MICHEL TUAN PHAM, CAROLINE GOUKENS, DONALD R. LEHMANN, and JENNIFER AMES STUART*

Six studies show that subtle contextual cues that increase customers' self-awareness can be used to influence their satisfaction with service providers (while holding the objective service delivery constant). Self-awareness cues tend to increase customers' satisfaction when the outcome of a service interaction is unfavorable, but they tend to decrease customers' satisfaction when the outcome of the interaction is favorable. This is because higher self-awareness increases customers' tendency to attribute outcomes to themselves rather than to the provider. Self-awareness can even influence satisfaction with service interactions that occurred far in the past. The authors demonstrate these effects across a variety of lab and field settings with different simulated retail experiences and with different real-life service interactions, including college courses, meals taken at a university cafeteria, and items purchased at an actual clothing store. The results further show that attempts to shape customers' satisfaction by means of self-awareness are more likely to be effective when there is substantial customer responsibility for the outcome; when customers' responsibility is limited, such attempts may backfire.

Keywords: customer satisfaction, judgment, self-awareness, service marketing, attribution

Shaping Customer Satisfaction Through Self-Awareness Cues

Improving customer satisfaction is of great importance to marketers. Understandably, a large body of applied and theoretical research has focused on how to improve customer satisfaction by enhancing objective product and service quality (Gale 1994; Hauser and Clausing 1988) or by addressing organizational gaps that contribute to any misalignment between customer expectations and product/service performance (e.g., Parasuraman, Zeithaml, and Berry 1985). However, because such customer satisfaction improvement efforts are costly, it is equally important to understand factors other than objective product/service performance that may also influence customer satisfaction. The purpose of this research is to advance and test an original means of influencing customer satisfaction without changing the objective performance of the product or service.

Taking a social cognition perspective from which customer satisfaction can be viewed as a type of judgment that is largely constructed (see Martin and Tesser 1992), we posit that satisfaction responses may be more malleable than the satisfaction literature has typically assumed. We report six lab and field studies that show that customers' satisfaction with service providers can be influenced by subtle contextual cues that increase customers' self-awareness. Such cues tend to increase customers' satisfaction with service providers when the outcome of a service interaction is unfavorable, but they tend to decrease customers' satisfaction with the providers when the outcome of the interaction is favorable. This is because higher self-awareness tends to increase customers' tendency to attribute service interaction outcomes to themselves rather than to the provider. As a

result, customers are likely to decrease the blame they put on the provider when the outcome is unfavorable but also decrease the credit given to the provider when the outcome is favorable. We demonstrate these effects on satisfaction across a variety of lab and field settings with different simulated retail experiences and various real-life service interactions, including college courses, meals taken at a university cafeteria, and items to be returned or exchanged at a New York City clothing store. In addition, the results suggest that these effects do not lie in a differential encoding of the service interaction but rather in how the encoded interaction is subsequently interpreted and evaluated. Therefore, self-awareness can even influence satisfaction with service interactions that occurred well in the past, extending the window of possible intervention. Finally, the results suggest that these effects are more likely to hold when there is substantial customer responsibility for the outcome. When customers' responsibility is limited, attempts to shape customers' satisfaction by raising their self-awareness are less effective and may even backfire.

SELF-AWARENESS, ATTRIBUTION, AND CUSTOMER SATISFACTION

Although customer satisfaction is a function of the level of product/service performance in relation to customers' expectations (Oliver 1980), it also depends on the locus of attribution that customers make about the success or failure in product/service performance (Folkes 1984; Tsiros, Mittal, and Ross 2004; Van Raaij and Pruyn 1998). That is, customers' satisfaction with successes or failures also depends on whether they perceive the cause of success or failure in product/service performance as resting with the provider or with themselves. In the case of delivery failure, satisfaction with the provider tends to be greater (dissatisfaction lower) if the failure is attributed to the customer or to an external cause than if it is attributed to the provider (Folkes 1984; Tsiros, Mittal, and Ross 2004; Van Raaij and Pruyn 1998). Conversely, in the case of delivery success, satisfaction with the provider tends to be greater if the success is attributed to the provider than if it is attributed to the customer or to an external factor (Oliver and DeSarbo 1988). In other words, the locus of attribution interacts with the outcome of product/service performance in influencing customer satisfaction.

Note that in previous research on the effects of locus of attribution on customer satisfaction, the locus of attribution was typically manipulated by varying the objective responsibility of the provider. For example, Oliver and DeSarbo (1988) manipulated the locus of attribution by varying whether the investor (the customer) or the broker (the provider) picked a given stock. If objective responsibility only were all that mattered in customer satisfaction, there would be little room for marketers to influence their customers' satisfaction through this attributional dimension, unless processes of product/service delivery were actually changed. However, if the subjective responsibility of the provider or the customer can be altered (while holding objective responsibility constant), it may be possible to influence customer satisfaction without changing the product or service itself. Building on research in the social psychology literature, we propose that a practical means of influencing the subjective responsibility of the customer in

relation to the provider—and thus customer satisfaction—is through the use of contextual cues that momentarily increase customers' self-awareness.

Self-awareness is a state in which people attend to their own consciousness, body, personal history, or some other aspect of themselves (Duval and Wicklund 1972). Although some people are chronically more self-aware than others—a trait known as self-consciousness (Fenigstein, Scheier, and Buss 1975)—momentary states of self-awareness can also be triggered by various situations that can make even less self-conscious people focus their attention inward, such as seeing oneself in a mirror, seeing oneself in a photograph, standing before an audience, or being in front of a camera (Carver and Scheier 1978; Duval and Lalwani 1999). Indeed, service providers routinely influence, intentionally or unintentionally, their customers' self-awareness when they engage customers in personal conversations (e.g., "small talk" during a sales visit), address customers by their names (e.g., "Good evening, Mrs. Y" at the front desk of a luxury hotel), ask them personal questions (e.g., doctors interviewing their patients), or have mirrors in their facilities (e.g., in fitting rooms). It has been suggested that a private and a public dimension of self-awareness need to be distinguished (Buss 1980; Carver and Scheier 1981). Private self-awareness is an "awareness of oneself from a personal perspective" (Fejfar and Hoyle 2000, p. 132). It refers to a heightened attention to inner aspects of the self, including one's own thoughts, feelings, and motives (Carver and Scheier 1981). For example, small mirrors or listening to one's own voice are believed to activate a private form of self-awareness. Public self-awareness is "the awareness of oneself from the imagined perspective of others" (Fejfar and Hoyle 2000. p. 132). It refers to a heightened attention to public aspects of the self as a social object, with an accentuated concern about how one is viewed by others (Carver and Scheier 1981). Being recorded by a camera or standing in front of an audience are actions believed to activate a public form of self-awareness.

A considerable amount of research has shown that high self-awareness increases the tendency to make internal causal attributions (e.g., Buss and Scheier 1976; Duval and Wicklund 1973; Fenigstein and Levine 1984). For example, Duval and Wicklund (1973) observe that when people's attention is directed to themselves—from seeing their reflection in a mirror—they are more likely to consider themselves the cause of both fortunate and unfortunate events. Buss and Scheier (1976) replicate this finding by comparing chronically self-conscious people with chronically less-self-conscious people. In short, high self-awareness prompts people to make more internal attributions and does so independently of the outcome to be attributed—a result with important implications for our predictions. Although most demonstrations of the effect of self-awareness on attribution have involved manipulations of private self-awareness, more recent research suggests that manipulations of public self-awareness have similar effects (Duval and Silvia 2002; Webb et al. 1989).

If customer satisfaction is a function of the perceived locus of responsibility for product/service performance and if the perceived locus of responsibility can be shifted by states of self-awareness, it should be possible to influence customers' satisfaction by merely varying their level of self-

awareness (while holding objective product/service performance constant). Specifically, in the case of product/service failure, raising customers' self-awareness should increase their satisfaction with the provider because higher self-awareness should make the customers accept greater responsibility for the failure if they indeed share some responsibility. However, in the case of product/service success, raising customers' self-awareness is likely to have the opposite effect of decreasing their satisfaction with the provider because higher self-awareness should make the customers take greater credit for the success. Given that public and private self-awareness have been found to have similar effects on attribution, we expect the effects to be similar with public self-awareness cues (e.g., video cameras) and private self-awareness cues (e.g., small mirrors).

