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Intended and Unintended Effects of Corrective Advertising on Beliefs and Evaluations: An Exploratory Analysis

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This research examined the effects of corrective advertising (advertising that corrects for previously made ad claims found to be deceptive) on brand and advertiser evaluations. Experiment 1 showed that brand evaluations were less favorable after (vs. before) company-sponsored corrective advertising when prior evaluations of the advertiser were negative, but not when they were positive. On the other hand, advertiser evaluations were less favorable after corrective advertising when prior evaluations of the advertiser were positive, but not when they were negative. Experiment 2 was designed to examine the mechanisms underlying these effects. Brand beliefs and cognitive responses to the corrective ad were found to mediate the effects of prior advertiser evaluations on brand evaluations. Advertiser evaluations were affected by cognitive and affective responses made to the corrective ad. Implications of these findings are discussed.

An important public policy issue in consumer research is that of deceptive claims made in advertisements and the remedies used to correct for the false beliefs that arise from these claims. Corrective advertising refers to advertising wherein the advertiser admits that some information that its earlier ads may have conveyed to consumers is incorrect. It is one of several remedies used to address the effects of deceptive advertising. The Federal Trade Commission (FTC) may order corrective advertising when the commission has determined that a false or deceptive image of a product exists in the mind of consumers; that advertising of the product is the primary source of the image; and that without correction, the image is likely to endure even after the advertising has ceased (Scammon & Semenik, 1983).

What are the consequences of using corrective advertising as a remedy for deception? Previous research drew different conclusions regarding the effects of
corrective advertising on evaluations of the brand and of the advertiser (e.g., Bernhardt, Kinney, & Mazis, 1986; Dyer & Kuehl, 1974, 1978; Hunt, 1973; Kassarjian, Carlson, & Rosin, 1975; Kuehl & Dyer, 1976; Mazis & Adkinson, 1976; Mizerski, Allison, & Calvert, 1980; Sawyer & Simenik, 1978). Drawing on attribution theory, and on literature in the areas of source credibility and congruity theory, this research suggests that corrective advertising sponsored by the company reduces brand evaluations, especially when the advertiser has a poor reputation. Conversely, corrective advertising reduces advertiser evaluations, especially when the advertiser has a good reputation.

In this research, we studied company-sponsored corrective advertising that included a claim that corrected a previously implied false claim and also included other positive claims. This focus was in keeping with company-sponsored corrective ads, which usually embed corrective claims amid other positive claims (Wilkie, McNeill, & Mazis, 1984). False assertions are explicitly stated falsehoods, whereas implied claims only suggest a benefit to be derived from a product or service, and consumers infer this benefit from the claim (Johar, 1995). Although both asserted and implied claims can deceive consumers, we focused on corrective ads that correct false implications made in previous advertising.

This article is organized as follows. First, we draw on the attribution theory, source credibility, and persuasion literatures to identify factors that moderate the effects of corrective advertising on brand and advertiser evaluations. We derive hypotheses (Hs) regarding the nature of these moderating effects and then report the design and results of two lab experiments that tested the hypotheses. An important caveat to the results from these experiments is that (a) they were conducted in a compressed time frame in a laboratory setting, and (b) deception and correction were manipulated in the same experimental session. We address issues of ecological and external validity that arise from these experimental procedures in the Discussion section.

**FACTORS MODERATING THE EFFECTS OF CORRECTIVE ADVERTISING**

Prior research found conflicting results regarding the effects of corrective advertising on brand and advertiser evaluations. For example, Dyer and Kuehl (1974) and Hunt (1973) found that corrective advertising reduces brand evaluations. Hunt also found that corrective advertising reduces advertiser evaluations. On the other hand, Mizerski et al. (1980) found that evaluations of the brand were not affected by corrective advertising, and Kassarjian et al. (1975) found that evaluations of the advertiser were not affected by corrective advertising. These conflicting results regarding the effects of corrective advertising on evaluations may be explained by considering the extent to which deception is attributed to the advertiser. The greater the attribution to the advertiser, the greater the effect of the corrective advertising on brand evaluation.
Attributions for Deception

**Corrective advertising and attributions.** Our general proposition is that a corrective ad is inconsistent with consumer expectations regarding advertising and is therefore likely to instigate attributions. Why is corrective advertising inconsistent? In general, consumers have a schema for ads (Goodstein, 1993), and they expect ads to provide positive information regarding the advertised brand. Advertisers are expected to have a reporting bias such that they only report information that depicts them favorably (Eagly, Wood, & Chaiken, 1978; Eagly, Chaiken, & Wood, 1981). The persuasion knowledge model (Friestad & Wright, 1994, 1995) also suggests that consumers have generalized knowledge regarding persuasion. Such knowledge can include the understanding that the purpose of advertising is to persuade consumers to purchase the advertised brand. Based on this understanding, consumers have normative expectations that advertising generally makes positive claims about a brand.

Given that the corrective ad violates communication norms (Grice, 1975), consumers may make pragmatic inferences, that is, inferences about the goals of the message source (Gruenfeld & Wyer, 1992; Wyer, Swan, & Gruenfeld, 1995), and causal attributions for the deception that resulted in the corrective ad (cf. Hastie, 1980, 1984). Empirical evidence also supports the view that negative and unexpected events initiate causal search (Crocker, Hannah, & Weber, 1983; Pyszczynski & Greenberg, 1981; Wong & Weiner, 1980).

