

# Consumer Reactions to Product Failure: An Attributional Approach

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Attribution theory provides the framework for predicting consumer responses to product failures. Study 1 surveyed reasons for and reactions to product failure and Study 2 manipulated reasons in an experiment. Reasons for product failure influenced reactions such as desiring a refund or an exchange for the product, perceiving that an apology is owed the consumer, and wanting to hurt the firm's business.

Within the last decade, interest has developed in consumer complaining behavior. A central goal is predicting how consumers will respond to product failure. When a consumer's new car breaks down, when a consumer opens a package of meat and finds it spoiled, or when recently purchased apparel falls apart, what does the consumer do about it?

A number of studies describe the frequency of various responses to product dissatisfaction (e.g., Day and Ash 1979; Day and Bodur 1978). However, few theoretical models have been developed that enable us to predict specific consumer complaining behaviors; those that have been developed typically identify general factors considered by consumers when deciding whether to complain. For example, Day and Landon (1977) have suggested that such factors as "value of obtaining redress," "availability of direct compensation," and ease and convenience of obtaining redress influence consumers' decisions of how to respond to product dissatisfaction. Landon (1977) hypothesized that complaining behavior results from dissatisfaction, importance, benefit from complaining, and personality of the consumer. With the identification of these general factors, a next step is greater specification of the cognitions determining the consumer's course of action. A theoretical model is needed to map out relationships between specific thoughts about product failure and specific complaining behaviors.

Attribution theory may provide just such a map. Attributions—the causes inferred for product failure—are omitted from the Day and Landon (1977) model, and Landon (1977) includes attributions only as part of personality dispositions. Yet there is reason to believe that attributions

play a central role in determining response to product failure. This belief is based only partially on consumer complaining research. Few studies have examined effects of attributions on consumer complaining (Krishnan and Valle 1979; Richins 1983; Valle and Wallendorf 1977). Attributing product failure to external factors (the seller or manufacturer) has been related to complaining about the product to the seller or to third parties and telling acquaintances or friends about the dissatisfaction. Thus relationships have been found, but the theory has been used in only a limited way. A number of studies in a variety of other domains suggest that attribution theory offers an even greater potential for predicting complaining behavior.

## AN ATTRIBUTIONAL APPROACH TO PRODUCT FAILURE

Attribution theory views people as rational information processors whose actions are influenced by their causal inferences. In the context of consumer complaining behavior, attribution theory predicts that the perceived reason for a product's failure influences how a consumer responds (Bettman 1979). It is not merely the judgment that the product has failed that determines consumer response. People try to determine why the product failed; the type of reason inferred influences what they do. For example, suppose a consumer uses a new laundry detergent and then discovers the laundry is not clean. According to attribution theory, the consumer will search for a reason why this occurred, and may arrive at any of several explanations: the detergent is ineffective, the consumer failed to use the proper amount of detergent, or the washing machine is broken.

Given a certain attribution or explanation for product failure, what does the consumer do? In the detergent example, does the consumer ask for a refund, get angry, or do nothing? Attributional approaches predict that the cause inferred for product failure influences how the consumer will respond. The purpose of this research is to investigate this link, to predict what sorts of attributions lead to which

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specific consumer responses. Research in other domains—such as achievement, affiliation, and moral judgments—has determined that one way to predict behaviors from attributions is to first classify causes on the basis of their underlying properties (see Weiner 1980a for a review).

### Causal Dimensions

The most successful categorization system is one developed by Weiner (1980a), who classified causes by their underlying causal properties or dimensions. One causal property or dimension is *stability*: causes can be relatively temporary (fluctuating over time) or fairly permanent (remaining stable over time). For example, a car might be poorly repaired because the mechanic was sloppy just this once, or the mechanic might be a consistently sloppy worker.

A second dimension is *locus*. Is the cause located in the consumer or in the seller or manufacturer? The primary distinction here is whether the cause of failure has something to do with the consumer or is located somewhere in the production or distribution of the product. For example, a set of bookshelves might collapse because the consumer assembled them incorrectly or because the manufacturer made a defective product.

A third dimension underlying causes of product failure is *controllability*. Causes can be volitional (choice can be involved) or nonvolitional (constraints may force a product failure). Suppose a consumer purchases a weight-loss food supplement and does not lose weight after using it. This could be due to a controllable cause—the consumer has made no effort to use it properly—or to an uncontrollable cause—the consumer is allergic to it. Similarly, firm-related causes may or may not be controllable by the firm. For example, when shoes are poorly repaired because the shop does not train its personnel, the cause is under the shop's control; when the poor repair is due to an externally set fire in the store, the cause is not under the shop's control.

In sum, causes of product failure can be categorized by their stability (whether they are temporary or fairly permanent), locus (whether they are consumer- or firm-related), and controllability (whether they are under volitional control or are constrained). Although these dimensions can be conceived of as continua, traditionally they are viewed as dichotomous (Weiner 1980a). This results in a  $2 \times 2 \times 2$  classification system of causes, forming eight categories of causes.

### Consequences of Causal Attributions

As intimated earlier, the advantage of this classification system is that stability, locus, and controllability have been linked to behavioral consequences. On the basis of previous research, the three causal dimensions are hypothesized to influence several clusters of consumer responses: (1) expectancy reactions, (2) marketplace equity reactions, and (3) anger reactions.

*Hypothesis 1: Causal stability influences expectancy reactions. Stable attributions lead to certainty about product failure and preference for a refund rather than an exchange. Unstable attributions lead to uncertainty about future product performance and more willingness to accept an exchange rather than a refund.*

Stability refers to whether causes are perceived as relatively permanent and unchanging or as temporary and fluctuating. Attributions to unstable reasons lead to uncertainty about future outcomes, whereas stable attributions lead a person to expect the same outcome in the future (see Weiner 1980a for a review). Thus when product failure is stable, people should expect the product to fail if they purchased it again in the future. For example, if a poor car repair occurred because the repair shop hired incompetent mechanics, poor repair work would be expected in the future also. Conversely, when product failure is caused by unstable reasons, consumers should be less certain of future product failure. If a car repair was poorly executed because of an unusually heavy workload, the consumer would not necessarily expect this shop's future repair work to be poor as well.

