The service recovery paradox: justifiable theory or smoldering myth?

Vincent P. Magnini
College of Business and Economics, Longwood University, Farmville, Virginia, USA

John B. Ford and Edward P. Markowski
College of Business and Public Administration, Old Dominion University, Norfolk, Virginia, USA, and

Earl D. Honeycutt Jr
Love School of Business, Elon University, Elon, North Carolina, USA

Abstract

Purpose – The purpose of this study is to address the discrepancy between research that supports the service failure recovery and that which does not by examining customer satisfaction in the event of a service failure empirically.

Design/methodology/approach – The objective of the study was achieved by conducting role-play experiments on undergraduate business students.

Findings – Analysis showed that a service recovery paradox is most likely to occur when the failure is not considered by the customer to be severe, the customer has had no prior failure with the firm, the cause of the failure was viewed as unstable by the customer, and the customer perceived that the company had little control over the cause of the failure.

Originality/value – This information should benefit service managers since service failures are common and typically trigger heightened customer attention. These findings may stimulate future research because the limitations of this study include the use of undergraduate business students and the examination of only one service setting. Nevertheless, this paper does demonstrate that, under the appropriate conditions, a customer can experience a paradoxical satisfaction increase after a service failure.

Keywords Service failures, Customer services quality, Customer service management

Paper type Research paper

An executive summary for managers can be found at the end of this article.

Introduction

Some researchers (e.g. Smith and Bolton, 1998; Spreng *et al.*, 1995; Tax *et al.*, 1998) support the notion of a "recovery paradox", which states that the occurrence of a failure may, if the recovery is highly effective, offer an opportunity to acquire higher satisfaction ratings from customers than if the failure had never happened. For instance, Hart *et al.* (1990, p. 148) state: "A good recovery can turn angry, frustrated customers into loyal ones. It can, in fact, create more goodwill than if things had gone smoothly in the first place". That is, a strong service recovery initiative is highly correlated with both customer satisfaction and the customer's propensity to spread positive word of mouth (Berry, 1995).

While a number of studies have provided evidence in support of the recovery paradox, several studies have failed to find such support. For example, McCollough *et al.* (2000) surveyed airport patrons regarding a hypothetical scenario involving a three-hour delay and found no support for a recovery paradox despite first-rate recovery options. Next, when students were surveyed regarding their haircut experiences, Maxham (2001) found no support for a recovery paradox. Andreassen (2001) drew similar conclusions when he analyzed the responses of 822 individuals regarding a broad spectrum of service encounters. Andreassen (2001) found that excellent recovery efforts aid in restoring company intent and image, but not in raising satisfaction to levels at or above pre-failure levels. Hence, the purpose of this study is to clear up this discrepancy in the literature by offering a more detailed model of the service recovery paradox which incorporates relevant moderators.

Literature review

The term "service recovery paradox" was first coined by McCollough and Bharadwaj (1992) and refers to situations in which a customer's post-failure satisfaction exceeds pre-failure satisfaction. The recovery paradox theory contends that an effective recovery cannot only maintain customer satisfaction, but also propel it to a higher level. A widely cited work supporting the service recovery paradox is the article by Hart *et al.* (1990) in the *Harvard Business Review*, which is titled "The profitable art of service recovery: how the best companies turn complaining customers into loyal ones". The authors of this article, again, support the notion that a company's initiatives following a service failure not only can return customer satisfaction to par, but can also move satisfaction above its pre-failure level. Hart *et al.* (1990, p. 149) state that "any problem that employees who are close to the customer can discover and resolve is a chance to go

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beyond the call of duty and win a customer for life". Walter Brosch, Director of Operations of TMH Hotels Corporation[1], is an advocate of the recovery paradox theory. He states:

> It is imperative that those of us in the hospitality industry through training and execution create a guest environment with minimal problems. However, it is not always the problem that causes disloyalty with our customers, but the matter in which the resolution is handled (Brosch, 2005).

A review of the existing literature reveals that three theories provide a theoretical foundation for the recovery paradox. First, theoretical support for the service recovery paradox is found in the expectancy disconfirmation paradigm. According to the disconfirmation paradigm, customer satisfaction is the consequence of an evaluation process in which the customer judges his or her expectations of how the service should be performed against the actual service experience (Oliver, 1993). Customer expectations are defined as internal standards or benchmarks against which customers judge or measure the quality of service they receive (McDougall and Levesque, 1998). Expectations are determined by factors that include advertising messages, prior experience, personal needs, word of mouth (Parasuraman *et al.*, 1985), the image of the service provider (Grönroos, 1984), and promises made by the service provider (Zeithaml *et al.*, 1993). According to the paradigm, *positive disconfirmation* occurs when a firm performs better than expected (Oliver, 1980). Disconfirmation is a function of recovery expectations and recovery performance. When a customer is the recipient of an *excellent recovery strategy*, this causes *positive disconfirmation* of expectations that results in a heightened post-satisfaction state (Oliver, 1997). Positive disconfirmation is only achieved after a first-rate recovery because most customers realize that a service transaction entails some potential for dissatisfaction (Murray and Schlacter, 1990), and, therefore, they expect some form of redress as a result of a failure (Berry and Parasuraman, 1991). Therefore, a mediocre recovery strategy only spurs confirmation of the customer's expectations and no paradoxical satisfaction increase is experienced.

Second, theoretical justification for the service recovery paradox can also be found in script theory. Script theory contends that knowledge about familiar, frequent situations is stored in one's mind as a coherent description of events expected to occur (Bateson, 2002). According to script theory, information about the service process is held in the memory of a consumer as a sequence of actions that transpire in a particular order, and this knowledge is called a script (Gan, 1991). This means that customers and employees in routine, well-understood service encounters share similar beliefs regarding their roles and the expected sequence of events and behaviors (Bitner *et al.*, 1994). Service failures heighten the sensitivity and awareness of the customer due to deviation from an anticipated transactional script. Therefore, service recovery efforts are usually very salient in the consumer's mind because of heightened attention and evaluation as a result of the service failure (Spreng *et al.*, 1995). This heightened attention and evaluation is particularly evident in failure scenarios that make the customer vulnerable, inconvenienced, and/or uncomfortable. Due to this heightened sensitivity, satisfaction with the redress initiative is more important than initial attributes in influencing overall satisfaction (Bitner *et al.*, 1990). Therefore, the actions of customer-contact personnel during service recovery is a key driver of a customer's overall satisfaction.