**Nature of attributions.** The attribution literature suggests that the most common attribution made for the deception that resulted in the corrective ad is likely to be an attribution to the advertiser (Heider, 1958; Ross, 1977). This proposition is based on research that suggests people tend to attribute behaviors to the dispositional characteristics of the person performing the behavior, that is, the “actor” (Jones & Nisbett, 1972; Ross, 1977). However, prior evaluations of the advertiser are likely to temper the dispositional attribution. Specifically, negatively evaluated advertisers are likely to be held more responsible for deception than are positively evaluated advertisers. This is because of consumers’ generalized beliefs that a “bad” company is capable of intentionally deceiving consumers, whereas a “good” company is less likely to do so (cf. Wood & Eagly, 1981). Therefore,

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1Contrary to this reasoning, Hunt, Kernan, and Mizerski (1983) manipulated subjects' attributions for deception and expected that successful advertisers would be more likely to be held responsible for deception than would unsuccessful advertisers. They expected that deception would be attributed to competitive pressures in the case of unsuccessful advertisers. However, their manipulation did not result in significant differences in advertiser attributions. Furthermore, this study differs from Hunt et al.'s in that we focused on deception arising from an implication claim rather than from a false assertion (i.e., consumers can see that deception may not have been intended by the advertiser). Thus, even in the case of a successful advertiser, reasons other than competitive pressures can be found for deception.
H1: After exposure to corrective advertising, advertiser attributions for deception are likely to be greater among consumers with negative prior evaluations of the advertiser than among consumers with positive prior evaluations of the advertiser.

Effects of Attributions

Attributional research concerned with the consequences of attributions suggests that they can have important consequences for future judgments and behavior (Folkes, 1988; Olson & Ross, 1985; Weiner, 1986). Analysis of inferences consumers generate regarding why the advertiser deceived and corrected the deception can help in understanding the consequences of deception. We now turn to this issue.

**Attitude to the brand.** Consumers exposed to a corrective ad may question why the advertiser ran a corrective ad that makes a negative claim and is, therefore, an incongruent message for an ad (Goldberg & Hartwick, 1990). The corrective ad seems credible (Lutz, 1985; MacKenzie & Lutz, 1989) because it disconfirms the expectancy that advertising is positive (Eagly et al., 1978; Sternthal, Phillips, & Dholakia, 1978). Perceived credibility of a corrective claim is high regardless of source credibility because a corrective claim in an ad is incongruent with the advertiser’s self-interest (Sternthal, Phillips, & Dholakia, 1978). Hence, acceptance of the corrective claim is high, and attitude to the brand depends on the evaluative implications of the corrective claim.

Corrective ads contain other positive claims as well (Wilkie et al., 1984). The negative (corrective) claim may also affect beliefs in other true ad claims, especially when deception is attributed more (vs. less) to the advertiser, as in the case of the negatively evaluated (vs. positively evaluated) advertiser. Consumers are likely to believe that the negatively evaluated advertiser ran a deceptive ad in order to deceive consumers about the true quality of the brand. Consumers may, therefore, make semantic inferences about other ad claims, resulting in a boomerang effect on the brand (Gruenfeld & Wyer, 1992; Wyer et al., 1995). Thus, in the case of negatively evaluated advertisers, attitude to the brand should be lower after (vs. before) corrective advertising. For positively evaluated advertisers, consumers are likely to attribute deception to the advertiser, but to a lesser extent, and they may believe that deception was not intentional. Therefore, ads from a positively evaluated source should result in fewer counterarguments and a smaller impact on brand beliefs, compared to a negatively evaluated source (Sternthal, Dholakia, & Leavitt, 1978). Therefore, attitude to the brand after versus before corrective advertising depends on the evaluative implications of the correction alone.
H2: Consumer evaluations of the brand are likely to be less favorable after corrective advertising than before corrective advertising, especially when prior advertiser evaluations are negative.

*Attitude to the advertiser.* In addition to brand attitudes, corrective advertising may also affect attitudes toward the advertiser. Consumers can cope with persuasion attempts by changing their attitudes toward the message topic or by disparaging the message source (e.g., Bergin, 1962; Bochner & Insko, 1966). The persuasion knowledge model also suggests that consumers have the goal of holding valid attitudes toward the topic and the agent (i.e., the advertiser), especially when the persuasion tactic is different (e.g., a corrective ad; Friestad & Wright, 1994). Persuasion research has not paid much attention to the effects of message processing on attitudes toward the source (Hass, 1981). However, research on congruity theory (Osgood & Tannenbaum, 1955) explicitly takes attitudes toward the message source into account and helps us make predictions by analyzing consumer reactions to the correction and to knowledge of deception.

Note that the positively evaluated advertiser also is held responsible for deception, only less so than is the negatively evaluated advertiser (H1). When a positive advertiser runs a corrective ad admitting to past wrongdoing, there is incongruence between the attitude toward the source and the attitude toward the topic (deception), and this lowers attitudes toward the advertiser. Running a deceptive ad disconfirms the expectancy for a positively evaluated company and, after knowledge of deception via corrective advertising, the company may be perceived as more biased and hence may be rated less favorably than before (Eagly et al., 1978). However, admission of deception from a negatively evaluated advertiser is not incongruent; hence attitudes toward the advertiser should remain unfavorable, as before, and no significant change would be expected.