Another expectancy reaction is concerned with preferences for refunds or exchanges. When there is a stable reason for product failure, the consumer expects future failure and so should prefer a refund: if the product is expected to fail, a consumer probably wants his or her money back. When product failure is due to unstable reasons, the consumer is less certain of future failure and so should be more willing to merely exchange the failed product for another. In sum, causal stability is hypothesized to influence expectancies for future failures and type of redress preferred (refund versus exchange).

*Hypothesis 2: The locus of the cause influences market equity reactions. When product failure is firm-related, a consumer is perceived to be owed a refund and an apology. When product failure is consumer-related, a consumer is owed neither a refund nor an apology.*

The locus of a cause, whether consumer-related or firm-related, should influence consumer reactions regarding the equity of marketplace exchange. Specifically, refunds are owed when failure is firm-related but not when it is consumer-related, because most marketing transactions involve exchanging a consumer's money for a promised product benefit. When the firm causes the absence of the benefit, the exchange is inequitable. A first step toward restoring equity is reversing the transaction; the firm should refund the consumer's money. Thus the consumer deserves a refund when product failure is firm-related, but does not when it is consumer-related. Past research relating asking for a refund to locus of causality supports this prediction (Krishnan and Valle 1979).

Apologies are also related to the equity of marketplace exchange and should be influenced by causal locus. When product failure is firm-related, the inequity of the exchange upsets the relationship between buyer and seller: the con-

sumer has been wronged. Besides giving a refund, damaged interpersonal relations must be repaired. By means of an apology, the firm admits to and regrets not providing the promised product benefit. Apologies are perceived to be owed when product failure is firm-related to redress the wrong; consumer-related failures do not call for apologies. Thus the same conditions that call for refunds also call for apologies.

*Hypothesis 3: Controllability and locus both influence anger reactions. Consumers should feel angry and desire to hurt the firm's business when failure is firm-related, particularly when the firm has control over the reason for product failure.*

The locus and controllability dimensions influence whether we blame and are angry at someone for an action. When a bad outcome is due to another's controllable actions, a person feels angry (Weiner 1980b). Thus when product failure is due to controllable actions of a firm, the consumer should feel angry toward the firm. Anger should decrease when failure is uncontrolled by the firm and be even less when failure is consumer-related.

Revenge is closely related to anger and is also a consequence of attributing failure to others (Weiner, Russell, and Lerman 1979). Consumers should want to hurt a firm's business more when the cause of product failure is controlled by the firm. A desire to hurt the firm's business should decrease when product failure is caused by reasons not under the firm's control.

### Complaining Responses

In sum, underlying causal properties or attributional dimensions are predicted to influence three types of consumer reactions: (1) expectancy reactions, (2) marketplace equity reactions, and (3) anger reactions. More specifically, stability should influence expectancies for future product failure and preference for type of redress (refund or exchange). Locus should influence how much both a refund and an apology are deserved. Locus and controllability should influence anger toward the manufacturer/seller and desire to hurt the manufacturer/seller's business. Thus, six specific responses are examined, although only three patterns of relationships between causal dimensions and consumer reactions are identified (Table 1). One potential contribution of this research is the linking of certain consumer reactions by their attributional antecedents.

In addition to their clear theoretical derivations from attribution principles, the consumer reactions studied here are of practical interest. Specifically, determining when people feel they deserve a refund and when refunds are preferred over exchanges is of interest because asking for a refund or replacement is a typical response to product failure (Day and Ash 1979). Expectancies for product performance influence consumer satisfaction (e.g., Oliver 1980). Receiving an apology and having a chance to vent one's anger are

TABLE 1  
PREDICTED EFFECTS OF CAUSAL DIMENSIONS  
ON CONSUMER REACTIONS

Causal dimension		Consumer reaction
Stability	→	Expectancy change
	→	Type of redress preferred
Locus	→	Refund deserved
	→	Apology deserved
Locus and Controllability	→	Anger toward firm
	→	Desire to hurt firm's business

perceived benefits of complaining (Richins 1979). Finally, a consumer's desire to hurt a firm's business may lead to destructive actions against the firm.

### STUDY 1

Two studies examined relationships between causal dimensions and consumer complaining reactions. The first study used the critical incident technique. Students were asked to recall the most recent incidence of a certain type of product failure. In a procedure similar to Richins (1982), product failure causes were classified and then dimensional scores were correlated with consumer reactions. In this way, relationships between naturally occurring attributions and recalled responses were examined.

### Method

Sixty-one UCLA undergraduates (25 males, 36 females) were given a questionnaire titled "Consumer Experiences Survey." They were asked to "think of the last time you went to a restaurant, ordered something, and did not like the taste of it." Then they were to "explain why you think the food or drink did not taste good," followed by three open-ended questions designed to elicit perceptions of the locus, controllability, and stability of the cause.

This information aided the judges in classifying causes. The judges were two marketing doctoral students (one male, one female). Ratings of causal stability, locus, and controllability were made on three 9-point scales derived from Russell (1982). Judges indicated whether causes (1) varied over time or were always present, (2) reflected on the restaurant or on the student, and (3) were controlled by the restaurant or not controlled by the restaurant. Interjudge reliability on the stability scale correlated 0.81, on the locus scale 0.92, and on the restaurant controllability scale 0.90. Judges also classified causes into dichotomous categories. They agreed on 90 percent of the stability classifications, 100 percent of the locus classifications, and 95 percent of the controllability classifications. Disagreements were resolved by a third rater (the author).

