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ORIGINAL EMPIRICAL RESEARCH

Better him than me: social comparison theory and service recovery

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Abstract We conduct two studies to examine if, when, and why communication strategies using social comparisons can effectively restore emotional equilibrium after a service failure, and thus aid recovery efforts. In our first study, we find that after a service failure, like compensation, downward social comparisons reduce anger and improve post-purchase behavioral intentions (including exiting, complaining to management, engaging in negative word-of-mouth, and complaining to a third party). However, when two recovery tools, compensation and downward social comparisons are used together they do not have an additive effect. Additionally, we show that anger mediates the social comparison effect. In a second study, we further explore the social comparison effect and the financial compensation effect using complete and incomplete downward social comparisons and multiple levels of financial compensation. Our findings indicate that complete downward social comparisons are particularly effective at improving all four types of post-purchase behavioral intentions when financial compensation is non-existent or relatively low. Finally, we discuss implications for theory and practice.

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Recently, concern has grown about the increasing numbers of delayed and cancelled flights. The Associated Press reported that almost 30% of all commercial flights were delayed or cancelled in March 2008 (Caterinicchia 2008a). Airlines provide a host of explanations for these delays including bad weather, old air-traffic control technology, increasing numbers of flights on smaller planes, and over-scheduling. Because prior research has established that financial compensation increases customer satisfaction after a service failure (e.g., Smith et al. 1999), it is not surprising that airlines often offer delayed passengers compensation in the form of free flights, hotel rooms, and food. In fact, the US Department of Transportation has just released a new rule requiring increased compensation for bumped and/or delayed customers beginning June 2008 (Caterinicchia 2008b). From a service recovery perspective, though, we might ask whether deploying customer service agents at the airport armed with financial incentives is the only way to deal with angry consumers.

In this article, we study a previously neglected but important component of recovery packages: interpersonal information from the service provider. Specifically, our focal research question asks whether downward social comparisons made by the service provider help change consumers' anger and improve post-purchase behavioral intentions. Downward social comparisons occur when individuals compare themselves to less fortunate others. According to downward social comparison theory, individuals who experience distress may improve their subjective well-being by spontaneously comparing themselves with others who are doing worse than they are. By comparing their outcome to someone else's worse outcome, they lower their reference points, and their outcome becomes "less bad."

By studying how a specific type of interpersonal information (downward social comparisons) affects consumer anger and post-purchase behavioral intentions, we make several theoretical and managerial contributions. First, prior research has tended to emphasize how compensation improves outcomes after service failures, while only a few investigators have studied how verbal communications, such as establishing employee customer rapport (DeWitt and Brady 2003) and apologizing (Matilla and Cranage 2005) affect how consumers evaluate the outcomes they receive. As a result, we are one of the first teams in the domain of marketing to study downward social comparisons (see also Argo et al. 2006) and to integrate these into models of service recovery. The social psychology literature extensively treats social comparisons but gives most emphasis to the operation of spontaneously-generated social comparisons, while we emphasize the operation of firm-generated social comparisons. This change in focus is appropriate for marketing contexts, where managers can provide social comparison information but cannot necessarily control internally-generated social comparisons.

A second theoretical contribution is our investigation into anger as the underlying mechanism between downward social comparisons and post-purchase behavioral intentions. Interestingly, although the literature on service failure and recovery has begun to incorporate emotions as negatively and positively-valenced affect, this research has not specifically examined whether service recovery efforts work through specific emotions like anger (exceptions include Bougie et al. 2003; Smith and Bolton 2002). This gap in the services marketing literature is surprising given that consumer behavior literature has shifted from research on the role of the valence of emotions to the role of specific emotions in explaining consumer behavior.

From a managerial perspective, we identify an important strategy that managers can employ to deal with customers and their emotions after a service failure. Chebat and Slusarczyk (2005) argue that learning how to manage customers and their emotions may have more positive long-run consequences in terms of retaining customers than the more traditional approach of trying to fix customers' problems without addressing their emotions. Using our findings that downward social comparisons reduce consumer anger and that reduced consumer anger leads to more favorable post-purchase behavioral intentions, we develop specific and actionable implications for employee training and consumer satisfaction surveys.

We first develop hypotheses about the independent and joint effects of downward social comparisons and compensation after a service failure on consumer post-purchase behavioral intentions that we test in two experiments. In the first study, we test our hypotheses in a restaurant scenario; in the second study, we use a failed service experience in an airport. In the final section of this paper, we address limitations, discuss the managerial implications of our research, and propose a specific agenda for future research.

Background and hypotheses

Our underlying framework links two focal recovery characteristics, downward social comparisons and compensation, to post-purchase behavioral intentions. Like Zeithaml et al. (1996), we consider these intentions important because they signal whether customers will remain with or defect from a company.

Outcomes from a service failure

Consumers respond in a broad variety of ways to service failures. Hirschman's 1970 typology of post-purchase behaviors, which has been used extensively by other researchers, identifies exit and voice as two important, but understudied, post-purchase behaviors (Hirschman 1970). Exit happens when individuals dissociate themselves from a company by switching brands or decreasing consumption of that company's products. In contrast, voice occurs when individuals try to change the practices and policies of the offending organization by complaining directly to the firm or to third parties such as consumer and government organizations. Subsequent typologies have included negative word-of-mouth communications (NWOM), which is defined as interpersonal communication concerning a marketing organization or product that denigrates the object of the communication (Laczniak et al. 2001; Richins 1987; Singh 1988). As a result, in both studies we use four scales to assess intentions for exiting, engaging in NWOM, and participating in two different types of voice (to management and to third parties).

