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Even though negative information about brands and companies is widely prevalent in the marketplace, except for case studies, there has been no systematic investigation of how consumers process negative information about the brands they like and use. In the three studies in this research, the authors attempt to bridge this gap. The findings of the first and second studies provide a theoretical framework for understanding how consumers process negative information in the marketplace. Commitment of the consumer toward the brand is identified as a moderator of negative information effects. In the third study, the authors use this theoretical framework to derive and test response strategies that companies can use to counter negative publicity for consumers who are high and low in commitment toward the brand.

Substitution Consumer Response to Negative Publicity: The Moderating Role of Commitment

Incidents of negative publicity are widely prevalent in the marketplace, ranging from safety concerns with Valujet airlines to tainted beef from Hudson foods. Such information can be devastating, resulting in major losses of revenue and market share. A study by DDB Needham Worldwide (*Advertising Age* 1995) finds that negative publicity and how the company handles it are among the most important factors influencing consumers' buying decisions.

The potential impact of negative publicity is not surprising. Publicity is considered a relatively credible source of information and therefore is more influential than other marketer-driven communications (Bond and Kirshenbaum 1998). Furthermore, negative as opposed to positive information is known to be more attention getting (Fiske 1980).

Despite the potential impact of negative publicity in the marketplace, knowledge about its effects is limited. There is little theoretical research dealing with how consumers process such information and how companies can develop strategies to combat its effects. The public relations and publicity literature has examined this problem at some length but has not converged on a unifying theoretical framework. One underlying assumption in this literature is that negative information is almost always devastating. For example, the Merriam formula used to determine the impact of media exposure gives negative news quadruple weight compared with positive news (Kroloff 1988). Another assumption in this literature is that consumers respond to the negative publicity in a homogeneous manner (Marconi 1997; Pearson and Mitroff 1993).

In general, case studies have been used to arrive at conclusions about which strategies work and which do not seem to work in the marketplace (e.g., Chisholm 1998; Marconi 1997; Pearson and Mitroff 1993; Weinberger, Romeo, and Piracha 1991). This literature, however, provides little direction for understanding the problem from a theoretical perspective. For example, a typical project in this area (e.g., Pearson and Mitroff 1993) presents a framework for crisis management based on the study of some companies in crisis situations. Recommendations comprise general strategic directions (e.g., "Integrate crisis management into strategic planning process," "Provide training and workshops in crisis management") without any attempt at understanding how consumers process this information and/or factors that moderate its effects on consumer response.

In the current research, we lay the foundation for a theoretical framework of negative information processing by focusing on consumer processing of negative publicity information about a company's products. Although negative publicity may also relate to other aspects of a company's operations (e.g., human resource issues), we focus on product-related publicity because of its preponderance (Dye 1997; Irvine 1992). Specifically, the objective of our re-

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search is to provide an understanding of how consumers react to negative product-related information about brands they like and use.

Departing from prior research, which has assumed a homogeneous consumer response to negative publicity information, we argue that prior characteristics of the consumer-specifically, commitment to the target brandmoderate the processing and impact of negative publicity. In a series of two studies, we test the differential responses to negative publicity of consumers who are high and low in commitment to the publicized brand, and we delineate the psychological processes responsible for this effect. The first experiment measures commitment for a leading brand in the target product category, and the second manipulates commitment for a relatively low-share brand in the same product category. On the basis of the findings from the first two studies, we propose and test (in Experiment 3) two types of response strategies to counter negative publicity, depending on the level of commitment of the consumers. We then discuss the implications of our findings for marketers.

CONCEPTUAL FOUNDATION

Negativity Effect

Although the literature is sparse on theoretical insights about consumer reaction to negative publicity about a known brand, the issue of how consumers process and integrate negative information with positive information has been studied in the impression formation literature in psychology (e.g., Fiske 1980; Klein 1996; Skowronski and Carlston 1989). A typical study in this literature involves giving subjects several pieces of information about a fictitious person, some positive and some negative, and then assessing the effects of negative information on the overall impression subjects form of that person.

A robust finding in the impression formation literature is the negativity effect; that is, people place more weight on negative than positive information in forming overall evaluations of a target (Fiske 1980; Klein 1996; Skowronski and Carlston 1989). This effect has been found in person perception as well as product evaluation contexts (e.g., Herr, Kardes, and Kim 1991; Wright 1974). For example, Maheswaran and Meyers-Levy (1990) find that when the processing is focused on message content, negative framing is more effective than positive framing.

One reason for the negativity effect may be that negative information is considered more diagnostic or informative than positive information (Maheswaran and Meyers-Levy 1990; Skowronski and Carlston 1989). For example, when consumers are exposed to negative information about a product, they can categorize the product as low in quality. However, positive and neutral information about products is less useful in categorizing them, because such features are commonly possessed by high-, average-, and low-quality products (Herr, Kardes, and Kim 1991). Therefore, negative information may simply be considered more useful or diagnostic in making decisions and is given greater weight than positive information.

The negativity effect, however, has been reported in experimental contexts in which subjects are unfamiliar with the person whom they are evaluating and are forced to combine positive and negative attribute information to form an attitude toward the person. Negative publicity, in contrast, deals with brands consumers are familiar with and toward which they may have a prior attitude. Whether and under what conditions the negativity effect applies to consumers evaluating negative publicity information are addressed next.

Attitude Strength

Recent research in consumer behavior indicates that consumers become attached to various brands and form "relationships" with them (e.g., Fournier 1998), which results in equity for the brand (e.g., Keller 1993). The attitudes that consumers have for such brands are expected to vary in strength. Stronger attitudes are known to exhibit greater resistance to information that attacks them, that is, negative information (e.g., Petty and Krosnick 1995).

Many dimensions of attitude strength (e.g., prior knowledge, commitment, importance, extremity) have been identified in the literature. Recent research, however, has concluded that there is no unitary construct of attitude strength (Krosnick et al. 1993; Petty and Krosnick 1995). Consequently, researchers in the area of attitude strength (Eagly and Chaiken 1995; Krosnick et al. 1993; Petty and Krosnick 1995) have issued a call for more research on the individual dimensions of attitude strength and greater restraint in generalizing the outcomes and processes obtained from one dimension to another.