Third, theoretical foundation for the service recovery paradox is Morgan and Hunt's (1994) commitment-trust theory for relationship marketing. A superb service recovery has a direct impact on the trust that the customer has in the firm (Kelley and Davis, 1994; Tax *et al.*, 1998). In fact, effective failure recovery and relationship marketing are linked closely in terms of their focus on customer satisfaction, trust and commitment (Achrol, 1991; Morgan and Hunt, 1994). At first glance, it may appear counterintuitive to state that a failure situation can ultimately enhance trust, but it is common knowledge that service failures are inevitable; therefore, trust is built because the consumer now has confidence that the firm has enough honesty and integrity to amend errors. Trust is an integral component in the development of marketing relationships and exists when one party has confidence in another's reliability and integrity (Morgan and Hunt, 1994). Confidence on the part of the trusting party results from the enduring belief that the trustworthy party has integrity, which is associated with such attributes as honesty, fairness, responsibility, and helpfulness (Larzelere and Houston, 1980). Rempel and Holmes (1986) contend that trust is bolstered when partners take action in ways that acknowledge an individual's specific needs and affirm their sense of worth. Trust in a person or a company is built through observing the party or learning of previous interactions, such as conflicts, that the partner has had with others in analogous situations (Holmes, 1991). Fair conflict resolution aids in fostering this trust (Achrol, 1991). Consequently, when satisfaction exceeds expectations, the customer perceives more firm reliability (Ganesan, 1994).

The previous discussion can be summarized by stating that the recovery paradox theory is supported by expectancy disconfirmation theory, script theory, and commitment-trust theory. Due to these robust theoretical foundations, and consistent with myriad other studies, the first hypothesis is:

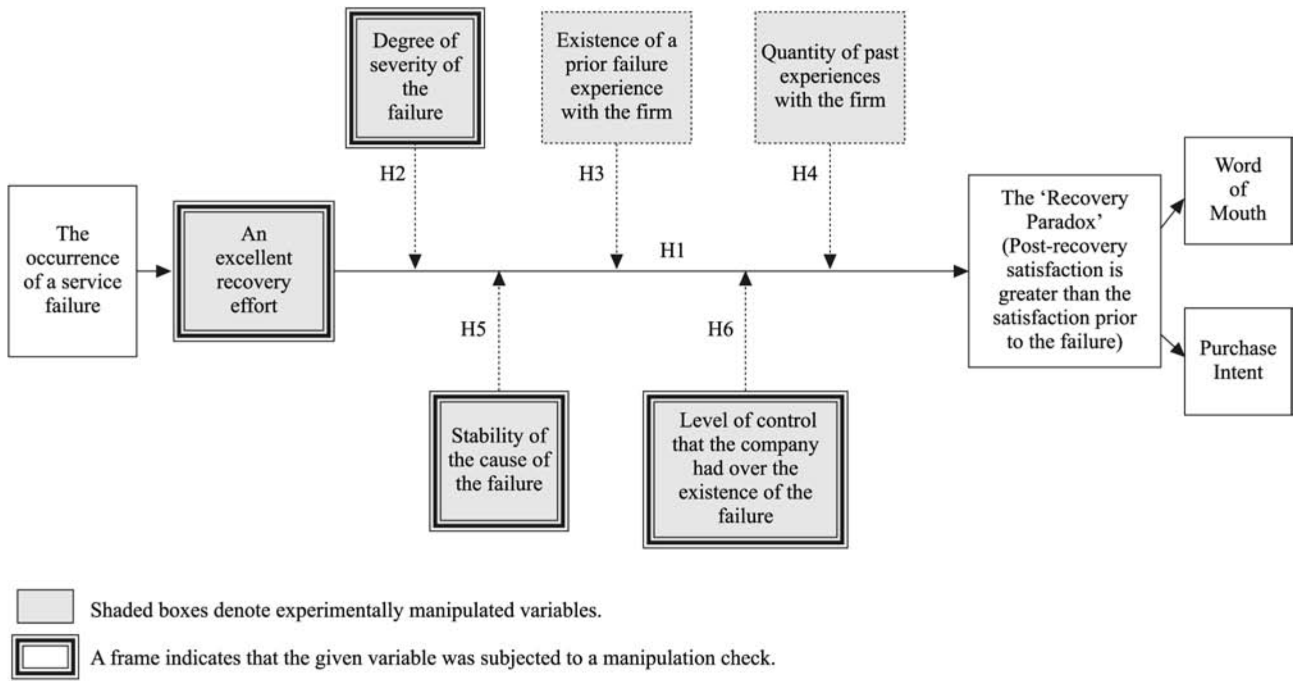
H1. If a firm exercises an excellent recovery, the customer's post-failure satisfaction will be greater than their pre-failure satisfaction.

Perhaps an explanation for the division between findings supporting, and not supporting, the paradox is that certain conditions can moderate the paradox. The purpose of this literature review, from this point forward, is to present a framework (see Figure 1) of the variables that can moderate the paradox.

The effect of the severity of the failure

According to McCollough *et al.* (2000), satisfaction judgments vary by the severity of the failure. Many service problems that customers experience can be characterized as only mildly annoying (McDougall and Levesque, 1998), but still others can range to very severe. Along these lines, Hoffman *et al.* (1995) state that the higher the magnitude or severity of the failure, the lower the level of customer satisfaction. Consequently, the existence of a recovery paradox is conditional upon the magnitude of the failure. For example, perhaps an apology, empathy, and compensation could create a paradoxical satisfaction increase after a 20-minute wait at the front desk of a hotel. But would this paradoxical increase occur if the wait caused the patron to miss a flight? It is unlikely that any realistic recovery is capable of completely erasing the harm caused by

Figure 1 Moderators of the "recovery paradox" and interaction effects



such a failure, and a paradoxical increase in post-failure satisfaction is even more improbable.

The fact that severe failures damage satisfaction beyond repair can be traced to prospect theory. Prospect theory contends that in decision-making, resources are weighted differentially according to their utility (Kahneman and Tversky, 1979). That is, the theory posits that the customer's value function is steeper for losses than for gains (Choong, 2001). More specifically, losses are typically weighted more heavily than gains (Oliver, 1997). Therefore, in a failure/recovery scenario, if the redress (gain) is equivalent to the failure (loss) the customer will likely place more psychological emphasis on the loss and exit the situation dissatisfied. In accordance with these discussions, a severe failure may result in a fatal blow to customer satisfaction that is hypothesized as:

H2. In the event of a service failure, a recovery paradox is more likely to occur if the service failure is less severe than if the failure is more severe.