Recovery efforts

Downward Social Comparisons. Social comparisons can occur automatically or in a controlled fashion, can have significant affective consequences, and fulfill important psychological functions. As mentioned earlier, the theory of downward social comparison posits that individuals experiencing negative affect can enhance their subjective well-being by comparing themselves to a less fortunate other (Aspinwall and Taylor 1993; Wills 1981). Downward social comparisons, working through a contrast effect, engender positive thoughts or feelings of relief that one is not in the same situation as the subject of the comparison. In an interesting application, Brown et al. (2006) survey alumni from a major university about their work environment, finding that people who make more downward social comparisons have higher job satisfaction, feel greater

affective job commitment, and engage less in job search activities (Brown et al. 2006).

However, relatively little research has studied how social comparisons made by third parties work. We hypothesize that if a manager explicitly makes downward social comparisons while dealing with unhappy customers, those customers will feel better about their situations and their anger will decrease. Because prior research establishes important links between changes in emotions such as anger and changes in post-purchase behaviors (Folkes et al. 1987; Liljander and Strandvik 1997; Zeithaml et al. 1996; Westbrook 1987), we also propose that downward social comparisons will decrease unfavorable post-purchase intentions—in particular, the intentions to exit, complain, and engage in NWOM. Westbrook (1987) examines consumer affective responses to consumption experiences and their relationship to certain aspects of post-purchase processes, finding that negative affective responses are directly related to complaint behavior and NWOM. Folkes et al. (1987) show that by reducing a specific negative emotion, anger, companies can reduce consumers' propensity to complain. Our contribution to this research is to identify how a specific previously unstudied intervention, downward social comparisons made by a third party, operates on post-purchase behavioral intentions by reducing anger.

Based on the above, we predict the following:

H1: Social Comparison Effect: After a service failure, when compared to a service provider who does not make such a comparison, a service provider who makes a downward social comparison will a) reduce consumer anger, and b) improve post-purchase behavioral intentions.

Compensation Prior research on customer compensation after a service failure suggests that by offering consumers compensation (in the form of dollars, discounts or coupons), the organization is trying to make the exchange more equitable by providing a gain to consumers who have experienced a loss. We extend the prior compensation research by considering how compensation affects a broad variety of post-purchase intentions (Chebat and Slusarczyk 2005; Smith et al. 1999). One possible explanation for compensation's influence is that in marketplace exchanges, people can easily weight the value of money against the value of a loss incurred in a service failure (Smith et al. 1999). As a result, we predict the following:

H2: Compensation Effect: In a service failure encounter, when compared to consumers who do not receive financial compensation, consumers who receive financial compensation will experience more positive post-purchase behavioral intentions.

Social comparison by financial compensation interaction A question arises about what effects will be observed if the service provider uses both a downward social comparison and financial compensation after a service failure. Although we predict that each service recovery tool will generate more positive post-purchase behavioral intentions, we do not expect the two tools together to have an additive effect because we expect that consumers will ignore the information contained in a social comparison, when they receive relatively unambiguous financial information.

This is consistent with the evaluability hypothesis (Hsee 1996), which suggests that when making a choice, consumers use the information that is easiest to evaluate, even if other information is available. Hsee (1996) finds that when no comparison information is available, information that is easy to evaluate influences choice, but that when comparison information is available, the relatively hard-to-evaluate information influences choice presumably because comparison information makes hard-to-evaluate information easier to evaluate. In a study asking respondents to evaluate two second-hand music dictionaries, respondents were presented with information about two attributes: each book's condition and the number of entries in each book. The respondents indicated how much they were willing to pay for each dictionary. In a joint-evaluation condition, participants were provided information about both dictionaries, but in two separate-evaluation conditions, participants were provided information about only one of the two dictionaries. Relative to the separate evaluations, in the joint-evaluation condition, the hard-to-evaluate attribute (number of entries) had a greater impact, and the easy-to-evaluate attribute (the book's condition) had a smaller impact. In separate evaluations, because individuals don't know how to assess the value given to a hard-to-evaluate attribute, they base their evaluations primarily on the easy-to-evaluate attribute, the book's condition.

Consistent with the evaluability hypothesis, we reason that when a consumer receives a service recovery package containing an apology, a downward social comparison, and no compensation, the consumer may experience uncertainty about how they feel about the service recovery package. In such situations, a social comparison can provide him or her with highly diagnostic information about whether the outcome is "fair" (as in, "Did I get what I deserved?") (Folger and Kass 2000; Boles and Messick 1995). When the recovery package includes financial compensation, consumers will use the relatively easy to interpret financial information (Smith et al. 1999) and ignore the information in the downward social comparison. As a result, financial compensation and downward social comparisons will not have additive effects:

H3: Interaction Effect: There will be an interaction between downward social comparisons and compensation so that when there is no compensation, the social comparison effect on post-purchase behavioral intentions will be present, and when there is compensation, the social comparison effect on post-purchase behavioral intentions will not be present.