H3: Consumer evaluations of the advertiser are likely to be lower after corrective advertising than before corrective advertising, especially when prior advertiser evaluations are positive.

**EXPERIMENT 1**

Experimental Design and Manipulations

Fifty-eight undergraduates at a large northeastern university participated in the study for partial course credit. A $2 \times 2$ between-subject experimental design was used to test the Hs, with 14 or 15 subjects in each cell.\(^2\) The factors were Prior

\(^2\) Level of deception (deceived vs. not deceived) was also manipulated in the experiments. However, the "not deceived" condition is not the focus of this article, and we do not discuss it further.
Advertiser Evaluation (positive vs. negative) and Point of Questioning (before vs. after corrective ad). Unlike most prior research, point of questioning was manipulated between subjects because repeated measures of beliefs and evaluations can increase hypotheses guessing.

To manipulate prior advertiser evaluation, subjects were told to form an impression of the advertiser based on an extract from Fortune magazine. A fictitious brand and advertiser were used to control for subjects' prior beliefs. Subjects in the positive advertiser evaluation condition were given positive information about Pharma Inc., the (fictitious) manufacturer of the (hypothetical) advertised drug No More Pain, and subjects in the negative condition were given negative information along the same dimensions. The information included statements about the manufacturer's expertise, reliability, and marketing practices. The manipulation was based on previous research (Goldberg & Hartwick, 1990; LaBarbera, 1982) and was pretested and refined based on the results.

Stimulus Ads

The deceptive ad included one "false" implication claim, which stated that the advertised brand was the "Fastest Acting Pain Reliever!" (cf. Burke, DeSarbo, Oliver, & Robertson, 1988), implying that the brand relieved pain faster than all other brands. This information was presented in the headline in bold, large letters. Below this headline was the brand name "No More Pain." To strengthen the manipulation, the deceptive ad also reiterated this claim by stating, "Feel complete relief from pain. Take No More Pain—a faster acting pain reliever." This incomplete comparison implication claim has been shown to be interpreted as "faster acting than all other pain relievers" (Johar, 1995) and is, therefore, consistent with the implication in the headline. The initial ad and the corrective ad about No More Pain contained five other claims. These were "made with pure ingredients," "has no gastrointestinal side effects," "tests prove the brand to be a high quality pain reliever," "priced lower than prescription drugs," and "packaged in a tamper proof recyclable bottle."

Both ads resembled newspaper ads and featured a bold headline "No More Pain" and a picture of a bottle of a pain reliever. The deceptive claim was placed above the brand name headline in the deceptive ad. All other claims were below the picture. The corrective ad featured two corrective claim paragraphs below the picture. The first paragraph stated that some earlier advertising of No More Pain stated that it was the fastest acting pain reliever and some consumers who read this claim may have concluded that No More Pain relieves pain faster than all other pain relievers. The paragraph added that No More Pain does not act faster than all other pain relievers. The second paragraph stated that there are a couple of pain relievers that act equally as fast as No More Pain and that although they act as fast as No More Pain, none acts faster than No More Pain. The five other claims from the deceptive ad were then reiterated.
Corrective ads were shown in isolation (devoid of editorial context). Past research showed no differences in the effects of corrective advertising if the correction is inserted in a newspaper or is shown with no editorial context (Kassarjian et al., 1975), suggesting that the results should hold even when corrective ads appear in newspapers and magazines. The pain reliever category was used based on its relevance to the student population that served as subjects and on its use in past research (Burke et al., 1988).

Procedure

Subjects were tested in groups of 10 to 15 and were randomly assigned to one of the four experimental conditions. The experimenter told subjects that this was a study about advertising and that brand and advertiser names had been changed for the purposes of this study. Each subject was given a booklet containing the stimuli and dependent measures. First, to manipulate prior advertiser evaluations, subjects were given either positive or negative information regarding the manufacturer of the advertised brand. Only those subjects in the “questioned before” condition then answered questions regarding their evaluations of the advertiser.

Subjects were then told that they would see an ad and should try to form an impression of the advertised brand. They then saw the deceptive ad. Subjects in the questioned before condition then answered brand belief and evaluation questions. The order of these belief and evaluation questions was counterbalanced across subjects.

All subjects then saw the corrective ad for the pain reliever. Next, all subjects responded to a question on attribution for deception. Subjects who previously had not been exposed to the brand evaluations, beliefs, and advertiser evaluation questions (subjects in the “questioned after” condition) were then asked to respond to these scales. The order of brand evaluations and belief questions was again counterbalanced across these subjects. Finally, all subjects answered questions testing for hypotheses guessing, provided demographic information, and rated their interest in the experiment.

Dependent Measures

Attributions. The attribution question was based on Russell’s (1982) causal dimension scale. The question asked, “In your opinion is the cause of the misunderstanding something that reflects an aspect of the company?” Subjects responded on a 9-point scale anchored at 1 (not at all) and 9 (very much so).

Brand beliefs and evaluations. Claim beliefs were measured by asking subjects to respond to seven claims on a 9-point scale anchored at 1 (definitely false) and 9 (definitely true). The midpoint of this 9-point scale (5) was labeled Don't Know. The deceptive claim, “No More Pain relieves pain faster than all
other pain relievers,” was embedded in six other claims. Of these six claims, one was unstated in the ad, three were negations of claims made in the ad (e.g., “The packaging of No More Pain is not recyclable”), and two were repetitions of claims made in the ad (e.g., “No More Pain is made with pure ingredients”). Brand evaluations were measured on a 9-point scale anchored at 1 (bad) and 9 (good).