We tested these predictions in a series of six lab and field experiments involving more than 800 participants whose state of self-awareness was manipulated with a variety of contextual means. The first experiment tested the basic prediction that mere exposure to innocuous cues that heighten self-awareness can increase customers' satisfaction with a service provider when the outcome of a service interaction is unfavorable and decrease customers' satisfaction when the outcome is favorable. This experiment also tested the proposition that these effects are mediated by changes in locus of attribution under low versus high self-awareness. To clarify the window of applicability of self-awareness as a means of influencing customer satisfaction, the second experiment tried to identify whether the effects of self-awareness on attribution and satisfaction occur at the encoding of the service interaction or during evaluation of the encoded interaction. The results favor the latter interpretation. Building on these results, the third experiment examined whether self-awareness can also influence current satisfaction with service interactions that occurred in the past. The fourth experiment was a field test of the effects of self-awareness cues on satisfaction with real service interactions that result in positive versus negative outcomes. The fifth experiment tested a boundary condition of these effects by comparing situations in which the customer has some responsibility for the service interaction outcome with situations in which the customer has no responsibility at all. The sixth and final experiment tested this boundary condition in yet another field setting.

STUDY 1

Study 1 tests the prediction that mere exposure to innocuous cues that heighten customers' self-awareness can influence their satisfaction with a service provider. When a service interaction results in an unfavorable outcome for the customer, subtly raising the customer's self-awareness will attenuate his or her dissatisfaction with the service provider, thus increasing his or her overall satisfaction. However, when a service interaction results in a favorable outcome, raising the customer's self-awareness will have the opposite effect of decreasing his or her overall satisfaction. This is because higher self-awareness should increase customers' tendency to attribute service interaction outcomes to themselves, thus decreasing not only the blame they put on the provider when outcomes are unfavorable but also the credit they give to the provider when outcomes are favorable.

Method

Design and procedure. The study allegedly focused on people's ability to empathize with everyday consumer situations. We asked 88 college students to project themselves as customers in two service interaction scenarios: one involving a copy service and the other involving an appliance store (we counterbalanced the order). After reading each service interaction scenario, participants assessed their overall satisfaction with the service provided in each. We manipulated two factors between subjects: (1) whether participants had low or high self-awareness and (2) whether the two service interactions resulted in a favorable or an unfavorable outcome for the customer. After reading the first scenario, participants rated their satisfaction with the service provider, evaluated responsibilities for the outcome, and explained their evaluation of the service. Participants then repeated the task for the second scenario. Finally, we administered demand, manipulation, and confounding checks.

Self-awareness manipulation. We manipulated self-awareness by the presence of a small mirror, which is known to induce a private form of self-awareness (Carver and Scheier 1978; Shavitt et al. 1992). Participants in the high-self-awareness condition completed the tasks while seated at a station with a small mirror facing them, which was ostensibly for another experiment. Participants in the low-self-awareness condition completed the same tasks at stations without a mirror.

Scenarios and manipulation of outcome favorability. To provide a meaningful test of the hypotheses, the scenarios needed to involve realistic service interactions that would be relevant to student participants and would plausibly result in either a favorable or an unfavorable outcome for the customer. Moreover, the scenarios should be such that the responsibility for the outcome could be attributed to the customer or to the provider and that satisfaction levels would not be too extreme. We identified two scenarios from two pretests (n = 90). The copy center scenario described a student who, after procrastinating, urgently needs ten bound copies of a project. The student drops the project off at a copy center, expecting to have it copied and bound by noon. When the student returns, only three copies have been completed because things have been busy at the center. Panicking, the student asks if there is anything he (or she) can do. In the positive-outcome version, the student does the copying himself (herself) and finishes just in time, and the clerk waives part of the copying charge. In the negative-outcome condition, the clerk refuses to let the student complete the job and makes condescending comments; the student ends up with only three books completed.

The appliance store scenario described a student who needs an air conditioner and finds one on sale. The student does not have his (her) credit card and informs a salesperson that he (she) will be back within an hour. Having stopped at a coffeehouse to meet friends, the student returns to the store late. The first salesperson is no longer there, and another salesperson announces that the last unit has been sold. The student insists that the salesperson check the storeroom. In the positive-outcome condition, the salesperson finds an air conditioning unit that the previous salesperson had set aside for the student. In the negative-outcome condition, no set-aside unit can be found.

Measures. Participants reported their overall service satisfaction on six seven-point "agree/disagree" items (e.g., "very satisfied with the service provided"; α_{Copy} = .93, $\alpha_{Appliance}$ = .94). We assessed participants' attributions of responsibility by having them allocate 100 points across (1) themselves, as the customer; (2) the service provider; and (3) other elements of the situation. Next, participants completed six seven-point "agree/disagree" items: Two served as a check for the self-awareness manipulation (e.g., "I felt constantly aware of my own feelings"), two served as a confounding check for differential involvement (e.g., "I was very careful when answering each question"), and two served as a confounding check for distraction (e.g., "I felt distracted throughout the study").

Results

Preliminary checks. None of the participants in this study (or in any of the subsequent laboratory studies) guessed the true purpose of the study. As expected, the manipulation of self-awareness had a significant main effect on reported self-awareness (M_{Low} = 5.07 versus M_{High} = 5.58; $F(1, 80)$ = 4.53, $p < .04$) but no main effect on reported involvement ($F(1, 80)$ = 1.17, $p = .28$) and reported distraction ($F < 1$), making it difficult to explain the results in terms of differential involvement or differential distraction. There were no main effects of outcome favorability and no self-awareness × outcome favorability interactions on any of these three measures ($ps > .16$).

Satisfaction. We submitted the overall satisfaction ratings for the two scenarios to a three-way mixed analysis of variance (ANOVA) with self-awareness and outcome as between-subjects factors and scenario as a repeated factor (see means in Table 1). Because the scenarios did not moderate any of the between-subjects effects ($ps > .25$), we pooled (averaged) the results across scenarios. Across scenarios, satisfaction was understandably greater when the outcome was favorable (M = 5.04) than when it was unfavorable (M = 3.53; $F(1, 80)$ = 51.39, $p < .001$). More important, as we predicted, there was a strong interaction between outcome favorability and self-awareness ($F(1, 80)$ = 15.19, $p < .001$), which also held for each scenario individually (both $ps < .01$). As Figure 1 illustrates, when the outcome was unfavorable, high self-awareness increased satisfaction (M_{low-SA} = 3.10 versus $M_{high-SA}$ = 3.97; $F(1, 80)$ = 8.81, $p < .01$). However, when the outcome was favorable, high self-awareness decreased satisfaction (M_{low-SA} = 5.43 versus $M_{high-SA}$ = 4.65; $F(1, 80)$ = 6.53, $p < .02$).

