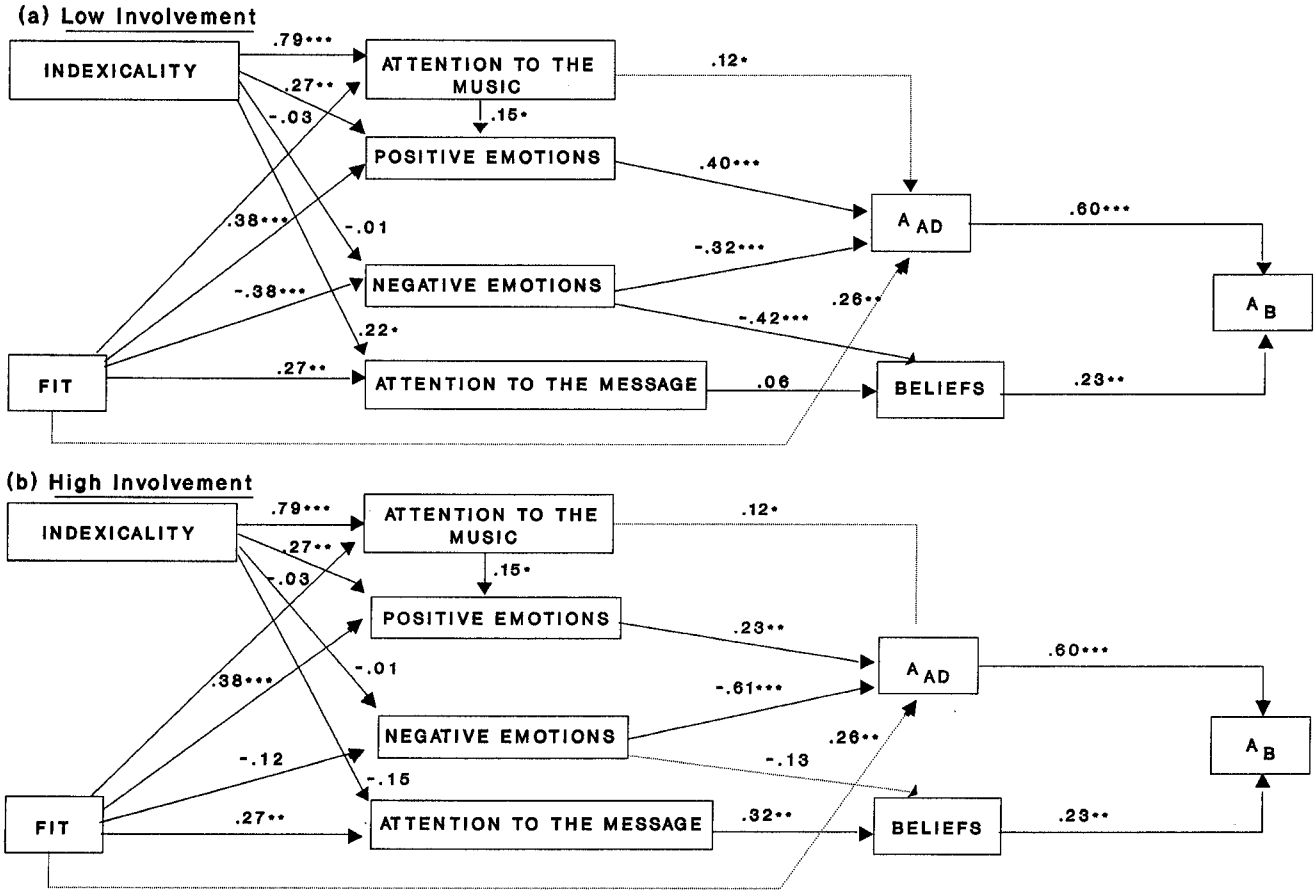
Dimensions of Music and Ad Processing. Figure 1 suggests that high indexicality should attract attention to the music, particularly for low-involvement subjects. This attentional focus was hypothesized to create some incidental attention to the message for low-involvement subjects but to distract high-involvement subjects' attention from the message. The results support these effects. Indexicality had a significant effect on attention to the music for both low- and high-involvement consumers (γ_{11} = .79, t = 14.78, $p < .001$), but it had different effects on low- and high-involvement consumers' attention to the message. As predicted, indexicality had a positive effect on low-involvement subjects' attention to the message (γ_{41} = .22, t = 2.03, $p < .05$); however, it had a distracting effect on high-involvement consumers' attention to the message (γ_{41} = −.15, t = −1.40, $p < .10$).