In this research, we examine the role of commitment, one of the attitude strength dimensions, as a moderator of negative information effects. We chose to focus on commitment for several reasons. First, commitment has been viewed as one of the two major dimensions of attitude strength (Krosnick et al. 1993; Pomerantz, Chaiken, and Tordesillas 1995).¹ Second, commitment has been shown to play a critical role in determining resistance to counterattitudinal information. Specifically, the effect of several strength variables, such as prior knowledge and importance, has been shown to depend on the person's level of commitment toward the target (Wood, Rhodes, and Biek 1995). For example, although knowledge can enable objective processing (inducing resistance to counter- and proattitudinal information) for people who are not committed to a brand/issue, it can lead to biased processing for committed subjects (inducing resistance to counter- but not proattitudinal information). Third, commitment is akin to brand loyalty, a concept that has recently engendered much research in marketing (e.g., Dick and Basu 1994; Fournier 1998). Commitment provides an essential basis for distinguishing between brand loyalty and other forms of repeat purchase behavior (Jacoby and Chestnut 1978). Although brand loyalty was viewed simply as repeat buying in the past, it has become increasingly similar to the conceptualization of commitment as the field of consumer behavior has matured (Morgan and Hunt 1994). It has been defined as an emotional or psychological attachment to a brand within a product class (Lastovicka and Gardner 1978).

HYPOTHESES

Prior research suggests that people who have positive attitudes toward a target are likely to engage in biased assimilation, resisting counterattitudinal information more

¹The other major dimension of attitude strength is embeddedness.

than proattitudinal information (Ditto and Lopez 1992; Edwards and Smith 1996; Kunda 1990). It follows from this literature that consumers who have a positive attitude toward a brand should counterargue the negative publicity related to it.

In contrast, the impression formation literature reviewed previously suggests that negative information receives greater weight than positive information and is more likely to cause attitude shifts in its direction. We contend that whether negative publicity information about a positively evaluated brand will be discounted in a biased manner or will be weighted heavily (as in the negativity effect) depends on the consumer's level of commitment toward that brand (see also Sawyer 1973). In other words, we suggest that the commitment of the consumer toward the brand will moderate these outcomes.

When commitment to a brand is lower, consumers are expected to process negative publicity information in a relatively objective manner. This situation resembles the settings found in the impression formation literature in which subjects are not committed toward the person they are rating. These people are likely to view negative publicity as more diagnostic than positive publicity about the brand. The more highly perceived diagnosticity of the negative information is expected to mediate the attitudinal changes experienced by low-commitment consumers as they encounter and react to negative publicity information about a brand.

The high-commitment consumers, conversely, are likely to engage in biased processing of the publicity information. They are expected to counterargue the negative information more extensively than the positive information (Chaiken, Liberman, and Eagly 1989; Gross, Holtz, and Miller 1995) and therefore resist attitude change in response to negative information. In addition, they are expected to show attitudinal shifts in the direction of the advocacy when the message portrays their favored brand in a positive light. Because of their high level of attachment to the brand, they are less likely to accept negative information as more diagnostic (Feldman and Lynch 1988). Thus, it is not the perceived diagnosticity but the counterargumentation that mediates attitude change for these consumers. Therefore, a negativity effect is not expected for them.

- H₁: Low-commitment consumers will exhibit a greater amount of attitude change in response to negative as compared with positive information (i.e., a negativity effect), but high-commitment consumers are not expected to exhibit a negativity effect.
- H₂: Although the effect of valence of the information on attitude change is likely to be mediated by the perceived diagnosticity of information for the low-commitment consumers, this effect is likely to be mediated by counterarguments generated for the high-commitment consumers.

A related issue is attitudinal ambivalence. Attitudes that have both positive and negative components associated with them are termed "ambivalent" and tend to be unstable (Kaplan 1972). Cacioppo, Gardner, and Berntson (1997) argue that the impact of negative information can be better judged through attitudinal ambivalence measures instead of the standard measures of attitude valence. The integration of negative information into the consumer's attitude is likely to lead to increased attitudinal ambivalence. As described previously, high-commitment consumers are expected to counterargue and discount negative information. Therefore, this information is not likely to be strongly associated with their post-negative message attitudes. Their attitudinal ambivalence is therefore not expected to be affected by negative publicity. The low-commitment consumers, in contrast, are expected to integrate the negative publicity into their attitudes, which results in increased ambivalence in the negative as opposed to the positive information condition.

H₃: Low-commitment consumers are expected to have significantly more ambivalent attitudes when exposed to negative as compared with positive publicity information, whereas no such differences in attitudinal ambivalence are expected for the high-commitment consumers.

Summary

The level of commitment that the consumer has toward the brand moderates the processing of negative information about a well-liked brand. People highly committed to a brand are expected to counterargue the information and resist attitude change. People whose commitment to the brand is lower are expected to counterargue negative information too, but less so than their high-commitment counterparts. They are expected to weight negative information more than positive information because of its higher perceived diagnosticity. Therefore, whereas a negativity effect is expected for the low-commitment consumers, it is expected to be absent for high-commitment consumers. In other words, commitment is hypothesized to moderate the occurrence of a negativity effect.

EXPERIMENT 1

To test the proposed hypotheses, a 2 (commitment of the consumer toward the target brand: high and low) \times 2 (valence of the publicity information: positive and negative) between-subjects design was implemented.

Stimuli and Independent Variables

Commitment was used as a measured variable in this experiment. The risk with measuring commitment is that other unmeasured factors associated with different levels of commitment may provide alternative explanations for the results. To address this issue, a pretest was run to examine the correlations between commitment and other potentially confounding dimensions of attitude strength. Twenty-five subjects responded to questions assessing various dimensions of attitude strength (accessibility, commitment, extremity, importance, and prior knowledge) for brands in two product categories: athletic shoes and televisions. The measures were adapted from Krosnick and colleagues (1993). The correlations between commitment and the variables of prior knowledge (r = .20), importance (r = .22), and accessibility (r = .21) were low and nonsignificant (all ps > .15). However, commitment was significantly correlated with attitudinal extremity (r = .71, p < .001). To control for attitudinal extremity, high- and low-commitment subjects with equivalent attitudes toward the target brand were recruited to participate in the experiment.