Perceived responsibility. Responsibility for the outcome was mostly attributed to the self (the customer) or to the provider. We created an attribution differential index (ADI) by subtracting the percentage of responsibility attributed to the provider from the percentage of responsibility attributed to the self. A high value indicated a tendency to blame (or credit) the self rather than the provider, and a low value indicated a tendency to blame (or credit) the provider rather than the self. A mixed ANOVA of the ADI revealed that attributions to the self (rather than to the provider) were greater in the high-self-awareness condition (M = 19.5%) than in the low-self-awareness condition (M = –15.0%; $F(1, 80)$ = 12.15, $p < .001$), regardless of scenario ($F(1, 80)$ = 1.91, $p = .17$). Importantly, this effect was not moderated by outcome favorability ($F < 1$), indicating that the tendency to assign greater responsibility to the self under high self-awareness than under low self-awareness held regardless of whether the outcome was favorable or unfavorable. Note that while self-awareness had a main effect on differential attribution, greater attribution to the self (rather than to the provider) should have different effects on overall satisfaction depending on the favorability of the outcome. When the outcome is unfavorable, greater attribution to the self should increase overall satisfaction, whereas when the outcome is favorable, greater attribution to the self should decrease

Figure 1
STUDY 1: EFFECTS OF SELF-AWARENESS AND OUTCOME FAVORABILITY ON SATISFACTION WITH PROVIDER
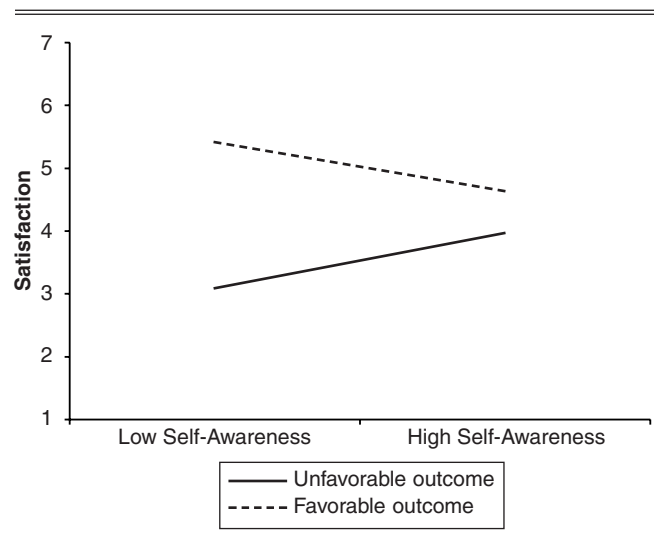

Table 1
STUDY 1: EFFECTS OF SELF-AWARENESS AND OUTCOME FAVORABILITY

| | Copy Service Scenario | | | | | Appliance Store Scenario | | | |
| | Negative Outcome | | Positive Outcome | | | Negative Outcome | | Positive Outcome | |
	Low Self-Awareness	High Self-Awareness	Low Self-Awareness	High Self-Awareness		Low Self-Awareness	High Self-Awareness	Low Self-Awareness	High Self-Awareness
Satisfaction	2.99	3.73	5.24	4.10		3.21	4.20	5.67	5.14
Attribution to self	54.4%	64.0%	37.7%	45.6%		54.8%	73.8%	29.2%	44.6%
Attributions to provider	39.0%	29.4%	53.6%	47.6%		40.4%	22.6%	62.1%	51.6%
Attributions to situation	6.7%	6.5%	10.2%	8.6%		6.2%	6.3%	10.8%	39.9%
ADI (self–provider)	15.42%	34.64%	–16.57%	.24%		14.37%	51.14%	–33.29%	–10.24%

overall satisfaction. To test this moderated-mediation pattern, we submitted the overall satisfaction ratings to a mixed analysis of covariance (ANCOVA) with the ADI and its interaction with outcome as covariates. As expected, the interaction between the ADI and outcome was indeed predictive of overall satisfaction ($F(1, 78) = 33.06$, $p < .0001$), whereas the main effect of ADI was not ($F < 1$). Furthermore, inclusion of the ADI interaction covariate in the model strongly attenuates the self-awareness × outcome interaction (a 78% reduction of the mean squares [MS] of the effect; see Pham and Muthukrishnan 2002), though the residual interaction remained significant ($F(1, 78) = 4.72$, $p = .03$). These results suggest that the effects of self-awareness on overall satisfaction are indeed mostly mediated by changes in locus of attribution of the outcome (in the positive-outcome condition, Sobel test $Z = -2.25$, $p < .03$; in the negative-outcome condition, Sobel test $Z = 2.44$, $p < .02$).

Discussion

The results support the prediction that subtle contextual cues that heighten consumers' self-awareness can change their overall satisfaction with a service interaction even if the service delivery is held constant. Specifically, heightened self-awareness increased satisfaction when the outcome of the interaction was unfavorable, but it lowered satisfaction when the outcome was favorable. These effects were mediated by an increased perceived responsibility of the self for the outcome under high self-awareness. Thus, satisfaction increased when the outcome was unfavorable because self-aware participants assumed a greater share of the blame, but satisfaction decreased when the outcome was favorable because self-aware participants claimed a greater share of the credit.

To test the robustness of these effects, we conducted a replication study (Study 1a) with a different manipulation of self-awareness. We assigned 70 student participants to the same 2 (self-awareness) × 2 (outcome) × 2 (scenario) mixed design as in Study 1. The scenarios and procedure were identical, except that we manipulated self-awareness by asking a series of personal questions before the main task (see Fenigstein and Levine 1984). Under the cover of a "movie-casting study," we asked participants in the high-self-awareness condition to describe themselves on dimensions such as height and weight, physical appearance, and voice pitch, whereas we asked participants in the low-self-awareness condition to describe a well-known actor or actress on the same dimensions. The results of this replication study were almost identical. Again, there was a significant interaction between outcome favorability and self-awareness ($F(1, 66) = 7.65$, $p < .01$), which was not moderated by scenario ($F < 1$). When the outcome was unfavorable, overall satisfaction was greater under high self-awareness ($M = 3.64$) than under low self-awareness ($M = 2.96$; $F(1, 66) = 4.69$, $p < .04$). When the outcome was favorable, overall satisfaction was marginally lower under high self-awareness ($M = 4.95$) than under low self-awareness ($M = 5.50$; $F(1, 66) = 3.05$, $p < .10$). As in Study 1, these effects were largely mediated by a tendency to attribute the outcome more to the self (rather than to the provider) under high self-awareness than under low self-awareness (in the negative-outcome condition, Sobel test $Z = 2.18$, $p < .03$; in the positive-outcome condition, $Z = -2.17$, $p < .03$).

STUDY 2

Study 1 and its replication suggest that raising customers' self-awareness can influence their satisfaction with a service provider by making them assume greater responsibility for the outcome of the service interaction. However, from a managerial standpoint, it is important to pinpoint the exact location of this effect, which is not clear from Study 1. One possibility lies in the encoding of the service interaction. It has been suggested that self-awareness exerts its effects through a selective encoding of self-related information (Hull and Levy 1979; Hull et al. 1988). Therefore, it could be that heightened self-awareness at the time of the service interaction increases customers' attention to facts related to their personal responsibility. Because of a stronger encoding of such facts, highly self-aware customers would subsequently attribute greater responsibility to themselves when assessing their overall satisfaction. Another possibility lies after the encoding of the service interaction. It may be that heightened self-awareness does not alter how customers encode the service interaction but rather how they interpret it when assessing their satisfaction. That is, self-aware people may be more likely to engage in self-attributions than non-self-aware people even if they have identical encodings of the service interaction. These two possibilities imply a different managerial applicability of self-awareness as a means of shaping customer satisfaction. The first explanation would imply a somewhat limited window of applicability because self-awareness would need to be manipulated immediately before or during the service interaction. The second explanation would imply a broader window of applicability because self-awareness could also be manipulated after the service interaction has taken place.

To better distinguish between the two possibilities, we employed a design inspired by research on online versus memory-based judgments. This research has shown that one way to create a temporal separation between the encoding of judgment-relevant facts and the judgment itself is to instruct participants to memorize these facts and subsequently ask them to make a memory-based judgment (Hastie and Park 1986; Lichtenstein and Srull 1987). Therefore, whereas in Study 1 participants were encouraged to form online impressions of the service interaction, in Study 2 participants we encouraged to memorize the details of the service interaction. Only after a delay did we ask participants to provide memory-based assessments of their overall satisfaction with the service interaction. Because this procedure introduces a clear temporal separation between the encoding of facts about the service interaction and the evaluation of this interaction, we were able to examine whether self-awareness exerts its effect during encoding or during evaluation by manipulating self-awareness either when participants memorized the service interaction facts or when they rendered their overall satisfaction judgments.

Method

This study was cast as a "Consumer Memory Study." We led 104 students to believe that we were interested in assessing people's ability to remember self-relevant information. We first asked participants to complete a short memory test. We then presented them with the negative-outcome version of the appliance store scenario used in Study 1 and asked them to put themselves into the situation and remember its

details. We expected this set of instructions to discourage the online formation of overall evaluations while reading about the service interaction (Hastie and Park 1986; Lichtenstein and Srull 1987). After reading the service interaction scenario, all participants completed an unrelated filler task designed to increase the temporal separation between the encoding of the scenario and the rating of overall satisfaction. After completing the filler task, participants assessed their overall satisfaction with the appliance store and completed the same set of measures as in Study 1.