Indexicality was hypothesized to create positive (but not negative) emotions for low-involvement subjects because attentional focus on the music retrieves positive emotions associated with the song. However, under high-involvement conditions, indexicality was expected to have relatively weak effects on positive emotions. The distraction effect that is created by high indexicality was also expected to create some negative feelings. The results, however, revealed that, for both high- and low-involvement subjects, indexicality (γ_{21} = .27, t = 2.32, $p < .01$) and attention to the music (β_{21} = .15, t = 1.30,

[5]Chi-square change from the initial model to the one including the relationship between fit and A_{ad} was 19.59 (df = 1, $p < .001$). Chi-square change from the model that also included the impact of attention to the music on A_{ad} was 4.32 (df = 1, $p < .05$). Finally, the model that also included the path from negative feelings to beliefs resulted in a significant chi-square change of 11.45 (df = 1, $p < .001$).

FIGURE 2

OBSERVED EFFECTS OF FIT AND INDEXICALITY FOR LOW- AND HIGH-INVOLVEMENT CONSUMERS



*$p < .05$.
**$p < .01$.
***$p < .001$.

$p < .10$) significantly influenced positive emotions. Finally, as hypothesized, indexicality had no impact on negative emotions for either high- or low-involvement subjects ($\gamma_{31} = -.01$, $t = -.15$, p = NS).

We hypothesized that fit would affect attention to the message, particularly for high-involvement subjects. The results indicated that fit affected both high- and low-involvement subjects' attention to the message ($\gamma_{21} = .27$, $t = 2.32$, $p < .01$). As hypothesized, fit had no effect on either high- or low-involvement subjects' attention to the music ($\gamma_{12} = -.03$, $t = -.57$, p = NS).

By its effects on message processing, fit was also expected to influence beliefs, particularly for high-involvement subjects. The results for high-involvement subjects conformed to expectations. The greater the attention to the message, the stronger subjects' beliefs were ($\beta_{64} = .32$, $t = 2.86$, $p < .001$). However, attention to the message had no effect on beliefs for low-involvement subjects ($\beta_{64} = .06$, $t = .55$, p = NS).

We further hypothesized that fit would affect the positive and negative emotions of both high- and low-involvement subjects. As hypothesized, emotions were more positive and less negative when fit was high than when it was low. However, the interaction-based model revealed that low fit strongly affected low-involvement ($\gamma_{32} = -.38$, $t = -3.34$, $p < .001$) but not high-involvement ($\gamma_{32} = -.12$, $t = -1.10$, p = NS) subjects' negative emotions.

The positive and negative emotions generated by fit and indexicality were hypothesized to affect A_{ad} for low- and high-involvement subjects. While both factors influenced high- and low-involvement consumers' A_{ad} in the expected direction, the interaction-based model revealed that positive emotions had a stronger effect on A_{ad} for low- ($\beta_{52} = .40$, $t = 4.78$, $p < .001$) than for high- ($\beta_{52} = .23$, $t = 2.79$, $p < .01$) involvement subjects, while negative emotions had a stronger effect on A_{ad} for high- ($\beta_{53} = -.61$, $t = -7.59$, $p < .001$) than for low- ($\beta_{53} = -.32$, $t = -4.12$, $p < .001$) involvement subjects. Note that, for low-involvement subjects, fit and index-

