Endorsers in Advertising: The Case of Negative Celebrity Information

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The use of celebrity endorsers is a popular executional device, but it is not without risk. The authors report three studies examining how negative information about a celebrity can affect the brand the celebrity endorses. Using an associative network model of memory as a theoretical framework, they considered four moderating variables: the size of the association set for the brand, the size of the association set for the celebrity, the timing of the negative celebrity information, and the strength of the associative link between the brand and the celebrity. In the first two studies, they used a fictitious but realistic celebrity endorser and in the third they used an actual celebrity. Negative information about a celebrity resulted in a decline in attitude toward the endorsed brand only for the fictitious celebrity. That general relationship was moderated in varying degrees by association set size, timing of the negative information, and the strength of the link between brand and celebrity.

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The use of celebrity endorsers is prevalent in advertising. In addition to the intuitive arguments that rationalize the practice, academic researchers have mounted empirical evidence to demonstrate the benefits of product endorsements. Atkin and Block (1983), for example, found that the use of a celebrity in beer advertising led to more favorable ad ratings and more positive product evaluations. Freiden (1984) tested four types of endorsers (celebrity, CEO, expert, and typical consumer) and determined that in comparison with other endorser types, the celebrity endorser scored particularly well on dimensions such as trustworthiness, believability, persuasiveness, and likeability. In a test of the matchup hypothesis, Kamins (1990) demonstrated that the positive impact of a celebrity endorser depends in part on proper fit between the celebrity and the product. Some evidence even suggests that Wall Street values the use of celebrity endorsers—Agrawal and Kamakura's (1995) analysis of stock price movements showed that press releases announcing celebrity endorsement contracts resulted, on average, in a .44% excess return.

Our research differs from prior research by examining the impact that *negative information* about a celebrity might have on consumer evaluations of endorsed brands. Practitioners hope their target audience's positive feelings toward a chosen celebrity will transfer to the endorsed brand or will otherwise enhance the brand's standing. What happens, however, if either during or after an advertising campaign negative information about the celebrity becomes public?

Widely publicized incidents (e.g., O.J. Simpson's indictment and later acquittal on murder charges, and Pepsi Cola's series of debacles with three tarnished celebrities—Mike Tyson, Madonna, and Michael Jackson) suggest that celebrity endorsers may at times become liabilities to the brands they endorse. The fear of potential celebrity scandals has given rise to a minitrend toward using deceased celebrities—individuals who posthumously can no longer engage in behaviors that might bring embarrassment and injury to the brands with which they are linked (Goldman 1994; Lefton 1994; Miller 1993). Observation also reveals an increase in the use of ani-

mated characters as product endorsers. Callcott and Lee's (1994) content analysis determined that 28% of animated advertisements contained cartoon-character celebrities such as Bugs Bunny and Mickey Mouse. Like deceased celebrities, those characters are generally immune to negative publicity.

No research with which we are familiar has directly tested the possible effects of negative information about celebrities on consumers' evaluations of endorsed brands, though two recent studies have touched on the issue. Langmeyer and Shank (1993) demonstrated a positive relationship between people's perceptions of a celebrity (Madonna) and perception of a nonprofit agency (Mothers Against Drunk Driving). For subjects who had a positive (negative) image of Madonna, perceptions of MADD became more positive (negative) after it was paired with Madonna. Tripp, Jensen, and Carlson (1994) found, among other results, that the effect of a celebrity endorsing multiple products is to reduce the celebrity's credibility and likeability and to lower attitudes toward the ad itself. Though both sets of findings are interesting, neither study examined the specific issues addressed in our research. We report three studies examining the conditions under which negative press about a celebrity may affect the endorsed brand.

Marketers obviously eschew nonpositive information about their brands and anything or anyone (such as a celebrity endorser) that is associated negatively with their brands. They have good cause for their concern inasmuch as literature in various psychological traditions has theorized and/or shown empirically that negative information has disproportionate influence on consumers' beliefs and evaluative judgments. Mizerski (1982) has done a particularly good job of describing the underlying reasons and demonstrating from an attribution theory perspective how negative information operates.

Using an associative network framing, we next explain how negative information about a celebrity can operate to lower evaluations of the advertised brand with which the celebrity has been associated. Three studies in which we applied associative learning principles are then reported. In the first two we used a fictitious, albeit realistic, celebrity endorser and in the third we used an actual celebrity.

Associative Learning and Celebrity Endorsers

Associative learning principles are based on a conception of memory as a network consisting of various nodes connected by associative links (Anderson 1976;

Collins and Loftus 1975; Rumelhart, Hinton, and McClelland 1986). In our research context, celebrities and brands both represent nodes, which initially are unconnected but become linked over time through the endorsement process.

Feelings toward a celebrity and/or meanings in the celebrity are expected to transfer to the endorsed brand through their recurring association. The repeated exposure to two stimuli results in simultaneous activation of memory nodes representing those stimuli, building an associative link between the two nodes (Domjan and Burkhard 1986; Klein 1991; Martindale 1991; Rumelhart, Hinton, and McClelland 1986). After an associative link has been forged between an advertised brand and its celebrity endorser, subsequent negative information about the endorser may result in a lower evaluation of the celebrity, which in turn may reflect back to the endorsed brand through the associative link established between the two entities.

The Impact of Negative Information

Repeated advertised pairings of a brand and celebrity establish/modify the pattern of connectivity by strengthening the associative link between them (Anderson 1976, 1983b; Berger and Mitchell 1989; Domjan and Burkhard 1986; Fazio, Powell, and Williams 1989; Furstenberg, Sebrechts, and Seamon 1987; Klein 1991; Martindale 1991). The concept of association sets is especially insightful for understanding that process. An association set represents the preexisting associates, or group of concepts, that are related meaningfully to an object (Nelson, Schreiber, and McEvoy 1992). Both the celebrity and the brand represent nodes connected to other nodes based on experiences with the brand and the celebrity. Those connections represent the *association set* for the celebrity and brand. For example, for some people, the association set for Michael Jordan might consist of "Chicago Bulls," "University of North Carolina," "basketball," "baseball," "Nike," "Dream Team," "Gatorade," and so forth. Association sets also include individuals' attitudes toward objects such as brands and celebrities (cf. Berger and Mitchell 1989; Fazio, Powell, and Williams 1989; Fazio et al. 1986; Judd et al. 1991; Noffsinger, Pellegrini, and Burnell 1983).

When a consumer thinks about a brand, the link with the celebrity node is animated to a certain level through spreading activation (Anderson 1983a). The joint activation of brand and celebrity provides a path over which one's evaluation of the celebrity has an

opportunity to transfer to the brand. The key to the process is the simultaneous activation of the brand and celebrity nodes. Negative information about the celebrity activates the celebrity node, which then activates the brand node to some degree and allows reduced evaluation of the celebrity to transfer to the brand. Studies by Noffsinger et al. (1983) and Judd et al. (1991) provide empirical evidence demonstrating that attitudes can be affected in such a way. The preceding discussion suggests the following general hypothesis.