Anger as mediator of the social comparison effect According to our mediation model, downward social comparisons will change post-purchase behavioral intentions (when compensation is not present) by reducing consumer anger. The expected pattern of effects is as follows: consumers exposed to downward social comparisons experience less anger, and less angry consumers express less negative post-purchase behavioral intentions. One benefit to managers and researchers of obtaining evidence for this chain of effects is that it encourages future investigators to direct attention to other service recovery tools that could reduce consumer anger. As discussed earlier, we do not expect consumers to attend to the information contained in social comparisons when compensation is present, so we do not predict mediation in the compensation conditions of our experiments. Specifically, we propose that

H4: When compensation is not present, anger will mediate the effect of a downward social comparison on post-purchase behavioral intentions.

Experiment 1

Overview

To test Hypotheses 1 through 4, in this 2×2 design, we manipulate the availability of financial compensation (none vs. free dinner) and the presence of a downward social comparison (none vs. downward). Participants viewed two videotapes that featured professional actors in a simulated restaurant setting. Prior research suggests that videotapes, because they are a visual and dynamic representation of the service setting, may produce the same emotional and behavioral intention outcomes as actual service settings (Bateson and Hui 1992).

Procedure

One hundred undergraduate college students participated outside of class time in sessions of approximately ten people. To eliminate the effects of individual differences such as propensity to complain and perceived self-control, we randomly assigned participants to different sessions and then randomly assigned sessions to different conditions. To increase the realism of the cover story, participants initially completed a short survey with general questions about local restaurants and reviewed a professionally designed menu from a "new local restaurant." Prior to watching the first video, participants were told that the actors were reenacting a recent actual event at this new local restaurant, and they were asked to "put themselves in the shoes of the couple in the restaurant and imagine how they might feel and react…" The participants then viewed a 12-min videotape depicting the service failure and one of four 3-min videos which showed a specific recovery effort (See Appendix 1 for the full scenario). After the video, they completed a questionnaire which again instructed them to imagine that "you have just finished eating at the restaurant and the manager has just spoken with you."

Independent variables

Recovery efforts The four recovery videos depict the restaurant manager describing what happened after the first video. He recalls that he apologized, and then, depending on the condition, says that he either made or did not make a downward social comparison and does or does not offer the couple a free dinner. (See Table 1 for the exact wording). When he does make a social comparison, the manager compares the plight of the couple in the video to that of another couple, who, he says, had a worse experience. When compensation is present, the manager indicates that the restaurant will pay for the couple's dinner.

Manipulation checks, mediator, and dependent variables

Manipulation checks For the social comparison manipulation check and the compensation manipulation check, we asked respondents to try to recall as much as they could about what happened in the videos. An independent judge coded the recall protocols by judging whether or not a respondent recalled that a) the restaurant paid for the meal, and/or b) the manager mentioned the experience of other consumers. At the end of the questionnaire, we asked respondents to rate the situation's plausibility on a seven-point scale. Additionally, we asked them whether they'd experienced anything similar. If they had, we asked them to write a description of the incident.

Mediator and dependent variables To measure anger, we asked participants to indicate on a nine-point scale how much they agreed or disagreed with each of the following statements: "I would feel angry about my experience at this restaurant"; "I would feel very displeased with the service at this restaurant"; "The more I think about it, the more

Table 1 Recovery text for experiments 1 and 2

Recovery conditions	Experiment
	Experiment 1
No downward social comparison and no compensation (NC)	Well, I bet you're wondering what happened Well I went over to the couple that you just saw in the video and told them that because the slow service tonight was the restaurant's fault, that we wanted to apologize to them for the inconvenience of missing the first act and quickly rang up their bill
Downward social comparison (DSC) and compensation (C)	Well, I bet you're wondering what happened Well I went over to the couple that you just saw in the video and told them that things could have been a lot worse. Last night, a couple of my friends had tickets to see *Rent* and they decided to go out to eat at another restaurant. Unfortunately for them, their meals took longer and they ended up missing the entire performance, and as you know, Hancher tickets are non-refundable so they lost about $60 on their tickets, and the restaurant wasn't able to provide them with any compensation Then I went over to the couple that you just saw in the video and told them that because the slow service tonight was the restaurant's fault, that we wanted to apologize and also to pay for their dinner in order to compensate them for the inconvenience of missing the first act and quickly took away their bill
	Experiment 2
Complete DSC and NC	The agent says, "Unfortunately, this is a very busy time of year and we have only two flights a day to Acapulco—all the flights are full on Sunday morning. You can try flying standby, but it doesn't look good—all our flights are checking in full." The agent hands you a new boarding pass for the Sunday afternoon flight and a distressed traveler package, which includes toiletries. The agent adds, "You know, things could have been worse. My college-aged son got delayed in O'Hare when traveling on a different airline last spring break. The airline didn't get him to his destination until 5 days later." After your transaction is complete, you go call your brother who lives in Chicago to arrange a place to stay
Incomplete DSC and C	The agent says, "Unfortunately, this is a very busy time of year and we have only two flights a day to Acapulco—all the flights are full on Sunday morning. You can try flying standby, but it doesn't look good—all our flights are checking in full." The agent hands you a new boarding pass for the Sunday afternoon flight and a distressed traveler package, which includes toiletries. The agent then adds, "Today, I can also offer you a 10% (25% or 100%) cash refund on the air portion of your vacation package. You can receive the cash refund of $40.00 ($100 or $400) right now and still take your vacation." As you accept the cash, the agent adds, "You know, things like this happen. My college-aged son got delayed in O'Hare when traveling on a different airline last spring break." After your transaction is complete, you go call your brother who lives in Chicago to arrange a place to stay

hostile I would feel towards the waiter/restaurant" (Adapted from Folkes et al. 1987; Coefficient alpha=0.87).

