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Different streams of research offer seemingly conflicting predictions as to the effects of analyzing reasons for preferences on the attitude-behavior link. The authors apply these different theoretical accounts to a new product scenario and identify conditions under which analyzing reasons for brand preferences can increase or decrease the predictive value of reported preferences. Consistent with dual-process theories of persuasion, in Study 1 the authors find that reasons analysis increases the link between attitude and behavior when the measure of behavior closely follows attitude measurement. In contrast, and consistent with research by Wilson and colleagues (e.g., Wilson et al. 1989) on the disruptive effects of reasons analysis, the authors find that thinking about reasons significantly decreases the attitude-behavior correlation when the observed behavior occurs after a substantial delay. Study 2 not only replicates this finding but also suggests that the timing of the reasons task can be an important moderator of the disruption effect. Specifically, the authors draw on the literature on accountability effects to show that even when there is a delay between attitude and behavior measurement, reasons analysis leads to an increase in the attitude-behavior link, as long as reasons are analyzed after attitude measurement. Finally, in Study 3, the authors validate the account of the effects of reasons analysis by obtaining parallel findings for attitude persistence. Together, the studies offer preliminary advice to both practitioners and academics regarding the potential effects of asking consumers to think about why they like or dislike certain products.

The Effects of Analyzing Reasons for Brand Preferences: Disruption or Reinforcement?

Consumers often analyze the reasons for their brand preferences, either willfully or as a consequence of marketer tactics. For example, such reasons analysis may occur as a result of survey questions, behavioral predictions (Hoch 1985; Koriat, Lichtenstein, and Fischhoff 1980), or prompts by certain types of advertising. For example, some advertisements encourage consumers to think of the reasons they would prefer a particular brand (Pechmann and Estaban 1994). In this article, we study whether such reasons analysis affects consumer purchase behavior. In particular, we

examine the effect that the act of analyzing reasons has on the link between brand attitudes and subsequent behavior.

Several streams of research imply that thinking about attitudes should increase the strength of the attitude-behavior link. For example, research based on dual-process models of persuasion (Chaiken, Liberman, and Eagly 1989; Petty and Cacioppo 1986) indicates that greater cognitive processing of attitude-relevant information increases the accessibility of this information, as well as of the attitude itself, which thus increases the possibility that these attitudes will guide behavior (see also Fazio, Powell, and Williams 1989). Another stream of research based on the effects of accountability (Tetlock 1992; Tetlock and Boettger 1989) suggests that justifying attitudes increases the evaluative consistency of underlying cognitions, which thus bolsters the attitude and the link to subsequent behavior (Tesser, Martin, and Mendolia 1995).

These related areas of research all imply that reasons analysis should increase the strength of the link between attitudes and behavior. However, research by Wilson and colleagues (for a review, see Wilson et al. 1989) on the dis-

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ruption effect has repeatedly documented that reasons analysis can result in a breakdown of the link between attitude and behavior. Using attitude objects as diverse as puzzles, paintings, and dating relationships, this research stream finds that people who are asked to think about the reasons for their preferences display a significantly weaker attitude-behavior link than people who are not asked to think about reasons (Wilson et al. 1984, 1989; Wilson, Kraft, and Dunn 1989).

Our principal goal in the current study is to bring these different streams of research together to examine the effects of analyzing reasons for brand preferences in a new product context. In particular, we seek to identify when such reasons analysis produces a disruptive or a reinforcing effect on the attitude-behavior link (as well as any related effect on attitude persistence). Our results offer practical implications for advertisers and market researchers who are interested in knowing whether and when asking consumers to think about the reasons for their preferences increases or decreases the possibility of brand purchase. From a conceptual standpoint, our findings enable us to link various theoretical models that make conflicting predictions as to the effects of reasons analysis.

THE DISRUPTIVE EFFECT OF ANALYZING REASONS

Wilson and colleagues (e.g., Wilson et al. 1984, 1993) have reliably demonstrated that analyzing reasons can reduce the predictive power of attitudes. In a typical experiment, Wilson and colleagues (1984) asked a group of student participants to evaluate a set of puzzles in terms of how interesting or boring they found each puzzle. Participants in the reasons condition were told to think about the reasons for their preferences as they played with the puzzles, whereas participants in the control condition were not given such instructions. After playing with the puzzles for five minutes, reasons participants were asked to write down the reasons for their attitudes toward each puzzle, whereas control participants were asked questions about their academic background. Attitudes toward the puzzles were measured for all participants. As a measure of behavior, all participants were then given a fifteen-minute free-play period, in which they could choose the puzzle they wanted to play with and for how long (participants could also choose not to play with any puzzle). Participants in the reasons condition (compared with control participants) exhibited a significantly lower correlation between their attitudes toward the various puzzles and their behavior toward them, as was manifested by the amount of time they chose to play with each puzzle in the free-play period.

Wilson has proposed a broad-based mechanism for the disruption effect. According to this mechanism, disruption is likely to occur when people are not fully aware of the reasons for their preferences, such as when people lack knowledge about the attitude object (Wilson, Kraft, and Dunn 1989) or when attitudes are based primarily on affect (Wilson et al. 1989). Under these circumstances, when people are asked to report reasons for preferences, they tend to focus disproportionately on cues that can be verbalized easily to the relative neglect of cues that cannot (Wilson et al. 1989, 1993). For example, as discussed by Wilson and colleagues (1993), people may have a positive reaction to a good painting but may not be able to say why they like the painting. When forced to think of reasons, instead of trying to access the complex mixture of thoughts and emotions aroused by the painting, they

may focus on some easily verbalized cue, such as "I find the subject matter boring."¹ Furthermore, when such reasons are made salient, people tend to change their attitudes in the direction of the articulated reasons through a process of self-attribution (Bem 1967). Thus, the attitudes reported by people who analyze reasons for preferences tend to be biased by a subset of the total set of cues that would otherwise have guided their attitudes.

However, behavior may not be guided by this biased set of cues. Specifically, in the experimental paradigm used by Wilson and colleagues, behavior is typically measured on the basis of continuous interaction with the attitude object (e.g., playing with puzzles for a long time, keeping a painting for a few days). As a result of this continuous interaction, the cues that had been made temporarily salient by the reasons manipulation decrease in influence, whereas "true" (chronic) evaluations tend to reassert themselves (Wilson et al. 1993). Thus, behavior is guided by such chronic or default evaluations, which are based on reactions to the overall features of the object, whereas reported attitudes are based on a biased subset of cues. Such a mismatch between the bases of attitude and behavior is the crucial factor that leads to the disruption of the attitude-behavior link (see also Millar and Tesser 1986b).

THE DISRUPTION EFFECT IN A PURCHASE CONTEXT

The consumer purchase context provides an interesting domain in which to observe the effects of reasons analysis, inasmuch as it facilitates the occurrence of such a mismatch between attitudes and behavior, particularly in the case of low-involvement packaged goods. At the time of initial exposure to brand information (e.g., through advertising), the consumer is typically exposed to a mixture of both easily verbalized cues (e.g., information on product attributes) and cues that are relatively harder to verbalize (e.g., visual cues, such as packaging). An initial attitude toward the product is likely to be based on this overall set of cues. However, at the time of choice, the cues that were salient at the time of attitude formation may no longer all be present or accessible. Instead, behavior is often guided by the (primarily visual) cues available in the purchase context, such as packaging. In such a situation, we propose that analyzing reasons for initial preferences leads to a disruption of the attitude-behavior link.