Whereas Study 1 relied on a standard manipulation of private self-awareness, Study 2 relied on a standard manipulation of public self-awareness: being videotaped (Duval 1976; Duval and Lalwani 1999). There were three conditions. In the two high-self-awareness conditions, the experimenter explained that portions of the session needed to be videotaped to document that the session had indeed taken place. In the high-self-awareness-at-encoding condition, the experimenter ostensibly turned on the camera as participants were about to read the service interaction scenario and turned it off when the filler task was administered. In the high-self-awareness-during-subsequent-rating condition, the experimenter turned the camera on only after the filler task had been administered, as participants were about to rate their overall satisfaction. In the low-self-awareness condition, the camera was left off during the entire session.[1]

Results

Preliminary analyses. As expected, reported self-awareness was higher in the high-self-awareness-during-encoding (M = 5.23) and high-self-awareness-during-rating (M = 5.42) conditions than in the low-self-awareness condition (M = 4.10; $F(2, 101) = 10.17$, $p < .001$). There were no effects of self-awareness on self-reported involvement and self-reported distraction ($ps > .23$).

Satisfaction. Although all participants underwent the same procedure—memorizing the details of the service interaction, completing a filler task, and then rating their satisfaction with the service from memory—the reported satisfaction with the service varied depending on whether and when self-awareness was raised ($F(2, 101) = 5.06$, $p < .01$), as Figure 2 illustrates. Planned contrasts show that with a service scenario involving a negative outcome, raising self-awareness when the service is being evaluated increased satisfaction relative to a condition of low self-awareness ($M_{low-SA} = 3.03$ versus $M_{high-SA-rating} = 3.81$; $F(1, 101) = 5.66$, $p < .02$). This finding is consistent with the findings of Study 1 in the negative-outcome condition. In contrast, raising self-awareness when facts about the service are being encoded did not influence satisfaction relative to a condition of low self-awareness ($M_{low-SA} = 3.03$ versus $M_{high-SA-encoding} = 2.94$; $F < 1$). This pattern of results suggests that the location of the effect of self-awareness on customer satisfaction lies not in how the service interaction

Figure 2
STUDY 2: EFFECTS OF SELF-AWARENESS ON SATISFACTION
(UNDER UNFAVORABLE OUTCOME)
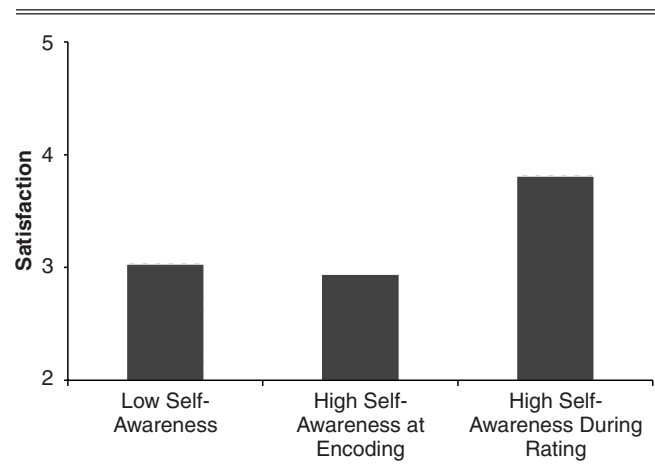
is encoded but in how it is subsequently interpreted and evaluated.

Perceived responsibility. We observed parallel effects of the manipulations on participants' attributions of responsibility for the outcome ($F(2, 101) = 6.03$, $p < .01$). Planned contrasts show that raising self-awareness when participants evaluated the service made them more likely to attribute responsibility for the outcome to themselves rather than to the provider ($M_{low-SA} = 2.50\%$ versus $M_{high-SA-rating} = 37.13\%$; $F(1, 101) = 10.05$, $p < .01$). However, raising self-awareness when participants encoded the service interaction did not significantly affect their attributions of responsibility for the outcome ($M_{low-SA} = 2.50\%$ versus $M_{high-SA-encoding} = 10.92\%$; $F < 1$). This result is also consistent with the interpretation that the location of the effect of self-awareness on customer satisfaction lies not in how the service interaction is encoded but in how it is subsequently interpreted and evaluated. As in Study 1, additional analyses show that the effects of self-awareness on satisfaction were mostly mediated by changes in attribution of responsibility. Addition of the ADI as a covariate in an ANCOVA of the overall satisfaction ratings shows a strong relationship between the ADI and overall satisfaction ($F(1, 100) = 64.32$, $p < .001$), which produces a strong reduction of the effect of self-awareness on satisfaction (84% reduction of the MS), reducing this effect to insignificance ($F(2, 100) = 1.29$, not significant)— a result further confirmed by a Sobel test ($Z = 3.21$, $p < .01$).

Discussion

This study replicates the finding that when service interactions have unfavorable outcomes, contextual cues that raise the customers' self-awareness increase their satisfaction with the service. Here, this effect was observed with a cue that manipulated public self-awareness rather than private self-awareness, as in Study 1. The parallelism between these two studies' findings suggests that both private self-awareness cues and public self-awareness cues can be used to influence customer satisfaction. More important, the results of this study clarify the locus of the self-awareness effect on customer satisfaction. This effect does not seem to lie in a differential encoding of the service interaction;

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[1]Some research suggests that the mere presence of the camera heightens public self-awareness. In this sense, even the low-self-awareness condition might have had slightly elevated (public) self-awareness compared with a baseline. Given that we held the mere presence of the camera constant across conditions, the findings thus reflect the incremental effects of turning the camera on compared with the camera being off.

rather, it seems to lie in how the encoded interaction is subsequently interpreted and evaluated. This finding has important managerial implications. Practically, it means that marketers do not necessarily need to influence customers' self-awareness at the moment of service delivery. Instead, they can influence self-awareness whenever the service interaction is being evaluated, which extends the window of possible intervention. In particular, it may be possible to use self-awareness to influence customer satisfaction even after the service interaction has taken place—a prediction we test in Study 3.

STUDY 3

Study 2's findings—that the effect of self-awareness on customer satisfaction does not lie in a differential encoding of the service interaction but rather in a differential interpretation of the encoded interaction—raise the possibility that self-awareness could be used to influence customer satisfaction even if the interaction has already taken place. To test this possibility, we examined the effects of self-awareness on satisfaction with an interaction that took place several months earlier. Two competing predictions could be made. Consistent with the idea that "older" attitudes should be less malleable than more "recent" attitudes (Mackie and Asuncion 1990), one could argue that satisfaction with distant-past service interactions should be crystallized and, therefore, impervious to subtle manipulations of self-awareness. Alternatively, to the extent that satisfaction—as a judgment—is largely constructed (see Martin and Tesser 1992), one could argue that raising self-awareness during satisfaction assessment could still influence satisfaction even if the interaction has taken place much earlier (and may have already been evaluated).

Another purpose of this study was to generalize the results of the first two studies from simulated service interactions to real-life service interactions. It is indeed possible that satisfaction with real-life service interactions is less sensitive to self-awareness manipulations than satisfaction with a simulated service interaction. To investigate these issues, we manipulated college students' self-awareness and asked them to assess their satisfaction with college courses they were currently taking or courses they had taken in the previous semester. Only courses that the participants disliked were examined.

Method

Under the cover of a study on general preferences, we asked 89 college students to assess their satisfaction with a course. We manipulated two factors between subjects: (1) whether participants had low or high self-awareness and (2) whether the course to be evaluated was one that participants were currently taking (current-episode condition) or one they had taken in the previous semester (past-episode condition). We asked participants in the current-episode condition to list items in different categories that they currently liked or disked (e.g., a book they were reading that they liked). One of the items was a course they were currently taking at the university that they disliked. We asked participants in the past-episode condition to list equivalent items from the past that they liked or disliked (e.g., a book they read at least three years ago that they liked). One of these items was a course they took in the previous semester that

they disliked. The course participants identified at this stage was the target they would be asked to evaluate subsequently. Having participants identify the target up front ensured that the identity of the target itself would not be influenced by self-awareness, which we manipulated next.