H1: Given a sufficiently strong associative link between a celebrity and a brand, subsequent negative information about the celebrity results in lowered evaluations of the brand.

Moderating Role of Association Set Size

Repeated pairings of celebrity endorser and brand should facilitate celebrity and brand becoming part of each other's association set. (For example, what celebrities come to mind when you see the brand names Jello and Nike?) Thinking of the brand will increase activation of the celebrity node, and thinking of the celebrity will increase activation of the brand node. However, thinking of a celebrity may not be as likely to activate an associated brand node as thinking of a brand is to activate an associated celebrity node. The level of activation of any one particular node depends in part on the number of competing nodes associated with that node. In the marketplace, consumers may have a larger association set for a certain celebrity than they have for a particular brand. In that case, thinking of the brand is more likely to activate the celebrity node than thinking about the celebrity is to activate the brand node.

As the size of an association set for a given concept increases, the likelihood of any given associated node also being activated is reduced; the greater the number of concepts activated, the less intensively each will be activated (Anderson 1983a, b; Collins and Loftus 1975; Nelson, Bajo, and Casanueva 1985). The learning of additional facts about a concept creates competition to take strength away from already known facts (Anderson 1983a), and activation of a set of nodes can inhibit the activation of related nodes (Martindale 1991). For example, consider a person about whom you know two things: he plays the violin and drives a sports car. Because only those two concepts are associated with this person in your mind,

when thoughts of that individual come to mind, the two associated concepts (plays violin, drives sports car) are fairly likely to be activated spontaneously to a reasonably high degree. If over time you learn more about the person (has two children, works at a hospital, served in the Navy, etc.), then all else being equal, the initial two nodes (plays violin and drives sports car) become less likely to be as highly activated. The basic principle is known as the fan effect (Wang, Seidman, and Reggia 1988).

Though competing nodes may reduce activation of any one target node, the target node may still activate strongly enough to come into working memory—provided the association between the originating node and the associated target node is strong (Martindale 1991). In other words, "plays violin" may be associated so strongly with a friend that learning additional facts, though reducing the level of activation of "plays violin," does not reduce it significantly.

Consider now celebrities and brands. A given brand evokes a particular association set consisting in part of information about the brand as well as association with the celebrity endorser. As the size of the association set for the brand increases, the level of activation of the associated celebrity node is likely to decrease, potentially tempering the impact of negative celebrity information on the brand. By similar logic, as the size of the celebrity association set increases, the level of activation of the associated brand node is likely to decrease. Hence, we propose two moderating hypotheses.

H2a: As the size of the *brand* association set increases, the effect on brand evaluations of negative celebrity information decreases.

H2b: As the size of the *celebrity* association set increases, the effect on brand evaluations of negative celebrity information decreases.

Study 1

In the first experiment we manipulated brand and celebrity association set sizes at two levels (relatively small or large set sizes) and whether or not subjects received negative information about the advertised brand's celebrity endorser. Of particular interest was the *change* in subjects' evaluations of the advertised brand based on the negative information about the endorser. Subjects' brand evaluations were measured at the beginning of the study (before introduction of negative information about the celebrity) as well as

later in the study (after introduction of negative information about the celebrity). In sum, the study had a 2^4 mixed factorial design consisting of three between-subjects factors (brand set size, celebrity set size, presence/absence of negative information) and one within-subjects factor (time of dependent variable measurement).

Choice of Brand and Celebrity

To minimize preexisting knowledge and affect due to prior exposure and familiarity, we used a fictitious brand from a product category relevant to our student subject pool. On the basis of pretesting, the racing bicycles product category and the brand name Avenix were selected. (In the context of the experiment, Avenix was a French brand name and was pronounced phonetically to subjects as Ah-ven-ee.)

A fictional celebrity was created to overcome potential problems with using a real celebrity. Though celebrities are by definition well known and generally popular, liking of a celebrity can vary considerably even in a relatively homogeneous population such as students. High variation in subjects' evaluation of a celebrity, even though randomly distributed across experimental conditions, could cause an error variance that swamps treatment effects. A second problem overcome by the use of a fictional celebrity relates to the association set size manipulation. Ideally, one might use two real celebrities who differ *only* in the size of their association sets. Practically, however, that is impossible. Any two celebrities may indeed differ in the size of their association sets, but, regardless of how closely matched, the two celebrities would also vary in other uncontrollable respects.

On the basis of pretesting, French Olympic cyclist Pierre Varnay was selected as the celebrity endorser for Avenix racing bicycles. Varnay is fictional, but subjects were not aware of that fact and not a single subject questioned the authenticity of Varnay or the study ruse that incarnated him. Note that, to overcome the potential liabilities associated with using a created celebrity (such as reduced ecological validity), we used a real celebrity in study 3.

Size of the Association Sets

Subjects in the small association set condition received *two* pieces of information each about the celebrity and about the brand, and subjects in the large association set condition received *six* items of information each for the celebrity and the brand. For the

celebrity manipulation, the following six items were presented in the large set size condition.

1. Pierre Varnay was the winner of the 1991 European Invitational.
2. Varnay has competed in the prestigious Tour de France three times.
3. Varnay is a vegetarian.
4. Varnay is one of the few left-handed cyclists.
5. Varnay's family has always worked on a farm.
6. Varnay was born near Normandy, France.

The following six information items were used in the large brand association set size condition.

1. Avenix tires self-seal if punctured.
2. Avenix has quick-release hubs.
3. Avenix comes with a one-year warranty.
4. Avenix has 10 speeds (gears).
5. Avenix is made just outside Paris.
6. Avenix was designed by a graduate of the Sorbonne, a French university.

Only the first two pieces of listed information for celebrity and brand were given to subjects in the small set size conditions. Pretesting determined that attitudes toward the brand and endorser were intentionally equivalent across the two set sizes.

Subjects

After 15 student subjects were dropped because of incomplete responses (6) or demand awareness (9), responses from 283 subjects remained for analysis. Three to 14 subjects participated in each session, with seven or eight as the modal attendance.

Procedures

Background and Study Ruse. Subjects were recruited primarily from introductory marketing courses and offered extra credit for their participation. The experimenter informed them that a major bicycle manufacturer was interested in their opinions about an advertising campaign for the new Avenix. That ruse served to rationalize subjects' (1) viewing the ad campaign that was designed to build an association between Avenix and Pierre Varnay, (2) reading articles (including the negative information) about Pierre Varnay, and (3) completing both pre and post measures of attitude toward Avenix.