To ascertain their intentions to engage in different post-purchase behaviors, we asked the participants to indicate on a seven-point scale how likely they would be to engage in eight different post-purchase behaviors (See Appendix 2). Confirmatory factor analysis was employed to assess the reliability of the measurement scales. We conclude that our four post-purchase behavioral intentions scales had adequate reliability because the standardized factor loadings, inter-item correlations, factor reliability, and average variance extract exceed thresholds used elsewhere in the literature (Hatcher 1994). To assess discriminant validity, we examined the correlations among the factors and the confidence intervals for the correlations, finding evidence for discriminant validity in the absence of "1" among the confidence intervals. We also tested for discriminant validity between the four constructs using the procedures suggested in Hatcher (1994). In six separate models, we constrained the covariance between a pair of factors to equal 1. Then we calculated the chi-square difference between the standard measurement model and the unidimensional model, finding a significant deterioration in fit with the constraint at either the 0.001 level or at the 0.005 level for the family of tests. We conclude that our measures have adequate reliability and discriminant validity.

Results

Manipulation checks Consistent with the social comparison manipulation, those in the social comparison condition (86%) were significantly more likely than consumers in the no social comparison condition (0%) to mention the downward social comparison in the free recall task (χ^2 (1)=140.24, $p<0.01$). Consistent with the compensation manipulation, those in the compensation condition were significantly more likely to recall the free dinner (92%) than those in the no compensation condition (0%, χ^2 (1)=157.63, $p<0.01$). There were no condition effects on respondents'

evaluations of the realism of the scenario ($F(3,97)=1.57$, $p>0.20$). Additionally, about 60% of the respondents in each condition indicated that something similar had happened to them, and there were no condition effects on the response to this item (χ^2 (3)=2.6, $p<0.62$). We also measured propensity to complain and perceived self-control at the end of our study, finding no differences between groups on these scales (Control (four items alpha 0.75) ($F(3,97) = 1.3$, $p>0.28$, Complain (four items alpha 0.51) $F(3,97)=1.81$, $p>0.15$). We conclude that the manipulations worked as intended.

Hypotheses testing To test our hypotheses about the effects of social comparisons and compensation on anger and post-purchase behavioral intentions, we used an ANOVA for anger and a MANOVA for the four dependent variables (NWOM, Exit, Complain to Management and Complain to Third Parties). All means and standard deviations are listed in Table 2; ANOVA and MANOVA results are reported in the text. The MANOVA revealed no significant multivariate effects, except for the type of post-purchase behavioral intention ($F(3,96)=27.51$, $p<0.01$). This pattern indicates that the means for intentions to exit, engage in NWOM, complain to management, and complain to third parties are different, and that the effects of compensation, the social comparison, and their interaction are the same on all four dependent variables.

Consistent with H1, there is a main effect of social comparison on anger ($F(1,97)=5.45$, $p<0.03$), and on post-purchase behavioral intentions ($F(1,96)=3.51$, $p<0.06$), such that consumers exposed to a downward social comparison feel less anger and express more positive post-purchase behavioral intentions than those who are not exposed to such a comparison. Consistent with H2, there is a significant compensation effect on anger ($F(1,97)=33.78$, $p<0.01$) and post-purchase behavioral intentions ($F(1,96)=4.37$, $p<0.05$), such that those who receive compensation express less anger and more favorable post-purchase behavioral intentions than those who do not receive it. Consistent with H3, we find a significant interaction between compensation and social comparisons on anger ($F(1,97)=12.62$, $p<0.01$) and on post-purchase behavioral intentions ($F(1,96)=7.78$, $p<0.01$). These two-way interactions qualify the main effects and follow a consistent pattern: the social comparison effect is only observed when compensation is not present. When consumers receive compensation, a downward social comparison does not significantly affect anger ($t=-0.89$, $p<0.39$) or post-purchase behavioral intentions ($F(1,52)=0.49$, $p<0.49$), but when consumers do not receive compensation, a social comparison reduces anger ($t=3.99$, $p<0.01$) and makes post-purchase behavioral intentions more favorable ($F(1,44)=9.22$, $p<0.01$). Thus, we find that the two recovery tools used together do not have an additive effect.

To test H4, our hypothesis that anger will mediate the social comparison effect in the no compensation condition, we follow the procedure outlined in Baron and Kenny (1986), finding evidence for mediation. In the conditions where there was no compensation, (1) social comparisons had a significant effect on anger ($F(1,44)=39.83$, $p<0.01$), (2) anger had a significant effect on post-purchase behavioral intentions ($F=33.13$, $p<0.01$) and, (3) social comparisons had a significant effect on post-purchase behavioral intentions ($F(1,44)=9.22$, $p<0.01$). When we added anger to the MANCOVA, social comparisons did not, but anger did, have a significant effect on post-purchase behavioral intentions (Anger: $F(1,43)=19.58$, $p<0.01$, Social Comparisons: $F(1,43)=0.18$, $p<0.67$). As a result, we conclude that when social comparisons are used alone

Table 2 Means and standard deviations for anger and post-purchase behavioral intentions for main effects and interactions