Advertiser evaluations. Two sets of scales were used to measure evaluations of the advertiser. The first set consisted of the following six 9-point scales anchored at 1 and 9: Bad–Good, Unpleasant–Pleasant, Not Likeable–Likeable, Boring–Interesting, Unenjoyable–Enjoyable, Unattractive–Attractive. The second set consisted of five statements—“I think it is a good company,” “I like the company,” “I think it is a bad company,” “I think it is a nice company,” and “I am favorably disposed toward the company”—to which subjects responded on a 9-point scale ranging from 1 (strongly disagree) to 9 (strongly agree).

Results

Manipulation and other checks. The prior advertiser evaluation manipulation was tested using only those subjects in the questioned before condition who were questioned before the corrective ad. As desired, advertiser evaluations were greater in the positive condition than in the negative condition (Ms 6.45 vs. 3.11), \( F(1, 28) = 63.91, p < .01 \). Before the corrective ad, beliefs in the deceptive claim were greater in the positive (vs. negative) advertiser condition (\( Ms = 4.93 \) vs. 3.80), \( F(1, 28) = 2.83 \), marginally significant at \( p = .10 \). Across conditions, the corrective ad was successful in reducing beliefs in the false claim (\( Ms \) before = 4.37 vs. after = 3.25), \( F(1, 54) = 4.35, p < .05 \).

Attributions. As expected (H1), subjects with a negative prior evaluation of the advertiser held the advertiser more responsible for deception than did subjects with a positive prior evaluation of the advertiser (\( Ms = 7.14 \) vs. 5.59), \( F(1, 56) = 8.27, p < .01 \).

Brand evaluations. Corrective advertising was expected to lead to less favorable brand evaluations. However, based on subjects’ attributions for deception and the resulting lower beliefs in other true claims in the deceptive ad, this effect was expected to be greater when prior advertiser evaluations were unfavorable (vs. favorable; H2). A \( 2 \times 2 \) analysis of variance (ANOVA) revealed a significant main effect for prior advertiser evaluation only (\( Ms = 6.07 \) vs. 4.38), \( F(1, 54) = 15.12, p < .01 \). This main effect was qualified by an interaction, \( F(1, 54) = 3.25, p = .07 \). Follow-up contrasts revealed that, as hypothesized, evaluations of the brand were significantly lower after the corrective ad (vs. before) only for
subjects in the negative prior advertiser evaluation condition ($M_s = 3.64$ vs. $5.07$), $F(1, 54) = 4.93, p < .05$. Brand evaluations did not change in the positive prior evaluations condition ($M_s = 6.14$ vs. $6.00, p > .8$). Figure 1 presents these results graphically.

This reduction in brand evaluations appears to be a result of the reduction in beliefs in other true ad claims when the advertiser was negatively evaluated, but not when the advertiser was positively evaluated. We averaged beliefs in other true ad claims (after reverse scoring the scales where necessary) and treated this composite brand beliefs variable as the dependent variable in an ANOVA. Beliefs in true ad claims were lower (approaching significance) after the corrective ad (vs. before) in the negative advertiser evaluation condition ($M_s = 5.17$ vs. $6.04$), $F(1, 54) = 2.41, p = .1$. However, beliefs did not change in the positive advertiser evaluation condition ($M_s$ after = $6.44$, before = $5.99$), $F(1, 54) = 0.61, p = .43$.

Advertiser evaluations. The 11 evaluative items were found to be internally consistent and were, therefore, averaged to form an index of evaluation (Cronbach's $\alpha = .96$). Advertiser evaluations were expected to decrease after the corrective ad (vs. before) for consumers who had positive prior evaluations of the advertiser more than for consumers who had negative prior advertiser evaluations. A $2 \times 2$ ANOVA revealed a significant main effect for prior advertiser evaluation ($M_s = 5.89$ vs. $3.17$), $F(1, 54) = 53.99, p < .01$, and a significant interaction effect, $F(1, 54) = 2.99, p = .08$. Follow-up contrasts revealed that subjects in the positive prior advertiser evaluation condition evaluated the advertiser less favorably when questioned after the corrective ad than when questioned before ($M_s = 5.29$ vs. $6.45$), $F(1, 54) = 5.75, p < .05$. However, subjects
in the negative prior advertiser evaluation condition did not change their evaluations of the advertiser when questioned after the corrective ad as compared to when questioned before (\(M_s = 3.23\) vs. \(3.11\)), \(F(1, 54) = 0.17, p > .6\). Figure 2 presents these results.

Discussion

Negatively evaluated advertisers were held more responsible for deception than were positively evaluated advertisers. Corrective advertising reduced brand evaluations when the advertiser was negatively evaluated, but not when the advertiser was positively evaluated. Finally, corrective advertising reduced advertiser evaluations when the advertiser was positively evaluated, but not when the advertiser was negatively evaluated. These asymmetric results were confirmed using repeated measures ANOVA with evaluation object (Brand vs. Advertiser) as the within-subjects factor, and Prior Advertiser Evaluation and Point of Questioning as between-subject factors. A significant three-way interaction was obtained, \(F(1, 54) = 7.57, p < .01\), confirming the lack of parallelism in the two dependent measures as a function of prior advertiser evaluations.