Association Sets. Prior to viewing the ad campaign, subjects were told that they may not be familiar with Pierre Varnay, a French Olympic cyclist who endorses

Avenix. (One might conjecture that such an announcement encouraged subjects to focus unduly on the ad campaign and the subsequent negative information. However, as is apparent from our subsequent presentation of findings, no demand-artifact explanation could possibly account for the pattern of results obtained.) Subjects then were given either two or six pieces of background information about Varnay and either two or six pieces of information about Avenix.

At the end of the study, written instructions asked subjects to recall each fact through prompting questions such as "How long is the Avenix warranty?" and "What race did Varnay win?" The subjects recalled 91.5 to 100% of the facts, with an average of 96.4% across conditions, thus indicating that they had learned the necessary association set information.

Initial Evaluation of Avenix. The initial evaluation was completed before subjects were exposed to the ad campaign and before they read articles that included the negative information about endorser Varnay. An initial lead-in question ("My overall feeling about Avenix bicycles is...") was followed by three 9-point bipolar scales (favorable/unfavorable, positive/negative, strongly like/strongly dislike). A second lead-in question ("I think that the Avenix bicycle is...") was followed by four additional items (good/bad, high quality/low quality, superior/inferior, and fast/slow). The seven items were summed to represent an overall attitude toward Avenix (Cronbach alpha=.93).

Forging the Association. A link between Pierre Varnay and Avenix bicycles was established by having subjects view a series of print ads. After being informed that the bicycle company's ad agency wanted to get college students' reactions to the campaign, subjects received an ad folder containing 10 black and white print ads. Each ad featured the same picture of Pierre Varnay riding an Avenix bicycle. (An actual photograph of an unknown cyclist representing the fictitious Pierre Varnay was selected through pretesting that identified it as the most attractive and athletic of several tested.) The headlines, though different in each ad, all linked Pierre Varnay with Avenix—for example, "Pierre Varnay Wins with Avenix." Each ad had minimal body copy that conveyed in different terms Pierre Varnay's endorsement of Avenix. The experimenter gave subjects 10 seconds for viewing/reading each ad. Subjects then evaluated the campaign by responding to nine 7-point bipolar scale items. Those measures were taken merely to maintain consistency with the study ruse and are not pertinent to any hypothesis tests.

Presenting the Negative Information. Subjects were told that there has been some recent publicity about

Varnay and that the ad agency sponsoring the research was interested in determining students' awareness of the publicity. Subjects then read three short magazine articles. The first two—one ostensibly from *Billboard* and the other supposedly from *People*—were about Varnay's music and reading preferences and were included to reduce subjects' demand awareness. The third, allegedly from *Sports Illustrated*, contained the negative information. (Control group subjects received the *Billboard* and *People* articles but not the *Sports Illustrated* article.) After reading each of the three articles, subjects were asked if they had seen the article previously, if they subscribe to the particular magazine, if they read the magazine at least once a month, and if the article influenced how they felt about Varnay. The purpose of those questions was to reinforce the ruse used to present the articles.

The *Sports Illustrated* article gave subjects either of two types of negative information about Pierre Varnay: that he had engaged in steroid use or that he had multiple driving-under-the-influence (DUI) infractions on his record. Because the two negative information instantiations yielded virtually identical results, we pooled the data. Obtaining similar results with two types of negative information simply adds to study generalizability.

Memory-Clearing Task. To help ensure that any observed effect was due to a restructuring of long-term memory, a memory-clearing task intervened between the negative information manipulation and measurement of the key dependent variables. Subjects read a newspaper article on commuting and carpooling and then were asked a variety of closed- and open-ended questions about their attitudes toward commuting, carpooling, and the use of bicycles as an alternative to car use.

Post Evaluation of Avenix. Subjects were told that now that they had seen the proposed ad campaign for Avenix, the ad agency was interested in their evaluations of Avenix. They completed the same set of measurements (i.e., seven 9-point bipolar scale items) as in the initial evaluation of Avenix.

Manipulation Check and Demand Awareness Measure. As a manipulation check on the negative information, subjects evaluated Pierre Varnay on a variety of 9-point bipolar scales: three global evaluation measures (good/bad, favorable/unfavorable, and positive/negative), two trust measures (trustworthy/not trustworthy and believable/not believable), two expertise measures (knowledgeable/not knowledgeable and qualified/not qualified), and two endorser appropriateness measures (appropriate/inappropriate and

effective/ineffective). The three global items were summed to represent an overall attitude toward the endorser (Cronbach alpha=.98), as were the two trustworthiness items (r=.78), the two expertise items (r=.74), and the two appropriateness items (r=.86).

Several checks were performed to establish that the negative information from the *Sports Illustrated* article affected subjects' evaluation of Pierre Varnay. Immediately after reading each of the articles on Varnay, subjects were asked, among other things, whether the article had influenced their feelings toward Varnay. Slightly more than 88% indicated that the *Sports Illustrated* article had affected their feelings. A stronger manipulation check was the evaluation subjects made of Varnay at the *end* of the study. Table 1 shows that subjects who received the negative information about Varnay had significantly less favorable evaluations of Varnay than subjects in the control groups, who did not read the negative *Sports Illustrated* article.

To identify potential demand awareness, subjects responded to an open-ended question about the purpose of the study. Responses were categorized as demand-aware if the comments identified the purpose of the study as determining how the negative information about the celebrity would influence people's feelings about the brand. Of the 196 subjects in the four negative information conditions, nine (4.6%) were classified as demand-aware and hence dropped from subsequent analysis.

Results

Effect of Negative Information. H1 suggests that given a sufficiently strong associative link between the celebrity and the brand, negative information about the celebrity will lower brand evaluations. As subjects had evaluated Avenix twice (before and after reading articles about Avenix), repeated measures MANOVA was used to examine whether the change in Avenix evaluations was greater in the negative information conditions than in the control conditions. Table 2 reports descriptive statistics and focused contrasts between experimental conditions and their corresponding controls.

The pre and post evaluations of Avenix averaged across the four negative information conditions were 46.9 and 45.9, respectively, indicating that attitudes toward Avenix declined after the negative information about the endorser. Comparatively, a moderately positive effect of the advertising information is evident in the control conditions with average pre and post evaluations of 46.5 and 47.3, respectively. The within-subjects effect for the interaction between time of measurement (pre vs. post) and condition (negative information vs. control) is significant ($F_{1,275}=10.1$; $p<.01$), supporting the expectation in H1 that negative information about the celebrity lowers evaluations of the advertised brand.

Moderating Role of Brand and Celebrity Association Set Sizes. H2a and H2b propose that the impact of the negative celebrity information on evaluations of the endorsed brand should be greater for smaller (vs. larger) association sets. H2a speaks to the moderating role of brand set size and predicts a time of evaluation by brand set size (with collapsing across celebrity set size) by negative information interaction; however, the test for that interaction is not significant ($F_{1,279}=1.0$, $p=.31$). The test of H2b on the moderating role of celebrity set size (with collapsing across brand set size) is also nonsignificant ($F_{1,279}=2.3$, $p=.13$).