		Dependent variable				
		Anger	Post-purchase behavioral intentions			
Main effects	Condition		Exit	NWOM	Complain to management	Complain to third party
Experiment 1						
Compensation (C) effect	No C (NC)	6.93[a] (.96)	6.13 (1.11)	6.32 (1.31)	5.86 (1.59)	4.88 (1.67)
	Free dinner	5.71 (1.35)	5.84 (.94)	6.26 (.72)	5.40 (1.8)	4.52 (1.6)
Social comparison (SC)	No SC (NSC)	6.53 (1.42)	6.10 (.80)	6.47 (.65)	5.77 (1.62)	4.81 (1.67)
	SC	6.05 (1.24)	5.87 (1.17)	6.14 (1.24)	5.48 (1.8)	4.59 (1.63)
Interaction effect	NSC and NC	7.65 (0.48)	6.31 (.85)	6.68 (.51)	6.31 (.95)	5.5(1.55)
	SC and NC	6.33 (.85)	5.98 (1.29)	6.01 (1.67)	5.48 (1.91)	4.36 (1.61)
	NSC and C	5.55 (1.23)	5.92 (.72)	6.28 (.71)	5.29 (1.93)	4.21 (1.54)
	SC and C	5.83 (1.46)	5.77 (1.09)	6.25 (.75)	5.48 (1.73)	4.78 (1.66)

[a] Means and standard deviations in parentheses

they operate through anger to improve post-purchase behavioral intentions.

Discussion

To summarize, the two-way interactions between social comparisons and compensation indicate that when there is no compensation, social comparisons are quite powerful in reducing anger and in promoting more positive post-purchase behavior intentions. The mediation analysis indicates that when compensation is not present, downward social comparisons work through anger to affect these behavioral intentions. This pattern suggests an interesting managerial implication: downward social comparisons may be useful in cases when it is not possible to compensate the consumer for a service failure. For example, an airline may not be willing or able to compensate someone who misses a funeral because of a cancelled flight.

This study has several limitations, which we address in our second experiment. Regarding the social comparison manipulation, we obtained relatively strong effects, but it may be that saying anything is better than saying nothing. So, in the next experiment, the customer service agent provides the same social information in all conditions, but in one condition withholds the outcome (i.e., makes an incomplete social comparison). Regarding compensation, we found relatively weak effects, but we only tested two levels of compensation (none vs. a free dinner). There may be occasions when a service provider can decide on the level of compensation. For example, a restaurant could offer a dissatisfied customer free drinks or a free meal. We predict that downward social comparisons will also be effective at moderate and low levels of compensation because they help consumers interpret information that is low in evaluability (Is this fair?). Our next study tests this by testing multiple levels of compensation. Finally, our next study enriches our two-item scales of Exit, NWOM, Complaining to Third Parties, and Complaining to Management by building three- and four-item scales of these post-purchase behavioral intentions.

Experiment 2

Overview

To overcome the limitations of Experiment 1 and to test our first three hypotheses, we use a 2×4 design, with four levels of financial compensation (none, $40, $100, and $400) and two levels of downward social comparison (complete or incomplete). We also refine the post-purchase behavioral intention measures by adding items to our four measures of intentions to exit, complain to management, complain to third parties, and engage in NWOM. Participants read one of eight versions of a scenario about an airport delay (See Appendix 3).

Procedure and independent variables

Two hundred and seven undergraduate college students participated outside of class time in sessions of about ten people. For each session, we randomly ordered questionnaires so that participants would receive different versions. To increase interest, we asked respondents to describe what they did over spring break and to estimate how much they spent on their vacation. We then described a scenario in which a student had bought a package that included airfare ($400) and a hotel room ($240) in Acapulco over spring break. The student in the scenario flew to Chicago but missed the connecting flight. In all conditions, the agent apologizes, delivers the bad news that the next available flight is 24 h later, hands the student a distressed traveler package with toiletries, and then, depending on the condition, offers $40, $100, $400, or no compensation and makes a downward social comparison (either incomplete or complete). (See Table 1 for exact wording and Appendix 3 for complete wording of scenario.) In making the complete downward social comparison, the customer service agent comments "My college-aged son got delayed in O'Hare when traveling on a different airline last spring break. The airline didn't get him to his destination until 5 days later." In making an incomplete social comparison, the customer service agent states that "My college-aged son got delayed in O'Hare when traveling on a different airline last spring break," but the agent does not reveal what the outcome was.

Manipulation checks and dependent variables

Manipulation checks For the compensation manipulation check, an independent judge coded participants' responses to a free recall task in which they were asked, "please try to recall as much as you can about the interaction between the student and the customer service agent." The judge coded whether a participant accurately reported the amount of the compensation. For the social comparison manipulation check, we asked respondents to indicate "Who had the worst outcome after the delayed flight?" where possible responses were (a) I had an outcome worse than the customer service agent's college-aged son, (b) the customer service agent's college-aged son had an outcome worse than mine, and (c) the customer service agent did not describe her college-aged son's outcome after the delayed flight. To determine whether participants rated the scenario as realistic, we asked them to rate the situation's plausibility on a seven-point scale. Additionally, we asked each respondent to indicate whether anything similar had happened to him or her.