The effect of a prior failure with the firm

A person's satisfaction judgment is a cumulative evaluation of all experiences with the firm (Cronin and Taylor, 1994). If the service failure occurred in a one-time only use, then the satisfaction judgment would be transaction-specific. However, an individual generally has a history of interactions with the firm, in which case satisfaction reflects the cumulative interactions over time between the individual and that firm (Bitner and Hubbert, 1994; Crosby and Stephens, 1987). An individual with a history of positive experiences may be more forgiving of a failure than a first time customer. The theoretical roots for this position can be seen in attribution theory, which encompasses attempts of individuals to comprehend the causes and implications of events (Ajzen and Fishbein, 1983). When a customer experiences a second failure s/he is more likely to attribute the cause of that problem to the firm than when the customer experienced the first failure (Maxham and Netemeyer, 2002). In other words, in the first failure the customer is more likely to perceive that the problem was beyond the control of the firm, but in the second scenario it is highly probable that the customer will attribute the failure to the firm. Thus:

H3. In the event of a service failure, a recovery paradox is more likely to occur if it is the firm's first failure with the customer than if it is the firm's second failure.

The effect of the quantity of past transactions with the firm

Since overall customer satisfaction is conditional upon a customer's entire history with the firm, a failure happening early in the customer's relationship with the firm will weigh more heavily on customer dissatisfaction because the customer has fewer successful service experiences to counterbalance the failure (Ganesan, 1994). That is, as a customer builds more confidence and experience over time in evaluating a provider, s/he weighs prior assessments of services more heavily and places less weight on new information (Tax *et al.*, 1998). In other words, the longer the history of satisfactory experiences, the greater the *buffer* when the inevitable failure occurs. This contention is reiterated by two recent studies. First, an empirical study conducted by Jones and Suh (2000) found that a previous level of overall satisfaction may mitigate the effect of a single, less-than-satisfactory service encounter. Second, recent research conducted by Hess *et al.* (2003) concluded that customer relationships provide an important buffer to service firms when failures transpire, resulting in lower levels of customer dissatisfaction. More specifically, a new customer may be more dissatisfied with a failure/recovery scenario than a customer who has five years of failure-free transactions buffering his/her dissatisfaction. Theoretical support for the existence of this buffer is found in attribution theory. Those customers who have made numerous transactions with a company are more likely to attribute the cause of a failure to a temporary factor than those customers who are relatively new users of the firm's offerings (Hess *et al.*, 2003). Thus:

H4. In the event of a service failure, a recovery paradox is more likely to occur if the customer has had a lengthy relationship with the firm with no previous failures, than if the customer is a second time user of the firm's services.

The effect of the stability of the cause of the failure

Stability is the extent to which a cause is viewed as temporary (expected to vary over time) or permanent (expected to persist over time) (Folkes, 1988; Hess *et al.*, 2003). Service failures with stable causes are more likely to recur than failures with unstable causes. For example, when a hotel guest is assigned to an incorrect room category due to an outdated property management computer system, this could be considered a failure with a stable (enduring) cause. On the other hand, if the guest's room assignment was botched because the front desk associate is in the initial stages of training, this could be viewed as an unstable (temporary) cause.

Customers are likely to be more forgiving of failures with unstable (temporary) causes (Kelley *et al.*, 1993). This is because the likelihood of a future inconvenience is minimal. That is, customers perceive the cause of the failure as a factor that is unlikely to crop up again and, therefore, customers are apt to accept the firm's apology and compensation and continue in the relationship. Conversely, if the customer views the failure's cause as stable (likely to occur again), the service recovery paradox is less likely to materialize because, according to prospect theory, losses are usually weighed more heavily than gains in the mind of the consumer and, therefore, customers do not want to run the risk of another failure regardless of first-rate recoveries employed by the firm. Causal stability has a strong influence on expectations because customer perceptions of unstable causes result in uncertainty about future outcomes (Folkes, 1984). Thus:

H5. In the event of a service failure, a recovery paradox is more likely to occur if the customer perceives that the failure had an unstable cause rather than if the customer perceived the cause to be stable.

The effect of perceived control

Control attributions should play an integral role in customers' post-failure judgments. A service failure is any situation where something goes wrong, irrespective of responsibility (Palmer *et al.*, 2000). Nevertheless, "the perceived reason for a product's failure influences how a consumer responds" (Folkes, 1984, p. 398). Customers are more forgiving if they perceive that the firm had little control over the occurrence of the failure (Maxham and Netemeyer, 2002). Conversely, customers are less forgiving when they feel that the failure was reasonably foreseeable and should have been prevented (Folkes, 1984). For instance, did a wait occur because of a peculiar and unanticipated spike in demand, or did it transpire because the firm did a poor job in forecasting, planning, or staffing? A bank customer may be understanding of a wait inside a bank lobby if there is an unexpected inflow of customers during a typically slow hour. On the other hand, the same customer may be less understanding if there is only one teller working during lunch hour on a Friday afternoon. In summary, customers are most dissatisfied when they believe the service provider had substantial control over the failure (Folkes, 1984).

This notion of control finds its theoretical roots in attribution theory. According to attribution theory, customers partake in spontaneous causal thinking (Weiner, 2000). Causal attributions are developed because of a need for predication and control of an individual's environment (Weiner, 2000). This spontaneous causal thinking is particularly common in failure situations because customers attempt to deduce why a failure transpired (Weiner, 2000). Customers are apt to ponder the following questions:

- "Who is responsible?"
- "Did the responsible party have control over the cause?"

These attributions impact both affective and behavioral responses (Folkes, 1988). Those attributions that blame the service organization have significant impact on satisfaction levels (Maxham and Netemeyer, 2002).

The absolute control that a firm has over failures is rarely completely known by the customer; therefore, service organizations must manage "perceived control" (Hui and Tse, 1996; Taylor, 1994). Therefore, service employees must focus on providing customers with adequate and plausible explanations when failures occur (Dunning *et al.*, 2004). In fact, attribution theory is based almost entirely on perceptions. Customers that attribute failures to controllable factors are less forgiving in satisfaction evaluations. For instance, Taylor (1994) reported that if the cause of a delay is perceived to be under the control of the firm, the customer's anger escalates, the perceived wait length increases and satisfaction declines. Many researchers have recently come to realize the importance of the customer's mental reasoning process (Hui and Tse, 1996; McDougall and Levesque, 1999) and have examined strategies that can be employed to shape customer perceptions in the circumstance of a failure. Thus:

H6. In the event of a service failure, a recovery paradox is more likely to occur if the customer perceives that the firm had little control over the cause of the failure than if the customer perceived that the firm had sizable control over the cause.