Consider, for example, consumers who receive initial information about a new brand of candy. This information might consist of several different types of cues, such as a picture of the candy package, as well as information regarding product attributes, such as the availability and shelf life of the candy. Given that candy is typically a low-involvement, experience product for most consumers and, furthermore, that the brand is unfamiliar to the consumers, it is unlikely that consumers will be aware of the reasons for their preferences (Wilson, Kraft, and Dunn 1989). In such a situation, consumers who are asked to analyze reasons for

¹Consistency theories suggest that people will think of reasons consistent with their initial evaluations. However, in line with Lusk and Judd's (1988) finding that people who are not knowledgeable tend to have inconsistent beliefs, Wilson, Kraft, and Dunn (1989b) suggest that for unfamiliar objects, people may bring to mind reasons that are inconsistent with evaluations. We return to this issue subsequently and outline a boundary condition that enables us to reconcile the predictions made by consistency theories with the disruption effect.

their preferences tend to focus disproportionately on cues that are easily verbalized, such as the product attribute information. In contrast, visual cues, such as the picture of the package, might be relatively neglected, because visual information is typically harder to verbalize (Wilson and Kraft 1988; Wilson et al. 1993). Thus, whereas consumers who do not analyze reasons are likely to incorporate both types of cues in their attitudes, the initial attitudes of consumers who engage in the reasons task are likely to be heavily guided by the easily verbalized cues. At the time of purchase, however, the cues that were present at the time of attitude formation will no longer all be available for use. In particular, easily verbalized elements (such as attribute information) may no longer be an input in the decision. Instead, for a low-involvement product such as candy, the purchase decision is likely to be influenced largely by nonverbalized cues, such as packaging, which are available at the point of purchase. Accordingly, there will be a greater match between the cues that guide attitudes and those that guide behavior for people who did not analyze reasons than for those who did. Consequently, analyzing reasons for brand preferences should lead to a disruption between brand attitudes and choice behavior.

TEMPORAL PROXIMITY OF ATTITUDE MEASUREMENT AND BEHAVIOR

We suggest that disruption should occur in the marketing scenario outlined previously, because the underlying basis for attitudes in the reasons condition will be different from the cues that guide the purchase decision. However, for this effect to occur, there should be a separation in time between the attitude measure and the behavior measure, so that the cues underlying the reported attitude are no longer salient at the time of behavior. If the behavior measure closely follows the attitude measure, the cues underlying initial attitudes should also exert a strong influence on behavior for the reasons participants as well as the control participants and thereby prevent disruption.

Not only should disruption be absent when attitude and behavior measures are proximal, but also, according to various streams of research, analyzing reasons in such a context should increase the strength of the link. According to dual-process models of persuasion (Chaiken, Liberman, and Eagly 1989; Petty and Cacioppo 1986), heightened cognitive processing of message information leads to a strengthening of the link between the attitudes induced by the message and subsequent behavior (Petty, Cacioppo, and Schumann 1983). Although several factors may be responsible for this effect, it has been suggested that greater cognitive elaboration leads to multiple accessing and rehearsal of the attitude schema, which increases the accessibility of the attitude as well as the cues underlying the attitude (Petty and Cacioppo 1986; Zanna, Fazio, and Ross 1994). In turn, greater accessibility produces a stronger link between attitude and behavior (Berger and Mitchell 1989; Fazio, Powell, and Williams 1989).

Although the reasons analysis task is not equivalent in all respects to the type of systematic message elaboration identified by dual-process models of persuasion, it is reasonable to suppose that analyzing reasons for evaluations can lead participants to engage in multiple rehearsal and accessing of their attitudes, as well as the underlying brand information.

As Fazio (1995, p. 252) suggests, any manipulation that "calls one's attention to the associated evaluation will serve as an additional trial of associative learning and strengthen the association." To the extent, therefore, that reasons analysis "call[s] attention to the associated evaluation," this task should lead to increased accessibility of attitudes and underlying cognitions and a concomitant increase in the attitude-behavior link.

Over time, however, neither the initial brand attitudes nor the cues they were based on will be as accessible as they were at the time of exposure. Thus, if a sufficient interval elapses between initial exposure and the purchase decision, people will tend to construct their decisions anew (Feldman and Lynch 1988; Schwarz and Bless 1992; Tourangeau and Rasinski 1988) on the basis of available inputs in the purchase context (e.g., product packaging). When this happens, as argued previously, people who did not analyze reasons are likely to have more of a match between the bases for their initial attitudes and eventual behavior than people who did. Accordingly, analyzing reasons should disrupt the link between attitude and behavior when there is a time lag between these measures but should reinforce the link when the attitude measure is closely followed by the measure of behavior. Thus, we hypothesize an interaction effect of the reasons task and the timing of the behavior measure (immediate versus delayed). Formally, in the specific context under study,

- H₁: Analyzing reasons for brand preferences (versus not analyzing reasons) should lead to (a) a disruption of the link between brand attitudes and purchase behavior when there is a substantial time lag between the attitude and behavior measures and (b) a reinforcement of the link between brand attitudes and purchase behavior when there is no time lag between the attitude and behavior measures.

STUDY 1

Student participants at a U.S. university formed attitudes toward four unfamiliar brands of Canadian candy bars on the basis of both a visual cue (i.e., the product package) and more verbal information that comprised (1) an advertising slogan and some information on the brand's history and (2) information on two attributes: shelf life of the candy bar and its availability in Canadian stores. The verbal information was deliberately pretested and chosen to be fairly nondiagnostic in nature, because the disruption effect is more likely to be observed under such conditions (Wilson et al. 1989). Brand choice was used as the measure of behavior.

A pretest was carried out to check that the packaging cue was relatively difficult to verbalize. One hundred eighteen participants viewed the complete set of information about each candy bar. They were then told that we wanted to find out how easy it would be for them to describe verbally the positives and negatives of some of the different candy-related features about which they were given information. They responded on a 1-7 scale anchored by "Would be difficult (easy) to verbalize exactly why you liked or disliked this feature." As expected, the packaging cue was perceived as the least easy to verbalize. Average ratings were as follows: shelf life = 4.6, availability of product = 4.8, information about company's marketing approach (e.g., "Brand is offered in a wide range of products") = 4.1, packaging = 2.4, and advertising slogan = 4.1 (higher numbers refer to greater ease of verbalizing).

Method

A 2 (the presence/absence of a product-related reasons task) \times 2 (delay/no delay between attitude measurement and actual behavior) between-subjects full-factorial design was used. During a regular class session, 209 graduate management students participated in the study in return for an entry in one of five \$100 lotteries. Participants were presented with a short booklet, which opened with a cover story explaining that the Confectionery Manufacturers Association of Canada (a fictional organization) was interested in the candy preferences of U.S. consumers. After this initial instruction page, participants read that they would be provided information about four real brands of Canadian candy bars that were not available in the U.S. market at the time of the experiment: Crunchie, Caramilk, Mr. Big, and Sweet Marie.