TABLE 1

SUMMARY OF HYPOTHESIZED AND OBSERVED EFFECTS

	Hypotheses for low involvement[a]	Observed (*t*)	Hypotheses for high involvement[a]	Observed (*t*)
Proposed path:				
γ_{11} (Index → attention to music)	++	.79 (14.78)	+	.79 (14.78)
γ_{21} (Index → positive emotions)	++	.27 (2.32)	0	.27 (2.32)
γ_{31} (Index → negative emotions)	0	−.01 (−.15)	−	−.01 (−.15)
γ_{41} (Index → attention to message)	+	.22 (2.03)	−	−.15 (−1.40)
γ_{12} (Fit → attention to music)	0	−.03 (−.57)	0	−.03 (−.57)
γ_{22} (Fit → positive emotions)	+	.38 (5.57)	+	.38 (5.57)
γ_{32} (Fit → negative emotions)	−	−.38 (−3.34)	−	−.12 (−1.10)
γ_{42} (Fit → attention to message)	+	.27 (2.32)	++	.27 (2.32)
β_{21} (Attention to music → positive emotions)	+	.15 (1.30)	+	.15 (1.30)
β_{53} (Positive emotions → A_{ad})	++	.40 (4.78)	++	.23 (2.79)
β_{53} (Negative emotions → A_{ad})	−−	−.32 (−4.12)	−−	−.61 (−7.59)
β_{64} (Attention to message → beliefs)	+	.06 (.55)	++	.32 (2.86)
β_{75} (A_{ad} → A_b)	++	.60 (10.12)	++	.60 (10.12)
β_{76} (Beliefs → A_b)	+	.23 (3.72)	++	.23 (3.72)
Additional findings:				
γ_{52} (Fit → A_{ad})		.26 (4.12)		.26 (4.12)
β_{51} (Attention to music → A_{ad})		.12 (2.06)		.12 (2.06)
β_{63} (Negative emotions → beliefs)		−.42 (−3.79)		−.13 (−1.22)

	Overall sample[b]	Low involvement[b]	High involvement[b]
Construct means:			
Indexicality	3.09 (1.67)	3.25 (1.80)	2.95 (1.53)
Fit	3.76 (1.37)	3.84 (1.44)	3.69 (1.31)
Attention to music	3.76 (1.63)	3.74 (1.60)	3.78 (1.66)
Positive emotions	2.65 (1.16)	2.62 (1.19)	2.68 (1.13)
Negative emotions	2.53 (1.10)	2.68 (1.17)	2.39 (1.02)
Attention to message	3.20 (1.63)	2.63 (1.49)	3.96 (1.50)
A_{ad}	3.53 (1.42)	3.58 (1.52)	3.48 (1.33)
Beliefs	4.70 (1.19)	4.68 (1.14)	4.72 (1.25)
A_b	4.13 (1.46)	3.86 (1.59)	4.37 (1.28)

[a]Items in these columns indicate the strength and direction of the hypothesized results: ++ indicates strong positive; +, modest positive; 0, no relationship; −, modest negative; −−, strong negative effect (see Fig. 1).
[b]Numbers given in parentheses are SDs.

icality affected A_{ad} through positive and negative emotions. For high-involvement subjects, fit and indexicality affected A_{ad} through their impact on positive emotions only. Although negative emotions strongly affected A_{ad}, music did not appear to influence high-involvement subjects' negative emotions.

Finally, it was expected that A_{ad} would affect A_b for both high- and low-involvement subjects, but that the impact of beliefs on A_b would be greater for high- than for low-involvement subjects. Consistent with expectations, A_{ad} exerted a strong and positive effect on A_b for both high- and low-involvement subjects ($\beta_{75} = .60$, $t = 10.13$, $p < .001$). While beliefs affected A_b for both high- and low-involvement consumers ($\beta_{76} = .23$, $t = 3.72$, $p < .01$), the impact of beliefs on A_b did not differ across involvement groups. Furthermore, for both groups, the impact of A_{ad} on A_b outweighed the impact of beliefs.

Additional Findings. Three findings not initially hypothesized were also observed (see Fig. 2). First, fit had a direct effect on A_{ad} under both low- and high-involvement conditions ($\gamma_{52} = .26$, $t = 4.12$, $p < .01$). Second, while fit did not operate as a heuristic persuasion cue (i.e., affecting low-involvement subjects' beliefs through its effects on attention to the message), fit did affect beliefs through its effects on negative emotions ($\beta_{63} = -.42$, $t = -3.79$, $p < .001$). This result did not occur for high-involvement subjects ($\beta_{63} = -.13$, $t = -1.22$, $p =$ NS). Finally, there was an effect of attention to the music on A_{ad} ($\beta_{51} = .12$, $t = 2.06$, $p < .05$). The existence of this effect is probably tied to our use of likable songs.