Research design and methodology

Our conceptual model involves manipulating interdependent variables one at a time. Consequently, the research hypotheses were tested through the use of role-playing experiments (scenarios), wherein subjects read scenarios and responded accordingly. The scenario for each condition depicted a service failure followed by an excellent recovery (the excellent recovery is determined in pretest 2). The instructions on the paper and pencil questionnaires asked participants to read the scenario carefully and to assume that the scenario has just happened to them and they were asked to project how they would react (i.e. rate satisfaction, purchase intent, propensity to spread positive word of mouth). This scenario approach enables difficult manipulations to be more easily operationalized and avoids ethical considerations associated with observing or enacting actual service failures (Smith and Bolton, 1998). Moreover, this approach gives the researcher control over otherwise unmanageable factors, and facilitates the compression of time by summarizing happenings that might otherwise transpire over weeks (Bitner, 1990). This scenario-based method also eliminates the managerial undesirability of intentionally subjecting customers to failure situations (Smith *et al.*, 1999). Lastly, this approach has advantages over asking subjects to recall actual service failures and recoveries using a retrospective-type approach (such as the critical incident technique) because retrospection is often plagued with response bias due to memory lapse, reinterpretation, and rationalization (Smith *et al.*, 1999). Also, findings may be misleading with a recall approach because customers are more prone to report extreme examples in retrospection (Smith and Bolton, 1998). Because of these suitable characteristics, the role-playing (scenario) approach used in this study is commonly utilized for the study of service failure and recovery (Michel, 2001). In terms of sample suitability, in order for the results to have adequate external validity, undergraduate business students must possess the ability to project their behavior and to respond as they actually would in a real situation. Therefore, a pretest was conducted to assess the suitability of using undergraduate students.

The main study was conducted on a convenience sample of 400 undergraduate students in a large Mid-Atlantic University. Participants were randomly assigned to one treatment condition in each of six treatment groups in a between-subjects experimental design. Each respondent was subjected to one condition from each treatment group because this quantity can comfortably be completed in one sitting. The data were collected in one point in time to avoid potential confounds such as interactive testing effects, instrument variations, and experimental mortality. Lastly, since each subject responded to only one condition from each group, the validity of the experiment was less likely to be hindered by a *main testing effect* (learning effect) in which the a prior observation creates an influence on a later observation (Churchill and Iacobucci, 2001). For example, a single participant was not asked to rate two levels of a given moderator such as high and low severity.

A hotel visit served as the context of this study. This setting was chosen for a number of reasons. First, service failures are frequent in hotels (Smith and Bolton, 1998). Therefore, it is anticipated that most subjects would find manipulations surrounding service failures and recoveries believable. Second, since its inception in 1994, the American Customer Satisfaction Index (ACSI) indicates that customer satisfaction with the six leading American hotel chains is not high. ACSI reports an average customer satisfaction score of 72.1 on a 100-point scale for the first quarters of 1995-2004 for the six major hotel corporations that are included on the index (see www.theacsi.org). Consequently, the study of hotel customer satisfaction is managerially relevant. Third, all of the variables under investigation could be readily manipulated in this setting. Fourth, the results of pretest 1 (outlined in the next section) indicated that undergraduate business students stay in hotels regularly and the vast majority have experienced a dissatisfying hotel experience.

Pretest 1: suitability of the sample for the sampling frame

A pretest was conducted to assess the suitability of the sample for the sample setting of the scenarios. The pretest was given to 63 undergraduate students. They were queried regarding their frequency of hotel stays by being asked: on average, how many nights per year they stay in hotel rooms (zero; 1-3 nights; 4-6 nights; >6 nights) and whether they have ever experienced a dissatisfying hotel stay. The findings of this pretest confirmed that undergraduate students were a suitable sample for this study. The results of this pretest indicated that undergraduate students regularly stay in hotels. A total of 92.1 percent of respondents indicated that they utilize hotel lodging at least 1-3 times per year. In order to preclude undergraduates who never stay in hotels from participating in the main experiment, the survey instrument for the main study also asked respondents how often they stay in hotels. A response of "zero nights" resulted in the removal of the respondent's survey from the analysis[2].

Measurement of variables

Pretest 2: manipulation checks

This study required a second pretest in order to conduct the manipulation checks on the subjective variables (excellent recovery, control, stability, and severity). The pretest was administered to a sample of 45 undergraduate students. The purpose of the pretest was twofold:

1. to find a "recovery effort" to be used in the main study that was viewed as excellent, but also realistic; and
2. to help ensure that manipulations on the "severity", "stability", and "control" variables were appropriate – that is, did the manipulations provide the intended variance in the experimental variables?

For the "excellent recovery" manipulation, the students were given a failure scenario with four subsequent service recovery strategies. The students were asked to rate the four recovery strategies as a poor recovery (coded as 1), an average recovery (coded as 2), or an excellent recovery (coded as 3). Recovery 2 emerged as the "excellent recovery" because it earned a mean rating of 2.93. Also, in order to ensure adequate external validity, subjects were asked to estimate realism of the scenarios on a five-point Likert-type scale ($1 =$ "not at all realistic", $5 =$ "extremely realistic"). Recovery 2 possessed adequate realism ($\text{realism} = 3.80$) and will therefore be utilized as the recovery initiative for all of the scenarios in the main study.

In the severity manipulation the respondents were provided two scenarios and were asked to rate both in terms of their severity (low level of severity, 1; moderate level of severity, 2; high level of severity, 3). The low severity vignette did, in fact, receive a low severity rating in the pretest with a mean of 1.40. Likewise the high severity scenario earned a severity rating of 2.84. Furthermore, participants perceived the severity vignettes as realistic ($\text{realism} = 4.00$).

For the "stability" construct, the students were asked to rate scenario failures in terms of the likelihood of re-occurrence (unlikely to occur again (unstable, 1); neutral (2); likely to occur again (stable, 3)). The high stability manipulation received a desired high rating of 2.71, but the low stability scenario did not earn a desirable low stability rating. The low stability scenario had a mean score of 2.09, which indicates that the low stability scenario is not creating the desired manipulation. Since the low stability scenario was not perceived as intended, it was altered, and the revised vignette depicts the scenario's service failure less likely to occur again because instead of the hotel in the vignette "searching for" an alternate internet provider, the hotel "has found" an alternate internet provider (the revised scenario will be tested in pretest 3). Amending the manipulation in this manner is consistent with the views of Perdue and Summers (1986), who stated that manipulation checks are most useful during the pretest phases of an experiment because poorly designed manipulations can still be amended and the main experiment saved.

In the "control" manipulation respondents were provided with two scenarios and were asked to rate both in terms of level of control (low level of control; moderate level of control; high level of control). The high control scenario was interpreted by the pretest respondents as being of high control (high control mean = 2.71), but the low control manipulation did not perform well (low control mean = 1.60). Therefore, the low control vignette was amended (the amended scenario will be tested in pretest 3). The revised scenario depicted the hypothetical hotel associate as being less defensive than in the original vignette. Again, altering the vignette is methodologically and theoretically sound because the primary impetus of an effective pretest is to identify when corrective changes are warranted for the manipulations (Perdue and Summers, 1986).