Experiment 1 suffered from two limitations. First, the lack of process measures made it difficult to explain the mechanisms underlying the results. Second, the manipulation checks suggested that the level of deception was unequal across the positive and negative prior advertiser evaluation conditions. Although the difference was only marginally significant, the brand belief and evaluation results were, nevertheless, open to this alternative explanation of the extent of deception. Experiment 2 addressed these limitations.
EXPERIMENT 2

Overview

Based on the limitations previously discussed, Experiment 2 differed from Experiment 1 in two respects. First, additional process measures were included—subjects provided cognitive responses in a retrospective thought-listing task and responded to questions regarding affect toward the advertiser. These measures were included to study the mechanisms underlying change in attitudes toward the brand and toward the advertiser.

Second, the order of exposure to information about the advertiser and the deceptive ad was changed so that prior advertiser evaluation was manipulated after deception. Information on the advertiser immediately followed brand belief and judgment measures for those in the questioned before condition and immediately followed the deceptive ad for those in the questioned after condition. The ordering of the two manipulations was changed to strengthen the deception manipulation. As seen in Experiment 1, precorrective ad beliefs in the deceptive claim are higher when the advertiser is favorably evaluated. As Goldberg and Hartwick (1990) demonstrated, this is because positive advertiser reputation results in greater beliefs in ad claims. To equalize deception across conditions, we manipulated prior advertiser evaluation after manipulating deception.

Deception prior to forming an advertiser evaluation corresponds to a real-life situation in which consumers see an ad for a brand but either (a) have no prior knowledge about who the manufacturer of the brand is or (b) know the manufacturer’s name but have no other knowledge about the company. They may acquire such information later by reading articles in the press, hearing from friends, and so forth. One example of such a situation is when consumers see an ad for a new brand.

Experimental Design, Stimuli, and Procedure

Ninety-six undergraduate students participated in the experiment for partial course credit. The experiment had a $2 \times 2$ between-subject design, as in Experiment 1, for advertiser measures, with 24 subjects in each condition. For brand measures, the experiment had three levels of a single factor. The control condition of subjects who were questioned before the corrective ad (no advertiser evaluation in place) was compared with two groups of experimental subjects questioned after the corrective ad (with positive and negative advertiser evaluations, respectively). There were 48 subjects in the control condition and 24 subjects in each of the experimental conditions. The same stimulus ads were used as in Experiment 1. Except for changing the order of the deceptive ad and advertiser reputation manipulation, the procedure was the same as before.
Dependent Measures

Cognitive responses. These were collected immediately after the corrective ad. Subjects were asked to write down all the thoughts they had while reading the corrective ad. Cognitive responses were coded by two independent coders blind to the experimental conditions. Each thought was coded for whether it reflected attributions for the deception (e.g., Pharma Inc. lied); and also for whether it related to brand (positive, negative, neutral), advertiser (positive, negative, neutral), or ad (positive, negative, neutral), or whether it was irrelevant (positive, negative, neutral). The mean number of thoughts per subject was 3.55. There was 95% agreement over 341 total thoughts. All disagreements were resolved through discussion.

Attributions. After providing cognitive responses, subjects were asked to respond to an open-ended question: "It appears from the second ad for No More Pain that there has been some misunderstanding about how fast the brand acts. In your opinion, who is primarily responsible for this misunderstanding about No More Pain?" Attributions also were measured using the closed-ended question used in Experiment 1, after the open-ended question.

Brand evaluations. Three 9-point scales anchored at 1 and 9—Bad—Good, Undesirable—Desirable, and Unfavorable—Favorable—were used to elicit brand evaluations.

Advertiser evaluations. In addition to the two sets of advertiser evaluation questions used in Experiment 1, a third set of four questions measuring affect toward the advertiser was included. Affect can be viewed as being distinct from attitude for several reasons (see J. B. Cohen, 1990; J. B. Cohen & Areni, 1991), and the measures were included to test their relation with advertiser evaluations. Subjects were told to rate their reactions to the advertiser Pharma Inc. on 9-point scales anchored at 1 (not at all) and 9 (very much so): Angry, Happy, Irritated, and Pleased.

Results

Manipulation and other checks. To check whether the prior advertiser evaluation manipulation worked as intended, only those subjects who answered the advertiser evaluation questions before the corrective ad (i.e., immediately after the prior advertiser evaluation manipulation) were included in the analysis. After recoding, the 11 evaluative questions were found to be internally consistent (Cronbach’s α = .97) and were averaged to form an index of evaluation. Subjects in the prior positive evaluation condition had significantly more favorable evaluations of the advertiser than did subjects in the negative prior advertiser evaluation condition ($Ms = 7.30$ vs. 2.93), $F(1, 46) = 219.60, p < .001.$
To create an affect index, principal component analysis (with varimax rotation) was run separately on the four affect questions in the positive and negative prior advertiser evaluation conditions. This revealed that the positive affect scales and the negative affect scales loaded on two different factors. Therefore, an affect index was created by subtracting the mean of the negative affect scales from the mean of the positive affect scales. As expected, the affect index in the positive prior evaluation condition was greater than the affect index in the negative prior evaluation condition \((Ms = 4.31 \text{ vs. } -3.15), F(1, 46) = 84.67, p < .001\).