At this stage of the experiment, participants were instructed to begin examining the alternative descriptions and attribute information. The next four pages of the booklet contained (1) an advertising slogan for each of the candy bars (e.g., "Crunchie ... the crispiest, crunchiest candy bar in town"); (2) a brief two-paragraph history of each brand (as mentioned previously, this history for each brand was pretested to be relatively positive but nondiagnostic in content: e.g., "In 1985-86 the brand needed a new strategy, and the idea was quite simple: make Mr. Big BIG! In 1987, the bar was upsized, the pack was flashed with 'now gigantic,' and the catchy line, 'When you're this big, they call you Mister' was used"); and (3) a small table for each of the brands, which contained information on shelf life (ranging from 90 to 120 days) and the availability of the candy bar in Canadian stores (ranging from "limited availability" to "widely available"). As a visual cue, a large computer projection (8' \times 8') of all four candy bar packages was displayed at the front of the room. The projection was kept up throughout the session to aid participants in distinguishing between the different brands of candy while they completed the questionnaire tasks and measures.

To this point, there were no differences across the four experimental conditions. Participants who were assigned to a product-related reasons condition were now asked to give reasons for liking or disliking each of the four candy bars.² The initial instructions were as follows:

In order to aid you in making your evaluations of the candy bars, please write your brief reasons for liking/disliking each candy bar on the following pages. Please do not take more than one minute for each candy bar. Note: The reasons you list will be kept totally anonymous and will not be used as research data. This reason-listing task has been given solely in order to help you arrive at your evaluations. Prior research has shown that completing this task is very helpful in order to

²The disruption studies (see Wilson et al. 1989) not only use the reasons task employed in the current study but also reinforce the manipulation by asking participants to think about reasons even at the time of initial exposure to the attitude objects (e.g., thinking of reasons while playing with the puzzles). In the present study, we were concerned that asking participants to think about reasons during initial exposure to brand information might detract from information processing, leading to lower elaboration and setting up an alternative explanation for any disruption compared with the nonreasons condition. Thus, the reasons manipulation was based solely on the reasons task described.

organize your thoughts. Your responses to all these questions will be kept totally anonymous.

Participants who were assigned to a product-unrelated reasons condition (a control condition) were asked to give reasons related to their choice of schools, majors, and so forth:³

Before we ask you for your evaluations of the candy bars, we would like you to respond to some additional questions that are part of an unrelated survey being carried out by the Marketing Department at UCLA. The survey requires you to briefly write down a couple of reasons for getting an MBA, for choosing the Anderson school, for choosing the major you have taken (plan on taking) in the MBA program, and for choosing the undergraduate major respectively. Please do not take more than one minute for each of these questions. Your responses to all these questions will be kept totally anonymous.

After the reasons task, all participants were asked to evaluate the candy bars they had seen by responding to four attitude scales for each candy bar: "very unfavorable"/"very favorable," "very bad"/"very good," "dislike very much"/"like very much," and "very distasteful"/"very tasty" (Cronbach's alpha = .94). Participants were instructed not to turn back to previous pages while reporting attitudes. If participants were assigned to a condition with no lag between attitude measurement and behavior (the immediate condition), they were then informed that though the experiment itself was over, the sponsors of the research had provided promotional samples of the four brands of candy bars. Participants were asked to indicate which of the four they would like to receive by tearing off the appropriate coupon from a set of four coupons (one for each bar) embedded in the booklet. The selected coupon could be exchanged later for a product sample. Participants did not realize they would receive a product sample until this point in the experiment. Finally, demographic information was collected and participants were thanked.

If participants had been assigned to a condition with a time lag between attitude measurement and behavior (a delay condition), they completed demographic questions after reporting their attitudes toward each of the brands and were thanked for their participation. Five days later,⁴ during the next regularly scheduled class, the experimenters entered the classroom and informed participants that the sponsors of the research had provided promotional samples of the candy bars (as in the immediate condition, this was the first time they learned of a product choice). Participants then completed the choice task described for the immediate conditions. The same images of the candy bar wrappers that participants in the immediate conditions were exposed to when they completed this task were displayed for the delay condition participants. The timing of the experiment was such that all participants across both

³Note that henceforth, when we refer to reasons conditions, we refer to the conditions in which participants analyzed product-related reasons. Participants in control conditions also analyze reasons, but for a product-unrelated task.

⁴The delay period was chosen on the basis of related work in the attitude strength area, which has used delays that range from two days to a week (Haugtvedt and Strathman 1990; Sengupta, Goodstein, and Boninger 1997).

delay and immediate conditions completed the choice measure on the same day (i.e., immediate participants completed the entire experiment on the delay condition participants' second day of the experiment). Participants in the immediate and delay conditions were in different rooms.

Results

There were no significant effects on initial brand attitudes. The critical dependent variable in our study, however, is not attitude itself, but the link between attitude and behavior. Accordingly, we constructed a measure of attitude-behavior consistency by computing the Pearson product-moment correlation between the attitude ratings reported by participants for all the new brands evaluated with a binary measure of choice (participants either chose the evaluated brand or did not; thus, we obtained four attitude-behavior observations from each participant, one for each of the four brands). Following Berger (1992), we then computed an attitude-behavior correlation in each condition on the basis of the total number of attitude-behavior observations in that condition. We then transformed these correlations into Fisher's z scores and analyzed them in a 2 (reasons versus control) \times 2 (immediate versus delay) analysis of variance (ANOVA). The analysis of Fisher's z scores follows the process outlined by Games (1978) and used in several investigations of attitude-behavior correlation (e.g., Berger 1992; Snyder and Kendzierski 1982; Wilson, Kraft, and Dunn 1989). In this ANOVA, the standard error of a transformed z score is given by $1/(n-3)^{1/2}$, where n is the number of attitude-behavior pairs used to compute the correlation. When n is equal for each of the correlation coefficients being contrasted, $1/(n-3)$ gives the known within-cells variance on which the ANOVA may be based. Thus, we computed the ANOVA using the four condition-level Fisher's z scores that represent the attitude-behavior link for each of the conditions and the within-cells variance. Because of missing values, 6 of the original 209 participants were not included in this analysis.

The ANOVA yielded a significant main effect of the elapsed time between attitude measurement and behavior ($F(1, \infty) = 2.98, p < .05$). More important, the two-way interaction was also significant ($F(1, \infty) = 8.72, p < .01$). In H_{1a}

we propose that asking participants to analyze reasons leads to a disruption of the attitude-behavior relationship in the delayed behavior condition. This is precisely what we observe. Participants who were asked to analyze product-related reasons had a significantly lower attitude-behavior correlation ($r = .27$) than did those who were not asked to analyze such reasons ($r = .49, z = 2.45, p < .01$). Conversely, in H_{1b} we hypothesize that analyzing reasons reinforces the strength of the link when behavior is measured immediately after attitudes. As predicted, in the immediate condition, participants who were asked to analyze product-related reasons had a significantly greater attitude-behavior correlation ($r = .54$) than did those who were not asked to analyze these reasons ($r = .42, z = 1.69, p < .05$). These results are summarized in Figure 1.⁵

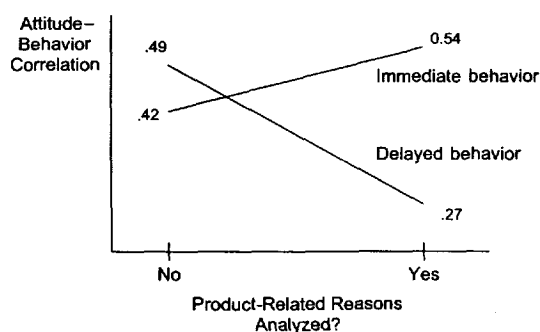
Supplementary Analyses

Process evidence in support of these findings comes from an internal analysis of the conditions in which participants analyzed and reported reasons for brand preferences. For these conditions, each separate reason reported by participants was coded as implying a positive (e.g., "It targets young people, and I'm young, so I'll probably like it"), negative (e.g., "Because it was first formulated in the 1920s, I feel nervous about it"), or neutral (e.g., "All candy is basically the same") evaluation of the brand. Two coders performed this task and had an 86% agreement rate. They discussed any disagreements until they agreed on a common code.