Pretest 3: validating vignette alterations and testing pre-failure satisfaction levels

Before conducting the main study, a third pretest was performed. Pretest 3 was administered to a sample of 36 undergraduate business students. Pretest 3 had two objectives. The first purpose of this pre-test was to test the alterations to the low stability and low control vignettes. The retesting of these two scenarios is necessary because according to the guideposts detailed by Perdue and Summers (1986), it must be verified that the manipulations are perceived as intended before the main study can be carried out successfully. The alterations to the low stability and low control scenarios did cause the vignettes to perform their intended manipulations as the mean scores were 1.50 and 1.36 respectively. Further, the two vignettes maintained high levels of realism (stability = 3.97, control = 3.94).

The second objective of this final pretest is to determine if the pre-failure satisfaction in all of the scenarios should be specified as six or seven on a nine-point likert-type scale. Theoretical support for setting the pre-failure satisfaction level at six is found in the American customer satisfaction index (ACSI). The ACSI reports that the mean customer satisfaction for six major hotel chains from 1995-2004 is 72.1 percent (see www.theacsi.org.htm). Since the ACSI score is only slightly closer to six than seven, the third motivation behind pretest 3 was to determine if recovery paradox would be significantly different between six and seven pre-satisfaction levels. To test this, half of the sample was given the baseline scenario with pre-failure satisfaction set at six and half of the participants were given the same baseline scenario with pre-failure satisfaction set at seven. The findings reveal no significant differences between the two groups. Consequently, since the average ACSI score (72.1 percent) lies closer to six than it does to seven, pre-failure satisfaction was given as a six in all of the vignettes of the main study. The results of this pretest, as well as the ACSI score, provide support for setting pre-failure satisfaction at six in all experimental scenarios. This approach of providing a pre-failure satisfaction rate is more conceptually robust than asking respondents to think of an establishment and to indicate their current satisfaction with that establishment because too many extraneous variables (such as length of relationship and the tendency to think of extreme examples) could confound the experimental results.

Measurement of the dependent variable

The recovery paradox

Following each experimental scenario, subjects were told that their overall-satisfaction with the service provider prior to the scenario was a six out of a possible nine (1 = extremely dissatisfied, 5 = neither, 9 = extremely satisfied) (see the Appendix). After being given their overall-satisfaction prior to the failure, the participants were then asked to indicate their overall satisfaction following the scenario in the given vignette. Like the pre-failure satisfaction, secondary satisfaction was treated as a bipolar construct, anchored by extremely dissatisfied/extremely satisfied (with the midpoint labeled "neither"). A nine-point scale is most appropriate for measuring satisfaction in order to limit skewness (Fornell, 1992).

Measurement of the mediating variable

An excellent recovery effort

Since an "excellent recovery" was modeled as a mediator (see Figure 1), it is predicted that the effect of the experimentally manipulated variables would be mediated through the recovery strategy to the resulting secondary satisfaction rating. In other words, it was expected that the "recovery effort" mediator *will affect* secondary satisfaction, and *will be affected* by the manipulated variables. Therefore, after finding in the manipulation check that the "excellent recovery" was, in fact, perceived as being realistic, it was not manipulated in the vignettes.

Measurement of the moderating variables

Severity

The objective was to create a strong manipulation of failure severity, but at the same time avoid unrealistic scenarios. Both severity treatments depicted a hotel patron not given access to in-room internet access. The low severity scenario depicted the respondent wanting to gain access to the internet for casual use. In contrast, the high severity condition described the respondent needing to gain access to the web for immediate business reasons.

Existence of a prior failure with the firm

Scenario manipulations incorporated two levels: "one previous failure" and "no previous failure". Therefore, the prior failure describes a problem with the cleanliness of the guest room bathroom during the previous stay, but the vignette stated that the bathroom was rapidly cleaned when the customer voiced a complaint.

Quantity of past experiences with the firm

It was predicted that a failure happening early in the customer's relationship with the firm weighs more heavily on

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customer dissatisfaction because the customer has fewer successful service experiences to counterbalance the failure. To test this prediction, a high quantity vignette was written which stated that the respondent had nine prior visits to the hotel property. Therefore, in the vignette the subject was told that this was their tenth stay at the hotel. The subject was also told that all of his/her previous nine stays at the hotel were enjoyable with no problems transpiring. Further, like in all of the other vignettes, the subject was told that before the current visit the subject possessed a satisfaction rating of six on a nine-point scale. Nine was the chosen number of prior visits because it seemed plausible that nine visits would allow for this satisfaction buffer to develop, but at the same time nine visits to a hotel property was not an unrealistic quantity. Conversely, the low quantity scenario was operationalized as one prior visit to the hotel; therefore, the baseline scenario was utilized.

Stability

In the low stability vignettes, upon hearing a complaint from the respondent involving problems with in-room internet access, the hypothetical hotel employee stated that these problems occur from time to time. Conversely, in the high stability condition, the hotel associate stated that problems do occur from time to time, but it is for that reason that the hotel company is switching internet providers in the near future. This switch is an attempt on the part of hotel management to preclude future internet-related problems in the guest rooms.

Control

The low control vignette entailed the respondent not being able to gain internet access from the guest room, but the portal was not physically damaged and the front desk had no other current or prior reports of problems. On the contrary, the high control situation described the respondent not gaining guestroom internet access. Further, the guestroom portal was physically damaged and the front desk associate stated that the room is red-flagged in the system as being out of order and, therefore, the respondent should not have been assigned that room.

Results of the study

In the final question on the survey respondents were asked to estimate how many nights per year they stay in hotel rooms. As a result, the completed surveys were inspected and respondents that indicated that they stay in hotels zero nights per year had their responses removed from the data set. This step resulted in 25 surveys (8 percent of the total surveys collected) to be extracted from the study. Therefore, the final number of usable surveys was 291[3]. Of the 291 final respondents in the main study, 54 percent were female and 46 percent were male. The average age of the participants was 24.

Table I lists the six hypotheses and reports how they are analyzed. It is prudent to note here that before any of the hypotheses were tested, the effects of gender were examined in each of the treatments and found to be insignificant. The impetus of *H1* aims to test the existence of the recovery paradox in the absence of the manipulations. Therefore, in the baseline scenario, the respondent is unable to get internet access in his/her guest room, but the vignette does not incorporate potentially moderating influences, such as cues for attributing control or for assessing stability. Further, the vignette incorporates the "excellent recovery" that was deemed to be realistic according to the results of pretest 1. Consistent with the other experimental treatments, the subject is provided with a pre-failure satisfaction rating and is requested to indicate a secondary rating. Also, in tandem with all the other treatments, the respondent is asked to indicate the likelihood of repurchase and positive word of mouth. The baseline scenario yielded 232 (79.7 percent) occurrences of a recovery paradox and 59 (20.3 percent) incidents with no recovery paradox. Consistent with expectations, a χ^2 of 102.85 ($p = 0.00$) indicates that there is a significant difference between the paradox occurrences and the absence of a paradox. Thus, *H1* is supported.