Subjects' commitment toward the target brand was measured using a three-item brand commitment measure proposed and tested by Beatty, Kahle, and Homer (1988).² Consumers in the upper (lower) third of this scale were categorized as high (low) in commitment.

Athletic shoes were selected as the target product category, because students in the subject pool (introductory marketing class) were familiar with this product category and had a fairly wide distribution of commitment toward it (mean = 6.11/9, standard deviation = 2.66, n = 456). Nike was chosen as the target brand because of its wide distribution of commitment scores and narrow distribution of attitude scores. This was important so that subjects with similar initial attitudes but different levels of commitment toward this brand could be recruited in the experiment.

Positive and negative target messages were developed through a series of pretests. Both versions of the message dealt with information about the attribute of shock absorption. In the final pretest, 35 subjects were exposed to either a positive or a negative message about an unknown brand of shoes. Subjects were asked to rate "how favorable or unfavorable was the presented article towards the target brand?" on an 11-point scale (-5 to +5). The messages were rated as significantly different in their valence (mean_{negative} = -3.4, mean_{positive} = +3.8; F = 95.6, p < .001) but not in their extremity (mean_{negative} = 3.4, mean_{positive} = 3.8; p > .50). They were rated (on a 7-point scale) as equivalent in their believability (mean_{negative} = 5.3, mean_{positive} = 5.1; p > .80) and were equated on their length. For the first experiment, the brand name in the target messages was changed to Nike.

Six filler articles (three positive and three negative) were developed. They were based on real articles published in major newspapers and dealt with products such as vitamins, computer software, automobiles, and orange juice. The filler articles served to reduce the likelihood of ceiling effects due to excessive attention focused on the target message.

Procedure

At the beginning of the academic session, all the students in an introductory marketing class were administered a mass-testing questionnaire that contained, embedded among other questions, measures of their commitment and attitude toward the target brand. Four weeks later, subjects were recruited over the telephone to participate in the experiment. To control for the extremity of the prior attitude toward the brand, high- and low-commitment students with similar attitudes (nine-point scale) toward the target brand were recruited (mean_{low} = 7.71, mean_{high} = 7.62; p > .80). A total of 68 subjects (34 high- and 34 low-commitment) participated in this study. On their arrival, subjects were told that they were participating in a media study being conducted by the department of marketing in collaboration with the school of journalism. Their task was to evaluate recent newspaper articles related to different products. The subjects were given a folder containing six newspaper articles-three of which were negative (N) and three of which were positive (P) toward the product/brand featured in them. To control for position effects, the negative or positive publicity article about Nike was always in the fourth place. In the negative target article condition, the sequence of articles was (N, P, P, N_{target} , P, N). In the positive target article condition, the sequence of articles was (N, P, N, P_{target} , P, N).

After reading the articles, subjects were given the dependent measures booklet. It started with a cognitive response task, followed by the attitude measures and the rest of the dependent measures. After they had completed the questionnaire, subjects were debriefed. They were specifically directed to the target article and told that it was made up by the experimenters and therefore should be discounted by them. Subjects were quizzed on whether they had guessed the purpose of the experiment. None of the subjects had.

Dependent Variables

Subjects were given 2.5 minutes to list all the thoughts they had while reading the target article (Petty and Cacioppo 1977). The thoughts were coded by two judges into four categories: counterarguments, support arguments, other message-related thoughts, and other thoughts (not related to the message). Support (counter-) arguments in the negative article condition included negative (positive) thoughts about Nike, whereas in the positive article condition they included positive (negative) thoughts about the target brand. There was 92% agreement between the judges. Disagreements were resolved through discussion.

Attitude toward the target brand was measured using four nine-point semantic differential scales (good/bad, beneficial/harmful, desirable/undesirable, and nice/awful) (coefficient alpha = .97). Using these measures, a mean attitude score was computed. Mean attitude change was computed as the difference³ between the premessage mean attitude (obtained during mass testing) and the postmessage mean attitude (measured during the study) for each subject.

Measures of ambivalence followed Kaplan's (1972) technique. Respondents were asked to rate on a four-point scale (not at all, 0, to extremely, 3) the extent to which they had positive feelings toward the target brand (e.g., 3) and then, separately, the extent to which they had negative feelings toward it (e.g., 2). The subject's degree of ambivalence was computed by taking the sum of the positive and negative ratings (e.g., 3 + 2 = 5) of the attitude toward the object (this represents the total amount of affect toward the object, regardless of valence) and then subtracting the absolute value of the difference between the two scales (e.g., 3 - 2 = 1). In our example, ambivalence would be calculated as 5 - 1 = 4. The ambivalence rating can range from 0 (no ambivalence) to 6 (very high ambivalence).

The perceived diagnosticity measures were similar to those used by Skowronski and Carlston (1987) and Herr, Kardes, and Kim's (1991). Subjects were asked to estimate the percentages of high- and low-quality shoes likely to have a problem with the target attribute (shock absorption) and the percentages of high- and low-quality shoes likely to

²The three items were (1) "If brand X of athletic shoes were not available at the store, it would make little difference to me if I had to choose another brand"; (2) "I consider myself to be highly loyal to X brand of athletic shoes"; and (3) "When another brand is on sale, I will generally purchase it rather than X brand." Subjects expressed their agreement with the statements on a nine-point scale anchored by disagree/agree.