After describing reasons for unpalatable food, subjects answered six questions about their reactions to the restau-

rant experience. Each question was followed by a 9-point rating scale. First, subjects were asked "If you went to the same restaurant and ordered the same thing again, would you expect it to taste good or not to taste good?" This was anchored by "expect not to taste good" and "expect to taste good." Next, subjects were asked "Did you deserve to be charged for the item?" anchored by "did not deserve to be charged" and "did deserve to be charged." Type of redress preferred was determined by the question "If the restaurant had offered either another dish or glass of the same thing or offered to take the charge off your bill, which would you have preferred?" This was anchored by "preferred another of the same type" and "preferred not to be charged." Subjects were then asked "Did you feel angry towards the restaurant?" anchored by "did not feel angry" and "did feel angry." Next was the question "Did you want to take actions that would hurt the restaurant's business?" anchored by "did not want to hurt" and "did want to hurt." Finally, subjects were asked "Did the restaurant owe you an apology because the item did not taste good?" anchored by "did not owe apology" and "did owe apology."

Subjects were also asked when the incident occurred. For 31 subjects (50 percent), the incident happened within the last month and for 18 subjects (30 percent), from one to six months previously.

## Results

Three types of attributions accounted for 93 percent of the reasons given. The most common classification for the cause of unpalatable food was stable and restaurant-controlled (36 percent of 61 subjects). For example, the restaurant employees do not make an effort to serve the food hot or the restaurant does not bother to obtain fresh ingredients. The second most common type was also restaurant-controlled but was unstable (31 percent of 61 subjects). Only one subject cited a reason uncontrolled by the restaurant and stable. While restaurants are typically perceived as controlling the reason for product failure (67 percent of subjects), consumer-related causes were all uncontrolled. Stable consumer-uncontrolled reasons were fairly common (26 percent). For example, students explained that they were unable to eat spicy food. Only 5 percent stated unstable, consumer-uncontrolled reasons.

In sum, restaurant-related causes were typically perceived as controlled by the restaurant—either stably or unstably—while consumer-related causes were typically uncontrolled by the consumer and were stable. This pattern can also be seen in the high correlation between locus ratings and restaurant controllability ratings ( $r = 0.94$ ). Stability is also correlated with locus and restaurant controllability ( $r = 0.50$  and  $0.44$ , respectively). The more stable the cause, the more the cause was consumer-related and not under the control of the restaurant. These high correlations suggest difficulty in distinguishing the effect of each dimension.

TABLE 2  
CORRELATIONS BETWEEN CAUSAL DIMENSIONS  
AND CONSUMER REACTIONS

	Stability	Locus	Control
Expectancy for failure	.47 <sup>a</sup>	.19	.20
Type of redress preferred	.35 <sup>b</sup>	.28 <sup>c</sup>	.29 <sup>c</sup>
Deserved to be charged	.44 <sup>a</sup>	.51 <sup>a</sup>	.48 <sup>a</sup>
Apology owed	.49 <sup>a</sup>	.65 <sup>a</sup>	.64 <sup>a</sup>
Felt angry	.33 <sup>b</sup>	.37 <sup>b</sup>	.35 <sup>b</sup>
Wanted to hurt business	.23 <sup>c</sup>	.32 <sup>b</sup>	.32 <sup>b</sup>

<sup>a</sup> $p < 0.001$ .

<sup>b</sup> $p < 0.01$ .

<sup>c</sup> $p < 0.05$ .

Turning to the relationships between causal dimensions and consumer reactions, Table 1 shows that, as predicted, stability was related to expectancies for the future ( $r = 0.47$ ,  $p < 0.001$ ) and type of redress preferred ( $r = 0.35$ ,  $p < 0.001$ ). The more stable the cause, the more certain were subjects that the dish would be unpalatable if purchased again and the more strongly they preferred not to be charged for the item rather than obtaining a replacement. Considering the correlation between stability and the other dimensions, it is not surprising that locus and controllability also correlate significantly with type of redress preferred (Table 2). When stability is controlled for, the correlation between locus and type of redress preferred is reduced from  $r = 0.28$  to  $r = 0.13$  ( $p < 0.20$ ). Similarly, when the correlation between stability and redress is partialled out, the correlation between controllability and redress is reduced from  $r = 0.29$  to  $r = 0.17$  ( $p < 0.15$ ).

Also as predicted, locus was strongly related to whether the customer deserved to be charged for the food and whether an apology was due the customer ( $r = 0.51$  and  $0.65$ ,  $p < 0.001$ , respectively). The more a cause was restaurant-related, the more a student felt he or she deserved not to be charged and deserved an apology. Not surprisingly—considering the correlations between locus, stability, and controllability—the latter two dimensions were also strongly related to deservingness of being charged and receiving an apology (Table 2). Controlling for locus reduces the correlation with stability from  $r = 0.44$  to  $r = 0.25$  ( $p < 0.05$ ) for no charge deserved, and from  $r = 0.49$  to  $r = 0.25$  ( $p < 0.05$ ) for apology owed.

Finally, controllability was related to consumers' anger and desire to hurt the restaurants' business ( $r = 0.35$  and  $0.32$ ,  $p < 0.01$ , respectively), as was locus ( $r = 0.37$  and  $0.32$ ,  $p < 0.01$ ). The more poor food was under the control of the restaurant, the angrier and more vengeful were the students. However, stability was also significantly related to anger and revenge (Table 2). When the correlation between controllability and anger is partialled out, the correlation between stability and anger is reduced from  $r = 0.33$  to  $r = 0.21$  ( $p < 0.05$ ). When the correlation between controllability and vengefulness is partialled out, the correlation between stability and vengefulness is reduced from  $r = 0.23$  to  $r = 0.11$  ( $p < 0.25$ ).

## Discussion

As predicted, causes of product failure were related to consumer reactions. Stability was correlated with expectancies and type of redress preferred, locus was correlated with deservingness of being charged and receiving an apology, and restaurant controllability was correlated with feelings of anger and desire to hurt the restaurant's business. All predicted relationships were significant at least at the  $p < 0.01$  level (Table 2). Nevertheless, other causal dimensions were also significantly related to consumer reactions.