Comparisons of the two experimental conditions with the control condition revealed that the mean belief in the false claim was lower after the corrective ad than before the corrective ad in the positive prior evaluation condition \((M \text{ before } = 4.46, M \text{ after}–\text{positive } = 1.75), F(1, 93) = 47.58, p < .01\), as well as in the negative prior evaluation condition \((M \text{ after}–\text{negative } = 1.71), F(1, 93) = 49.06, p < .01\). The order of belief and evaluation questions did not have any significant main or interaction effects and, therefore, was excluded from the analyses. All subjects were included in the analyses because an open-ended question on the purpose of the experiment revealed that none had guessed the true purpose of the experiment.

**Attributions.** Cognitive response data revealed that subjects made spontaneous attributions for deception when they processed corrective advertising. Of the 50 subjects who made attributions for deception in their cognitive responses, 48 subjects made an advertiser attribution.\(^3\) Furthermore, the open-ended attribution question revealed that 70% of subjects across all conditions held the advertiser responsible for deception. An ANOVA on the closed-ended attribution question revealed a significant main effect for prior advertising evaluation, as expected \((Ms = 6.23 \text{ vs. } 7.35), F(1, 94) = 9.29, p < .01\), such that subjects with a favorable prior evaluation of the advertiser held the advertiser less responsible for the deception than did those with a negative prior evaluation.\(^4\)

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\(^3\)Some subjects may have made such spontaneous attributions but edited them out in the retrospective thought-listing task. Furthermore, results on brand and advertiser evaluations were identical whether or not subjects who reported spontaneous attributions for deception in their cognitive responses were retained for the analyses. Thus, responding to the attribution questions prior to the evaluation questions did not bias the responses to the evaluation questions.

\(^4\)Converging evidence for this pattern of evaluations comes from a pilot study conducted to test whether the attribution results hold under more ecologically valid conditions. Nineteen undergraduates read a fictitious article from the *Wall Street Journal* and were asked to form an impression of the featured companies and brands. They were exposed to the prior advertiser evaluation manipulation, followed by the deceptive ad placed in between two articles. Two days later they saw the corrective ad embedded in editorial matter. Advertiser attributions for deception were then measured using the same question as was used in the two experiments and two additional questions from Russell’s (1982) Causal Dimension Scale, all anchored at 1 (*not at all*) and 9 (*very much so*). The three questions were internally consistent (Cronbach’s \(\alpha = .77\)) and were averaged to form an attribution index. As expected, advertiser attributions were greater when subjects had a negative (vs. positive) prior evaluation of the advertiser \((Ms = 6.92 \text{ vs. } 5.42), t(17) = 1.97, p < .05\), one-tailed.
Brand evaluations. The three items were found to be internally consistent (Cronbach’s $\alpha = .93$) and, therefore, were averaged to form an index of brand evaluation. Note that in this experiment, changes in brand evaluations after (vs. before) the corrective ad can be attributed to the corrective ad or to the advertiser evaluation manipulation. This is because the brand belief and evaluation measures in the before condition were collected before the corrective ad and before the advertiser evaluation manipulation, but after the deception manipulation.

A one-way ANOVA with evaluations in the control condition and in the after corrective ad experimental conditions (positive vs. negative advertiser evaluation) revealed a significant main effect, $F(2, 93) = 20.02, p < .01$. Contrasts with the before corrective ad control condition revealed that mean evaluations of the brand were lower after the corrective ad in the negative advertiser evaluation condition versus in the control condition ($M$ before = 5.42, $M$ after = 3.61), $F(1, 93) = 26.15, p < .01$. Brand evaluations were marginally higher after the corrective ad in the positive advertiser evaluation condition compared to the control condition ($M$ after = 6.06), $F(1, 93) = 3.27, p = .07$. These results are not directly comparable to those of Experiment 1 because the postcorrective ad means reflect the impact of the advertiser evaluation and the corrective ad.

Advertiser evaluations. Evaluations of the advertiser were measured using 15 questions, 4 of which measured affective reactions. After recoding for directional consistency (so that higher numbers represent more favorable evaluations), the 11 evaluative questions were averaged to form an index of evaluation (Cronbach’s $\alpha = .96$). The affect index created by subtracting the mean negative affect from the mean positive affect was used.

An ANOVA with the evaluative index as the dependent variable, and prior advertiser evaluation and point of questioning as the independent variables, showed a significant main effect for point of questioning. Evaluations of the advertiser were lower for subjects who answered the question after the corrective ad ($Ms = 4.65$ vs. $5.12$), $F(1, 92) = 4.39, p < .05$. The main effect for prior advertiser evaluation also was significant, and advertiser evaluations were significantly higher in the positive (vs. the negative) prior evaluation condition ($Ms = 6.63$ vs. $3.13$), $F(1, 92) = 242.40, p < .01$.

These main effects were qualified by a Point of Questioning $\times$ Prior Advertiser Evaluation interaction, $F(1, 92) = 15.04, p < .01$. The means reveal that subjects with a positive prior evaluation of the advertiser evaluated the advertiser less favorably if questioned after (vs. before) the corrective ad ($Ms = 5.96$ vs. $7.30$), $F(1, 92) = 17.84, p < .01$. However, subjects with a negative advertiser prior evaluation did not change their evaluation as a function of the point of questioning ($Ms = 3.33$ vs. $2.93$), $F(1, 92) = 1.59, p = .21$. These findings replicate those in Experiment 1.