As part of a supposedly unrelated study, as in Fenigstein and Levine (1984), we gave participants ten minutes to write a story that included 20 specific words (e.g., "walking," "television"). In the high-self-awareness condition, the story to be written was about the participants themselves, and 5 of the 20 words to be used were self-awareness-inducing words (e.g., "I," "me," "alone"). In the low-self-awareness condition, the story to be written was about a well-known public figure, and the 5 high-self-awareness words were replaced by low-self-awareness equivalents (e.g., "he," "him," "together"). A pretest among 39 participants showed that participants asked to write a story about themselves reported higher self-awareness (M = 5.05) than participants asked to write a story about a public figure (M = 4.03; $F(1, 37) = 7.12$, $p < .02$). There were no differences in reported involvement and distraction (Fs < 1).

After participants completed the story-writing task, we asked them to recall the disliked course they identified before and rated their satisfaction with this course on three seven-point items (e.g., "The course was poor/excellent"; $\alpha = .90$). They then listed all the pros and cons of their experience with this course and subsequently coded each listed pro or con into three categories: "I am most responsible for this," "The professor is most responsible for this," and "Some other situational element is most responsible for this." We used these self-codings to construct a locus of attribution measure.

Results

Satisfaction. There was no main effect of time (when the course was taken) on satisfaction with the course ($p > .1$). However, satisfaction with the course was greater in the high-self-awareness condition (M = 3.46) than in the low-self-awareness condition (M = 2.47; $F(1, 85) = 11.26$, $p < .001$), replicating the finding that self-awareness increases satisfaction when outcomes are unfavorable. Importantly, this effect did not depend on whether the course to be rated was a current course or a course taken in the past (F < 1). That is, self-awareness increased satisfaction both with courses currently being taken ($M_{low-SA} = 2.58$, $M_{high-SA} = 3.65$; $F(1, 85) = 6.61$, $p < .02$) and with courses taken in the previous semester ($M_{low-SA} = 2.37$, $M_{high-SA} = 3.27$; $F(1, 85) = 4.72$, $p < .04$). Therefore, self-awareness may shape current satisfaction with service interactions even if the interactions occurred in the past.

Perceived responsibility. We constructed an ADI by subtracting the proportion of pros or cons attributed to the professor from the proportion of pros or cons attributed to the self ([number of pros and cons attributed to self/total number of pros and cons] − [number of pros and cons attributed to professor/total number of pros and cons]). As we expected, participants attributed the course's pros and cons more to the self (rather than the professor) under high self-awareness (M = −.19) than under low self-awareness (M = −.45; $F(1, 85) = 12.89$, $p < .001$). This effect was not moderated by the time the course was taken (F < 1). Moreover, a 2 × 2 ANCOVA of overall course satisfaction, with the ADI

as a covariate, shows a strong relationship between the ADI and satisfaction (F(1, 84) = 39.64, $p < .001$) that produces a strong reduction of the main effect of self-awareness (MS reduced by 87%), rendering this effect nonsignificant ($p > .1$). These results suggest that the effects of self-awareness on course satisfaction were mediated by changes in attribution, as further supported by a Sobel test (in the current-episode condition, Z = 2.41, $p < .02$; in the past-episode condition, Z = 2.25, $p < .03$).

Discussion

This study shows that self-awareness can also influence satisfaction with real-life service interactions. In addition, it shows that this effect is not limited to ongoing or recent service interactions but also applies to service interactions that occurred much earlier and may have been previously evaluated. Therefore, the window of opportunity for using self-awareness cues to shape customer satisfaction without changing the offer itself could possibly be extensive. Therefore satisfaction judgments may be more malleable than previously believed.

We tested the robustness of these effects in a replication study (Study 3a) among 120 students at another university. The design and procedure were identical, except that we manipulated self-awareness using a video camera, as in Study 2. The results were very similar. Again, self-awareness increased satisfaction with the disliked course (M_{low-SA} = 2.30, $M_{high-SA}$ = 2.86; F(1, 116) = 7.87, $p < .01$), and this effect was not moderated by whether participants were currently taking the course or had taken it earlier (F < 1). Personal attributions of responsibility were also greater under high self-awareness (M = .11) than under low self-awareness (M = −.13; F(1, 116) = 27.80, $p < .0001$). These changes in attribution mediated the effect of self-awareness on course satisfaction (MS reduced by 80%). The similarity of results between Study 3 and this replication (Study 3a) again suggests that manipulations of both private and public self-awareness have similar effects on customer satisfaction.

STUDY 4

Although Study 3 and its replication involved real-life service interactions, these studies still involved a lab setting. Given the objective of this research, it is important to test the effects documented in the first three studies in a true field setting. Study 4 examines how self-awareness influences customers' satisfaction with a meal at a cafeteria. In light of the findings of Study 1, we predicted that among customers who were initially not happy with their meal, raising self-awareness would increase satisfaction, whereas among customers who were initially happy with their meal, raising self-awareness would decrease satisfaction.

Method

Participants were 124 students and university employees who had just finished a meal at a university cafeteria and agreed to participate in a supposed survey of customer satisfaction with the food at the cafeteria. A female experimenter approached them as they were exiting the cafeteria. As an operationalization of outcome favorability, participants were initially asked whether they liked the meal they just had at the cafeteria: Those who did were assigned to the positive-outcome condition; those who did not were

assigned to the negative-outcome condition. Participants were then led to a station where they completed the satisfaction survey. Consistent with research showing that the presence of an audience increases public self-awareness (Buss 1980; Duval, Silvia, and Lalwani 2001), participants in the high-self-awareness condition completed the survey while the experimenter, standing less than two feet away, silently observed them; participants in the low-self-awareness condition completed the survey while the experimenter, standing more than six feet away, ostensibly looked away (Argo, Dahl, and Manchanda 2005; Goukens, Dewitte, and Warlop 2009). As the main dependent measure, participants rated their satisfaction with the meal they just had on three seven-point items (e.g., "very satisfied/dissatisfied"; α = .87). To explore whether any effect of self-awareness would carry over to a more general satisfaction with the cafeteria, participants were also asked to rate the cafeteria on six seven-point items (e.g., "The cafeteria cares about my needs as a customer"; α = .75).

To pretest the manipulation of self-awareness, 40 participants, who were either ostensibly observed by an experimenter or not observed, were given a series of sentences written in Russian and were asked to guess whether the words that were underlined referred to first-person pronouns (e.g., "I," "me," "mine") or to other-person pronouns (e.g., "he/she," "him/her," "his/her"; Smeesters, Wheeler, and Kay 2009). Previous research has shown that high self-awareness increases the use of first-person pronouns (Davis and Brock 1978). As expected, participants who were closely observed by the experimenter were more likely to identify the underlined words as first-person pronouns (M = 17.3) than participants who were not observed (M = 15.2; F(1, 38) = 4.75, $p < .05$).

Results and Discussion

We submitted participants' ratings of satisfaction with the meal to a 2 (self-awareness) × 2 (outcome favorability) ANOVA. Satisfaction was understandably greater when the outcome (initial evaluation) was favorable (M = 5.25) than when it was unfavorable (M = 3.46; F(1, 120) = 96.95, $p < .001$). More important, this effect was qualified by a significant interaction with self-awareness (F(1, 120) = 11.73, $p < .001$). As in the previous studies, when the outcome (initial evaluation) was unfavorable, satisfaction with the meal was greater under high self-awareness (M = 3.77) than under low self-awareness (M = 3.16; F(1, 120) = 4.67, $p < .04$). However, as observed in Study 1, when the outcome was favorable, satisfaction with the meal was lower under high self-awareness (M = 4.93) than under low self-awareness (M = 5.57; F(1, 120) = 7.68, $p < .01$). Similar analyses of overall satisfaction with the cafeteria show no effects of the manipulations ($ps > .14$).