Considering multiple possible additional determinants of consumer reactions, correlations between causal dimensions and consumer reactions to product failure are impressive. Beyond specifying the setting as a restaurant, there were no constraints on the failure situation. Thus restaurant type, product value, others' presence, familiarity with type of food, and other factors could vary. With this much possible "noise," weak relationships might be anticipated. That significant relationships were found is encouraging for an attributional approach. However, this methodology precludes random assignment of subjects to attribution conditions, so ambiguities arise when interpreting results. Significant correlations occurred for predicted causal dimensions as well as for other dimensions (Table 2). Thus the precise relationship between causal dimensions and consumer reactions is difficult to ascertain using this methodology.

## STUDY 2

In Study 2, relationships between causal dimensions and consumer responses were tested by presenting subjects with hypothetical product failures and asking how the consumer would respond. This experimental methodology was chosen primarily for the control it provides. It allows manipulation of all eight types of causes, so that a broad range of causes can be examined; with a more naturalistic methodology, it was possible that some cells would occur too infrequently for statistical analysis. Control can also be exercised over how causes are perceived—thus minimizing the possibility of causes being misclassified—and direction of causality can be ascertained.

## Method

**Procedure.** Subjects were 56 UCLA undergraduates (25 men, 31 women) taking an introductory psychology course. Questionnaires were administered in groups of 5 to 16 persons. Each page of the questionnaire described a different reason for product failure. Reasons varied in locus (consumer- or manufacturer/store-related), controllability (controllable, uncontrollable), and stability (stable, unstable), for a total of eight different reasons. Thus each subject completed a questionnaire that described the same product failing for eight different reasons. For example, the subject read that "A student bought a new type of weight-loss breakfast drink for \$6. After a week he has not lost any

weight. This is because the manufacturer knows the product doesn't work but thinks it can get away with misleading advertising." In this example the reason for the product failure (the lack of weight loss) is manufacturer-related, controlled by the manufacturer, and stable over time. On the next page of the questionnaire, the subject read about a different incident in which the weight loss did not occur. The order in which the reasons were presented was randomized for each subject.

The eight types of reasons for the breakfast drink failure were:

1. *Unstable, controlled by consumer:* The student had a lot of parties to go to that week. He knew he was eating too much but decided to enjoy himself this once.
2. *Stable, controlled by consumer:* The student never likes to follow a set menu so he has avoided following the prescribed diet. He never makes an effort to follow instructions of this sort.
3. *Unstable, uncontrolled by consumer:* The student has been ill for the last week and his doctor didn't tell him that the prescribed medication would interfere with the breakfast drink's effect.
4. *Stable, uncontrolled by consumer:* The student discovered he's allergic to one of the main ingredients, so the product doesn't work the way it should. There's nothing the student can do about it.
5. *Unstable, controlled by manufacturer:* For just one day, the manufacturer ran out of the important dieting ingredient. Instead of closing down for the day, the manufacturer decided to leave out the ingredient in this one batch of the drink.
6. *Stable, controlled by manufacturer:* The manufacturer knows the product doesn't work but thinks it can get away with misleading advertising.
7. *Unstable, uncontrolled by manufacturer:* During a freak summer heat wave, this particular batch of the product was accidentally placed in the hottest section of the warehouse. The manufacturer had no idea the product would be ruined by extremely hot temperatures.
8. *Stable, uncontrolled by manufacturer:* The research company that tested the breakfast drink faked the results to make them look good. The manufacturer had no idea that the formula it bought was phony.

Manipulating just these eight reasons could lead to erroneous conclusions. Subjects' ratings could be a function of the specific reason devised rather than the three underlying dimensions of interest. Therefore, it was important to test the effect of several reasons for each of the eight cells. One strategy might have been to devise three reasons why the breakfast drink failed per cell. However, the value of an attributional approach to complaining behavior would be limited if the study could not show generality across a variety of products.

To test the generality of the theory, there were four versions of the questionnaire, each describing a different product and varying different causes. Because complaining be-

havior studies typically distinguish between goods and services (e.g., Day and Ash 1979; Day and Bodur 1978), product type was varied. The two goods were a weight-loss breakfast drink (a consumer nondurable) and a bookshelf (a consumer durable); the two services were shoe resoling and car repair. The price of each product or service was specified: the weight-loss drink and the resoling cost \$6.00; the bookshelf and car repair cost \$35.00. Thus there was a  $2 \times 2$  between-subject design manipulating type of product (goods or services) and two levels of price (\$6 and \$35), in addition to the within-subject variables already described. This meant there were three additional reasons for each condition besides those already given for the weight-loss drink. For example, the causes for the other product and the two services that were consumer-related, not under the control of the consumer, and stable over time were as follows:

1. A student bought a \$35 bookcase that he had to assemble himself. The bookshelf collapsed when he put books on it. The bookshelf collapsed because the student is not strong enough for this sort of project. He just can't help the fact that he is a weak person.
2. A student paid \$6 to have his shoes resoled. They no longer feel comfortable. This is because resoling always changes the fit of the shoe and the student is rarely able to have a comfortable fit. Because of a birth defect the student's foot has a somewhat unusual shape.
3. A student paid \$35 to have his car work better. After driving home from the repair shop, he realized that the car still didn't work the way he wanted. This is because the student has a speech impediment that he can't do anything about. He is never able to communicate his car problems clearly to mechanics, even if they try their best to understand him.

*Classification of Causes.* Causes were devised and classified using an elaborate testing procedure. First, causes were devised to fit each cell; then undergraduates rated the causes on scales for their stability, locus, and controllability. The original causes were modified on the basis of students' ratings, then tested on another group of students. After four testing cycles, the final result was eight causes or scenarios for each of the four types of products. Each scenario differed in perceived stability, locus, and controllability.