DISCUSSION

Two characteristics of music, indexicality and fit, play a fundamental role in the processing of both high- and low-involvement consumers, influencing both message- and non-message-based processing. The precise nature of their effects, however, differs across involvement levels. As such, the commonly understood relationship between the level of involvement and processing, a ty-

pology based on the relative roles of message versus executional cues, is overly simplistic.

First, it is overly simplistic to equate the usage of an executional cue to low involvement and non-message-based processing because both characteristics of music affected message- and non-message-based processing for both high- and low-involvement consumers. Under conditions of low involvement, indexicality affected message-based processing through its effects on attention to the message, and non-message-based processing through its effects on emotions. It is notable that indexicality significantly enhanced message processing for low-involvement subjects given that their absolute level of involvement was quite low (see Manipulation-Check Results for involvement). Fit affected message-based processing through its effects on attention to the message and its effects on negative emotion-induced beliefs; fit affected non-message-based processing through its effects on emotions and A_{ad}. Under conditions of high involvement, fit affected message-based processing through its effects on attention to the message and beliefs, while it influenced non-message-based processing through its effects on emotions. Indexicality influenced high-involvement subjects' non-message-based processing through its effects on positive emotions. It also had an impact, although weak, on message-based processing through its distracting role.

Second, the results suggest that, while a given cue characteristic can affect both high- and low-involvement consumers' message-based and non-message-based processing, the nature of the effect may be the same or different across the levels of involvement. For example, while indexicality had similar effects on attention to the music and the affective responses of high- and low-involvement consumers, it had different effects on their message-based processing; it enhanced message processing for low-involvement consumers while it possibly distracted from high-involvement consumers' message processing. Relatedly, while fit had similar effects on high- and low-involvement consumers' focusing of attention on the music or the message, it created different effects on their affective responses. Specifically, lack of fit created more negative emotions for low- than for high-involvement consumers. Hence, careful attention to the nature of the cue itself and its effects on processing is warranted.

Whether a given executional cue has the same or different effects on high- and low-involvement consumers' ad processing should depend critically on its characteristics. As indexicality is principally described in terms of its affective capabilities, it should and does create similar effects on the affective processes of high- and low-involvement consumers. However, as it is also regarded as a message-independent cue, indexicality creates different effects on high- and low-involvement consumer's processing. Because music fit is described in terms of its relationship to other cues in the ad, and because it is a message-relevant cue, it should create similar effects on attention to the message and other ad elements. However, because high- and low-involvement consumers may be differentially sensitive to levels of fit or lack of fit, fit may create different effects on their emotional responses.

Although the results suggest that executional cues are powerful, several unexpected findings deserve comment. First, under conditions of high involvement, we had expected that low fit would create negative emotions because of its incongruity, and that indexicality would create negative emotions because of its distracting influence on attention to the message. However, neither fit nor indexicality affected high-involvement subjects' negative emotions. Furthermore, the distraction effect of indexicality was weak.

One explanation for these effects is that high-involvement consumers are less sensitive to the impact of executional cues. However, this explanation is unlikely because characteristics of music clearly affected other aspects of high-involvement consumers' processing. Alternatively, the source of negative emotions for low- and high-involvement consumers may differ (MacInnis and Jaworski 1989). Because high-involvement subjects' attention is focused on the message, problems arising from the lack of fit may have little impact on negative emotions for them.

On the other hand, perhaps negative emotions are generated for high-involvement consumers only by a strong disruption of processing, which may occur only when fit is low and indexicality is high. Unfortunately, this interaction effect could not be estimated because there were too few observations to split the high-involvement group into high- and low-fit subgroups. Equally unfortunate was that the level of indexicality that was manipulated in this study might not have been high enough for such effects to occur. Manipulation-check results, for example, show that scores for high indexicality are just above scale midpoints. If the absolute level of indexicality had been stronger, the effect of indexicality on negative emotions and attention to the message might have been greater.

A second unexpected finding was the relatively strong impact of fit on both positive emotions and A_{ad}. While fit was expected to create favorable positive emotions for high- and low-involvement consumers, the magnitude of its effect was greater than anticipated. Furthermore, we had not expected a direct effect for fit on A_{ad}. These results suggest that fit has a powerful role in creating favorable ad and brand attitudes. When fit is high, the ad is regarded as more pleasant. Perhaps fit creates such effects because the complementary relationship among ad cues facilitates identification of the main point, which, in turn, creates pleasant feelings. Furthermore, when cues are complementary, each reinforces the basic message. The reinforcing properties of such cues may enhance the credibility of the ad. MacKenzie and Lutz (1989) have shown that ad-credibility responses are powerful predictors of A_{ad}. The direct effect of fit on A_{ad} may therefore reflect the fact that, in both involvement conditions, fit affects predic-

tors of A_{ad}, such as ad credibility, that were not included in our model.