For each participant in the reasons conditions, we formed a valenced reasons index (VRI) for each brand by subtracting the total number of negative reasons from the total number of positive reasons. In the delay condition, in which analyzing reasons leads to disruption, we expect that this index of liking based on reasons will be highly correlated with attitudes but not with choice behavior. This prediction is based on the premise that analyzing reasons leads to a temporary shift in attitudes in the directions of the reasons but does not carry over to subsequent behavior. This argument received support: In the delayed condition, a significant correlation was observed between VRI and brand attitude ($r = .612, p < .001$) but not between VRI and choice ($r = .048, p = .51$). In the immediate condition, however, the index of reasons-based liking should be highly correlated with both attitudes and behavior. Such was found to be the case: VRI was significantly correlated with both attitude ($r = .669, p < .001$) and choice ($r = .441, p < .001$). Thus, analyses based on the reasons-based liking index offer convergent support for our predictions.

Figure 1

DISRUPTION VERSUS REINFORCEMENT: TIME LAG BETWEEN ATTITUDE MEASUREMENT AND BEHAVIOR



⁵As further support for our findings, we computed and analyzed attitude-behavior correlations using brand as the unit of analysis, thus accounting for systematic effects due to brand (for similar analyses, see Berger 1992; Fazio, Powell, and Williams 1989). We computed attitude-behavior correlations within each brand for each of the four different conditions resulting from our 2 (reasons/control) \times 2 (immediate/delayed) design. After converting each of these 16 correlations (four brands and four conditions) to a Fisher's z score, we computed a 2 \times 2 ANOVA with brand as the unit of analysis, which yielded similar results to the main analysis. As expected, the two-way interaction was significant ($F(1, 12) = 30.87, p < .0001$). In each of the three experiments reported in the article, this alternative analysis yielded virtually identical results to the main analysis.

Discussion

Disruption in a consumer context. Study 1 produced two major findings regarding the impact of reasons analysis in a purchase context. First, given a delay between attitude and behavior, we found that analyzing reasons for brand preferences actually weakened the attitude-behavior link in comparison with a control condition. This finding has interesting implications for survey research, wherein consumers often are asked to think about why they like a particular brand. Our disruption finding reveals that such a question may have counterproductive effects. The relevance of this finding is heightened in a consumer context, because there is usually a substantial delay between exposure to brand information and final purchase. As our findings show, such a delay can facilitate disruption.

Our results provide another demonstration of the disruptive effect of analyzing reasons, but in a new context—that of attitude formation toward new products and subsequent choice behavior. Although the disruption effect is well established, our demonstration of the effect in this new context provides an extension of the basic premise that underlies the effect. In prior research, reasons analysis has been shown to yield disruption because the reasons task causes attitudes to become temporarily biased in the direction of the reasons that are brought to mind, whereas behavior (after a sufficient period of interaction with the object) is guided by the true or chronic evaluation of the object (Wilson et al. 1984, 1993). In the current study, the new product scenario makes the existence of such a well-formed true evaluation less likely. Rather, we suggest that disruption occurs because reasons analysis causes initial attitudes to be unduly biased by easily verbalized information, whereas purchase behavior (at delay) is more likely to be guided by the visual cues available in the purchase context.

Although these two types of disruption are thus not identical, they do share the same basic premise: Namely, disruption occurs when reasons analysis causes a mismatch between the basis of attitudes and the basis of behavior. In Wilson and colleagues' (e.g., Wilson et al. 1984, 1993) research, the mismatch occurs because reasons-based attitudes are not guided by "true" evaluations, whereas the behavior is. In the current case, the specific cues available in the purchase context create an explicit mismatch between the underpinnings of reasons-based attitudes and choice behavior.

Resolving disruption effects with reinforcement predictions. The second major finding to emerge from Study 1 relates to what we have termed the "reinforcement" effect: When attitude measurement was followed immediately by the choice measure, reasons analysis significantly increased the attitude-behavior link compared with a control. The importance of this result lies in its potential to reconcile predictions based on the disruption literature with findings that arise from dual-process models of persuasion. Research based on the elaboration likelihood model (Petty and Cacioppo 1986) and the heuristic-systematic model (Chaiken, Liberman, and Eagly 1989) indicates that having people engage in greater cognitive elaboration produces attitudes that are better linked to behavior because of the greater accessibility of attitudes and cognitions produced through elaboration. Although analyzing reasons is different from the elaboration manipulations typically employed in

dual-process experiments, it nevertheless seems a fair supposition that participants who analyze reasons (versus those who do not) should engage in greater processing of the presented information and consequently should display a better link between their attitudes and behavior.⁶ The disruption effect runs contrary to this inference. In recognition of the disruption effect literature, Petty and Cacioppo (1986, p. 190) acknowledge that these "very interesting findings warrant further investigation." Our results identify a moderating variable that can reconcile the conflicting predictions, at least in the specific context under investigation. We find that whereas the disruption effect is likely to occur when there is a time lag between attitudes and behavior, reinforcement takes place when the attitude and behavior measures are proximal.

TIMING OF REASONS TASK

Study 1 demonstrates that though analyzing reasons increases the attitude-behavior link when there is no delay between the two measures, disruption of the link occurs under conditions of delay. This latter finding is of particular importance in the consumer domain, because most purchases take place some time after initial exposure to brand information. An important question thus arises: Are there conditions under which reasons analysis can increase the strength of the link, even when purchase behavior is measured after a delay? In Study 2, we aim to answer this question. Furthermore, just as in Study 1 we attempted to reconcile the disruption effect with opposing models of the attitude-behavior process, in Study 2 we also seek to reconcile conflicting perspectives indicative of reinforcement and disruption effects.

As Wilson and colleagues (1989, p. 299) note, "perhaps the most controversial part [of the mechanism underlying the disruption effect] is the idea that when asked to explain their feelings, people will search for reasons that do not match their initial affect." An opposing perspective is offered by consistency models, such as balance theory (Heider 1958) and the theory of cognitive dissonance (Festinger 1957), which posit that people are motivated to maintain consistency between their beliefs and evaluations regarding any attitude object. These theories imply that when asked to analyze reasons for their preferences, people will tend to think of reasons consistent with their attitudes, which thus reinforces the existing attitude.