This study suggests that self-awareness cues can also influence customer satisfaction in a field setting. However, the effects seem to be limited to satisfaction with the focal interaction and do not seem to carry over to satisfaction with the provider as a whole. This boundary makes theoretical sense insofar as self-awareness should increase internal attributions for specific service-interaction outcomes rather than to general provider performance. It could be argued that these findings were driven by impression-management motives triggered by the presence of the interviewer in the

high-self-awareness condition. Participants may have been less willing to report extreme ratings when being closely observed by the interviewer. However, given that the results closely replicated those of Studies 1 and 3, in which self-awareness was manipulated privately, impression management was likely not the real explanation.

STUDY 5

Before self-awareness cues can be used as a means to influence customer satisfaction, potential boundaries of these effects need to be clarified. In all the service interactions examined in the previous studies, there was room for personal attributions of responsibility for the outcome. How does self-awareness influence satisfaction with a service when the customer bears absolutely no responsibility for the outcome? Study 5 tests the prediction that in such situations, the previously documented effect of self-awareness may not hold and could even reverse. This is because higher self-awareness may make it more salient that the customers are *not* responsible for the outcome and possibly trigger ego-defense motives (Gibbons 1990; Silvia and Duval 2001).

Method

We gave 110 students a version of the copy service scenario used in the previous studies and asked them to rate their overall satisfaction with the copy service. One factor manipulated participants' private self-awareness with the presence of a small mirror, as in Study 1. The second factor manipulated the customer's responsibility for the outcome of the service interaction, which was unfavorable for all participants. In the mixed-responsibility condition, the scenario was the same as the one used in the previous studies, providing opportunities for both provider and personal attributions for the negative outcome. In the no-responsibility condition, all information that might imply a possible responsibility of the customer was removed, providing no opportunity for personal attributions. The dependent measures were the same as in Study 1.

Results

Satisfaction. Satisfaction was greater when there was mixed responsibility (M = 3.32) than when the customer had no responsibility at all (M = 2.93; F(1, 106) = 3.90, p = .05). More important, there was a significant interaction between self-awareness and responsibility (F(1, 106) = 10.77, p < .001). As Figure 3 illustrates, when there was mixed responsibility, self-awareness increased satisfaction, as in the previous studies (M_{low-SA} = 3.00 versus $M_{high-SA}$ = 3.63; F(1, 106) = 5.05, p < .03). However, when the customer clearly had no responsibility, self-awareness decreased satisfaction (M_{low-SA} = 3.26 versus $M_{high-SA}$ = 2.60; F(1, 106) = 5.74, p < .02). Therefore, when the customer has absolutely no responsibility for the unfavorable outcome, increasing self-awareness does not increase satisfaction and may even backfire.

Perceived responsibility. Personal attributions for the outcome (ADI) were greater in the mixed-responsibility condition (M = 29.54) than in the no-responsibility condition (M = –12.58; F(1, 106) = 24.21, p < .0001), indicating that the manipulation of responsibility was effective. More important, there was an interaction between self-awareness and responsibility (F(1, 106) = 10.59, p < .01). When there was

Figure 3
STUDY 5: EFFECTS OF SELF-AWARENESS AND OBJECTIVE RESPONSIBILITY ON SATISFACTION
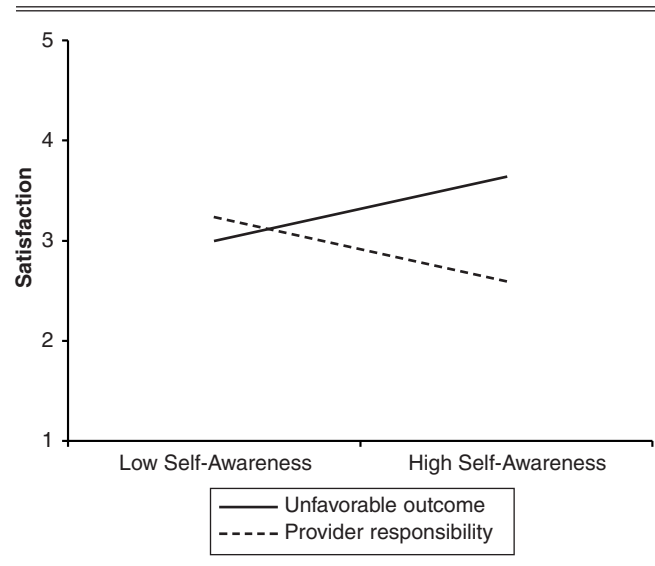
mixed responsibility, personal attributions for the outcome were greater in the high-self-awareness condition (M = 43.12) than in the low-self-awareness condition (M = 15.96; F(1, 106) = 4.85, p < .03), as in the previous studies. However, when the customer had no responsibility, personal attributions for the outcome were lower in the high-self-awareness condition (M = –26.85) than in the low-self-awareness condition (M = 1.70; F(1, 106) = 5.77, p < .02), indicating that high self-awareness may make it more salient to the customer that he or she is not responsible for the outcome. Again, additional analyses confirmed that the effects of self-awareness on satisfaction were mediated by attributions of responsibility (MS reduced by 84.3% in ANCOVA; in the no-responsibility condition, Sobel test Z = –2.27, p < .03; in the mixed-responsibility condition, Z = 2.10, p < .04).

Discussion

This study shows that though raising self-awareness may increase the overall satisfaction with service interactions with an unfavorable outcome, it will only do so when the customer bears at least some responsibility for the outcome. If responsibility for the outcome rests entirely with the provider, raising customers' self-awareness would not increase their satisfaction and may even decrease it. This is because higher self-awareness may make it more salient that the customers bear no responsibility for the outcome of the interaction and may trigger ego-defense motives.

STUDY 6

The purpose of this final study was to provide another field demonstration that self-awareness cues can be used to influence customer satisfaction. An additional objective was to further investigate the notion that this effect may depend on the degree to which customers can be held responsible for the outcome. This study examined how the presence of mirrors in the service desk area of an actual clothing store

influences customers' satisfaction with the items they are about to return or exchange.

Method

We conducted this study in a large clothing store in New York City. Participants were 122 female shoppers who were about to return or exchange a previously purchased item at the store's customer service desk. In the high-self-awareness condition, several mirrors were discreetly placed around the customer service desk area so that they would be visible to customers who were waiting in line. In the low-self-awareness condition, the mirrors were removed (see Figure 4). The two conditions were rotated periodically when there were no customers in the area. To ensure that the mirrors had a chance of being noticed, the experimenter only approached customers who had been waiting in line for at least a couple of minutes. Participants were told that university researchers not affiliated with the store were interested in studying customer satisfaction with retail stores in general. Customers who agreed to participate were asked to briefly explain orally why they were returning or exchanging some items—explanations that the experimenter wrote down. Participants were then handed a clipboard with a short satisfaction questionnaire, which they completed on their own before their turn at the service desk. This was to ensure that the dependent measure could not be influenced by the service desk agents who were aware of the mirrors (though not of the study's hypotheses). The main dependent measure was participants' satisfaction with the set of items they were about to return or exchange, which participants rated on a single seven-point scale ("very dissatisfied/very satisfied"). To explore whether any effect of self-awareness would carry over to a more general satisfaction with the store, participants were also asked to rate their overall satisfaction with the store on a similar item.

Results and Discussion

Using the coding of seven independent judges (who were blind to the conditions), we categorized the reasons that par-

ticipants expressed for returning or exchanging items as (1) primary customer responsibility (e.g., "I changed my mind"), (2) primary store responsibility (e.g., "The item was damaged"), or (3) ambiguous (e.g., "I don't like the fit").[2] We submitted participants' satisfaction with the items to a 2 (self-awareness) × 3 (responsibility) ANCOVA with day of data collection, age, and waiting time as control variables. The analysis revealed a significant self-awareness × responsibility interaction ($F(2, 107) = 3.37$, $p < .04$). As Figure 5 illustrates, when customers were primarily responsible for the return or exchange, self-awareness again increased their satisfaction with the items ($M_{low-SA} = 3.57$ versus $M_{high-SA} = 4.67$; $F(1, 107) = 5.23$, $p < .03$). However, self-awareness did not significantly influence satisfaction with the items when the responsibility rested primarily with the store ($M_{low-SA} = 3.89$ versus $M_{high-SA} = 2.56$; $F(1, 107) = 1.95$, $p = .17$) or when the responsibility was ambiguous ($M_{low-SA} = 3.72$ versus $M_{high-SA} = 3.55$; $F < 1$)[3] A similar analysis of participants' satisfaction with the store did not reveal any significant differences across conditions ($Fs < 1$).