*Dependent Measures.* Each scenario was followed by six questions to which the subjects responded by placing a check on a 9-point scale. The six questions and the anchors of the rating scales for the weight-loss breakfast drink were:

1. If the manufacturer gave the student another carton of the weight-loss drink, do you think he would expect to lose weight? (expect to lose weight, expect not to lose weight)
2. Do you think the student deserves a refund from the manufacturer for the breakfast drink? (does not deserve a refund, deserves a refund)

3. Suppose the manufacturer offered the student either another carton of the weight-loss drink in exchange or a refund. Which do you think the student would prefer? (definitely prefer exchange, definitely prefer refund)
4. Do you think the student would feel angry towards the manufacturer? (would not feel angry, would feel angry)
5. Do you think the student would want to take actions that would hurt the manufacturer's business? (would not want to hurt, would want to hurt)
6. Do you think the manufacturer owes the student an apology? (does not owe apology, owes apology)

The same questions were asked for all four products, with appropriate modifications. For example, in the bookcase situation, subjects were asked "Do you think the student deserves a refund from the manufacturer for the bookcase?" with the anchors "does not deserve refund" and "does deserve refund." Subjects in the shoe resoling condition were asked "Do you think the student deserves a refund from the store for the resoling?" also anchored by "does not deserve refund" on one end and "does deserve refund" on the other.

## Results

Following Finn and Mattsson's (1978) recommendation, conceptually similar measures were analyzed by multivariate analyses of variance, followed by univariate analyses of variance. To test the reliability of the results, the sample was randomly split in half and the two halves were analyzed separately. The number of effects tested meant that some significant relationships would emerge merely by chance. Therefore, a conservative decision rule was adopted wherein effects are reported only if significance reached the  $p < 0.01$  level in both samples. Type of product (goods versus services) and price (\$6, \$35) effects were not significant in the MANOVAs, so these factors were not included in the ANOVAs that were performed.

*Expectancy Reactions.* Multivariate and univariate analyses of variance reveal large main effects for stability (Table 3). As predicted, subjects thought that consumers are more likely to expect future product failure when causes are stable than when they are unstable (Table 4). For example, subjects thought that consumers were more likely to expect future product failure when failure was due to employee incompetence than when failure was due to a temporary work deluge in the shop. Similarly, when failure was due to an unstable cause, consumers were thought more willing to accept an exchange than when it was due to a stable cause (Table 3). The stability main effects accounted for the majority of the explained variance (Table 5). Most of the remaining variance was accounted for by locus (Table 5). Ratings were higher for consumer-related causes than for manufacturer/store-related causes (Table 4). Consumers were thought to expect future product failure more when failure was consumer-related than when it was manufacturer/store-related; in consumer-related cases of failure,

TABLE 3  
F-RATIOS OF SIGNIFICANT EFFECTS IN SAMPLES 1 AND 2<sup>a</sup>

Source		Expectancy reactions		Market equity reactions		Anger reactions	
		Expectancies for future	Type of redress preferred	Refund deserved	Apology deserved	Felt angry	Hurt business
Stability							
MANOVA	-1		42.97				
MANOVA	-2		41.26				
ANOVA	-1	86.34	33.67				
ANOVA	-2	78.24	54.41				
Locus							
MANOVA	-1		18.79		380.21		59.46
MANOVA	-2		19.94		320.60		79.09
ANOVA	-1	9.19 <sup>b</sup>	22.35	469.87	238.42	66.38	72.21
ANOVA	-2	7.22 <sup>b</sup>	35.68	203.72	314.00	124.94	71.09
Controllability							
MANOVA	-1						34.53
MANOVA	-2						23.42
ANOVA	-1					28.95	56.25
ANOVA	-2					29.13	36.36
Locus × Stability							
MANOVA	-1				11.62		
MANOVA	-2				40.65		
ANOVA	-1			21.94	9.95 <sup>b</sup>		
ANOVA	-2			27.54	34.36		
Locus × Controllability							
MANOVA	-1				34.98		19.96
MANOVA	-2				13.70		13.07
ANOVA	-1			30.81	61.73	10.67 <sup>b</sup>	32.69
ANOVA	-2			25.32	24.23	17.12	21.63
Locus × Controllability × Stability							
MANOVA	-1				15.73		
MANOVA	-2				15.90		
ANOVA	-1			16.68	15.29		
ANOVA	-2			13.30 <sup>b</sup>	28.28		

<sup>a</sup>Only effects significant at  $p < 0.01$  level in both samples are reported. For multivariate analyses  $df = 2, 23$ ; for univariate analyses  $df = 1, 27$ .

<sup>b</sup> $p < 0.01$  (all other  $F$ s significant at  $p < 0.001$ ).

they were also thought to less strongly prefer a refund over an exchange.

**Marketplace Equity Reactions.** As predicted, locus influenced whether a consumer was thought to deserve a refund or an apology. The locus main effect was highly significant for both samples and in multivariate and univariate analysis (Table 3). Furthermore, the locus effect accounted for over 85 percent of the explained variance in the univariate analyses (Table 5). When product failure was consumer-related, consumers were thought to be less deserving of refunds and apologies than when failure was manufacturer/store-related (Table 6).

However, inspection of the means reveals that stable causes uncontrolled by the manufacturer/store are lower than other manufacturer/store-related causes (Table 6). Correspondingly, stable causes uncontrolled by the consumer have higher means than other consumer-related causes (Ta-

ble 6). Thus it is not surprising that the highly significant locus main effects are qualified by interactions with stability and controllability. For both samples, there are two-way interactions of locus with stability and with controllability as well as a three-way interaction (Table 3).