Post-purchase behavioral intentions To indicate intentions to exit, complain to management, engage in NWOM, and complain to a third party, participants indicated on a seven-point scale how likely they would be to engage in 13 different post-purchase behaviors (See Appendix 2). After analyzing the reliability and discriminant validity as we did in Experiment 1, we conclude that our measures had adequate amounts of both.

Results

Manipulation checks All but two of the participants correctly recalled the compensation amount; thus, the compensation size affected the size of the recalled compensation (χ^2 (3)=288, $p<0.01$). The two participants who were inaccurate were in the $40 condition and did not mention a cash refund in their recall protocol. In response to the multiple choice question about whose outcome was worst, there was a significant effect of social comparison condition on responses to our multiple choice question about whose outcome was worst (χ^2(2 df)=162.06, $p<0.01$). Ninety-six percent of the participants in the incomplete social comparison conditions correctly answered that the customer service agent did not describe her college-aged son's outcome after the delayed flight and 90% of the participants in the complete social comparison condition correctly indicated that the customer service agent's college-aged son had an outcome worse than theirs. We reanalyzed our results, leaving out the participants who incorrectly answered the question, but there was no significant change in the pattern of means. As a result, our analysis includes all participants. There were no version effects on how realistic the scenario was judged to be (F(7,195)=0.90, $p<0.50$); nor were there version effects on responses to the question about whether the participant had experienced a similar event (about 61% answered "yes" across conditions, χ^2 (7)=7.16, $p<0.41$). Because of random assignment, there were no differences between groups in respect to the personality characteristic "propensity to complain" (F(7,191)=1.45, $p<0.19$).

Hypothesis testing We conducted an ANOVA analysis on anger and a MANOVA analysis on the four post-purchase behavioral intentions. We report these results in the text; all means are in Table 3. Again, the MANOVA revealed no significant multivariate effects, except for the type of post-purchase behavioral intentions (F(3,194)=222.28, $p<0.01$).

Consistent with Hypothesis 1 (the social comparison effect), we found a significant social comparison effect on anger (F(1,197)=7.53, $p<0.01$) and on post-purchase behavioral intentions (F(1,196)=21.75, $p<0.01$). Consistent with H2 (the compensation effect), we found a significant compensation effect on anger (F(3,197)=7.71, $p<0.01$) and post-purchase behavioral intentions (F(3,196)=5.47, $p<0.01$). Consistent with H3, we found a significant interaction between compensation and social comparison on anger and post-purchase behavioral intentions (Anger: F=8.89, $p<0.01$; Post-Purchase Behavioral Intentions (F(3,196)=4.78, $p<0.01$).

Follow-up tests further illuminate the ways complete downward social comparisons can complement compensa-

Table 3 Means and standard deviations for anger and post-purchase behavioral intentions for main effects and interactions

		Variable					
Main effects	Condition	Anger	Distributive justice	Exit	NWOM	Complain to management	Complain to third party
Experiment 2							
Compensation (C)	None	6.0 (1.04)	2.45 (1.15)	5.81 (.92)	5.78 (1.18)	5.29 (1.25)	2.89 (1.56)
	$40	5.73 (1.08)	2.80 (1.1)	5.46 (1.22)	5.62 (1.03)	4.86 (1.14)	3.15 (1.7)
	$100	5.61 (1.12)	2.94 (1.14)	5.41 (1.34)	5.68 (1.21)	4.90 (1.53)	2.67 (1.30)
	$400	4.96 (1.53)	4.06 (1.46)	4.84 (1.56)	5.05 (1.30)	4.80 (1.53)	2.21 (1.19)
Social comparison (SC)	Incomplete	5.74 (1.33)	2.87 (1.43)	5.64 (1.32)	5.78 (1.25)	5.36 (1.22)	2.99 (1.47)
	Complete	5.32 (1.20)	3.38 (1.27)	5.05 (1.32)	4.63 (1.5)	5.23 (1.14)	2.38 (1.39)
Interaction effects	Incomplete (SC)						
	None (C)	6.46 (.75)	2.04 (.92)	6.13 (.75)	6.13 (.87)	5.90 (.94)	3.53 (1.31)
	$40 (C)	6.26 (.82)	2.29 (.97)	5.71 (1.15)	6.04 (.89)	5.32 (0.94)	3.51 (1.75)
	$100 (C)	5.89 (1.01)	2.55 (0.99)	5.93 (1.17)	6.06 (1.13)	5.23 (1.33)	2.95 (1.29)
	$400 (C)	4.45 (1.53)	4.48 (1.37)	4.78 (1.66)	4.9 (1.53)	4.68 (1.31)	2.13 (1.13)
	Complete (SC)						
	None (C)	5.42 (1.07)	2.93 (1.25)	5.4 (0.98)	5.34 (1.37)	4.56 (1.21)	2.11 (1.50)
	$40 (C)	5.16 (1.05)	3.36 (1.01)	5.19 (1.26)	5.16 (1.00)	4.35 (1.16)	2.75 (1.66)
	$100 (C)	5.32 (1.17)	3.34 (1.16)	4.89 (1.31)	5.28 (1.18)	4.57 (1.68)	2.42 (1.27)
	$400 (C)	5.38 (1.41)	3.71 (1.46)	4.89 (1.51)	5.18 (1.10)	4.91 (1.70)	2.27 (1.25)

tion effects. Replicating the first study, we find that when consumers receive no compensation, a complete downward social comparison reduces consumer anger (t=2.92, p<0.01) and improves post-purchase behavioral intentions (F(1,40)=18.55, p<0.01). Additionally, we find that when consumers receive partial compensation ($40 or $100), a complete downward social comparison reduces consumer anger ($40 compensation: t=3.17, p<0.01; $100 compensation: t=1.95, p<0.05), and improves post-purchase intentions ($40: F(1,42)=10.17, p<0.01; $100: F(1,58)= 9.19, p<0.01). However, we find that at full compensation ($400 level), a downward social comparison significantly increases anger: (t=−3.04, p<0.01) but does not significantly affect post-purchase behavioral intentions (F(1,56)= 0.51, p<0.48). We explore possible reasons for this last result in the discussion.