³Measuring attitude change as a difference, however, raises the issue of whether these difference scores are reliable (Cronbach and Furby 1970; Harris 1967). Recent research has demonstrated that difference scores are unreliable only when the standard assumptions of classical theory that pretest (x) and posttest (y) standard deviations are equal (i.e., $\lambda = \sigma_x/\sigma_y = 1$) and the correlation between posttest and pretest scores is large ($\rho_{xy} = 1$) hold (e.g., Collins 1996; Rogosa 1988). In our data, $\lambda = .52$ and $\rho_{xy} = .34$. Therefore, the reliability of difference scores is not a potential issue for our research.

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have a high (good) level of shock absorption. As in Herr, Kardes, and Kim's (1991) study, *low quality* was defined as average or low quality to ensure that mutually exclusive and exhaustive categories would be employed. The diagnosticity of negative information was computed by dividing the perceived probability of a low-quality shoe having a problem by the sum of the same probability and the probability of a high-quality brand having that problem. The diagnosticity of positive information was computed similarly.

Results

Attitudes. Low-commitment consumers were expected to exhibit greater attitude change and significantly more ambivalent attitudes in response to negative (versus positive) publicity. However, high-commitment consumers were not expected to exhibit greater attitude change or more ambivalent attitudes when exposed to negative (versus positive) publicity. These predictions called for an interaction between commitment and valence.

The interaction between commitment and valence was significant for attitude change (F = 3.76, p < .05) and approached significance for attitudinal ambivalence (F = 2.78, p < .10). Because attitude change could be either positive or negative in our experiment, only comparisons using absolute values of attitude change could ensure an appropriate test of the hypotheses.⁴

As predicted in H₁, low-commitment consumers expressed significantly greater attitude change with negative (versus positive) information (mean_{negative} = 1.69, mean_{positive} = .07; t = 5.26, p < .001). Furthermore, their attitudes were significantly more ambivalent (mean_{negative} = 2.47, mean_{positive} = 1.33; t = 2.74, p < .01) when they were exposed to negative (versus positive) information (H₃).

Also as predicted in H₁, the high-commitment consumers did not exhibit more attitude change with negative than positive publicity information; instead, the negativity effect was nearly reversed for these consumers. They had marginally more attitude change with positive than negative information (mean_{positive} = .69, mean_{negative} = .24; t = 1.37, p < .10). Consistent with H₃, there were no significant differences in the attitudinal ambivalence of high-commitment consumers (mean_{negative} = 1.53, mean_{positive} = 1.38; p < .25). Therefore, the results supported the hypothesis that high-commitment consumers resist negative information.⁵

Cognitive responses. Low-commitment consumers were expected to process the publicity information objectively. Because the messages were equally strong, no differences were expected in the number of counterarguments generated in the positive and negative conditions. High-commitment consumers, conversely, were expected to engage in defensive processing of the messages, generating more counterarguments in response to the attitude-inconsistent negative message as compared with the attitude-consistent positive message. The commitment by valence interaction was significant (F = 26.41, p < .001). The main effect for valence was also significant (F = 42.94, p < .001), which suggests more counterarguments in the negative than the positive condition. As expected, high-commitment consumers had significantly more counterarguments in the negative = 3.59, mean_{positive} = .75; t = 5.85, p < .001), whereas low-commitment consumers did not exhibit a significant difference between the two conditions (mean_{negative} = 2.18, mean_{positive} = 1.83; t < 1).

The pattern of results obtained with support arguments was consistent with the attitude results. High-commitment consumers had more support arguments in the positive than the negative condition (mean_{negative} = .94, mean_{positive} = 2.63; t = 3.63, p < .01), whereas low-commitment consumers had more support arguments in the negative than the positive condition (mean_{negative} = 1.94, mean_{positive} = 1.11; t = 1.78, p < .05).

Perceived diagnosticity. The negativity effect is based on the assumption that negative information is perceived to be more diagnostic than positive information. Consistent with this rationale, low-commitment consumers perceived negative information to be more diagnostic⁶ than positive information (mean_{negative} = .70, mean_{positive} = .66; t = 2.30, p <.05). A reversal, however, was found for the high-commitment consumers. They perceived positive (versus negative) information as more diagnostic (mean_{negative} = .67, mean_{positive} = .72; t = 3.47, p < .001). Although we had not predicted this reversal, it suggests that negative information is not viewed as diagnostic under all conditions and the level of commitment affects perceived diagnosticity.

Mediational analysis. H2 predicts that perceived diagnosticity of information is likely to mediate attitude change for low-commitment consumers, whereas counterargumentation is likely to mediate the attitude change for high-commitment consumers. To test these predictions, for each commitment condition, the two variables (perceived diagnosticity⁷ and counterarguments) were tested as potential mediators of the impact of information valence on attitude change. Following Baron and Kenny (1986), we ran a series of regressions. Mediation would be implied if all of the following three conditions were met: (1) Information valence significantly predicted the variable (i.e., perceived diagnosticity or counterarguments), (2) valence significantly predicted attitude change, and (3) when both the variable and valence were regressed on attitude change, the impact of valence was attenuated, but the variable remained significant. Therefore, we estimated five regression equations (de-

⁴For example, if positive publicity results in +2 units of attitude change and negative publicity leads to -2 units of attitude change, the amount of attitude change is not significantly different in the two conditions, even though the difference between -2 and +2 is likely to be significant.

⁵Even though the data provide clear evidence of resistance to negative information by high-commitment consumers, we cannot infer that high-commitment consumers were not at all influenced by the negative information, because the power of the attitude change measure was too low to detect differences (power = .31).

⁶All the consumers (irrespective of whether they saw negative or positive target information) rated the perceived diagnosticity of negative as well as positive information relating to the target attribute. Therefore, the diagnosticity scores were averaged for each level of commitment across the different levels of valence. That is, we calculated the diagnosticity index of negative information for low-commitment consumers by averaging the diagnosticity ratings of all the low-commitment consumers, irrespective of whether they saw the negative or positive information. We performed ttests on the composite means obtained.