To clarify the nature of these interactions,  $t$ -tests were run comparing means of the eight causal categories. Comparisons of each of the four consumer-related conditions with the corresponding manufacturer/store-related conditions follow the same general pattern for refunds and apologies. Each consumer-related mean is lower than the corresponding manufacturer/store mean (Table 6). Apologies and refunds are perceived as significantly less deserved when consumer-related than when manufacturer/store-related (Table 7). Comparisons among the manufacturer/store-related cells reveal that the manufacturer/store-uncontrolled stable means are significantly lower than the manufacturer/store-controlled stable means and the manufac-

TABLE 4  
MEAN OF EXPECTANCIES AND PREFERRED  
REDRESS RATINGS

Type of cause	Expectancies for future <sup>a</sup>		Refund vs. exchange <sup>b</sup>	
	Sample 1	Sample 2	Sample 1	Sample 2
Consumer-related, unstable	7.3	6.9	6.1	6.4
Consumer-related, stable	4.0	3.8	3.6	4.0
Mfr./store-related, unstable	6.3	6.4	3.8	4.5
Mfr./store-related, stable	2.3	2.6	1.8	1.7

<sup>a</sup>The higher the number, the more failure is not expected.

<sup>b</sup>The higher the number, the more preferred is an exchange.

turer/store-uncontrolled unstable means (Tables 6 and 7). For example, when an unavoidable part of the store's shoe resoling process involves stretching the shoes and changing their shape, refunds and apologies are perceived as less deserved than for other store-related causes. In a corresponding fashion, consumer-uncontrolled stable means are significantly higher than consumer-uncontrolled unstable means and consumer-controlled stable means (Tables 6 and 7). For example, when the shoe resoling is uncomfortable because the student's foot has an unusual shape, the student is perceived as more deserving of a refund and an apology than for other student-related causes. In sum, the general pattern of refunds and apologies being deserved when failure is manufacturer/store-related and not being deserved when consumer-related is weaker for stable manufacturer/store-uncontrolled failures and stable consumer-uncontrolled failures.

**Anger Reactions.** Locus and controllability influenced whether subjects thought a consumer was likely to feel angry and desire revenge for product failure (Table 3). The highly significant locus main effect indicates greater likelihood of anger and revenge when failure is manufacturer/store-related than when it is consumer-related (Table 8). Locus accounts for 64 to 74 percent of the explained variance in the two samples (Table 5). Nevertheless, there are also significant controllability main effects and locus  $\times$  controllability interactions (Table 3). As would be expected given the highly significant locus main effect, *t*-tests comparing manufacturer/store-controlled means with consumer-controlled means and manufacturer/store-uncontrolled means with consumer-uncontrolled means are significant (Table 9).

However, the significant locus  $\times$  controllability interaction appears to account for the controllability main effect: *t*-tests comparing consumer-controlled with consumer-uncontrolled causes are not significant, while *t*-tests comparing manufacturer/store-controlled with manufacturer/store-uncontrolled causes are significant (Table 9). Thus subjects thought consumers would be most angry and would most desire to hurt a business when failure is manufacturer/store-

controlled. For example, anger is expected when the manufacturers believe they can get away with misleading advertising or when repair shops hire incompetent employees to increase their profits.

## Discussion

The results support the hypotheses, replicating relationships found in Study 1. Furthermore, Study 2 suggests that several unpredicted correlations between causal dimensions and consumer responses in Study 1 were probably due to confounding of dimensions. In addition, similarities within the three pairs of consumer reactions are more evident in the second study.

Specifically, the stability and locus of product failure similarly influenced expectancies for future product failure and preference for a refund rather than an exchange. This link has not been made previously, despite the prominence of both reactions in complaining research. Expectancies, in particular, are a central concept in the consumer satisfaction/dissatisfaction literature (e.g., Oliver 1980). As predicted, consumers were thought to expect the product to fail if purchased again in the future when the cause was stable (Table 4). Similarly, they were thought to prefer a refund rather than an exchange when the cause of failure was stable (Table 4). When failure was due to an unstable cause, consumers were thought less likely to expect future failure and hence to less strongly prefer a refund. These results are consistent with correlations found in Study 1 between stability and expectancies and between stability and type of redress preferred (Table 2), as well as with previous research in the achievement domain (see Weiner 1980a).

Study 1 found lower correlations between locus and expectancies and between locus and type of redress preferred (Table 2). The locus main effect in Study 2 suggests these correlations were not solely due to the confounding of locus and stability (Table 3), particularly for type of redress preferred. In the case of expectancies for future failure, the locus effect may reflect subjects' assumptions that consumer-related causes are slightly more changeable for a consumer than are firm-related causes for the firm. The locus effect for type of redress preferred may reflect this same notion. Consumers may also be perceived to prefer a refund more when failure is manufacturer/store-related because refunds are deserved for these causes (Table 6).

Locus strongly influences whether refunds and apologies are deserved (Tables 3 and 5). This is also consistent with high correlations in Study 1 (Table 1). As predicted, refunds and apologies are thought to be more deserved when failure is firm-related than when it is consumer-related. Not predicted were the much smaller locus  $\times$  stability  $\times$  controllability interactions (Tables 3 and 5), perhaps reflecting uncertainty about whether refunds and apologies are deserved in the firm-uncontrolled stable condition and the consumer-uncontrolled stable condition (Table 6).

While mean ratings for the latter two conditions fell in the middle of the scale, means were quite high in the other



TABLE 5  
PERCENT OF EXPLAINED VARIANCE ACCOUNTED FOR BY SIGNIFICANT EFFECTS

Source	Expectancies for future	Type of redress preferred	Refund deserved	Apology owed	Felt angry	Hurt business
Stability						
Sample 1	81	55				
Sample 2	91	55				
Locus						
Sample 1	11	43	92	86	72	66
Sample 2	6	36	86	89	74	64
Controllability						
Sample 1					17	15
Sample 2					11	20
Locus × Stability						
Sample 1			2	2		
Sample 2			8	3		
Locus × Controllability						
Sample 1			4	9	7	13
Sample 2			4	4	5	14
Locus × Stability × Controllability						
Sample 1			2	3		
Sample 2			2	3		

firm-related conditions (Table 6). The high means indicate much more certainty about refunds and apologies being owed. When apologies are given, they appear to reduce blame and punishment and increase liking and forgiveness (Darby and Schlenker 1982). In contrast, the lack of an apology may generate a good deal of ill will. Despite these positive effects of apologizing and negative effects of withholding apologies, firms do not seem to emphasize them.