A $2 \times 2$ ANOVA with the affect index as the dependent variable revealed a significant main effect for point of questioning ($M$ before = .58 vs. after = -1.33),
$F(1, 92) = 10.97, p < .01$, and prior advertiser evaluations ($Ms$ positive = 2.11, negative = -2.86), $F(1, 92) = 74.04, p < .01$. These main effects were qualified by a significant Point of Questioning $\times$ Prior Advertiser Evaluation interaction, $F(1, 92) = 18.36, p < .01$. The means reveal a pattern similar to that observed with advertiser evaluations. Subjects with a positive prior evaluation of the advertiser had less positive affect toward the advertiser when questioned after (vs. before) the corrective ad ($Ms$ -.08 vs. 4.31), $F(1, 92) = 28.86, p < .01$. However, affect of subjects with a negative prior evaluation of the advertiser was not affected by the corrective ad ($M$ before = -3.15 vs. after = -2.58), $F(1, 92) = 0.47, p = .49$.

**Path analyses.** We conducted path analyses to examine how consumer responses to corrective advertising from different sources (positively vs. negatively evaluated advertisers) affect brand and advertiser evaluations. Given our interest in evaluations after corrective advertising, we considered evaluations of those subjects who rated the brand and advertiser after viewing the corrective ad as the dependent variable.

We expected that prior advertiser evaluations (the manipulated variable) could affect brand evaluations after the corrective ad in three ways. First, it definitely would have a direct effect because brands from favorably evaluated advertisers are likely to be rated higher than brands from less favorably evaluated advertisers, even after the corrective ad. Second, the cognitive response model of persuasion (Greenwald, 1968) and the elaboration likelihood model (Petty & Cacioppo, 1986) suggest that postcorrective ad brand evaluations are mediated by consumers’ cognitive responses when processing the corrective ad (especially under high-involvement conditions such as those in our experiment in which subjects had an impression-formation goal). These cognitive responses include spontaneous attributions for deception. Third, brand evaluations are likely to be affected by brand beliefs, which in turn are affected by prior advertiser evaluations. Advertiser evaluations are likely to be based only on the first two. In addition, affective responses to the advertiser after exposure to the corrective ad are likely to influence advertiser evaluations (Batra & Ray, 1986).

The brand (advertiser) cognitive response (CR) index was created by subtracting the number of negative brand-related (advertiser-related) thoughts from the number of positive brand-related (advertiser-related) thoughts (MacKenzie & Lutz, 1989; Maheswaran & Chaiken, 1991; Worth & Mackie, 1987). Table 1 presents the mean number of positive and negative brand and advertiser thoughts in each of the experimental conditions.

Hierarchical regression analyses were used to determine the direct and indirect effects of prior advertiser evaluations on brand and advertiser evaluations after exposure to the corrective ad (Cohen & Cohen, 1983). Figure 3 presents the partial regression coefficients for each path in the brand model, and Figure 4 presents the partial regression coefficients for each path in the advertiser model.
TABLE 1
Experiment 2: Cognitive Responses

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive prior advertiser evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean number of brand thoughts</td>
<td>.46</td>
<td>.21</td>
<td>.88</td>
</tr>
<tr>
<td>Mean number of advertiser thoughts</td>
<td>.54</td>
<td>.29</td>
<td>.50</td>
</tr>
<tr>
<td>Negative prior advertiser evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean number of brand thoughts</td>
<td>.04</td>
<td>.67</td>
<td>.12</td>
</tr>
<tr>
<td>Mean number of advertiser thoughts</td>
<td>.08</td>
<td>1.71</td>
<td>.17</td>
</tr>
</tbody>
</table>

Note. There were 24 subjects in each prior advertiser evaluation cell. Only data from subjects who responded to beliefs and evaluations after the corrective ad are included.

Figure 3 reveals that prior advertiser evaluations affect (postcorrective ad) brand evaluations directly ($\beta = .43, p < .01$). In addition, they also affect brand evaluations indirectly via brand cognitive responses to the corrective ad ($\beta = .09$) and via beliefs in other true claims made in the ads ($\beta = .13$). These indirect effects were computed by multiplying the component direct effects.\(^3\) Brand cognitive responses and brand beliefs were less favorable for negatively evaluated advertisers, and they had a positive effect on brand evaluations (CRs $\beta = .22, p < .05$; brand beliefs $\beta = .37, p < .01$). When all three variables were entered in the model, $R^2 = .58$. Adding advertiser attributions did not significantly improve the model fit.

The path analyses on advertiser evaluations (see Figure 4) suggest that after corrective advertising they were affected both directly ($\beta = .48, p < .01$) and indirectly (via CRs, $\beta = .19$, and the affect index, $\beta = .16$) by prior advertiser evaluations ($R^2 = .75$). CR ($\beta = .21, p < .05$) and affective response indexes ($\beta = .38, p < .01$) had a positive effect on (postcorrective ad) advertiser evaluations.

\(^3\)The indirect effects of prior advertiser evaluations are considered significant if the component direct effects are significant (Cohen & Cohen, 1983). To our knowledge, there is no statistical significance test that can be performed on the regression coefficients for the indirect effects.
Again, adding advertiser attributions for deception did not increase the model fit significantly.