H2 was then tested by comparing the number of recovery paradox incidents in the low and high severity vignettes. In the low severity treatment, 62 (45.6 percent) of the subjects witnessed a recovery paradox while 74 (54.4 percent) did not. Conversely, only 22 (14.3 percent) of the participants in the high severity treatment experienced a paradox and 133 (85.7 percent) did not report paradoxical satisfaction ratings. As anticipated, a χ^2 of 34.77 ($p = 0.00$) supports the expectation that a recovery paradox is more likely to occur when the service mistake is of low severity than if the failure is severe. Hence, *H2* is supported.

H3 posits that a recovery paradox is more likely to occur if it is the firm's first failure with the customer than if it is the firm's second failure. Since the baseline treatment depicts the participant having one failure, data are collected from a scenario describing a second failure (a current failure and a past failure) and is compared to the responses in the baseline vignette. In the past failure treatment, 102 (35.1 percent) subjects experienced a recovery paradox and 189 (64.9 percent) did not. A crosstab employing the McNemar test is employed to test the results for significance. The χ^2 of the McNemar test is 122.36 ($p = 0.00$), which supports the notion that a prior failure can moderate the occurrence of a recovery paradox. The off-diagonal elements of the McNemar test also provide testimony that a prior failure experience can intervene to influence the paradox. Specifically, 133 of the respondents who reported paradoxical increases in the baseline scenario indicated no paradox in the prior failure situation. Further, only three subjects witnessed a recovery paradox in the prior failure treatment, but no paradox in the baseline condition. *H3* is therefore supported.

To test *H4*, subjects were asked to react to a scenario that states that they had nine prior failure-free encounters with the service provider. Since the only difference between the baseline treatment and the "many past transactions" treatment are the nine prior encounters, *H4* is tested by comparing the many past transactions vignette to the baseline. In the many past transactions treatment, 212 (72.9 percent) of the respondents underwent a paradoxical post-failure satisfaction increase, while 79 (27.1 percent) of the subjects did not experience a recovery paradox. Like *H3*, because the prior failure treatment is analyzed against the baseline scenario, a McNemar test is necessary to test the results for significance. While the χ^2 of the McNemar test is 5.31 ($p = 0.02$), which shows significance, *H4* is not supported. *H4* predicts the proportion of "yes" answers (recovery paradoxes) to be higher for the many past transactions treatment, but in realty the proportion of "yes" answers is actually greater in the baseline scenario. As a result, *H4* is not supported.

H5 was then tested by comparing the number of recovery paradox incidents in the low and high stability vignettes. In

Table I Organizing the data for hypothesis testing

H1. **If the firm exercises an excellent recovery, the customer's post-failure satisfaction level will be greater than the pre-failure level**	Tested by comparing yes with no within the baseline scenario	Baseline Yes = 232 (79.7 percent)	Baseline No = 59 (20.3 percent)
H2. **A recovery paradox is more likely to occur if the service failure is less severe than if the failure is more severe**	Tested by comparing low and high scenarios	Low severity Yes = 62 (45.6 percent) No = 74 (54.4 percent)	High severity Yes = 22 (14.3 percent) No = 133 (85.7 percent)
H3. **A recovery paradox is more likely to occur if it is the firm's first failure with the customer than if it is the firm's second failure**	Tested by comparing the prior failure scenario with the baseline	Prior failure Yes = 102 (35.1 percent) No = 189 (64.9 percent)	Baseline Yes = 232 (79.7 percent) No = 59 (20.3 percent)
H4. **A recovery paradox is more likely to occur if the customer has had a lengthy relationship with the firm with no previous failures, than if the customer is a new user of the firm's services**	Tested by comparing the many past transactions scenario with the baseline	Many past transactions Yes = 212 (72.9 percent) No = 79 (27.1 percent)	Baseline Yes = 232 (79.7 percent) No = 59 (20.3 percent)
H5. **A recovery paradox is more likely to occur if the customer perceives that the failure had an unstable cause rather than if the customer perceived the cause to be stable**	Tested by comparing the low stability scenario with the high stability scenario	Low stability Yes = 83 (58.9 percent) No = 58 (41.1 percent)	High stability Yes = 46 (30.7 percent) No = 104 (69.3 percent)
H6. **A recovery paradox is more likely to occur if the customer perceives that the firm had little control over the cause of the failure than if the customer perceived that the firm had sizeable control over the cause of the failure**	Tested by comparing the low control scenario with the high control scenario	Low control Yes = 82 (59 percent) No = 57 (41 percent)	High control Yes = 47 (30.92 percent) No = 105 (69.08 percent)

the low stability treatment, 83 (58.9 percent) of the subjects witnessed a recovery paradox while 58 (41.1 percent) did not. Conversely, only 46 (30.7 percent) of the participants in the high stability treatment experienced a paradox and 104 (69.3 percent) did not report paradoxical satisfaction ratings. As hypothesized, a χ^2 of 23.14 ($p = 0.00$) supports the expectation that a recovery paradox is more likely to occur when the service mistake is perceived as unlikely to occur again. Hence, *H5* is supported.

Lastly, *H6* was tested by comparing the number of recovery paradox incidents in the low and high control treatments. In the low control scenario, 82 (59 percent) of the subjects experienced a recovery paradox, while 58 (41 percent) did not. On the other hand, only 47 (30.9 percent) of the subjects in the high control treatment reported a paradox. As predicted, a χ^2 of 23.18 ($p = 0.00$) supports the notion that the level of control (as perceived by the customer) that the service firm had over the failure influences the likelihood of a recovery paradox. Hence, *H6* is supported.

Implications

The overriding conclusion that can be drawn from this study is that the recovery paradox is indeed a valid theory, but the paradoxical post-failure satisfaction increase is moderated by a number of contextual influences. Therefore, researchers should take a more fine-grained analytical approach to the study of the recovery paradox. That is, rather than offering evidence for or against the existence of the paradox, researchers would be better served to approach the subject by analyzing intervening factors which could enhance or hinder the odds of the occurrence of a paradoxical satisfaction after a failure and a first-rate redress.

One contextual variable that moderates the existence of a recovery paradox is the severity of the failure. The results of this study are consistent with those found by McCollough *et al.* (2000), which indicate that it is unlikely that a first-rate redress initiative can return the satisfaction of a severe failure recipient to par. If the loss experienced by the customer as a result of the failure is too great, no reasonable apology or redress can create a recovery paradox. For example, generous offerings cannot recoup failed business opportunities or missed one-time-only social events.