⁷To minimize within-subject variance, the relative perceived diagnosticity term was computed as the standardized diagnosticity of the publicity information to which the subject was exposed. For subjects who were exposed to negative (positive) publicity, the relative diagnosticity was computed by dividing their perceived diagnosticity of negative (positive) information by their perceived diagnosticity of positive (negative) information about the target attribute.

scribed in Tables 1 and 2) for each group of consumers. The results are described next.

For the low-commitment consumers, perceived diagnosticity emerged as a significant mediator of attitude change. Valence was a significant predictor of attitude change (p < .001). Furthermore, not only did information valence predict perceived diagnosticity (p < .001), but including the latter in the regression equation also attenuated the impact of valence on attitude change (from p < .001 to p < .10), whereas the effect of perceived diagnosticity remained significant (p < .05). See Table 1. Counterarguments, however, did not mediate attitude change for these consumers, because valence was not a significant predictor of counterarguments.

As predicted, counterarguments significantly mediated attitude change for the high-commitment consumers. Information valence predicted attitude change (p < .10) as well as counterarguments elicited (p < .001). Furthermore, including counterarguments in the regression equation attenuated the impact of valence on attitude change (from p < .10 to p > .60). As expected, diagnosticity did not emerge as a significant mediator of attitude change for these consumers. It failed to predict attitude change when perceived diagnosticity and information valence were regressed on attitude change (Equation 3). See Table 2.

Therefore, low-commitment consumers exhibited attitude change in response to negative information because they perceived it to be highly diagnostic, whereas the high-commitment consumers resisted negative information because they effectively counterargued it.

Discussion

Commitment emerged as a moderator of negative information effects on attitude change. The data indicate that lowcommitment consumers give more weight to negative than positive information, because they perceive it to be more diagnostic. However, they do not appear to counterargue it any less than the positive information. In other words, they process the information objectively but are influenced by the higher perceived diagnosticity of negative information and therefore give it more weight than positive information.

In contrast, the level of defense offered to negative information by the high-commitment consumers was remarkable. They extensively counterargued the negative information while supporting the positive information. The counterarguments generated emerged as a significant mediator of attitude change for this group of consumers.

The high-commitment consumers perceived positive information to be more diagnostic than negative information. Prior literature (Feldman and Lynch 1988; Herr, Kardes, and Kim 1991) suggests that a person's goals are likely to determine the perceived diagnosticity of a piece of information. Consumers may exhibit inferential biases to be consistent with their goals, over- or underestimating the diagnostic value of a piece of information (Herr, Kardes, and Kim

Table 1				
MEDIATIONAL ANALYSIS: LOW-COMMITMENT CONSUMERS				

Equation Number	Dependent Variable	Independent Variable(s)	Standardized Regression Coefficient	t-Value
(1)	Attitude change	Valence	55	-3.74***
(2)	Perceived diagnosticity	Valence	52	-3.53***
(3)	Attitude change	Valence	32	-1.91*
		Perceived diagnosticity	38	2.25**
(4)	Counterarguments	Valence	12	69
(5)	Attitude change	Valence	55	-3.79***
	-	Counterarguments	24	-1.63

*p < .10.

***p* < .05.

***p < .001

Table 2				
MEDIATIONAL ANALYSIS: HIGH-COMMITMENT CONSUMERS				

Equation Number	Dependent Variable	Independent Variable(s)	Standardized Regression Coefficient	t-Value
(1)	Attitude change	Valence	.31	1.80*
(2)	Perceived diagnosticity	Valence	.51	3.27**
(3)	Attitude change	Valence	.20	1.04
	-	Perceived diagnosticity	.20	1.02
(4)	Counterarguments	Valence	.73	5.90***
(5)	Attitude change	Valence	08	36
	-	Counterarguments	54	-2.31**

*p < .10.

**p < .05.

***p < .001.

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1991). Our finding of higher perceived diagnosticity of the goal-consistent positive information as compared with the goal-inconsistent negative information for high-commitment consumers is consistent with this literature. However, diagnosticity did not mediate attitude change for them.

Although this experiment provides support for our hypotheses, further evidence of both internal and external validity of the findings would be desirable. Commitment was measured for a leading brand in the product category in this experiment. Commitment levels for such brands should be strong and capable of generating the biased processing found in Experiment 1. A question that follows is whether these effects would be replicable for a low-share brand, for which commitment levels may not be as high. In other words, subjects with extremely high levels of commitment were recruited. It would be desirable to test whether these results are generalizable to less extreme levels of commitment. Another major concern is that commitment was measured in this experiment. Although many precautions were taken to control for confounding variables, it may still be desirable for commitment to be manipulated.

We conducted a second experiment to address the previous issues. We manipulated commitment for a low-share brand. The selection of a low-share, lesser-known brand enables us to equate the high- and low-commitment groups on other attitude strength dimensions and ensure that the effects we observe are driven by commitment. Therefore, in the second experiment, we attempt to extend the external and the internal validity of the framework tested in Experiment 1. Because all of these issues can be addressed within the context of negative information, we focused on only this condition in Experiment 2.

EXPERIMENT 2

Design

Commitment (high versus low) was manipulated. Two conditions (experimental and control), described in the procedure section, were run for each commitment group.

Stimuli

A pretest was conducted to identify the low-share target brand. Three hundred ninety students from an introductory business class filled out a questionnaire assessing their attitudes about, familiarity with, and commitment toward various brands. On the basis of the results, Mizuno athletic shoes were identified as the target brand. On a nine-point scale, students were relatively unfamiliar with the brand (mean = 3.07), had low levels of prior commitment toward the brand (mean = 2.18), and had moderately positive attitudes toward it (mean = 5.13). Cameras were chosen as a filler product for reasons to be described in the next section. Materials, including background information on the products/companies, Consumer Reports articles for the brands, and advertisements, were developed for the two product categories.

Procedure

Seventy-one students from an introductory business class participated individually in this experiment. On arrival, subjects were informed that they were participating in a consumer survey being conducted by a market research company in collaboration with the business school. The subjects were told that the study would pertain to two products that were going to be introduced in their local area. They were then handed a folder containing materials related to the two products (a camera and an athletic shoe). The materials included background information, a Consumer Reports article, and draft copies of advertisements for both products. After subjects finished reviewing the materials, they were asked to record their thoughts related to the two products on an audio tape. They were asked to point out specifically the positive qualities of the brand that the company could use in its advertising and were encouraged to suggest a potential endorsement or slogan for each product.