Though H2a and H2b are not supported, separate contrast tests (see last column in Table 2) for the four celebrity/brand set size conditions show a statistically significant attitude change toward Avenix in the small brand set/small celebrity set/negative information condition versus its matching control group ($F_{1,68}=14.96$; $p<.01$).The finding demonstrates that the effect of negative celebrity information on the endorsed brand is greatest when *both* the brand and the celebrity set sizes are relatively small; comparatively, no other contrasts between the respective treatment and control conditions are statistically significant.

Discussion

As supported by the logic of associative network models, our results indicate that activation of negative information about a celebrity can have an adverse effect—through lowered brand evaluations—on the endorsed brand with which that celebrity is associated. Negative information had a strong effect when the association set sizes were small for *both* the brand and the celebrity. However, when either the brand or the celebrity had larger association sets, negative celebrity publicity did not have a significant detrimental effect on the endorsed brand. That crucial finding suggests that negative information about a celebrity may be problematic for the associated brand only when consumers have scant association sets, or knowledge structures, for both brand and celebrity. When knowledge structures for brand and/or celebrity are more fully developed, a brand may be somewhat in-

Table 1
Effect of Negative Information on Evaluation of Pierre Varnay in Study 1[a]

	Overall Evaluation[b]	Trustworthiness[c]	Expertise[c]	Appropriateness[c]
Small Association Set				
Negative information	15.8[1]	10.1[1]	13.4[1]	10.8[1]
Control	21.0[2]	13.6[2]	15.0[2]	15.0[2]
Large Association Set				
Negative information	15.2[1]	9.9[1]	13.4[1]	10.9[1]
Control	21.8[2]	13.9[2]	15.1[2]	15.8[2]
Total				
Negative information	15.5[1]	10.0[1]	13.4[1]	10.8[1]
Control	21.4[2]	13.7[2]	15.0[2]	15.4[2]

[a] Reading down, means with different superscripts indicate significant differences ($p < .05$). For example, 15.8 differs from 21.0.
[b] Scale range 3 to 27.
[c] Scale range 2 to 18.

sulated from negative press about the endorsing celebrity.

Study 2

The second study had a 2^3 mixed factorial design structured to examine two additional moderating variables that are ecologically relevant as well as theoretically interesting. The moderating variables were represented in the form of two between-subjects factors: (1) *strength* of the associative link between the brand and the celebrity (weak or strong) and (2) *timing* of the negative celebrity information (before or after the advertising campaign). Additionally, time of dependent variable measurement (both before and after subjects were exposed to the negative celebrity information) was a within-subjects factor. Two no-negative-information groups were used as controls.

Moderating Role of Associative Link Strength

Associative networks consist of a pattern of connectivity among units that is modified on the basis of experiences (Anderson 1976; Collins and Loftus 1975; Rumelhart, Hinton, and McClelland 1986). The connectivity, or associative link, varies in strength (Furstenberg, Sebrechts, and Seamon 1987; Klein 1991; Martindale 1991). The stronger the associative link between two nodes, the greater the likelihood that activation of one of the nodes will lead to activation of the other (Anderson 1983a; Yantis and Meyer 1988).

We expected the strength of the associative link between the brand and the celebrity to moderate the degree to which negative celebrity information affects attitude toward the brand. If the link between the brand and the celebrity is weak, activation of the brand node should be less intense when the celebrity node is activated by either negative celebrity information or other occurrences related to the celebrity. A weak association between celebrity and brand would hinder the transfer of celebrity information to the brand, which suggests the following hypothesis.

H3: Negative celebrity information has less impact on brand evaluations when the associative link between brand and celebrity is weak than it does when the link is strong.

Moderating Role of Negative Information Timing

Negative information about the celebrity could become public before, during, or after an endorsement campaign. In study 1, the negative information (the *Sports Illustrated* article) was presented after subjects had viewed the Avenix campaign featuring Pierre

Table 2
Attitude toward Avenix: Pre Measures, Post Measures, and Difference Scores from Study 1

Condition[a]	n	Mean and (SD)		Difference
		Pre[b]	Post[b]	
1. L brand, L celebrity, negative	47	48.0 (6.4)	47.1 (5.8)	-.9 $F_{1,67}=1.26$, p=.27
2. L brand, L celebrity, control	22	50.6 (8.4)	50.8 (7.9)	+.2
3. L brand, S celebrity, negative	48	48.0 (8.4)	46.2 (7.5)	-1.8 $F_{1,71}=1.32$, p=.25
4. L brand, S celebrity, control	25	46.4 (6.6)	46.0 (4.6)	-.4
5. S brand, L celebrity, negative	47	44.3 (7.9)	44.8 (8.5)	+.5 $F_{1,69}=0.30$, p=.58
6. S brand, L celebrity, control	24	43.9 (7.1)	45.1 (6.7)	+1.2
7. S brand, S celebrity, negative	45	47.3 (7.6)	45.6 (5.9)	-1.7 $F_{1,68}=14.96$, p<.01
8. S brand, S celebrity, control	25	45.4 (6.5)	47.7 (7.2)	+2.3

[a] L =Large association set size for brand and/or celebrity.
   S =Small association set size for brand and/or celebrity.
[b] Pre and post scores each range from 7 to 63.

Varnay. At that point a link between the celebrity and the negative information had been established. Also occurring at that time was the activation of other associations with the celebrity, including, possibly, the endorsed brand. The brand/celebrity/negative celebrity information activation allowed for the transfer of negative celebrity affect to the endorsed brand.

A company is unlikely to use a celebrity who is already tainted by negative news, but it is theoretically interesting to consider the possible effect on the endorsed brand of negative celebrity information made public *prior* to an ad campaign. Additionally, information about a celebrity may be negative to only a subset of the total market. For example, a celebrity's political position on a controversial issue represents either positive or negative information depending on the consumer's personal position on that issue. The advertiser, in selecting any complex, multifaceted in-

dividual to endorse a particular brand, runs the risk that some target group members will be offended by that celebrity.

Circulation of negative celebrity information should establish a link between the celebrity and the negative information. A subsequent ad campaign featuring both the brand and the celebrity would activate the brand and the celebrity nodes simultaneously in memory. Also activated to some degree would be other nodes connected to the brand and the celebrity. Each ad presentation in the campaign would reactivate the brand node, the celebrity node, and probably the negative celebrity information. The repeated activation should increase the likelihood that the negative information will affect attitudes toward the endorsed brand. Indeed, the opportunity for repeated simultaneous activation of the brand/celebrity/negative celebrity information should be much greater when con-

sumers are already aware of the negative information as they are exposed repetitively to the brand's ad campaign featuring the celebrity endorser.

H4: Negative celebrity information has a more adverse impact on brand evaluations when received prior to an ad campaign than it does when received after the campaign.