Follow-up tests also shed light on how compensation operates when the service provider does not make a complete downward social comparison. When consumers receive incomplete social comparisons, those who receive $400 of compensation feel less anger (t= 5.3, p<0.01) and express lower intentions to exit, engage in negative word-of-mouth, complain to management, and complain to third parties (F(1,47)=28.67, p<0.01) than those who receive no compensation. Similar, but slightly weaker effects are observed when there is no social comparison and consumers receive $100 of compensation: Those who receive $100 of compensation express less anger and more favorable post-purchase intentions than those who receive no compensation (Anger t=2.25, p<0.03; Purchase Intentions F(1,45)=3.81, p<0.06). However, $40 of compensation does not significantly affect anger or post-purchase behavioral intentions.

General discussion, managerial implications, and limitations

Taken together, the results from the two experiments tell an interesting story. It appears that downward social comparisons made by third parties mitigate the effects of a service failure on post-purchase behavioral intentions by reducing consumer anger about the failure. Compensation also mitigates the effects of a service failure on post-purchase behavioral intentions, but compensation amounts have to be large to influence post-purchase behavioral intentions. Our research shows, though, that if the customer service agent pairs relatively low levels of compensation (none, $40 or $100) with a complete downward social comparison, then the combination of compensation and downward social comparisons reduce consumer anger and improve post-purchase behavioral intentions. But the research shows a pitfall: if the customer service agent pairs relatively high levels of compensation ($400 or a free dinner) with a social comparison, the service agent may not gain additional effectiveness and instead may increase consumer anger.

Two related questions remain. First, why would consumers express anger when they received a $400 cash refund and a downward social comparison? Written responses on the questionnaires suggest that when consumers received a $400 cash refund, a downward social comparison made them angrier, perhaps because they resent the addition of a moral lesson or the feeling of being manipulated after receiving the monetary compensation. One respondent wrote, “The agent gave me $400 and then tried to convince me to look on the bright side.” Prior social psychology literature also shows that under some circumstances downward social comparisons can actually increase negative affect. For example, if a downward social comparison increases an individual’s anxiety about outcomes they will receive in the future, the comparison may increase negative affect (Buunk et al. 1990).

Second, why were complete downward social comparisons effective at the $40 and $100 levels in the second study? We argue that downward social comparisons can decrease anger and increase perceptions of what is known as distributive justice or judgments about outcome fairness when compensation levels are ambiguous. Our second study contained a four-item scale measuring distributive justice (e.g., the outcome I received was fair, coefficient alpha=0.93). When the service provider made an incomplete social comparison and offered consumers $40 or $100 compensation, consumer perceptions of distributive justice were no higher than when they received no compensation; when the service provider made a complete social comparison and offered consumers $40 or $100 compensation, then consumers’ perceptions of distributive justice were as high as when they received $400 of compensation. (Means and standard deviations are in Table 3.)

Specific and actionable implications for managers

As Bolton et al. (2004) note, there has been a recent paradigm shift in marketing management, from an emphasis on allocating resources to customers who are currently loyal to the company (a reactive strategy) to a focus on allocating resources to customers to create, maintain, and enhance loyal behaviors (a proactive strategy). This paradigm shift means that managers are becoming increasingly interested in learning how to handle complaints so as to maintain and enhance loyal consumer behavior (Chebat and Slusarczyk 2005; Tax et al. 1998). Our research expands the tool kit for managers wishing to employ proactive strategies by showing the benefits of making a downward social comparison. It is true that a downward social comparison

does not fix or compensate for a major failure, but it does decrease consumer anger and intentions to exit, engage in NWOM, and to complain. These managers may find downward social comparisons an especially important component of a well-crafted service recovery strategy in situations where consumers cannot be compensated adequately for the loss arising from a service failure. For example, no amount of compensation may adequately compensate a passenger who misses a graduation because of airline overbooking. However, customer service representatives can be trained to use downward social comparisons when appropriate, just as they can be trained to establish rapport (DeWitt and Brady 2003). Specifically, they can learn to recognize the often non-verbal signs that a consumer is angry (Matilla and Enz 2002). We do not recommend that service personnel invent downward social comparisons; rather, we suggest that training programs educate service personnel on how to construct effective downward social comparisons and provide material for these comparisons by describing different consumers' experiences. Learning what a downward social comparison is will prevent service representatives from making the relatively ineffectual incomplete social comparison (one in which the outcome is not disclosed; these are used in our control condition in Experiment 2).

Our research also has implications for post-purchase surveys, as it suggests that organizations would benefit from inquiring about consumers' emotions and perceived distributive justice. For example, BizRate.com's post-fulfillment satisfaction survey contains only measures of performance on cognitive attributes, such as availability/ease of contacting customer support, courtesy and knowledge of staff, and product quality. By modifying the questionnaire to include questions about emotional and distributive justice perceptions, business managers may come to better understand and more effectively manage a variety of post-purchase behaviors including word-of-mouth, exiting, complaining to management, and complaining to third parties.