The manipulation for commitment was administered after the subjects had tape-recorded their thoughts. The subjects in the high-commitment condition were asked if the Mizuno corporation could use their taped thoughts about the brand along with their photographs in the company's advertising and publicity campaigns. The subject was photographed and asked to sign a release statement to this effect. This induction follows the procedure used in prior commitment studies, which have shown that public attachment of self to the target results in increased commitment toward it (e.g., Halverson and Pallak 1978; Keisler 1971). This procedure directly follows from the definition of commitment as the pledging or binding of the individual to behavioral acts (Keisler 1971) and refers to the associations between people's attitudes and their overt, often public behaviors in support of that attitude. The subjects in the low-commitment condition underwent the same procedure but were asked to release their thoughts related to the filler camera brand. Therefore, subjects in both the high- and the low-commitment conditions went through exactly the same set of procedures and provided thoughts for both products. The only difference was the brand for which they signed the release and were photographed.

To examine the effects of commitment on negative information processing, the subjects were exposed to the negative brand-related information after the commitment manipulation. When the experimenter went to his desk to get the questionnaire, he acted surprised to find a loose-leaf page on the desk and inquired whether the subjects had read the page. When the subjects confirmed that they had not, the experimenter apologized and told the subjects that the page had apparently slipped out of the folder unnoticed and requested that the subjects read it before they filled out the questionnaire. The binder holes in the "missing page" were deliberately torn, so that the mishap could be explained easily. The missing page was the newspaper article used in Experiment 1, but it featured Mizuno instead of Nike as the brand name. After reading the article, subjects filled out the dependent measures questionnaire.

Two control groups (high- and low-commitment) were used for assessing the manipulation checks (commitment, attitude, product involvement, and ambivalence). These manipulation checks were not administered to the experimental groups because of the potential for demand artifacts. Subjects in the control group performed the same tasks as did those in the experimental group but did not see the target article. That is, they did not go through the mishap of the missing page. All subjects were thoroughly debriefed and quizzed for potential hypotheses guessing. One subject reported being suspicious about the article slipping out and was dropped from the analysis."

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Dependent Variables

Attitudes, cognitive responses, commitment, ambivalence, and perceived diagnosticity were measured as in Experiment 1. Thoughts were also coded in a similar manner. The brand-level involvement measure was based on Zaichkowsky's (1985).

Results

Manipulation checks. In the control groups, as expected, high-commitment subjects reported a significantly higher level of commitment toward the target brand than the low-commitment subjects (mean_{low} = 2.14, mean_{high} = 3.71; $F_{(1,32)} = 7.37$, p < .01) but had equivalent attitudes (mean_{low} = 5.74, mean_{high} = 5.65), associated with equivalent levels of ambivalence (mean_{low} = 1.53, mean_{high} = 1.53), and were not significantly different in their involvement with the target brand (mean_{low} = 4.00, mean_{high} = 4.60; $F_{(1,32)} = 1.81$, p > .15).

Attitudes. As anticipated, low- (versus high-) commitment subjects reported significantly less positive (mean_{low} = 4.23, mean_{high} = 5.21; $F_{(1,34)} = 4.99$, p < .05) and more ambivalent attitudes (mean_{low} = 3.44, mean_{high} = 2.44; $F_{(1,34)} =$ 5.20, p < .05) after exposure to negative information.

Process evidence. Consistent with the results of the first experiment, low-commitment subjects perceived negative information to be more diagnostic than the high-commitment subjects (mean_{low} = .68, mean_{high} = .61, $F_{(1,34)} = 3.89$, p < .06). Conversely, high-commitment subjects generated significantly more counterarguments in response to the negative information than the low-commitment subjects (mean-high = 4.06, mean_{low} = 2.11; $F_{(1,34)} = 9.13$, p < .005).

Regression analysis. Mean attitude was regressed on perceived diagnosticity and counterarguments for both highand low-commitment consumers. Although perceived diagnosticity emerged as a marginally significant predictor of attitudes for the low-commitment consumers (beta = .40, t = 1.72, p < .10), it failed to predict attitudes for high-commitment consumers (beta = .04, t = .15, p > .80). Counterarguments emerged as a significant predictor of attitudes for both high- (beta = .50, t = 2.28, p < .05) and lowcommitment (beta = .61, t = 3.07, p < .01) consumers.

Thus, the results of Experiment 2 increased our confidence in the findings of the first experiment. High-commitment consumers counterargued the negative information to a greater extent than did low-commitment consumers. Furthermore, counterargumentation, and not the perceived diagnosticity of negative information, predicted attitude change for the high-commitment consumers. Conversely, perceived diagnosticity of negative information emerged as a significant predictor of attitudes for low-commitment consumers. This replication was achieved in the context of a low-share brand and when commitment was manipulated. To that extent, the confidence in the generalizability of our findings is enhanced. How our findings can affect the communication strategy for a company facing negative publicity is the focus of Experiment 3.

EXPERIMENT 3

The processing differences between low- and high-commitment consumers, observed in Experiments 1 and 2, suggest that a common strategy as suggested by several casebased studies (e.g., Johnson 1993) may not be equally effective in combating the ill effects of negative information for consumers with different levels of commitment. Prior research indicates that strategies that provide consumers with additional information that they did not spontaneously consider are likely to be more effective in persuasion than are strategies that duplicate or match these processes (e.g., Kardes 1988).

Specifically, because high-commitment consumers engage in extensive counterargumentation of the negative information, a company response that counterargues the publicity may just replicate their spontaneous processes. However, a response focusing on the diagnosticity of the information would provide them with information not considered spontaneously upon exposure to the negative message. Therefore, this response would be more likely to enhance persuasion than one that focused on counterarguments.