Finally, perceived feelings of anger toward the firm and desire to hurt the firm's business were influenced by the same causal patterns. Firm-related causes were thought to elicit much more anger and desire to hurt business than were consumer-related causes. This is consistent with the significant locus correlation in Study 1 (Table 2). Controllability was also significantly correlated with anger and revenge in the first study. As predicted, the perception that a firm could control the reason for failure was thought particularly likely to elicit these reactions. Mean anger ratings are quite high in the firm-controlled conditions, considering the 9-point scale (8.6 and 8.5 in the first and second samples, respectively; see Table 8). Thus anger may be strongly felt. Considering possible behavioral manifestations of anger, it may be an important affect for marketers to investigate. Research on consumer affective reactions has primarily emphasized satisfaction and dissatisfaction. Yet dissatisfaction seems too tepid to encompass the problem of the irate or the vengeful consumer.

In sum, attributions influence consumer responses to product failure. All three causal dimensions—stability, locus, and controllability—are useful in predicting consumer responses. Previous consumer complaining research has examined only the effect of locus (e.g., Krishnan and Valle

1979; Richins 1983; Valle and Wallendorf 1977). Using all three dimensions increases precision in mapping out relationships between causes and consumer responses. The influence of the three dimensions varies across consumer reactions. The attributional conditions that influence expectancy reactions differ from those that influence market equity reactions, and the pattern is different again for attributions influencing anger reactions (Table 3). However, it is noteworthy that three basic patterns emerged rather than six. Thus it may not be necessary to determine unique causal antecedents for all consumer complaining reactions, but rather to identify a few basic patterns.

One final point concerns the design of Study 2. Advantages of the within-subject design included a measure of control over intra-individual variance; the design also allowed sufficient subjects to manipulate four causes in each of the eight attributional cells and to replicate results in two samples. The similar results from both samples (Tables 3 and 5) lend confidence to the conclusions drawn. A disadvantage is that the within-subject design might have sensitized subjects to the causal dimensions under study and so exaggerated the effects. Lending confidence to the results is the fact that relations between causal dimensions and three of the consumer reactions (expectancies, anger, and desire to hurt the firm's business) are similar to those found in studies using different methods (for a review, see Weiner 1980a).

There are additional reasons to believe that the results are not seriously influenced by sensitization effects from using a within-subject design. First, the manipulated dimensions were probably not as obvious to subjects as those of us familiar with Weiner's classification scheme.

**TABLE 6**  
MEANS OF REFUND AND APOLOGY RATINGS

Type of cause	Deserves refund <sup>a</sup>		Deserves apology <sup>b</sup>	
	Sample 1	Sample 2	Sample 1	Sample 2
Consumer-controlled, unstable	1.5	1.9	1.8	2.1
Consumer-controlled, stable	1.5	2.3	1.6	1.9
Consumer-uncontrolled, unstable	1.8	2.4	1.8	1.8
Consumer-uncontrolled, stable	3.4	4.4	3.8	3.7
Mfr./store-controlled, unstable	8.7	8.9	8.5	8.6
Mfr./store-controlled, stable	8.7	7.8	8.7	8.4
Mfr./store-uncontrolled, unstable	8.1	8.7	7.1	8.3
Mfr./store-uncontrolled, stable	6.4	6.0	5.6	5.9

<sup>a</sup>The higher the number, the more a refund is deserved.

<sup>b</sup>The higher the number, the more an apology is owed.

People make many kinds of distinctions among causes besides those examined here (Wimer and Kelley 1982). In this research, the dimensions themselves were not stated to the subjects. Just as Weiner and his colleagues typically manipulate ability, effort, luck, and task difficulty rather than specifying dimensional categories (e.g., internal-unstable), Study 2 manipulated causes varying in three underlying attributional dimensions but varying in other ways also. The complexity of the design ( $2 \times 2 \times 2$ ) further obscured the experimental design from subjects, as did instructions forbidding subjects to preview or review pages of the questionnaire other than the one on which they were working. In sum, within-subject design sensitization is unlikely to have seriously biased the results of Study 2. Nevertheless, experiments less subject to demand effects should be undertaken to test these hypotheses.

## GENERAL DISCUSSION

The results of the two studies suggest that attributions influence how consumers respond to product failure. A sequence is implied in which consumers first ask "Why did the product go wrong?" and from the answer to this question consider "What should be done about it?" The particular value of this attributional approach is that a scientifically determined structure is imposed on the myriad types of causes for product failure—a structure that then permits predictions to specific consumer reactions.

### When Are Attributions Made?

This research assumes that when a product failure occurs, consumers search for attributions, and that the type of at-

tribution inferred influences actions taken. Thus two important questions are whether consumers actually do search for attributions for product failure and if so, what sort of attributions they infer. With regard to the first question, there is evidence that negative and unexpected events initiate causal search (Folkes 1982; Wong and Weiner 1980); thus purchasing a product and finding that it does not perform as desired should prompt attributional search. Yet product importance, conflict in making the purchase decision, and other factors may influence attributional search (Bettman 1979). If the product is trivial, for example, consumers may neglect to ask themselves why the failure has occurred.

When consumers do engage in attributional search, it may be biased toward certain categories of causes. The tendency to perceive unpalatable food as restaurant-controlled in Study 1 may reflect an attributional pattern typical for this product failure. The same tendency to infer firm controllability may be found elsewhere. For example, whenever a recently purchased used car breaks down, consumers may typically infer that the seller knew the car was a lemon. On the other hand, when a prescription drug does not alleviate symptoms, consumers may rarely infer that the pharmacist erred, much less that it was under the pharmacist's control. The questions of how consumers arrive at attributions and why certain patterns occur may be important to the understanding of consumer learning (Bettman 1979).