Tetlock's (1992) social contingency model (SCM) of accountability suggests that the timing of the reasons task in relation to the attitude measure may determine whether such

⁶An important assumption we have made in comparing these different research streams is that the task of analyzing reasons leads to greater processing of the presented information. If true, this would imply better information recall in the reasons than the control condition (Anderson 1983; Srull and Wyer 1989). We obtained supportive evidence in a pretest using two different measures of recall of the verbal information in Study 1: One consisted of identifying true versus false statements related to this information, and the other consisted of matching each brand with the correct information. Two hours after exposure to the information, participants in the reasons condition performed better than those in the control condition on the item-recall measure (reasons = 32.8, nonreasons = 30.99; $F(1,220) = 4.58, p < .05$) and the list-matching measure (reasons = 2.12, nonreasons = 1.65; $F(1,226) = 6.63, p < .05$). These data thus provide strong support for the position that reasons analysis leads to greater cognitive processing of brand information.

consistency motivations will be observed. In Wilson's disruption experiments (as also in Study 1 of this article), participants in the experimental condition typically analyze and report their reasons before they complete the attitude measures. However, the SCM indicates that when people are asked to justify their evaluations after having committed to a particular position (e.g., after completing an attitude measure), they are likely to devote a major portion of their mental effort to defending and bolstering that position. Postevaluation cognitions in such a case tend to be consistent with the evaluation itself. This should result in a strengthening of the initial attitude, in line with research that predicts that stronger attitudes are obtained when people's thoughts are consistent with initial attitudes (Tesser, Martin, and Mendolia 1995). Thus, the act of analyzing reasons after having reported attitudes should strengthen attitudes as compared with a control situation in which subjects do not analyze reasons. In this regard, the reasons task should have a similar effect to that induced by the recall of attitude-relevant behaviors following attitude formation (Ross et al. 1983; Zanna, Fazio, and Ross 1994). Such autobiographical recall tends to be of a biased nature, in that the recalled behaviors are consistent with the newly formed attitude (Ross, McFarland, and Fletcher 1981). Biased recall has been shown to bolster attitudes, which leads to a stronger link between the initial attitude and delayed measures of behavior (Ross et al. 1983, Experiment 2).

Analogously, we suggest that if participants engage in a reasons analysis task after forming and reporting their attitudes, the reasons will be biased in the direction of the attitudes, which leads to a strengthening of initial attitudes. In turn, such attitude bolstering should be reflected in a stronger link with behavior, even when behavior is measured after a delay (Ross et al. 1983; Zanna, Fazio, and Ross 1994). Thus, simply switching the timing of the reasons task should reverse the disruption effect, even when there is a time lag between the attitude and behavior measures. Accordingly, we predict the following:

H₂: Analyzing reasons for brand preferences (versus not analyzing reasons) should lead to (a) a disruption of the link between brand attitudes and purchase behavior when reasons are analyzed before attitude measurement and (b) a reinforcement of the link between brand attitudes and purchase behavior when reasons are analyzed after attitude measurement.

STUDY 2

Study 2 was a 2 × 2 between-subjects full-factorial design. The factors were (1) the presence or absence of a product-related reasons task and (2) the timing of the reasons task—either before or immediately after attitude measurement. During a regular class session, 153 graduate management students participated in the study in return for an entry in a lottery for a \$100 prize. The basic procedure, cover story, and stimuli used in Study 2 were identical to those in Study 1. As in Study 1, participants exposed to a product-related reasons task (the reasons condition) analyzed reasons for liking or disliking the stimuli (i.e., the candy bar brands), whereas those in the control condition analyzed reasons for their educational choices. All participants in Study 2 had a five-day delay between attitude meas-

urement and the behavioral measure (identical to the delay conditions in Study 1).

Participants who received the reasons task before attitude measurement (reasons before attitudes conditions) followed the order described in Study 1, namely, instructions, examination of stimuli, reasons task, attitude measurement, and finally the behavioral measure. Participants who performed the reasons task after attitude measurement (attitudes before reasons conditions) followed a similar order, but the reasons and attitude tasks were reversed, as follows: instructions, examination of stimuli, attitude measurement, reasons task, and behavioral measure.

Results

Of the 153 initial participants, 150 completed the experiment and are included in the analyses. Unlike in Study 1, the reasons manipulation had an effect on initial attitudes: A more favorable attitude was reported in the control than in the reasons condition (6.6 versus 5.7; $F(1,1596) = 33.7, p < .001$). As noted by Wilson and colleagues (1989), the reasons manipulation may or may not change average attitudes. This depends on whether the reasons task uniformly (i.e., across participants) highlights cues of the same valence (which lead to a change in average attitudes) or whether different participants bring to mind oppositely valenced reasons (which cancel each other out in aggregate and lead to no change). The disruption effect has been reliably obtained, however, irrespective of whether the reasons manipulation caused a change in average attitudes (for a breakdown of study results, see Wilson et al. 1989, p. 295). Accordingly, as in Study 1, our analysis focused on the link between attitude and behavior. Attitude-behavior correlations were computed between participants' reported attitudes toward each of the brands and a binary choice variable. As in Study 1, these correlations were transformed to Fisher's z scores, and a 2 (reasons versus control) × 2 (reasons before attitudes versus attitudes before reasons) ANOVA was run.

The ANOVA yielded a significant main effect of the timing of the reasons task on the attitude-behavior relationship, such that analyzing reasons before reporting attitudes led to lower attitude-behavior relationships than did analyzing reasons after reporting attitudes ($F(1,\infty) = 9.56, p < .01$), which provides evidence that the timing of the reasons manipulation can significantly influence the link between reported attitudes and choice behavior. More important, the hypothesized two-way interaction between the effect of analyzing reasons and the timing of the reasons task was significant ($F(1,\infty) = 13.67, p < .01$). As predicted in H_{2a}, a planned contrast of participants in the control/reasons before attitudes condition ($r = .49$) and participants in the reasons/reasons before attitudes condition ($r = .19$) was significant ($z = 2.97, p < .01$). Note that this result essentially replicates the result obtained in Study 1, which provides further support for the basic hypothesis that asking participants to analyze reasons leads to a disruption of the attitude-behavior link. More interesting, H_{2b} predicts that when reasons are analyzed after reporting attitudes, the reasons analysis task should reverse the disruption effect: Analyzing reasons should increase the strength of the attitude-behavior link as compared with the control situation. A planned contrast within the attitude before reasons condition provided strong support for this prediction: Participants who analyzed reasons had a significantly higher attitude-behav-

ior correlation ($r = .66$) than did those who did not ($r = .48$, $z = 2.25$, $p < .05$). Thus, reversing the order of the reasons and attitude tasks reversed the disruption effect, as we had predicted. For a summary of these results, see Figure 2.

Supplementary Analyses

Convergent support for our attitude-behavior findings was provided by an internal analysis of the conditions in which participants analyzed and reported reasons for brand preferences. As in Study 1, for each participant, we computed a VRI for each brand by subtracting the total number of negative reasons from the total number of positive reasons. In the reasons before attitude conditions, in which analyzing reasons leads to disruption, we expect that this reasons-based liking index will be highly correlated with attitudes but not with choice behavior. This argument received support: We observed a significant correlation between VRI and brand attitude ($r = .586$, $p < .001$) but not between VRI and choice ($r = .062$, $p = .43$). In the attitude before reasons condition, however, in which analyzing reasons leads to reinforcement, the index of reasons-based liking should be highly correlated with both attitudes and behavior. Such was found to be the case: VRI was significantly correlated with both attitude ($r = .601$, $p < .001$) and choice ($r = .432$, $p < .001$). Thus, analyses based on the reasons-based liking index offer convergent support for our predictions.