The occurrence of a recovery paradox is also influenced by the history of the customer's relationship with the firm. The findings of this investigation indicate that a customer who has experienced a prior failure with the firm is less likely to be impressed by a superb recovery than a customer who has never encountered a problem with the service provider. This is likely because when a customer experiences a second failure s/he is more likely to attribute the cause of that problem to the firm than when the customer experienced the first failure. This finding is consistent with a study conducted by Maxham and Netemeyer (2002) that revealed similar results pertaining to the effect of a previous failure. Nevertheless, the findings of this study do not support the notion that a longer customer relationship with the provider increases the likelihood of a recovery paradox. That is, the data indicate that those who have had one past transaction and those who have undergone nine past encounters (*ceteris paribus*) both have equal chances of experiencing a recovery paradox. This finding is inconsistent with the concept of a satisfaction "buffer" proposed by Hess *et al.* (2003).

Both control and stability intervene to affect the likelihood of increases in post-failure customer satisfaction. That is, consistent with attribution theory (Ajzen and Fishbein, 1983) people are more forgiving if they feel that the failure was not reasonably foreseeable to the service provider. Further, in agreement with prospect theory (Kahneman and Tversky, 1979) customers are more apt to exonerate the firm if they assess that the failure is unlikely to happen again. Therefore, both perceived control and perceived stability moderate the recovery paradox.

From a managerial perspective, these results indicate that because failure recovery offers a unique opportunity to build customer satisfaction, the training of employees in this area should be of reasonable importance. For example, service firms could train their employees in the LEARN process (listen, empathize, apologize, react, notify) (Magnini and Ford, 2004). This could serve as a useful recovery process because of the listening and empathizing stages. That is, post-failure satisfaction is probably more like to increase if the customer perceives the recovery effort as a legitimate and sincere corrective action as opposed to a PR effort[4]. If managed correctly the failure redress procedures of a service firm can serve as a powerful tool in increasing customer loyalty. Perhaps if recovery procedures are well-managed to the extent that the competition cannot easily duplicate them, then it can be argued that a firm's failure recovery constitutes a core competency.

Also, because past problems are discovered to moderate the "paradox", a customer who has experienced a past problem could be "red flagged" in the database and employees can be trained to take additional care to ensure that the particular customer does not encounter a second failure scenario. Not all service industries maintain formal databases of customers; for example, most restaurants do not. Nevertheless, many other businesses within the service arena, such as hotels, airlines, auto maintenance, pest control, and lawn and tree services, do actively use customer databases, and these databases provide the opportunity to track and monitor the customer service failure history.

Further, inspection with a managerial lens contends that because the severity of the failure is found to moderate the occurrence of a "paradox", resources should be allocated to establish and reinforce training and operational systems that limit the odds of a severe failure. This initiative would first involve the service firm collecting customer data that define which failures are viewed as severe in the eyes of the various customer segments. Upon collection of these customer-driven data, managerial programs can be implemented that reduce the likelihood of future severe failures. Furthermore, since it is the customer who defines failure severity, perceived severity will vary among customer segments. Consequently, this customer-driven research must be conducted for each customer segment.

Since a customer is more forgiving when s/he deduces the cause of the failure to be outside the firm's realm of control, service personnel should be trained to manage customer perceptions in the event of a service failure. Consider, for example, a customer who gets stuck in an elevator. Since an up-to-date inspection certificate can be viewed in the elevator, the individual does not blame the problem on the service establishment. However, circumstances change if the customer finally gets out of the elevator and a service employee states "That elevator has been acting funny all day, I've been meaning to put an 'out of order' sign on it".

Moreover, because a customer is more likely to have a post-failure satisfaction increase if the stability of the failure is perceived as low, front-line employees should actively manage these perceptions as well. For example, employees should be trained to build a customer's confidence in the redress process by exuding a feeling of competence and by engaging in dialogue with the customer that instills confidence to ensure that the problem is unlikely to reoccur. In this dialogue, the service employee should explain to the customer the steps that establishment is taking so that the problem will not transpire again.

Most importantly, recovery paradox effects are constrained by the requirement that in most cases, customers must seek redress for the recovery to occur (McCollough *et al.*, 2000). Therefore, companies should actively encourage complaining behavior (Halstead *et al.*, 1993). One direct way to solicit complaints is to ask straight-to-the-point questions, like "How is everything?". Some service providers offer money-back guarantees and other substantial benefits for those who complain. Embassy Suites and Hampton Inns both have 100 percent satisfaction guarantee policies that are likely to elicit complaints. Also, front-line service providers may adopt an improved attitude toward customer complaints if they are reminded by management that most service failures go unreported. Lastly, since most complaints go unreported, the service provider should steer clear from resource allocation decisions that can be perceived as a failure by many customers. For example, before decreasing the quality of hotel toiletry items, customer-focused research must be conducted to determine which amenities customers are most willing to pay for and which they are willing to do with out.

Limitations and future research

While the results of this study provide useful managerial implications, they must be tempered by limitations. Although the scenario-based experiment is a technique with strong precedence, one shortcoming is the limited capability of respondents to project their behavior and to respond as they really would in an actual situation. Since the experiment entailed rating paper-and-pencil vignettes, feelings and emotions surrounding an actual service failure were not fully experienced. In spite of this limitation, it is believed that the restrained external validity is offset by enhanced control over the various nuances of the failure scenario, which is provided through the use of the scenario-based approach. Also, the conclusions of this study are based upon findings from a hotel setting (and undergraduate students), and therefore caution must be exercised in generalizing the results to other service industries (and populations).

A number of directions for future research are evident. First, it would be informative to test the recovery paradox model derived from this study in other service settings. Each of the intervening variable manipulations could likely be created in settings such as auto repair, auto rental, dry cleaners, airlines, and restaurants. Future testing in various service sectors could potentially enhance the external validity of the model and refine the measures used to test the variables. Along these lines, perhaps manipulating the criticality (perceived importance) of the service attribute involved in the service failure could shed new light on failure recovery as well.

A second issue for future consideration pertains to experimentally manipulating the firm's recovery initiative. Consider the research possibility of creating scenarios in which the customer is asked what s/he feels that the firm should do to rectify the problem and repair satisfaction. Putting the ball in the customer's court could result in one of two beneficial outcomes:

1. the customer makes an overly demanding and unrealistic request, in which case, the firm can call into question whether business should really be conducted with this customer (recovery can be expensive for a firm, particularly if the likelihood that the customer will return is low); or
2. the customer could make a reasonable recovery request that the firm's subsequent redress strategy could exceed.

This would create a situation of positive disconfirmation and perhaps a paradoxical increase in satisfaction.

Third, while this study did not reveal any differences in customers who have had a single transaction with those who have experienced nine, research is warranted that explores when a satisfaction "buffer" is created through past encounters and when it is not. For example, perhaps a customer may accumulate a level of comfort and forgiveness with a firm, after a number of encounters, but perhaps the person would be less forgiving as the relationship progresses further. The less forgiving mentality might be based on the belief that the firm should go the extra mile because of the loyalty and commitment involved in the relationship. Therefore, perhaps future relationship may reveal a bell-shaped satisfaction buffer between a firm and its patrons.