The low-commitment consumers, in contrast, appear to consider spontaneously the perceived diagnosticity of the attribute information. However, the number of counterarguments was not significantly different in the negative and positive conditions. Therefore, a response strategy that provides these consumers with counterarguments is likely to be more effective in changing attitudes than one that focuses on the perceived diagnosticity of the information. Thus,

H₄: For the high-commitment consumers, a response strategy focusing on the perceived diagnosticity of the negative information is likely to be more persuasive than one that counterargues it, whereas for the low-commitment consumers, the counterargumentation response is likely to be more persuasive than the diagnosticity response.

Methodology

To test the proposed hypotheses, a 2 (commitment: high and low) \times 2 (response strategy: counterargumentation and diagnosticity) between-subjects design was implemented.

The strategies. Counterargumentation is one of the most popular strategies currently used by companies in dealing with negative publicity. It involves arguing against the negative publicity by questioning its validity. The diagnosticity response strategy, in contrast, focuses on reducing the value of the negative information for discriminating between alternative brands in the product category. For example, given the negative publicity message used in Experiments 1 and 2, the counterargumentation response was developed to focus on the reliability of the data, the completeness of the data, and the validity of the sample. The diagnosticity response, in contrast, argued that the target brand was not different from the others on the focal attribute, because all brands used the same shock absorption technology.

The two response strategies were operationalized as newspaper advertisements, which is a common medium through which companies respond to negative publicity. In a pretest, both versions of the advertisements were rated as equivalent in believability (mean_{counter} = 4.7, mean_{diagnos} = 4.9; $F_{1,18} = .12$, p > .70) and strength (mean_{counter} = 5.1, mean_{diagnos} = 5.0; $F_{1,18} = .06$, p > .80). The advertisements were also approximately equal in length.

A series of pretests was conducted to establish the validity of the strategy manipulations. In the first pretest, 30 subjects were given definitions of the two strategies, shown one of the two advertisements, and asked to classify it into one of the following categories: diagnosticity, counterargumentation, a combination of the two, or neither of the two. All subjects who saw the counterargumentation advertisement and two-thirds of those exposed to the diagnosticity advertisement classified them appropriately.

In the next pretest, 20 subjects rated the diagnosticity of the negative publicity information after seeing a company response advertisement (counterargumentation or diagnosticity). Supporting the validity of our operationalization, subjects who saw the diagnosticity advertisement rated the negative information as not at all diagnostic (mean = .50), whereas subjects who saw the counterargumentation advertisement perceived it as significantly more diagnostic (mean_{counter} = .66, mean_{diagnos} = .50; $F_{1,18} = 4.92$, p < .05). Therefore, the diagnosticity response advertisement reduced the perceived diagnosticity of the attribute information in the negative publicity article.

The counterargumentation strategy, conversely, was expected to result in thoughts questioning the validity of the information contained in the article. In a third pretest, 30 subjects were exposed to the target newspaper article followed by one of the company response advertisements. Subjects were asked to list the thoughts they had while reading the company response advertisement. As expected, subjects in the counterargumentation condition had significantly more thoughts questioning the validity of the newspaper article than subjects in the diagnosticity condition (mean_{counter} = 2.07, mean_{diagnos} = .67; $F_{1,28} = 8.92$, p < .006). Therefore, the advertisements were viewed as effective operationalizations of the two response strategies.

Commitment. Brand commitment was measured. Nike was the target brand.

Procedure and dependent variables. Using the same procedure as in Experiment 1, we recruited subjects (35 highand 35 low-commitment) over the telephone on the basis of their commitment scores. Subjects were told that they were participating in a two-part media study: In the first part, their task was to evaluate recent newspaper articles related to different products; in the second part, they would evaluate newspaper advertisements. All subjects read four articlestwo negative and two positive toward the product/brand featured in them. One of them was the negative target article from Experiment 1. After reading the articles, subjects were given a questionnaire, which asked them to rate the quality of the articles and indicate their attitude toward the products. In the second part, they read advertisements and were informed that the companies ran these advertisements in response to the publicity received in the newspaper articles featured in the first part of the study. Subjects were asked to rate each advertisement on how believable, strong, and appropriate it was. After completing the second questionnaire, subjects reported their brand evaluations again.

Two levels of attitude change were computed: attitude change in response to negative information (post-negative message attitude minus prestudy attitude) and attitude change after exposure to the response strategy (postadvertisement attitude minus post-negative message attitude).

Results and Discussion

Consistent with the results of Experiments 1 and 2, lowcommitment consumers exhibited a significant decline in their attitude toward Nike after being exposed to negative publicity about the brand (mean = -1.53; p < .01). Surprisingly, a small but significant attitude change was observed in the high-commitment subjects as well (mean = -.68; p < .05). However, the attitude change was significantly greater in the low- than the high-commitment consumers (F = 21.27, p < .001). Thus, the pattern of data ob-

tained in the first two experiments was replicated. In their reactions to the company response advertisements, high-commitment consumers were expected to exhibit greater attitude change and less ambivalent attitudes with the diagnosticity than with the counterargumentation response strategy. However, low-commitment consumers were hypothesized to demonstrate greater attitude change and less ambivalent attitudes when exposed to the counterargumentation as compared with the diagnosticity message.

Although the commitment × response strategy interaction was significant for the attitudinal ambivalence measure (F =7.37, p < .01), it approached significance for the postadvertisement attitude change variable (F = 2.81, p < .10). Further analyses revealed that this interaction was generated by a pattern of mean attitude scores, which were consistent with our predictions. The high-commitment consumers exhibited greater attitude recovery and lower ambivalence when confronted with a diagnosticity advertisement than a counterargumentation advertisement (means = .76 versus means = .35for attitude, p < .07; means = 1.1 versus means = 2.0 for ambivalence, p < .05). In contrast, a reverse pattern was found for the low-commitment consumers. Although attitude results were in the expected direction, with greater change in the counterargumentation condition (mean = .46) than in the diagnosticity condition (mean = .24), this difference was not significant. However, low-commitment consumers exhibited lower ambivalence after reading the counterargumentation advertisement (mean = 1.8) versus the diagnosticity advertisement (mean = 2.67; p < .05). Thus, the pattern of results generally supported H₄.