We provide further insights into the underlying process by examining the evaluative consistency of the reasons generated. We predicted that analyzing reasons after forming and reporting brand attitudes should lead to greater evaluative consistency among these reasons, which thus bolsters brand attitudes and increases the strength of the attitude-behavior link (Tesser, Martin, and Mendolia 1995; Tetlock 1992). To provide support for this prediction, we computed an index of evaluative consistency, defined as the ratio of the total number of either positively or negatively valenced reasons (whichever is greater) to the total number of reasons listed for each brand (Tetlock 1983). We compared this index for the two conditions in which participants analyzed reasons for brand preferences. The smaller the value of the index, the lower was the evaluative consistency among the reasons generated. As expected, evaluative consistency

was found to be higher in the attitude before reasons (evaluative consistency = .75) than the reasons before attitude (evaluative consistency = .67, $F(1, 317) = 6.70$, $p < .01$) condition.

Discussion

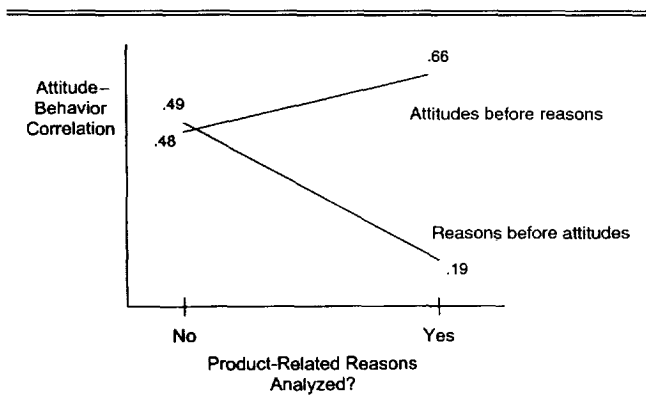
As in Study 1, the results of Study 2 demonstrate the disruptive effect of analyzing reasons for brand preferences on the link between attitude and behavior when reasons were analyzed before attitude measurement. More important, we found support for a second moderating factor on the disruptive effect of analyzing reasons on the attitude-behavior link. The significant two-way interaction obtained in Study 2 shows that the timing of the reasons task plays a critical role in the disruptive effect of analyzing reasons. When participants were asked to analyze reasons after reporting attitudes, no disruption effect was observed; in fact, a significant increase in the attitude-behavior correlation was found. Thus, even in the context of a delay between the measures of attitude and behavior, it seems possible to reverse the disruption effect by appropriate timing of the reasons task.

Apart from extending previous work on the disruption effect, these results also add to Tetlock's (1992) SCM of the effects of accountability. This model suggests that analyzing reasons after attitudes have been reported causes people to justify and strengthen their attitudes. As far as we are aware, our study is the first in which this strength-related prediction of the SCM has been tested in the context of the attitude-behavior link. Our results provide support for the model: Analyzing reasons after attitude measurement seems to increase attitude strength, as is evidenced by a stronger link with behavior. Thus, through its effect on attitude strength, reasons analysis in this condition affects behavior. This can be contrasted with disruption findings in the reasons before attitude condition, in which reasons analysis does not have any influence on behavior.

In Study 3, we seek to replicate the findings obtained in Study 2 and extend them to a new context—that of attitude persistence. There are two major reasons to focus on attitude persistence as the dependent variable of interest (in addition to the attitude-behavior link studies thus far). First, research in the area of attitude strength has repeatedly made the point that strength is a multidimensional construct and preferably should be measured by multiple indicators (e.g., Petty and Krosnick 1995). Whereas the attitude-behavior link is one such indicator, another commonly studied outcome is attitude persistence: The greater the strength of the initial attitude, the longer it should persist over time (Sengupta, Goodstein, and Boninger 1997). We have made the case that analyzing reasons after attitude measurement increases the strength of the attitude. Accordingly, a higher degree of persistence should be observed in this condition than in a control condition.

Second, a study of attitude persistence helps further clarify the underlying mechanism for the disruption effect that has been demonstrated in the first two studies in this article. We reason that a breakdown of the attitude-behavior correlation is observed because reasons analysis (before attitude measurement) causes the attitude measured at Time 1 to be based on a set of cues different from those that are available to guide the decision at Time 2. If this is indeed the case, such a breakdown of the link between the initial and delayed decisions should be observed even if the decision at Time 2

Figure 2
DISRUPTION VERSUS REINFORCEMENT: TIMING OF THE REASONS TASK



consists of an attitudinal judgment rather than a behavioral choice. In other words, our demonstration of the disruption effect should not be unique to the attitude-behavior link—it should also translate to lower attitude persistence. Otherwise, it might be argued that disruption occurs not because of a mismatch between the cues that guide initial attitudes and delayed behavior but simply because behavior is a more robust construct than attitudes (Campbell 1963) and is thus not affected by reasons analysis. This alternative explanation for our disruption findings can be refuted if the effect is demonstrated in the context of attitude persistence. Specifically, just as analyzing reasons (before attitude measurement) lowers attitude-behavior correspondence, it should also lead to lower persistence of the initial attitude, as compared with a control condition.

We therefore conducted Study 3 to replicate Study 2's findings in the context of attitude persistence. Furthermore, as described subsequently, Study 3 contained additional checks, and the control group enabled us to rule out an alternative explanation for the increased attitude-behavior link obtained when reasons are analyzed after attitudes.

STUDY 3: REASONS ANALYSIS AND ATTITUDE PERSISTENCE

Study 3 was similar in design to Study 2, though some differences are discussed subsequently. As in Study 2, the basic design was a 2×2 between-subjects full-factorial design. The factors were (1) the presence or absence of a product-related reasons task and (2) the timing of the reasons task—either before or immediately after attitude measurement. In partial fulfillment of a class requirement, 122 undergraduate management students participated in the study. The basic procedure, cover story, and stimuli used in Study 3 were similar to those in Study 2. Participants who performed a product-related reasons task (the reasons conditions) analyzed reasons for liking or disliking the stimuli (i.e., the candy bar brands), whereas those in the control condition analyzed reasons for their educational choices. Depending on the condition, attitude measurement (on the same scales as in the previous studies) either immediately preceded or immediately followed reasons analysis. Subsequently, all participants completed two items that measured the amount of processing. These measures were unique to this study and were taken to check the assumption that reasons analysis corresponds to more effortful processing. The two scales asked participants to indicate how much effort (1 = "very little" and 7 = "very much") they had spent thinking about (1) the candy bar information before making their evaluations of the candy bars and (2) their evaluations of the different candy bars. We expected participants in the reasons before attitude condition to get higher scores on the first scale than those in the control nonreasons group. Participants in the attitude before reasons condition, in contrast, should report higher scores on the second scale than those in the equivalent nonreasons group.

As in Study 2, all participants experienced a five-day delay between initial attitude measurement and the collection of the final dependent measure. In Study 3, however, instead of making a choice at the second session, participants completed a second set of attitude measures. They responded to two items per candy bar, each on a 1–7 scale, with endpoints "good"/"bad" and "like"/"dislike." The end-

points were deliberately chosen to be different from those employed in the first session (–4 to +4) to minimize simple recall of a previously reported rating on a particular attitude scale (Powell and Fazio 1984).