Manipulations

Strength of the brand/celebrity associative link was manipulated at two levels (weak or strong), as was timing of the negative celebrity information (before or after the ad campaign). In addition, the design included weak- and strong-associative-link control conditions that were identical to the treatment conditions with exception that the subjects did not receive the negative celebrity information.

Associative Link Strength. The procedure used in study 1 to operationalize the associative link between brand and celebrity was used to operationalize the *strong* link in study 2 (i.e., 10 print ads featuring Varnay as endorser of Avenix racing bicycles). Subjects in the *weak* associative link condition also saw 10 ads for Avenix, but only three of the 10 ads featured Varnay (ad positions 1, 5, and 10). The other seven ads, which otherwise were identical in style and tone, illustrated only the bicycle.

Timing of the Negative Information. The *negative-after* information presentation mirrored the procedure used in study 1, in which negative information about Varnay was presented after subjects had seen the Avenix ad campaign. The lead-in for subjects was: "In the ads you saw, French Olympic cyclist Pierre Varnay was used as an endorser for Avenix bicycles. The advertising agency that is sponsoring this research wants feedback on consumers' awareness of recent publicity about Varnay. Below you will find several recent articles...."

In the *negative-before* presentation, subjects read the fictitious articles before viewing the ad campaign. The lead-in was: "In the ads you are about to see, French Olympic cyclist Pierre Varnay is used as an endorser for Avenix bicycles. The advertising agency that is sponsoring this research wants feedback on consumers' awareness of recent publicity about Varnay. Below you will find several recent articles...."

Subjects and Procedure

Of the 192 undergraduates who participated, four were dropped because of demand awareness. Pierre Varnay and Avenix were used as the celebrity and brand stimuli. The fictitious *Sports Illustrated* article provided the negative information induction (steroid usage only). The size of both the brand and the celebrity association sets was held constant at three pieces of information each. Sessions lasted approximately 45 minutes.

Procedures for study 2 were very similar to those used in study 1. Subjects (1) read background information about the alleged purpose of the study, (2) processed information contained in the association sets (three information pieces in each) for Avenix and Varnay, (3) completed a pre evaluation of Avenix, (4a) viewed the Avenix ad campaign (negative information after) or (4b) read fictitious Varnay magazine articles (negative information before), (5a) read fictitious Varnay magazine articles (negative information after) or (5b) viewed the Avenix ad campaign (negative information before), (6) participated in a memory-clearing task, (7) completed a post evaluation of Avenix, (8) evaluated Pierre Varnay, and (9) answered diagnostic questions.

Results

Manipulation Checks. As in study 1, subjects were asked whether the article had influenced how they felt about Varnay. Nearly 89% indicated that the *Sports Illustrated* article had affected their feelings about Varnay. Another manipulation check was the subjects' evaluation of Varnay at the end of the study. Table 3 shows that subjects who received the negative information about Varnay had significantly less favorable evaluations of Varnay than subjects in the control groups who had not read the negative *Sports Illustrated* article.

Tests of Hypotheses. An initial issue is whether the results replicate those from study 1; specifically, did negative information about Pierre Varnay affect evaluations of Avenix bicycles? MANOVA results reveal a significant time by negative information interaction effect, which supports H1 that negative celebrity information lowers brand evaluations. Specifically, the average pre and post evaluations of Avenix for the negative information conditions were 46.6 and 44.7, for an average reduction of 1.9. For the control conditions, the average pre and post evaluations of Avenix were 46.7 and 47.3, for an increase of .6. The planned contrast of the interaction between the time of evaluation (pre vs. post) and information condition (negative information vs. no information control) is significant ($F_{1,179}=10.9$; $p<.01$). Hence, the replication supports the premise that negative information about

Table 3
Effect of Negative Information on Evaluation of Pierre Varnay In Study 2[a]

	Overall Evaluation[b]	Trustworthiness[c]	Expertise[c]	Appropriateness[c]
Weak Associative Link				
Negative information	13.6[1]	8.2[1]	11.8[1]	8.5[1]
Control	21.0[2]	13.8[2]	15.0[2]	14.3[2]
Strong Associative Link				
Negative information	14.1[1]	8.7[1]	12.6[1]	9.6[1]
Control	21.9[2]	13.8[2]	15.2[2]	14.7[2]
Total				
Negative information	13.8[1]	8.4[1]	12.2[1]	9.1[1]
Control	21.4[2]	13.8[2]	15.1[2]	14.5[2]

[a] Reading down, means with different superscripts indicate significant differences (p < .05). For example, 13.6 differs from 21.0.
[b] Scale range 3 to 27.
[c] Scale range 2 to 18.

Varnay had an adverse effect on subjects' evaluations of Avenix.

H3 posits that the change in brand evaluation is significantly greater (more negative) in strong than in weak associative link conditions. Table 4 provides descriptive statistics by condition. In the weak associative link condition, the average pre evaluation of Avenix was 46.9 and the average post evaluation was 45.6 (a decrease of 1.3). In the strong associative link condition, the average pre and post evaluations were 46.3 and 43.9 (a decrease of 2.4). The strong associative link control group pre-to-post change was an increase of .5, very similar to the change in the weak associative link control group (an increase of .6). Though the data are consistent with the expected greater effect of negative celebrity information on the endorsed brand in the strong associative link condition, the time of evaluation by strength of associative link by negative information interaction is not significant ($F_{1,177}=0.53$; p=.47).

H4 posits that the change in brand evaluation is significantly greater (more negative) when negative celebrity information is presented before the ad campaign than it is when such information is presented after the ad campaign. The change in evaluation of Avenix in the before conditions is -2.6 (pre and post evaluations=46.0 and 43.4, respectively). In the after condition, the change is -1.1 (pre and post evaluations=47.2 and 46.1, respectively). Those results yield

a significant interaction ($F_{1,128}=4.04$; p<. 05) that is consistent with H4.

Discussion

The results replicate those for H1 in study 1 by showing that negative information about the celebrity attenuates attitudes toward the endorsed brand. The timing of the negative celebrity information also is shown to moderate the effect of that information on brand evaluations (in support of H4). Consistent with an associative learning perspective, the impact of the negative celebrity information on brand attitude is greater when that information is presented *before* the link has been forged between celebrity and brand. However, the prediction about the strength of the associative link between brand and celebrity is not supported.

Study 3

The third study had two objectives: (1) to examine the generalizability to a *real* celebrity of the effect of negative celebrity information on the endorsed brand and (2) to examine whether the order in which the endorser and the brand are evaluated moderates the effect of the negative celebrity information. In studies 1 and 2 subjects evaluated the celebrity after evaluating the brand. The evaluation of the brand in study

Table 4
Attitude toward Avenlx: Pre Measures, Post Measures, and Difference Scores from Study 2

Condition[a]	n	Mean and (SD)		Difference
		Pre[a]	Post[a]	
1. Strong link, negative before	30	46.2 (6.7)	42.6 (6.9)	-3.6
2. Strong link, negative after	35	46.4 (7.3)	45.0 (7.4)	-1.4
3. Strong link, control	25	47.4 (4.2)	47.9 (3.5)	+.5
4. Weak link, negative before	34	45.9 (8.2)	44.0 (7.5)	-1.9
5. Weak link, negative after	31	48.0 (7.5)	47.3 (6.8)	-.7
6. Weak link, control	26	46.1 (5.8)	46.7 (6.9)	+.6

[a] Pre and post scores each range from 7 to 63.