A fourth area that currently remains unexplored, but one with high relevance for the service manager, is whether a service encounter with a long interaction time during the transaction has better odds in generating a recovery paradox than a short service encounter. For example, would a fine dining restaurant have an edge over a fast food establishment in creating a recovery paradox if the failure occurred early in the transaction? Would an extended stay hotel have an advantage over a transient hotel property? In other words, can a recovery paradox be generated by spreading the redress initiative over the length of the transaction; or, should the redress be swift in hopes that the customer will "forgive and forget?".

Notes

1. TMH won Hilton Garden Inn's 2003 Service Failure Recovery Award.
2. The results of this pretest also indicated that the sample should have little trouble finding hotel vignettes believable because 69.8 percent of the respondents indicated that they had experienced a dissatisfying hotel stay in the past.
3. A *post hoc* test found that there are no significant differences between the satisfaction judgments of respondents who stay in hotels 1-3 nights per year and those respondents who stay greater than three nights per year.
4. We thank one of the anonymous reviewers for raising this point.

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Appendix

Figure A1 The baseline scenario

Upon checking-in, you enter your hotel room and decide to connect your laptop to the free high-speed Internet portal located on the wall above your desk. You complete the steps in the connection process, but you fail to get any web access. While the portal does not appear to be physically damaged, you know that there must be something wrong with it because you frequently connect your laptop to similar portals.

Consequently, you call the front desk and explain that the Internet portal in your room is not working. The front desk associate apologizes and immediately sends a member of the bell staff to your room so that he can help you with your belongings and show you to a much nicer suite-style room (which typically costs about $50 more per night than a standard room) in which you stay at no additional charge. Once you've been in your new room for a short time, the front desk associate calls you to once again apologize for the inconvenience of the room switch and inquires regarding your satisfaction with the new accommodations.

This was your second stay at the hotel. Your first stay was enjoyable and this is how you ranked your satisfaction with the hotel after your first stay:

Extremely Dissatisfied				Neither				Extremely Satisfied
1	2	3	4	5	6	7	8	9

Based on the information given above, please use the scale below to rank your overall satisfaction with the hotel after your second stay:

Extremely Dissatisfied				Neither				Extremely Satisfied
1	2	3	4	5	6	7	8	9

Please use the scale below to indicate your likelihood of spreading positive word-of-mouth about this hotel property:

Extremely Unlikely				Neither				Extremely Likely
1	2	3	4	5	6	7	8	9

Please use the scale below to indicate your likelihood of wanting to stay at this hotel again if you ever have the need to travel to that area in the future:

Extremely Unlikely				Neither				Extremely Likely
1	2	3	4	5	6	7	8	9

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Corresponding author

Vincent P. Magnini can be contacted at: magninivp@longwood.edu

Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of the article. Those with a particular interest in the topic covered may then read the article in toto *to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.*

When contestants on a well-loved British TV game show spectacularly failed to win the star prize, the host would end the program by showing them the elusive gift and saying "See what you could have won".

The show's continuing failure to do what it intended, and conclude with happy people winning a car, a boat, a holiday or whatever, might have been a cause for concern. But disappointment, coupled with that "See what you could have won" catchphrase, came to symbolize the show's appeal. A success flourished from failure.

No one is suggesting service providers deliberately try to copy the format by leaving their customers disappointed, but there is a well-known perception in business that customers who are failed but are subsequently impressed with the way a company goes about recovering the situation – putting matters right, apologising, reimbursing, explaining, etc. – can end up having a higher satisfaction with the company than if their service provision went without a hitch.

The phenomenon has been labelled a service recovery paradox because of its seemingly absurd or contradictory nature. But should it be so perplexing? Many customers can surely relate to a situation where, in the event of something going wrong, the focus of their criticism or praise might well be on the manner in which the company tries to put things right or make amends rather than the failure itself – moderated by their perceptions of whether the failure wasn't the company's fault in the first place or was one which they could not have been expected to foresee.

If the company is impressive in its attempts at recovery, the customer may well give credit where it's due and come away with a better opinion of it than if they had not suffered the failure – and there's the paradox. But if the recovery strategy is only mediocre, there is little likelihood of the paradox occurring. In either scenario, managers should be aware that the initial failure heightens customer awareness of the organization's actions and attitudes. The failed customer is, understandably, more focussed than a customer who has not been inconvenienced or harmed, and the actions of customer-contact personnel in these situations is a key driver of a customer's overall satisfaction.

In the face of conflicting research, some of which supports the notion of the recovery paradox and some which does not, Vincent P. Magnini, John B. Ford, Edward P. Markowski and Earl D. Honeycutt Jr attempt to explain discrepancies by offering a detailed model which incorporates relevant moderators. They conclude that it is indeed a valid theory, but the paradoxical post-failure satisfaction increase is moderated by a number of contextual influences.

They advise that, rather than offering evidence for or against the existence of the paradox, researchers should analyze intervening factors that could enhance or hinder the odds of the occurrence of a paradoxical satisfaction after a failure and a first-rate redress.

For instance the severity of the failure. Perhaps an apology, empathy, and compensation could create a paradoxical satisfaction increase after a 20-minute wait at the reception of a hotel. But would a paradoxical satisfaction increase occur if the wait caused you to miss your flight?

Also the history of the customer's relationship with the firm. A customer who has experienced a prior failure with the firm is less likely to be impressed by a superb recovery than a customer who has never encountered a problem before. However, the findings do not support the notion that a longer customer relationship with the provider increases the likelihood of a recovery paradox.

Because failure recovery offers a unique opportunity to build customer satisfaction, employee training in this area should be of reasonable importance. For example, service firms could train their employees in the LEARN process (listen, empathize, apologize, react, notify). This could serve as a useful recovery process because of the listening and empathizing stages.

That is, post-failure satisfaction is probably more likely to increase if the customer perceives the recovery effort as a legitimate and sincere corrective action as opposed to a PR effort. If managed correctly, the failure redress procedures of a service firm can serve as a powerful tool in increasing customer loyalty. Perhaps if recovery procedures are well-managed to the extent that the competition cannot easily duplicate them, then it can be argued that a firm's recovery failure constitutes a core competency.

Also, because past problems are discovered to moderate the "paradox", a customer who has experienced a past problem could be "red flagged" in the database and employees trained to take additional care to ensure that he or she is not failed again.

It is also important to be aware that, in most cases, customers must seek redress for a recovery to occur. Consequently, companies should actively encourage them to complain – perhaps by asking straight-to-the-point questions like "How is everything?".

(A précis of the article "The service recovery paradox: justifiable theory or smoldering myth?". Supplied by Marketing Consultants for Emerald.)