Another issue concerns the accuracy of the attribution inferred. Although consumers may feel confident about their inferences, perceived reasons may differ from "true" reasons for product failure. For example, when a mail-order item does not arrive, the consumer may perceive the reason to be post office inefficiency when the "real" reason is the consumer's negligence in filling out the address label. Because attribution theory is a phenomenological approach, perceived reasons are of interest. Thus reasons inferred by Study 1 subjects and manipulated in Study 2 might not be known to be true. For example, the student might not know how much control the restaurant exercises. Yet the consumer can have beliefs about controllability, and perceived reasons do influence consumers' actions.

This is not to say that consumers always arrive at an attribution for product failure. Sometimes uncertainty occurs, such as when the product is complex. Consumers may then turn to firms to facilitate causal attribution. In fact, many letters to firms are not complaints but are requests for product information (Diener 1977). Thus firms can influence consumers' attributions when asked for causal information. Firms have other opportunities to influence consumers' attributions—for example, when a product is returned, salespeople may convey causal stability by stating that breakdown rarely occurs for this product. This information may influence consumers' willingness to accept an exchange rather than a refund. Considering the consequences, controllability may be particularly important information to impart. For example, a car dealership may explain that some flaws are inevitable with a product as

**TABLE 7**  
T-TESTS OF MEANS FOR REFUND AND APOLOGY RATINGS\*

Means compared	Deserves refund		Deserves apology	
	Sample 1	Sample 2	Sample 1	Sample 2
Consumer-controlled, unstable with Mfr./store-controlled, unstable	29.02	25.72	11.60	19.73
Consumer-controlled, stable with Mfr./store-controlled, stable	21.81	8.93	26.38	14.08
Consumer-controlled, unstable with Mfr./store-uncontrolled, unstable	14.52	15.93	9.82	18.24
Consumer-uncontrolled, stable with Mfr./store-uncontrolled, stable	4.43	2.10 <sup>b</sup>	2.48 <sup>b</sup>	3.52
Consumer-uncontrolled, stable with Consumer-uncontrolled, unstable	3.25	3.74	3.64	3.94
Consumer-uncontrolled, stable with Consumer-controlled, stable	3.83	3.23	4.28	3.25
Mfr./store-uncontrolled, stable with Mfr./store-uncontrolled, unstable	3.73	4.69	2.19 <sup>b</sup>	5.18
Mfr./store-uncontrolled, stable with Mfr./store-controlled, stable	3.61	3.01	5.01	4.80

\*df = 27.

<sup>b</sup>Significant at  $p < 0.05$ . All others significant at  $p < 0.01$ .

**TABLE 8**  
MEANS OF ANGER AND DESIRE TO HURT BUSINESS RATINGS

Type of cause	Feel angry <sup>a</sup>		Hurt business <sup>b</sup>	
	Sample 1	Sample 2	Sample 1	Sample 2
Controllable by consumer	4.3	4.0	2.9	2.6
Uncontrollable by consumer	3.8	3.6	2.8	2.4
Controllable by mfr./store	8.6	8.5	7.3	6.2
Uncontrollable by mfr./store	6.0	6.2	4.5	3.7

<sup>a</sup>The higher the number, the greater the anger.<sup>b</sup>The higher the number, the more likely the consumer wishes to hurt the manufacturer's store's business.

**TABLE 9**  
T-TESTS OF ANGER AND DESIRE TO HURT BUSINESS MEANS\*

Means compared	Anger		Hurt business	
	Sample 1	Sample 2	Sample 1	Sample 2
Consumer-controlled with Consumer-uncontrolled	1.29	1.22	.85	.38
Mfr./store-controlled with Mfr./store-uncontrolled	6.77 <sup>b</sup>	6.71 <sup>b</sup>	6.29 <sup>b</sup>	10.13 <sup>b</sup>
Consumer-controlled with Mfr./store-controlled	8.10 <sup>b</sup>	10.88 <sup>b</sup>	7.72 <sup>b</sup>	8.73 <sup>b</sup>
Consumer-uncontrolled with Mfr./store-uncontrolled	4.80 <sup>b</sup>	6.98 <sup>b</sup>	4.80 <sup>b</sup>	5.45 <sup>b</sup>

\*df = 27.

<sup>b</sup> $p < 0.001$ .

complex as an auto and that the dealer will gladly repair them. In this way the dealer might decrease the car purchaser's anger and vengefulness.

In sum, there are probably limits on when consumers engage in attribution search for product failure. Consumers may sometimes be unable to arrive at an attribution or may hold an attribution only tentatively. Furthermore, the inferred reason may not be the "true" cause of product failure. Attribution theory focuses on perceived causes and their effects on actions.

### The Predictive Ability of An Attributional Model

Of course, the ability of an attributional approach to predict whether consumer complaining behaviors will actually occur is limited. Clearly, there are additional determinants of complaining behavior—for example, consumers report considering the time and effort to complain (Day and Ash 1979). They may be angry and believe they deserve a refund and apology but do nothing because of little anticipated benefit from complaining. Conversely, consumers may believe a refund is undeserved but ask for one because of the benefits involved. Thus a model of consumer complaining behavior must include factors besides attributions. This research assumes that attributions typically influence beliefs about appropriate actions, while other considerations—such as benefit from complaining—subsequently decrease or increase the likelihood of complaining behavior.

Even if consumers do not actually confront firms with their demands, it is important to know when consumers have post-purchase responses such as feeling angry, feeling they are owed an apology, and feeling they deserve a refund. These feelings probably are manifested in other behaviors, such as store loyalty and personal communication about the product. Knowing when consumers would like to take direct actions but do not may be especially valuable for firms. When this occurs, marketers feel the effects in indirect ways and hence are less able to identify and remedy problems.

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