3 was manipulated as either before or after the celebrity evaluation. Study 3 had a 2^3 mixed factorial design. The between-subjects factors were order of the brand and celebrity evaluations and presence/absence of negative information. The within-subjects factor, as in the first two studies, was the time of the dependent variable measurement.

Use of a Real Celebrity

The use of a fictitious celebrity in studies 1 and 2 allowed for considerable experimental control. Control was particularly important in study 1, which manipulated size of the celebrity association set. The association sets for real celebrities naturally vary from consumer to consumer, rendering any experimental manipulation of association set problematic. Though the subjects found the experimental ruse, the background information on Varnay, and the overall experimental environment to be realistic, we wondered whether negative celebrity information would affect the endorsed product in the case of a real and well-known endorser.

The rationale for expecting negative celebrity information to transfer to the endorsed brand was developed previously, but would the use of a real celebrity

yield stronger or weaker effects? An argument in favor of stronger effects is that the negative information might have greater salience or memorability when it is about someone people already know. An offsetting argument is that people have larger association sets for real than for experimentally created celebrities and, as shown in study 1, association set size can influence the impact of negative information on the endorsed brand. Hence, the effect on brand evaluations may be weaker for a real celebrity than for the created celebrity used in studies 1 and 2. We hypothesized, as in H1 involving a fictional celebrity, that negative information about a real celebrity would lead to lowered brand evaluations. We formed no hypothesis for whether the effect of negative information about a real celebrity would be stronger or weaker than the effect found in studies 1 and 2.

H5: Given a sufficiently strong associative link between a real celebrity and a brand, subsequent negative information about the celebrity lowers brand evaluations.

Order of Brand/Endorser Evaluation

In studies 1 and 2 subjects evaluated the brand before evaluating the celebrity. That ordering is eco-

logically valid inasmuch as consumers typically make choices at the point of purchase without celebrity information, either positive or negative. Any impact of celebrity information on brand evaluation must derive from long-term memory. In study 3 we manipulated the ordering of celebrity and brand evaluations. Our reasoning was that having subjects evaluate the celebrity first would effectively serve to prime the negative celebrity information and its linkage with the endorsed brand immediately prior to subjects' evaluation of the endorsed brand. We therefore sacrificed ecological validity of the ordering for the offsetting advantage of potentially greater impact.

> H6: Negative celebrity information has greater impact on brand evaluations when the celebrity is evaluated before the brand than it does when the celebrity is evaluated after the brand.

Method

The Avenix bicycle was the endorsed product. A well-known American cyclist (Greg LeMond) was used as the endorser for Avenix. The picture in the ads in studies 1 and 2 portrayed a very athletic cyclist riding a racing bicycle. Because the cyclist was wearing a helmet and his face was not clearly visible, we used the same ads in study 3 and merely substituted the name Greg LeMond for the name Pierre Varnay in the headline and short copy. The fictitious *Sports Illustrated* article provided the negative information induction (steroid usage). Size of the brand and celebrity association sets was held constant at three items of information each. Three facts about Avenix (drawn from study 1) were presented to the subjects. Three true facts provided the association set for Greg LeMond, namely that Greg is an avid outdoorsman, who grew up in California, and has won the Tour de France three times.

Subjects and Procedures. Ninety-seven undergraduate students completed the study, but two were later classified as demand-aware and dropped. Procedures were very similar to those used in the first two studies; specifically, subjects (1) read background information about the alleged purpose of the study, (2) learned the association sets for Avenix and LeMond, (3) completed an initial (pre) evaluation of Avenix, (4) viewed the Avenix ad campaign, (5) read the fictitious LeMond magazine articles, (6) performed a memory-clearing task, (7a) completed a post evaluation of Avenix or (7b) completed an evaluation of Greg LeMond, (8a) completed an evaluation of Greg LeMond

or (8b) completed a post evaluation of Avenix, (9) answered diagnostic questions, and (10) were debriefed at the end of the session and told that none of the materials used in the study should be taken to imply that Greg LeMond, in actuality, has ever used steroids.

Results

We performed several checks to establish that the negative information from the *Sports Illustrated* article adversely affected subjects' evaluation of Greg LeMond. As in the previous studies, after reading the articles about LeMond, subjects were asked whether their feelings toward him had changed. Approximately 81% indicated that the *Sports Illustrated* article had affected their feelings about LeMond. Table 5 shows that subjects who received the negative information about LeMond had significantly less favorable evaluations of LeMond than subjects in the control groups who did not read the negative *Sports Illustrated* article.

Tests of Hypothesized Effects

Effect of Negative Celebrity Information. H5 examines whether the deleterious effect of negative celebrity information on the endorsed brand, as found in studies 1 and 2, holds in the case of a real celebrity. The average pre and post evaluations of Avenix for the negative information condition are 47.2 and 46.7, for a decrease of .5. For the control condition, the pre and post evaluation averages are 46.4 and 47.1, for an increase of .7. The pattern of results is consistent with expectations, but the interaction between type of information (negative or not) and time of evaluation (pre vs. post) is not significant ($F_{1,91}=1.97$; p=.16).

Effect of Order of Brand/Endorser Evaluation. H6 posits that the effect of negative celebrity information on an endorsed brand is stronger when subjects evaluate the celebrity before evaluating the brand. Table 6 shows that the change in evaluation of Avenix is -.4 for subjects in the negative information group who evaluated LeMond first, whereas the change is 1.0 for the corresponding control group (overall difference 1.4). The change in Avenix evaluations is -.7 for subjects in the negative information group who evaluated Avenix first, but is .5 for the control group (overall difference 1.2). The information (negative or control) by order of evaluation (celebrity or brand first) by time of evaluation (pre or post) interaction is not significant ($F_{1,91}=0.16$; p=.70).

Table 5
Effect of Negative Information on Evaluation of Greg LeMond in Study 3[a]

	Overall Evaluation[b]	Trustworthiness[c]	Expertise[c]	Appropriateness[c]
LeMond Evaluated Before Avenix				
Negative information	17.9[1]	11.3[1]	14.3[1]	13.0[1]
Control	22.5[2]	14.1[2]	15.8[2]	16.8[2]
LeMond Evaluated After Avenix				
Negative information	17.3[1]	11.2[1]	12.8[1]	13.0[1]
Control	21.6[2]	13.6[2]	14.3[1]	15.0[2]
Total				
Negative information	17.6[1]	11.2[1]	13.5[1]	13.0[1]
Control	22.1[2]	13.8[2]	·15.0[2]	15.8[2]

[a]Reading down, means with different superscripts indicate significant differences ($p < .05$). For example, 17.9 differs from 22.5.
[b]Scale range 3 to 27.
[c]Scale range 2 to 18.