**GENERAL DISCUSSION**

Summary and Interpretation of Results

Three findings emerge regarding consumer reactions to corrective advertising. First, consumers are likely to hold the advertiser less responsible for deception if they have a positive (vs. a negative) prior evaluation of the advertiser. Second, consumers are likely to maintain (decrease) brand evaluations if they previously evaluated the advertiser positively (negatively). Third, consumers are likely to decrease (maintain) advertiser evaluations if they previously evaluated the advertiser positively (negatively).

Consumer reactions to corrective advertising, therefore, depend on their prior evaluations of the advertiser. Consumers have generalized knowledge regarding persuasion and expect advertising to be positive (Friestad & Wright, 1994). When exposed to corrective advertising, they make pragmatic inferences regarding the advertiser's motives in running the deceptive ad that needed the correction. If the advertiser is negatively evaluated, they infer that the advertiser tried to deceive consumers to enhance persuasion. Therefore, they hold the advertiser highly responsible for deception, generate unfavorable advertiser cognitions (80% of all advertiser thoughts), and maintain their prior negative advertiser evaluation. Consumers also generate predominantly unfavorable brand cognitions (82% of all brand thoughts) and reduce their beliefs in other nondeceptive claims made about the brand because they believe that the advertiser may have deceived on other claims as well. These reactions result in lower brand evaluations after (vs. before) corrective advertising.

If consumers see a corrective ad from a company they evaluate positively, they hold the advertiser responsible for deception, but they adjust the extent of
 attribution downward because of their favorable evaluation (Gilbert, 1989). Their beliefs about the company are no longer congruous (a good company ran a deceptive ad, even if unintentionally). They generate some unfavorable advertiser cognitions (27% of all advertiser thoughts) and feel let down by the advertiser. Because they anchor on their prior evaluation and adjust downward for the negative behavior (Tversky & Kahneman, 1974), they reduce their attitudes toward the advertiser. However, their beliefs in other nondeceptive ad claims about the brand remain unchanged because they attribute deception less to the advertiser (compared to a negatively evaluated advertiser). Changes in brand evaluations, therefore, depend only on the evaluative implications of the corrective claim and not on beliefs in other claims.

As an anonymous reviewer noted, consumers may be exposed to a deceptive ad over time and may be exposed to the corrective ad some time after exposure to the deceptive ad. In contrast, subjects in our experiments were exposed to the deceptive ad only once, and they were exposed to both the deceptive and corrective ads (devoid of editorial material) in the same experimental session. Therefore, we can only be confident that our results on brand evaluations are likely to hold when the deceptive ad is salient in consumers’ memories at the time they process the corrective ad. Results on advertiser evaluations are most likely to hold when consumers have stored in memory a strong attitude toward the advertiser stored in memory, which becomes activated on exposure to the corrective ad explicitly sponsored by the advertiser.

Contributions

*Theoretical contribution.* This research examines the processes underlying brand and advertiser evaluations after corrective advertising. Brand evaluations are found to depend on brand beliefs, which in turn depend on the attributions made for deception. Advertiser evaluations appear to be based on cognitive and affective responses to the corrective ad. This research offers a process explanation for conflicting findings regarding the effects of corrective advertising and provides some resolution to the conflicting findings in past research that may have stemmed from methodological differences such as the context in which the corrective message was presented, the nature of the corrective message, and the number of exposures to it.

*Practical implications.* The effect of corrective advertising on brand and advertiser evaluations is an important public policy issue. The FTC mandated that remedies for deception should not punish the advertiser by reducing advertiser evaluations and belief levels for true ad claims (Wilkie, McNeill, & Mazis, 1984). Some studies found such punitive results of corrective advertising (e.g., Mazis & Adkinson, 1976), whereas other studies (e.g., Mizerski et al., 1980) did not.
Our findings suggest that corrective advertising may be punitive in different ways for negatively and positively evaluated advertisers.

Future Research

The reasons underlying the different effects of corrective advertising on brand versus advertiser evaluations have not been documented completely in this research. Other mediating variables that may affect these evaluations after corrective advertising need to be identified, and the nature of this mediation (e.g., whether it is independent or interacts with the mediating factors studied in this research) needs to be delineated.

Research is also needed in two general areas. First, the effectiveness of corrective advertising as a remedy for deception needs to be studied (cf. Armstrong, Gurok, & Russ, 1979). For example, Schul and Mazursky (1990) found that explicitly telling consumers that a particular claim is incorrect is effective in reducing false beliefs. Hence, corrective ads may be successful in reducing false beliefs, and their effectiveness may depend on the ad design (e.g., explicitness), the strength of the false beliefs, and the level of motivation to hold accurate beliefs.

Second, the stability of beliefs and attitudes needs to be studied over time. Results from the two experiments reported here show that corrective ads may hurt favorably evaluated advertisers by harming their reputation and may hurt unfavorably evaluated advertisers by harming brand evaluations. One might ask about the long-term effects of corrective advertising on these dependent variables—do these contrasting patterns of results for brand and advertiser evaluations hold over time? Future laboratory and field research should consider additional variables such as the context of the ads, different product categories, other types of implied claims, and multiple exposures to the deceptive and corrective ads.

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