A third unexpected finding was that fit had an equally strong effect on low- and high-involvement subjects' attention to the message. These results suggest that low-involvement consumers may not be inattentive to the ad and its message contents when executional cues fit the message. Alternatively, the manipulated level of fit might not have been strong enough to create differential effects on attention. However, this latter effect appears less reasonable because the manipulated level of fit did appear to be sufficiently strong to differentially affect high- and low-involvement consumers' negative emotions.

A fourth and final unexpected effect concerns the significant impact of negative emotions on low-involvement subjects' beliefs. These results suggest a different form of inferential processing than has been identified in the literature. Specifically, rather than using fit directly as a basis for inferences, low-involvement subjects appear to use the negative emotions that are generated by a lack of fit as a basis for disbelieving the ad claim. When the level of music fit and indexicality is not sufficiently high to facilitate message processing, low-involvement consumers might use affect as the basis for beliefs. Additional research on affective antecedents to beliefs is therefore warranted.

It is also interesting to note that, under conditions of high involvement, A_{ad} had a greater impact on A_b than did beliefs. Several explanations may underlie this effect. First, while our pretests suggest that the advertised attributes are important, such ratings do not guarantee that the message conveyed attributes in a persuasive manner (Areni and Lutz 1988). It is possible that message arguments were not perceived as strong. Second, the belief measure used in this study was based on functional attributes. However, the ad's focus on the beauty of the model's hair may have elicited affective involvement (Park and Young 1986). The use of symbolic (vs. functional) attributes as a basis for beliefs (Mittal 1990) may have resulted in stronger effects for beliefs on A_b.

In addition to the above, two additional issues are worthy of comment. The first concerns the degree of fit and its effects on information processing. Although we have not differentiated degrees of fit, studies that explicitly manipulate the degree of fit (e.g., good vs. low vs. bad fit) would allow one to examine any nonmonotonic effects of fit on processing. A second issue is the role of likability. Likability is a natural correlate of indexicality because of the inherent relationship between likability and familiarity (Zajonc et al. 1974), and between likability and positive experiences. Therefore, it is extremely difficult to find two equally likable songs that differ in indexicality. While we have attributed the observed results to indexicality, it may be possible that the effects are due to likability. Although this study did not explicitly manipulate indexicality and likability, research that explores this effect is needed.

Finally, the methodological issues surrounding this study should be noted. First, the study's use of one message and one commercial in one product category raises issues of generalizability. Second, the study was unable to examine the joint effect of fit and indexicality on outcome measures of processing in an ANOVA fashion, because of problems in calibrating the songs. Additional research that examines not only process but also outcome factors associated with these constructs is warranted. Measurement aspects of the study also deserve comment. The single-item, self-report measure of attention to the message is potentially capable of error because subjects may have had trouble reporting on these internal states. However, we are not inclined to believe this item is problematic since it achieved convergent validity with a non-self-report-based measure of processing (e.g., the proportion of brand to total cognitive responses generated from the ad).[6] Given the relatively weak manipulations, additional study using stronger manipulations is warranted. Finally, the relatively small number of subjects in the study prohibited modeling interactions of fit and indexicality on high- and low-involvement consumers' ad processing via LISREL.

Despite these limitations, the results of this study suggest that characteristics of an advertising executional cue, such as music, can affect the message- and non-message-based processing of high- and low-involvement consumers, but in potentially different ways. The results further suggest that characterizing music as message-relevant and message-independent represents a useful distinction because these cue characteristics appear to have predictable effects on processing. Although we have examined only two characteristics of music, other characteristics may also affect ad processing of high- and low-involvement consumers. Additional study of executional cues and their processing implications for high- and low-involvement consumers' ad processing is therefore warranted.

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[6]The latter was not used as an indicator of message-based processing because of the relatively low absolute number of such responses. See n. 3.

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