Discussion

Negative celebrity information had a somewhat weaker effect than it did in the two studies with the fictitious Pierre Varnay. One plausible explanation is that subjects had richer association sets for LeMond than for the fictitious Varnay, which may have diluted the impact of the negative information. A comparison of Table 5 with Tables 1 and 3 adds support for such an interpretation as the negative *Sports Illustrated* article had a greater effect on subjects' evaluations of Varnay than on their evaluations of LeMond.

We also examined the possible effect of the order in which subjects evaluate the brand and the celebrity. One might expect a greater effect of negative celebrity information on the endorsed brand when the celebrity is evaluated just before the brand. However, as order of brand/celebrity evaluation is not significant, negative celebrity information appears to have been sufficiently accessible, without artifactual priming, to influence evaluations of the brand with which the celebrity was linked.

General Discussion

Our research broadens the theoretical domains used in understanding the processes involved in celebrity endorsements by considering celebrity issues within the context of an associative memory framework. Indeed, the desired outcome from the use of a celebrity endorser is a strong and positive associative link between the brand and the celebrity as a means of enhancing the brand's equity (Keller 1993). Though advertisers expect the associative link between the brand and the celebrity to transfer positive feelings about the celebrity to the endorsed brand, our research shows that a lowered evaluation of the celebrity can lower brand evaluations.

Study 1 shows that in the small brand/small celebrity association set size condition—albeit in no other condition—the negative information about Varnay attenuated subjects' attitudes toward Avenix. That finding is consistent with the results of fan effect studies (e.g., Anderson and Reder 1987) demonstrating how activation of a particular node increases as the number of competing nodes decreases.

The results from study 2 replicate those from study 1. Additionally, the data show that negative celebrity information presented prior to the brand/celebrity pairing had a greater effect on the endorsed brand than negative celebrity information presented after the pairing. However, the findings fail to support the prediction that the effect of negative celebrity information on the endorsed brand would be greater when there is a strong (rather than weak) associative link between the brand and the celebrity.

Table 6
Attitude toward Avenix: Pre Measures, Post Measures, and Difference Scores from Study 3

Condition[a]	n	Mean and (SD)		Difference
		Pre[a]	Post[a]	
1. Evaluate brand first, negative	22	45.5 (8.6)	44.8 (7.9)	-.7
2. Evaluate brand first, control	24	46.7 (8.9)	47.2 (7.1)	+.5
3. Evaluate celebrity first, negative	24	48.8 (7.8)	48.4 (7.3)	-.4
4. Evaluate celebrity first, control	25	46.0 (7.1)	47.0 (6.9)	+1.0

[a]Pre and post scores each range from 7 to 63.

The results of study 3 do not support the prior studies' findings about the deleterious effects of negative celebrity information on the endorsed brand. We speculate that subjects had a fuller association set for Greg LeMond than for the fictitious Pierre Varnay, which may have blunted the effect of the negative celebrity information.

Implications and Limits

Use of celebrity endorsers has been an enduring practice in advertising, but our studies illustrate its potential risk. The advertiser who chooses to use a celebrity has no control over the celebrity's future behavior. Any negative news about a celebrity may reduce the celebrity's allure, and therefore the appeal of the brand the celebrity has endorsed. The risk is potentially great for new or unfamiliar brands for which the association set is relatively scant and for which the celebrity is essentially the primary attribute on which consumers form evaluations of the brand. Negative celebrity information may have a much greater effect on such brands than it does on familiar, established brands. Also at great risk are brands closely tied to a specific celebrity, as study 2 provides suggestive directional evidence that the effect of negative celebrity information is greater when the associative link between the brand and celebrity is strong.

Our research has several limitations. One is the compressed time in which the phenomenon was examined. Each complete experiment—which involved learning about the brand and the celebrity, developing the association between the brand and the celebrity, and reacting to exposure to the negative celebrity information—was done in 45 to 50 minutes. In the marketplace, the process would occur over weeks, if not years.

Another limitation is the laboratory setting. Because the marketplace can be both more intense and less intense than the laboratory, the results from our laboratory studies may not generalize to the marketplace. Celebrities in the marketplace often evoke a much richer set of feelings and responses than a fictitious celebrity used in laboratory research. Strong associations between a celebrity and a brand are established over years of advertising exposure, and individual celebrities often endorse multiple brands. Because of the higher salience of an actual celebrity, negative celebrity information might have more impact for an actual than for a created celebrity. Negative information about Michael Jordan, for example, may be more startling, interesting, and meaningful than negative information about either the fictitious Pierre Varnay or the less famous Greg LeMond. In many ways, the marketplace can be more intense than the laboratory, and any effect found in the laboratory also would be expected to occur in the marketplace. However, certain characteristics make the marketplace seem less intense than the laboratory. In the marketplace consumers often face communication clutter, celebrities (such as Michael Jordan and Tiger Woods) endorsing multiple brands, brands employ-

ing multiple celebrities (such as the well-known milk mustache campaign), and sources of information about celebrities that vary widely in credibility. All of those factors may mitigate the impact of negative celebrity information and limit the generalizability of a laboratory study.

A third limitation of our research is the use of a fictitious brand (Avenix). Ecologically, results from our experiments could at the limit be generalized to the subset of new or relatively unknown brands for which consumers' knowledge structures are scant. Our use of Avenix structured a situation in which the information about the celebrity endorser was essentially the most important ground on which subjects could form evaluations of the brand. Further, because negative information is notable in its tendency to gain attention and evoke cognitive effort (Taylor 1991), our experiments created a best-case environment for the negative celebrity information to be integrated with initial attitudes formed toward Avenix and therefore to result in less favorable attitudes.

Though our findings are limited in their range of applicability, the purpose of laboratory experimentation is not to generalize *findings* to business practice, but rather to test practitioners' "theories in use" and to generalize *processes* to actual practice (cf. Mook 1983). Marketing practitioners apparently operate under the assumption that negative celebrity news holds strong potential for sullying their brands' reputations, as celebrity endorsers are commonly discharged when negative information about them surfaces (Miciak and Shanklin 1994).