GENERAL DISCUSSION AND CONCLUSION

Negative information about brands and companies is widely prevalent in the marketplace. Yet except for case studies on this topic, there has been no systematic investigation of how consumers process negative publicity information about the brands they like and use and which strategies to counter the negative publicity are appropriate. In three studies reported in this article, we attempt to bridge this gap in the literature.

In the first two studies, we found that commitment is an important moderator of consumer response to negative information. Specifically, the response patterns of high- and low-commitment consumers are very different. Consumers who are committed to a brand instinctively counterargue negative information about that brand. These defensive processes mitigate the ill effects of that information in that they reduce the likelihood of attitude degradation. Lowcommitment consumers, conversely, counterargue the negative information to a lesser degree. Furthermore, even though low-commitment consumers seem to like the brand as much as the high-commitment consumers do, they exhibit greater attitude change and increased attitude ambivalence upon exposure to negative information about it. This attitude degradation is driven by their perceptions of the diagnosticity of negative information. Therefore, an important contribution of our work emerges from our melding of the literature on biased assimilation and impression formation and demonstrating that a person's level of commitment dictates which literature is more applicable in determining response to negative communications.

In addition, whereas most research has focused on the negativity effect and the reasons for that effect, our research uncovers its limitations. That consumers focus on negative information because it is more diagnostic is now well accepted in the impression formation literature. We show that the consumer's level of commitment qualifies this effect. Specifically, the negativity effect appears to be more likely when a consumer's commitment to the target object or issue is low. At high levels of commitment, not only is the negativity effect absent, but also consumers actually considered positive information about that object more diagnostic than negative information about it. This reversal of the negativity effect attests to the powerful nature of commitment as a moderator of communication effects.

Our results suggest that a committed consumer can resist information effectively that is likely to induce switching behavior: negative information about the target and positive about the competition. This information processing bias may therefore lead to repeat purchase behavior observed for committed consumers. In other words, our research provides an insight into why and how committed consumers engage in repeat purchase behavior.

The current research attests to the value of customer commitment or loyalty for a company. Not only does it enable consumers to resist negative information, but it also enhances the impact of positive publicity. This finding comes in the wake of market data that shows brand commitment is on the decline (e.g., Schriver 1997). Further theoretical research examining how companies can enhance customers' commitment toward their products would be desirable.

Currently, most companies use a "mass approach" in responding to negative publicity (see, e.g., Pearson and Mitroff 1993; Weinberger, Romeo, and Piracha 1991). Our research argues that they should consider using a targeted approach. Different response strategies are likely to be more effective for high- and low-commitment consumers. Furthermore, an important contribution of our work lies in its delineation of the two types of response strategiescounterargumentation and diagnosticity-and our ability to predict a priori the effectiveness of a strategy given the commitment level of consumers. Thus, marketers worried about the effects of negative publicity on their loyal consumers should attempt to use the diagnosticity strategy, because the consumers might already have generated the necessary counterarguments. In contrast, when addressing a consumer segment that likes the brand but is not committed to it (e.g., is part of the consumer's consideration set), marketers are advised to focus more on the counterargumentation strategy.

Our research also underscores the importance of measuring dimensions of attitude other than bipolar valence. We measured the effects of negative information on both attitudinal ambivalence and bipolar valence measures. Prior research suggests that in the context of negative information, measures of ambivalence may be more appropriate than bipolar measures of valence (see Cacioppo, Gardner, and Berntson 1997; Haugtvedt et al. 1994). Our results (especially Experiment 3) demonstrate that the effects of negative information emerge more clearly with the ambivalence measures. Furthermore, the ambivalence of a brand attitude conveys to the marketer important information relating to the ability of this attitude to predict the consumer's future purchase behavior. The more ambivalent an attitude, the less likely is it to predict behavior.

The external validity of our findings can be examined within the context of background factors controlled in our research setting (Lynch 1982). Although some of these factors, such as age of the respondent, are not expected to interact with the variables of interest, others may be likely to. First, our research focuses on product attribute-related information. However, previous literature suggests that the perceived diagnosticity of negative information is likely to be higher in the morality (e.g., company values) versus the ability (e.g., product attributes) domain, which leads to greater weighting of negative information in the former domain (Skowronski and Carlston 1987). Thus, the findings obtained here may not be generalizable to negative information reflecting a company's values (e.g., its management practices such as bribery and sexual harassment). Further research could examine this issue in an experimental setting by manipulating the type of negative information (values-related versus attributes-related).

Second, although the messages in our experiments were highly positive (negative), they did not imply extreme or life-threatening consequences. However, prior research (Fiske 1980) indicates that extreme information is perceived as more diagnostic than moderate information and therefore is weighted more in overall evaluations. It could be argued that extremely negative information (e.g., relating to the "transgressions" that Fournier [1998] discusses) might provide a boundary condition to our findings. It may be difficult for even the committed consumers to discount this highly diagnostic information. Moderate information, conversely, because of its lower diagnosticity, may lead to an attenuation of the negativity effect for the low-commitment consumers. These predictions could be tested in an experimental setting by manipulating the extremity of the negative information.

Finally, our research focuses on negativity in the context of publicity. However, the findings could be extended to other types of negative information in the marketplace, for example, negative advertising, comparative advertising, and negative word of mouth. Given that most types of negative information differ primarily on the basis of their source and its credibility (e.g., advertising versus publicity), factoring in the effect of the source of information in the framework would further enrich its generalizability. For example, Sternthal, Dholakia, and Leavitt (1978) suggest that counterattitudinal negative information conveyed by a credible source, such as publicity, is likely to be more damaging than the same information presented by a less credible source, such as advertising. Furthermore, Shiv, Edell, and Payne (1997) suggest that in the advertising context, negative framing may, under certain conditions, generate tactics-related cognitions, thereby diminishing the impact of negative information.

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