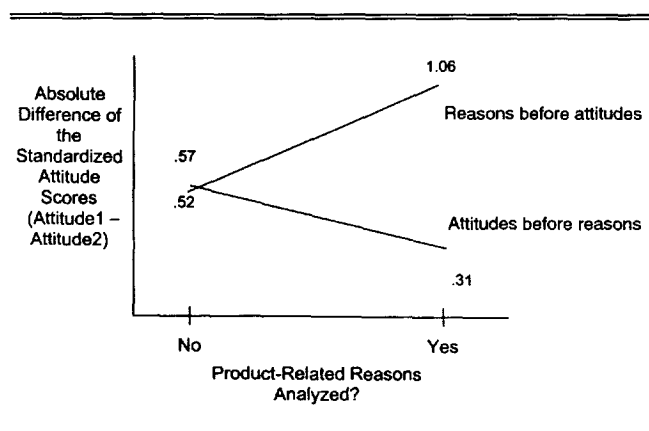
Thus, all participants responded to initial as well as delayed attitude measures. The major goal of Study 3 was to examine the relationship between attitude measured in the first session (Attitude1) and attitude measured at the second session five days later (Attitude2). Consistent with Study 2 findings, we expected that analyzing reasons before attitude measurement would lower attitude persistence as compared with the equivalent (nonreasons) control, whereas reasons analysis subsequent to attitude measurement would increase persistence as compared with the equivalent nonreasons control condition.

Finally, in addition to the four experimental cells in the 2×2 design, we ran another condition (the attitude-reasons-attitude condition) in which we collected an additional attitude measure (two items, scaled –4 to +4, with endpoints "weak"/"strong" and "negative"/"positive") at the end of the first session immediately following the reasons task (Attitude1b). Thus, this group followed the following sequence: instructions, examination of stimuli, initial attitude measurement, reasons task, a second initial session attitude measure, involvement measures, a five-day time lag, and finally the delayed attitude measure. We included this condition to check whether reasons analysis after attitude measurement increases attitude extremity. We have theorized that reasons analysis increases the attitude-behavior link (and attitude persistence) by increasing the strength of the attitude—not by increasing its extremity. Prior research, however, has found that highly extreme (i.e., highly positive or highly negative) attitudes are likely to correlate strongly with later behavior (Berger and Mitchell 1989; Powell and Fazio 1984). Thus, if reasons analysis after attitude measurement increases the extremity of the initial attitude, this would constitute an alternative explanation for the heightened attitude-behavior link obtained in Study 2. Including the second measure of attitude immediately following reasons measurement enabled us to check this explanation.

Results

Analyses are first reported for the 96 participants belonging to the four cells of the basic 2×2 design. We analyzed attitude persistence by comparing the absolute difference of standardized attitude scores for each brand during the first session and the standardized attitudes collected during the second session. Standardization was required because the scales used to measure attitude at the two different points in the experiment were different (Wilson, Kraft, and Dunn 1989). A 2 (reasons versus control) \times 2 (reasons before attitudes versus attitudes before reasons) ANOVA revealed significant main effects of both factors: whether reasons were asked ($F(1,379) = 3.89, p < .05$); and the order of reasons versus attitude measurement ($F(1,379) = 30.81, p < .001$). As expected, we obtained a significant two-way interaction ($F(1,379) = 24.59, p < .001$), which is shown in Figure 3. We used planned contrasts to explore this effect further. When reasons were analyzed before attitude measurement, a higher absolute difference was obtained when product-related reasons were asked (mean difference = 1.06) versus when they were not asked

Figure 3
DISRUPTION VERSUS REINFORCEMENT: ATTITUDE
PERSISTENCE



(mean difference = .57, $F(1,379) = 30.81, p < .001$); note that a higher difference score indicates less persistent attitudes. When reasons were collected after attitude measurement, the opposite pattern was observed. A lower difference (and thus higher persistence) resulted for participants who analyzed product-relevant reasons (mean difference = .31) than those who did not give such reasons (mean difference = .52, $F(1,379) = 3.89, p < .05$). These results are thus highly supportive of our predictions. Analyzing reasons before attitude measurement leads to disruption (lower persistence), whereas analyzing reasons after attitude measurement leads to reinforcement (higher persistence).⁷

Finally, an examination of the fifth condition—the attitude–reasons–attitude group—shows that reasons analysis after attitude measurement does not increase attitude extremity. The correlation of attitudes measured before the reasons task (Attitude1) with attitudes measured immediately following the reasons task (Attitude1b) was high ($r = .874, p < .001$). More important, a more direct measure of the increase in extremity was found to be low. At the brand level, this measure was coded as the difference between Attitude1b and Attitude1 ratings (both measures were on a -4 to +4 scale) if the brand was positively rated (>0) on the Attitude1 measure and as Attitude1 - Attitude1b if the brand was initially negatively rated (<0). Thus, higher scores would be obtained on this index if attitudes increased in extremity following the reasons task, either by positive brands becoming more positive or by negative brands becoming more negative. However, the value of this index was not significantly greater than zero (mean extremity = $-.04, t(67) = -.39, p = .70$). Furthermore, attitude persistence in this condition was, as might be expected, similar to that of the attitude before reasons/product-related reasons collected condition in the main experiment (absolute difference scores of .29 and .31, respectively). Thus, although our studies show that analyzing reasons after attitude measurement leads to greater attitude persistence as well as a

stronger attitude–behavior link, these results cannot be attributed simply to an increase in attitude extremity following reasons analysis.

Supplementary Analyses

As we did in the previous studies, for each participant, we computed a VRI for each brand by subtracting the total number of negative reasons from the total number of positive reasons. In the reasons before attitude conditions, in which analyzing reasons leads to less persistent attitudes, we expect that this index of liking based on reasons will be highly correlated with attitudes collected in the first session but not with attitudes collected after the five-day time lag. As expected, we observed a significant correlation between VRI and brand attitude during the first session ($r = .706, p < .001$) but not between VRI and attitudes collected during the second session ($r = .070, p = .49$). In the attitude before reasons conditions, however, in which analyzing reasons leads to reinforcement of attitudes, we expected and found a significant correlation of VRI with both Attitude1 ($r = .658, p < .001$) and Attitude2 measures ($r = .701, p < .001$). Thus, as in our previous studies, analyses based on the reasons-based liking index offer convergent support for our predictions.

As in Study 2, we also examined the evaluative consistency of the reasons generated. We predicted that analyzing reasons after forming and reporting brand attitudes should lead to greater evaluative consistency among these reasons, which thus bolsters brand attitudes and increases the persistence of these attitudes. As expected, and mirroring our Study 2 results, evaluative consistency was found to be higher in the attitude before reasons (evaluative consistency = .84) than the reasons before attitude (evaluative consistency = .75, $F(1,189) = 4.48, p < .05$) condition.

Finally, analyses were also carried out on the two self-report measures of effort. On the first scale, which measured the amount of information processing before making evaluations, participants in the reasons before attitude condition reported significantly higher scores (mean = 5.65) than did those in the equivalent nonreasons group (mean = 4.05, $F(1,94) = 14.8, p < .001$). Thus, as expected, more effortful processing of product information was undertaken by the former group than the latter. Also as might be expected, scores on this scale did not differ for the two attitude before reasons cells (reasons = 4.05, control = 4.11; $F(1,94) = .03, n.s.$). In contrast, scores on the second involvement scale, which measured the extent to which participants thought about their evaluations, differed for these two groups (reasons = 5.00, control = 3.59; $F(1,94) = 7.02, p < .01$) but did not differ for the reasons before attitude cells (reasons = 3.26, control = 3.23; $F(1,94) = .00, n.s.$). Thus, as we suggested previously (see n. 6), reasons analysis before attitude measurement increases the processing of information used in forming evaluations, analogous to the effects of greater involvement (Petty, Cacioppo, and Schumann 1983). In contrast, reasons analysis after attitude measurement increases the extent to which participants think about their evaluations, consistent with our prediction that such reasons analysis increases attitude strength.