Our findings support the practitioner's reasons for concern, but only when an unknown brand is advertised. Predictions derived from associative memory models suggest that marketers have much less cause for concern when an established brand is advertised. In the latter situation, consumers' rich and varied cognitive structures should insulate the brand from negative press. Understandably, advertising executives and brand managers who are responsible for selection of a subsequently besmirched celebrity endorser sense great urgency to dump the celebrity quickly to save face or for fear of consumer retribution. Their actions might be fully justified for the aforementioned reasons, but theoretical predictions based on associative network models of memory do not necessarily indicate that negative information about a celebrity causes serious harm to an established brand. Indeed, Hertz apparently has not suffered any significant reduction in market share since news emerged about O. J. Simpson's alleged connec-

tion with the murders of his former wife and her friend, nor did Pepsi lose share after Michael Jackson's child-molestation charge or Mike Tyson's rape conviction. Executives undoubtedly were embarrassed in all those instances, but their well-established brands remained relatively unscathed.

References

Agrawal, Jagdish and Wagner A. Kamakura (1995), "The Economic Worth of Celebrity Endorsers: An Event Study Analysis," *Journal of Marketing*, 59 (July), 56-62.

Anderson, John R. (1976), *Language, Memory, and Thought*, Hillsdale, NJ: Lawrence Erlbaum Associates.

————— (1983a), "A Spreading Activation Theory of Memory," *Journal of Verbal Learning and Verbal Behavior*, 22 (3), 261-295.

————— (1983b), "Retrieval of Information from Long-Term Memory," *Science*, 220 (4592), 25-30.

————— and Lynne M. Reder (1987), "Effects of Number of Facts Studied on Recognition Versus Sensibility Judgments," *Journal of Experimental Psychology: Learning, Memory and Cognition*, 13 (3), 355-367.

Atkin, Charles and Martin Block (1983), "Effectiveness of Celebrity Endorsers," *Journal of Advertising Research*, 23 (February/March), 57-61.

Berger, Ida E. and Andrew A. Mitchell (1989), "The Effect of Advertising on Attitude Accessibility, Attitude Confidence, and the Attitude-Behavior Relationship," *Journal of Consumer Research*, 16 (December), 269-279.

Callcott, Margaret F. and Wei-Na Lee (1994), "A Content Analysis of Animation and Animated Spokes-Characters in Television Commercials," *Journal of Advertising*, 23 (4), 1-12.

Collins, Allan M. and Elizabeth F. Loftus (1975), "Theory of Semantic Processing," *Psychological Review*, 82 (6), 407-428.

Domjan, Michael and Barbara Burkhard (1986), *The Principles of Learning and Behavior*, Monterey, CA: Brooks/Cole.

Fazio, Russell H., Martha C. Powell, and Carol J. Williams (1989), "The Role of Attitude Accessibility in the Attitude-to-Behavior Process," *Journal of Consumer Research*, 16 (December), 280-288.

————— , David M. Sanbonmatsu, Martha C. Powell, and Frank R. Kardes (1986), "On the Automatic Activation of Attitudes," *Journal of Personality and Social Psychology*, 50 (2), 229-238.

Freiden, Jon B. (1984), "Advertising Spokesperson Effects: An Examination of Endorser Type and Gender on Two Audiences," *Journal of Advertising Research*, 24 (October/November), 33-41.

Furstenberg, Charlotte T., Marc M. Sebrechts, and John G. Seamon (1987), "Accessing Associative Strength in Cued Recall and Pair Recognition," *American Journal of Psychology*, 100 (2), 239-251.

Goldman, Kevin (1994), "Dead Celebrities Are Resurrected as Pitchmen," *Wall Street Journal* (January 7), B1, B2.

Judd, Charles M., Roger A. Drake, James W. Downing, and Jon A. Krosnick (1991), "Some Dynamic Properties of Attitude Structures: Context-Induced Response Facilitation and Polarization," *Journal of Personality and Social Psychology*, 60 (2), 193-202.

Kamins, Michael A. (1990), "An Investigation into the 'Match-Up' Hypothesis in Celebrity Advertising: When Beauty May Be Only Skin Deep," *Journal of Advertising*, 19 (1), 4-13.

Keller, Kevin Lane (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (January), 1-22.

Klein, Stephen B. (1991), *Learning: Principles and Applications*, New York: McGraw-Hill.

Langmeyer, Lynn and Matthew D. Shank (1993), "Celebrity Endorsers and Public Service Agencies: A Balancing Act," *Proceedings of the 1993 Conference of the American Academy of Advertising*, E. Thorson, ed., Columbia, MO: American Academy of Advertising, 197-207.

Lefton, Terry (1994), "Revlon Knocks on Wood for Dead Celeb Fragrance," *Brandweek* (January 10), 12.

Martindale, Colin (1991), *Cognitive Psychology: A Neural-Network Approach*, Pacific Grove, CA: Brooks/Cole.

Miciak, Alan R. and William L. Shanklin (1994), "Choosing Celebrity Endorsers," *Marketing Management*, 3 (Winter), 51-59.

Miller, Cyndee (1993), "Some Celebs Just Now Reaching Their Potential—And They're Dead," *Marketing News* (March 29), 2, 22.

Mizerski, Richard W. (1982), "An Attribution Explanation of the Disproportionate Influence of Unfavorable Information," *Journal of Consumer Research*, 9 (December), 301-310.

Mook, Douglas G. (1983), "In Defense of External Invalidity," *American Psychologist*, 38 (April), 379-387.

Nelson, Douglas L., Maria Teresa Bajo, and Diane Casanueva (1985), "Prior Knowledge and Memory: The Influence of Natural Category Size as a Function of Intention and Distraction," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 11 (1), 94-105.

——————, Thomas A. Schreiber, and Cathy L. McEvoy (1992), "Processing Implicit and Explicit Representations," *Psychological Review*, 99 (2), 322-348.

Noffsinger, Edward B., Robert J. Pellegrini, and George M. Burnell (1983), "The Effect of Associated Persons Upon the Formation and Modifiability of First Impressions," *Journal of Social Psychology*, 120 (2), 183-195.

Rumelhart, D.E., G.E. Hinton, and J.L. McClelland (1986), "A General Framework for Parallel Distributed Processing," in *Parallel Distributed Processing Volume 1: Foundations*, D.E. Rumelhart and J.L. McClelland, eds., Cambridge, MA: Bradford.

Taylor, Shelley E. (1991), "Asymmetrical Effects of Positive and Negative Events: The Mobilization-Minimization Hypothesis," *Psychological Bulletin*, 110 (1), 67-85.

Tripp, Carolyn, Thomas D. Jensen, and Les Carlson (1994), "The Effects of Multiple Product Endorsements by Celebrities on Consumers' Attitudes and Intentions," *Journal of Consumer Research*, 20 (March), 535-547.

Wang, P.Y., S.B. Seidman, and J.A. Reggia (1988), "Analysis of Competition-Based Spreading Activation in Connectionist Models," *International Journal of Man-Machine Studies*, 28 (1), 77-97.

Yantis, Steven and David E. Meyer (1988), "Dynamics of Activation in Semantic and Episodic Memory," *Journal of Experimental Psychology: General*, 117 (2), 130-147.