The results show that subtle cues, such as the presence of mirrors, can influence customer satisfaction with a real

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[2]The seven judges were members of the first author's research lab. They were given the list of reasons items were returned and were asked to ascribe them to the three categories of responsibility. Reasons that at least six of the seven judges considered primarily the customer's responsibility were classified as such, reasons that at least six of the judges considered primarily the store's responsibility were classified as such, and the remaining reasons were classified as ambiguous. Because the reasons for return or exchange were beyond our experimental control, the final cell sizes were unbalanced with respect to the responsibility factor: 56 returns/exchanges were classified as primarily the customer's responsibility (30 in the high-self-awareness condition and 26 in the low-self-awareness condition), 41 returns/exchanges were classified as primarily the store's responsibility (30 in the high-self-awareness condition and 26 in the low-self-awareness condition), and 15 returns/exchanges were classified as ambiguous (8 in the high-self-awareness condition and 7 in the low-self-awareness condition).

[3]Although there appears to be a reversal of the effect of self-awareness under conditions of clear store responsibility—a backfiring effect similar to that observed in Study 5—this effect did not reach significance in this study because of the limited number of observations in this condition.

Figure 4
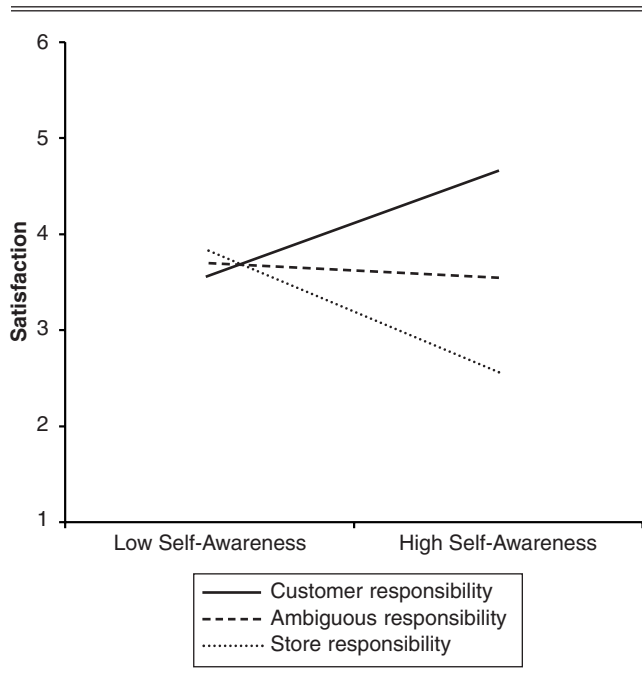STUDY 6: MANIPULATION OF SELF-AWARENESS IN A RETAIL STORE

Low-Self-Awareness Condition

High-Self-Awareness Condition

Figure 5
STUDY 6: EFFECTS OF SELF-AWARENESS AND OBJECTIVE
RESPONSIBILITY ON SATISFACTION

transaction in an actual retail environment. However, this effect was more likely to be observed when the customers had substantial responsibility for the outcome than when their responsibility was more limited. This contingency is directionally consistent with the findings of Study 5, except that in this particular setting the degree of customer responsibility required to observe a satisfaction-enhancement effect of self-awareness appeared to be higher. This may be because, by virtue of self-selection, participants in this study were less likely to accept blame for having to return or exchange an item.

GENERAL DISCUSSION

The results from six studies suggest that subtle cues that raise customers' self-awareness can influence their reported satisfaction with service providers, even if the objective service performance remains constant. Specifically, when customers bear significant responsibility for the negative outcome of a service interaction, cues that heighten the customers' self-awareness can increase their satisfaction with the service provider. However, when the outcome of a service interaction is favorable, the effect reverses: Cues that heighten self-awareness tend to decrease customers' satisfaction with the service provider. That the findings were very similar with public and private manipulations of self-awareness suggests that these effects are not driven by the triggering of impression-management motives that encourage moderation under high public self-awareness. Rather, mediation analyses show that these effects are mainly due to shifts in the locus of attribution under heightened self-awareness. Specifically, when there is substantial customer responsibility for a given outcome, high self-awareness increases customers' tendency to attribute responsibility to themselves rather than the provider. As a result, self-aware

customers' satisfaction tends to increase when the outcome is unfavorable because they take a greater share of the blame, but it tends to decrease when the outcome is favorable because they claim a greater share of the credit. The source of these effects does not lie in a differential encoding of the service interaction under high versus low self-awareness but rather in a differential interpretation of the encoded inter- action when it is evaluated.

In addition, the results provide insights into the extent to which these effects generalize across situations. The effects of self-awareness appear to apply to a wide range of service interactions. These effects were observed with different simulated retail interactions (Studies 1, 1a, 2, and 5), satis- faction with different college courses (Studies 3 and 3a), satisfaction with meals at a university cafeteria (Study 4), and satisfaction with purchased items at a clothing store (Study 6). The effects also hold for a variety of self-awareness manipulations, covering both private and public dimensions of self-awareness, including small mirrors (Studies 1, 5, and 6), personal questions (Study 1a), self-referencing during story writing (Study 3), video cameras (Studies 2 and 3a), and presence of an audience (Study 4). Finally, these effects seem to hold for recent and ongoing service interactions as well as for service interactions that occurred well in the past (Study 3).

Nevertheless, the boundaries of these effects need to be recognized. First, the findings show that self-awareness is more likely to influence satisfaction if it is raised when the service interaction is being evaluated. In real life, it may not always be possible to know a priori when customers are most likely to form their evaluations of service interactions. In such cases, self-awareness may need to be elevated throughout the service interaction. However, there are situa- tions in which the timing of likely summary evaluation is more predictable. This is the case, for example, with extended service interactions that are not easily broken down and have clearly marked end points (e.g., movies, col- lege courses, surgeries). This is also the case when mar- keters explicitly solicit summary evaluations (e.g., end-of- the-semester course evaluations). Such settings make it easier to induce self-awareness coincident with the timing of evaluation.

A second boundary of these effects lies in the degree to which the consumer can be held responsible for the out- come of a service interaction. As Studies 5 and 6 show, when customers bear little responsibility for a negative out- come, raising their self-awareness will not increase their satisfaction and may even backfire. It is only when cus- tomers' responsibility for negative outcomes is sufficiently high that self-awareness can increase their satisfaction. What "sufficiently high customer responsibility" means, however, is not totally clear. In most of our studies, highly self-aware participants were more willing to accept some of the blame as long as there was mixed responsibility for a negative outcome. However, in Study 6, it was only those customers who were clearly responsible for the outcome who exhibited this effect. This implies that there may be dif- ferent thresholds of changeable perceptions of responsibil- ity across settings. This point notwithstanding, this bound- ary condition means that using self-awareness to increase satisfaction (decrease dissatisfaction) with unfavorable out- comes is more likely to be effective in settings in which cus-

tomers have a greater role in product/service performance, including many services (e.g., consulting, education) and products requiring substantial customer coproduction (e.g., software, technology).

A third boundary condition involves the restriction of the effects of self-awareness on satisfaction to the focal service interaction. In Studies 4 and 6, we found that though self-awareness influenced satisfaction with the focal interaction (the meal just taken at the cafeteria and the items to be returned or exchanged, respectively), this effect did not carry over to more global aspects of satisfaction (satisfaction with the cafeteria, satisfaction with the clothing store). Theoretically, this boundary makes sense because what self-awareness does is to change consumers' attributions for particular outcomes (e.g., why a dress needed to be returned).