Discussion

The attitude persistence results obtained in Study 3 provide a reassuring parallel with previous findings related to

⁷Paralleling our previous attitude–behavior analyses, an ANOVA on Attitude1–Attitude2 correlations produced an identical pattern of results, and there was a significant two-way interaction between the effect of analyzing reasons and the timing of the reasons task ($F(1,\infty) = 50.52, p < .001$).

the attitude-behavior link on two fronts. First, the basic disruption finding in the reasons before attitude condition that was documented in both Studies 1 and 2 was also observed in the case of attitude persistence. Analyzing reasons before attitudes led to a significantly lower correlation with delayed attitudes, as compared with the control condition. This result refutes the criticism that the attitude-behavior disruption documented in previous studies was a simple artifact of behavior being an intrinsically robust type of response, which is not affected by reasons analysis.

Second, as predicted by Tetlock's (1992) SCM, analyzing reasons subsequent to attitude measurement appears to bolster and strengthen the attitude. Study 2 demonstrates this effect in the context of the attitude-behavior link, and Study 3 provides further evidence for increased strength by documenting greater persistence in the attitude before reasons condition than in the control condition. Our check on the amount of effort spent thinking about evaluations also yielded supportive results. Participants in the attitude before reasons condition reported significantly higher scores on this index than did those in the control condition. In view of prior research that shows that thinking about attitudes increases attitude strength (e.g., Fazio et al. 1982; Wilson and Dunn 1986), this finding supports our contention regarding the bolstering effect of analyzing reasons after attitude measurement.

Finally, the results obtained in the attitude-reasons-attitude control group were also revealing. Results in this condition showed that analyzing reasons after attitude measurement did not lead to an increase in attitude extremity; attitudes measured immediately after the reasons task were not more extreme than those measured just before the task. Thus, the increased persistence obtained in the attitude before reasons condition is more likely a result of increased strength than of any increase in the extremity of the initial attitude.

GENERAL DISCUSSION

Results from all three experiments provide a convincing demonstration of the disruptive effect of asking consumers to analyze reasons in a new product context. The first two experiments show that when reasons analysis precedes attitude measurement and there is a substantial delay between attitude and behavior measures, a large decrease in attitude-behavior correspondence is obtained as compared with a control condition. Attitude-behavior correspondence is essentially cut in half for participants who are exposed to the reasons task. The third experiment obtained a similar result for attitude persistence: Reasons analysis, when it preceded attitude measurement, produced significantly lower persistence, as compared with a control condition.

From a practical perspective, our findings carry interesting implications in relation to context effects within a market research questionnaire. Previous research (e.g., Fitzsimons and Morwitz 1996; Morwitz, Johnson, and Schmittlein 1993) has found that asking a purchase intention question can increase the link between intentions and behavior. The current disruption findings find support for the other side of the coin: In some circumstances, asking consumers to analyze reasons can lower the attitude-behavior link and reduce attitude persistence. This finding is of importance to market researchers, who often need to find out why consumers feel the way they do about certain products—partic-

ularly in the context of a new product launch. Disruption may result in such cases, especially for product categories in which most consumers make choices on the basis of factors that are not easily verbalized.

This relatively pessimistic picture does not, however, tell the whole story. The current studies not only provide insight as to when analyzing reasons leads to a disruption of the attitude-behavior relationship but also identify conditions that both prevent disruption and lead to reinforcement. Specifically, we find that asking reasons can significantly increase the attitude-behavior link in the absence of a delay between attitude and behavior measures. Even when there is a delay, we show that the attitude-behavior link (as well as attitude persistence) is reinforced if the reasons task is completed after attitudes have been reported.

An important theoretical contribution of our findings deals with reconciling the disruption effect literature with other models of the attitude-behavior process. As mentioned previously, research related to dual-process models of persuasion (Chaiken, Liberman, and Eagly 1989; Petty and Cacioppo 1986), as well as the research on the effects of accountability (Tetlock 1992) and mere thought (Tesser, Martin, and Mendolia 1995), seem to offer predictions that conflict with the disruption results demonstrated by Wilson and colleagues (e.g., Wilson et al. 1984, 1993). Specifically, these research streams imply a reinforcement effect, whereby tasks such as reasons analysis lead to an increase in attitude persistence and attitude-behavior correspondence. Our investigation suggests that these seemingly opposing perspectives are not so much conflicting as complementary: Either reinforcement or disruption may occur, depending on the levels of moderating factors, such as the delay between attitude and behavior measurement and the timing of reasons analysis.

It should be noted that our studies provided conditions particularly conducive to obtaining a disruption effect, in that the easily verbalized product information given to participants was relatively nondiagnostic. Wilson and colleagues (1989) argue that when highly diagnostic, easily verbalized information is presented even for an unfamiliar attitude object (e.g., subjects know that a person they are meeting for the first time is a convicted felon), people are likely to be aware of the reasons for their attitudes, and analyzing reasons would not change attitudes, as compared with people in a control group. The reasons task is unlikely to have an effect on the attitude-behavior link in such a context. Thus, in the consumer scenario investigated here, disruption may be prevented if all participants were exposed to highly diagnostic attribute information about the candy bars (e.g., the candy bars differed significantly in taste). Further research should examine the role of information diagnosticity in the context of reasons analysis.

Future research should also examine category effects on the findings reported here. The product category used in our studies is one in which attitudes are likely to have a significant affective component. According to Wilson and colleagues (1989), people find it more difficult to verbalize attitudes that have a large affective base. When attitudes are highly cognitive, reasons analysis does not change attitudes, because people find it easy to verbalize the true reasons for their attitudes (Millar and Tesser 1986b). Consequently, there is no reason to expect a weaker attitude-behavior link in the reasons than the nonreasons condition. Thus, the cur-

rent findings may not be generalizable to highly cognitive product categories (e.g., consumer durables), in which people are aware of the reasons for their preferences and find it easy to verbalize them.

Finally, the ideas presented in this article might be useful to consumer researchers who use cognitive protocols to tap into participants' thought processes in the context of judgment or choice decisions. Although useful insights may be gained by careful examinations of these protocols, the current research suggests that the act of measurement affects some of the constructs being measured. It would be of interest to examine whether factors such as the timing of the protocols (before or after attitude measurement) have differential effects on important outcomes, such as the link between attitudes and behavior or the extent to which attitudes persist over time.

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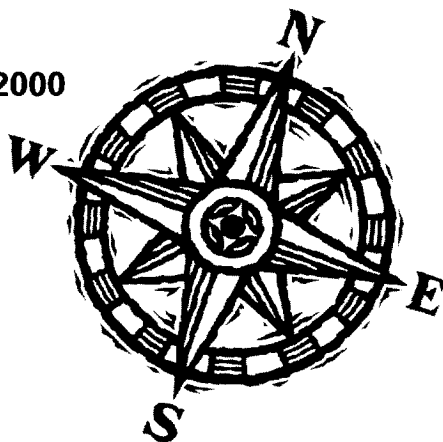
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