A limitation of this research is that it examines only the effects of self-awareness on self-reported satisfaction. Further research should assess whether these findings extend to "true" private customer satisfaction and last over time. A way to examine these issues would be to use more behavioral indicators of customer satisfaction, such as loyalty or word of mouth. However, note that even if these effects were limited to self-reported satisfaction (rather than to true private satisfaction), these findings would still be significant because, in many managerial settings, judgments of satisfaction are themselves important. For example, many incentive structures are directly linked to self-reports of customer satisfaction (e.g., teaching evaluations at universities). In a related issue, this research speaks only to "short-term" satisfaction that arises from single interactions with service providers ("transactional" satisfaction) rather than to "long-term" satisfaction that builds over time with repeated interactions ("relational" satisfaction), which logically should be less prone to the effects documented here.

Finally, it could be argued that raising customers' satisfaction without changing the objective level of product/service performance would be unethical. However, this may not necessarily be the case. It depends on whether customers' "baseline level" of satisfaction in absence of self-awareness inducement is commensurate with their true responsibility for the outcome. If customers have a tendency to "overblame" providers for outcomes for which the customers are actually responsible, raising their self-awareness might be ethically justifiable. Moreover, the finding that raising customers' self-awareness may backfire when they bear little responsibility for the outcome provides some safeguard against possible abuses of the method. We leave these and other issues for further research to address.

REFERENCES

Argo, Jennifer J., Darren W. Dahl, and Rajesh V. Manchanda (2005), "The Influence of a Mere Social Presence in a Retail Context," *Journal of Consumer Research*, 32 (September), 207–212.

Buss, Arnold H. (1980), *Self-Consciousness and Social Anxiety*. San Francisco: Freeman.

Buss, David M. and Michael F. Scheier (1976), "Self-Consciousness, Self-Awareness, and Self-Attribution," *Journal of Research in Personality*, 10 (4), 463–68.

Carver, Charles S. and Michael F. Scheier (1978), "Self-Focusing Effects of Dispositional Self-Consciousness, Mirror Presence, and Audience Presence," *Journal of Personality and Social Psychology*, 36 (3), 324–32.

——— and ——— (1981), *Attention and Self-Regulation: A Control-Theory Approach to Human Behavior*. New York: Springer-Verlag.

Davis, Deborah and Timothy C. Brock (1978), "Use of First-Person Pronouns as a Function of Increased Objective Self-Awareness and Performance Feedback," *Journal of Experimental Social Psychology*, 11 (4), 381–88.

Duval, T. Shelley (1976), "Conformity on a Visual Task as a Function of Personal Novelty on Attitudinal Dimensions and Being Reminded of the Object Status of Self," *Journal of Experimental Social Psychology*, 12 (1), 87–104.

——— and Neal Lalwani (1999), "Objective Self-Awareness and Causal Attributions for Self-Standard Discrepancies: Changing Self or Changing Standards of Correctness," *Personality and Social Psychology Bulletin*, 25 (10), 1220–29.

——— and Paul J. Silvia (2002), "Self-Awareness, Probability of Improvement, and the Self-Serving Bias," *Journal of Personality and Social Psychology*, 82 (1), 49–61.

———, ———, and Neal Lalwani (2001), *Self-Awareness & Causal Attribution: A Dual Systems Theory*. Norwell, MA: Kluwer.

——— and Robert A. Wicklund (1972), *A Theory of Objective Self-Awareness*. New York: Academic Press.

——— and ——— (1973), "Effects of Objective Self-Awareness on Attribution of Causality," *Journal of Experimental Social Psychology*, 9 (1), 17–31.

Fejfar, Michele C. and Rick H. Hoyle (2000), "Effect of Private Self-Awareness on Negative Affect and Self-Referent Attribution: A Quantitative Review," *Personality and Social Psychology Review*, 4 (2), 132–42.

Fenigstein, Allan and Michael P. Levine (1984), "Self-Attention, Concept Activation, and the Causal Self," *Journal of Experimental Social Psychology*, 20 (3), 231–45.

———, Michael F. Scheier, and Arnold H. Buss (1975), "Public and Private Self-Consciousness: Assessment and Theory," *Journal of Consulting and Clinical Psychology*, 43 (4), 522–27.

Folkes, Valerie S. (1984), "Consumer Reactions to Product Failure: An Attributional Approach," *Journal of Consumer Research*, 10 (4), 398–409.

Gale, Bradley T. (1994), *Managing Customer Value: Creating Quality & Service That Customers Can See*. New York: The Free Press.

Gibbons, Frederick X. (1990), "Self-Attention and Behavior: A Review and Theoretical Update," in *Advances in Experimental Social Psychology*, Vol. 23, Mark P. Zanna, ed. San Diego: Academic Press, 249–303.

Goukens, Caroline, Siegfried Dewitte, and Luk Warlop (2009), "Me, Myself, and My Choices: The Influence of Private Self-Awareness on Choice," *Journal of Marketing Research*, 46 (October), 682–92.

Hastie, Reid and Bernadette Park (1986), "The Relationship Between Memory and Judgment Depends on Whether the Judgment Task Is Memory-Based or Online," *Psychological Review*, 93 (3), 258–68.

Hauser, John R. and Don Clausing (1988), "The House of Quality," *Harvard Business Review*, 66 (3), 63–73.

Hull, Jay G. and Alan S. Levy (1979), "Organizational Functions of the Self: Alternative to the Duval and Wicklund Model of Self-Awareness," *Journal of Personality and Social Psychology*, 37 (5), 756–68.

———, Ronald R. Vantreuren, Susan J. Ashford, Pamela Propsom, and Bruce W. Andrus (1988), "Self-Consciousness and the Processing of Self-Relevant Information," *Journal of Personality and Social Psychology*, 54 (3), 452–65.

Lichtenstein, Meryl and Thomas K. Srull (1987), "Processing Objectives as a Determinant of the Relationship Between Recall and Judgment," *Journal of Experimental Social Psychology*, 23 (2), 93–118.

Mackie, Diane M. and Arlene G. Asuncion (1990), "On-Line and Memory-Based Modification of Attitudes: Determinants of Message Recall-Attitude Change Correspondence," *Journal of Personality and Social Psychology*, 59 (1), 5–16.

Martin, Leonard L. and Abraham Tesser (1992), *The Construction of Social Judgments*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Oliver, Richard L. (1980), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research*, 17 (November), 460–69.

——— and Wayne S. DeSarbo (1988), "Response Determinants in Satisfaction Judgments," *Journal of Consumer Research*, 14 (4), 495–507.

Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, 49 (Autumn), 41–50.

Pham, Michel Tuan and A.V. Muthukrishnan (2002), "Search and Alignment in Judgment Revision: Implications for Brand Positioning," *Journal of Marketing Research*, 39 (February), 18–30.

Shavitt, Sharon, Suzanne Swann, Tina M. Lowrey, and Michaela Wanke (1992), "The Interaction of Endorser Attractiveness and Involvement in Persuasion Depends on the Goal That Guides Message Processing," *Journal of Consumer Psychology*, 3 (2), 137–62.

Silvia, Paul J. and Thomas S. Duval (2001), "Objective Self-Awareness Theory: Recent Progress and Enduring Problems," *Personality and Social Psychology Review*, 5 (3), 230–41.

Smeesters, Dirk, S. Christian Wheeler, and Aaron C. Kay (2009), "The Role of Interpersonal Perceptions in the Prime-to-Behavior Pathway," *Journal of Personality and Social Psychology*, 96 (2), 395–414.

Tsiros, Michael, Vikas Mittal, and William T. Ross (2004), "The Role of Attributions in Customer Satisfaction: A Reexamination," *Journal of Consumer Research*, 31 (2), 476–83.

Van Raaij, Fred W.F. and Ad T.H. Pruyn (1998), "Customer Control and Evaluation of Service Validity and Reliability," *Psychology & Marketing*, 15 (8), 811–32.

Webb, William M., William Schneiderman, Kerry L. Marsh, and Bob Davis (1989), "Interaction Between Self-Monitoring and Manipulated States of Self-Awareness," *Journal of Personality and Social Psychology*, 56 (1), 70–80.