Limitations, future research, and conclusion

We see many avenues for future research, all of which stem from the limitations of our own studies. Although our research offers new insight into the role of a specific type of interpersonal information (a downward social comparison made by a service provider) in influencing consumers' behavioral intentions after a service failure, future studies could broaden our research question to investigate how characteristics of the customer, service failure, and social comparison itself affect the effectiveness of the social comparison. For example, would we get the same pattern of results if the target consumer in the social comparisons suffered at the hands of the same firm? Similarly, other types of carefully crafted social comparisons (e.g., upward, in which the outcome is better than what the consumer receives) may increase desirable behaviors such as giving constructive feedback to management so that the service provider can remedy legitimate complaints and encourage loyalty behaviors. Also, in our studies we used comparisons made by a party with a vested interest (the service provider), but because customers often interact with others in service situations, they are likely to make their own spontaneous social comparisons by observing the outcomes other customers receive. Thus, a future research question might be: is it possible to influence spontaneous social comparisons by carefully designing service environments? Finally, future research might improve external validity by examining social comparisons in naturally occurring service failure situations.

Ultimately, we suggest that existing models of consumer behavior should be revised to incorporate social comparison processes similar to what is being done in an organizational context (Goodman and Haisley 2007). We see numerous opportunities for future research that links social comparison processes to service recovery efforts and more broadly to consumer behavior.

Appendix 1

Study 1 Text of videos

Video 1:

Outside:

Setting: It is a warm sunny October late Saturday afternoon. Two students (one male and one female) have just finished watching their college football team beat the visiting team in an exciting game.

The couple now decides to go out to dinner at a new restaurant in town. Later that evening, they have plans to attend *Rent*, which is at Hancher Auditorium for the weekend.

At the restaurant:

The manager seats the couple right away.

Then the waiter comes over to their table and takes their orders. The two people are very hungry, because they have been outside all afternoon. They decide to order a special dish from the menu that sounds really good (the menu indicates that this is the restaurant's specialty).

A couple of minutes after the two people have placed their order, a group of seven or eight people (the 'extras') enters the restaurant. They are seated right away at a big table nearby.

15 min later:

The two people are still waiting for their meals. The waiter, though, has brought salad and bread to the large group table.

After another 15 min:

The waiter serves the main courses to the large group table; then, the waiter serves the salads and bread to the couple.

The couple then calls the waiter over to their table and asks "What's the matter? Why are you serving them first?" The waiter says, "Just a minute," and leaves.

The couple continues to wait for their main course. While they wait, the group of people at the nearby table are eating. The couple calls the manager over and says, "We have been waiting so long… We have tickets to see *Rent* at Hancher, and we are going to miss the first act of the show… We would like our food." The manager says, "Please wait a minute. There are more customers at that table, so we served them first." Then the manager leaves.

End of Video 1

Video 2: Recovery with downward social comparison and compensation

Well, I bet you're wondering what happened. I went over to the couple that you just saw in the video and told them that things could have been a lot worse. Last night, a couple of my friends had tickets to see *Rent* and they decided to go out to eat at another restaurant. Unfortunately for them, their meals took longer and they ended up missing the entire performance, and as you know, Hancher tickets are non-refundable so they lost about $60 on their tickets, and the restaurant wasn't able to provide them with any compensation.

Then I went over to the couple that you just saw in the video and told them that because the slow service tonight was the restaurant's fault, that we wanted to apologize and also to pay for their dinner in order to compensate them for the inconvenience of missing the first act and quickly took away their bill.

Appendix 2

Table 4 Measures for post-purchase behavioral intentions for experiment 1 and 2

Experiment 1		Experiment 2	
Scale[a]	Factor loading (Std)	Scale[a]	Factor loading (Std)
Exit			
Inter-item correlation=0.66, composite reliability=0.90, extracted variance=0.84		Coefficient alpha=0.90, composite reliability=0.90, extracted variance=0.76	
Return to this restaurant again the next time you dined out[b]	0.96	Purchase another vacation package from this airline next spring break[b]	0.83
Ever return to this restaurant again[b]	0.86	Do more business with this airline in the future[b]	0.90
		Ever purchase another vacation package from this airline[b]	0.88
Complain to management			
Inter-item correlation=0.90, composite reliability=0.95, extracted variance=0.91		Coefficient alpha=0.76, composite reliability=0.80, extracted variance=0.59	
Complain to the manager of the restaurant	0.99	Complain to the customer service manager	0.85
Make certain that the restaurant manager knew exactly what you thought about the service	0.89	Make certain that the customer service manager knew exactly what you thought about the airline's service	0.92
		Insist on a full cash refund for all of your vacation package	0.45
Engage in negative word-of-mouth			
Inter item-correlation=0.51, composite reliability=0.79, extracted variance=0.69		Coefficient alpha=0.68, composite reliability=0.68, extracted variance=0.42	
Try to discourage other people from dining at this restaurant	0.98	Try to discourage other people like you from using this airline	0.50
Recommend this restaurant to your friends and acquaintances[b]	0.70	Tell your friends and acquaintances bad things about this experience	0.76
		Recommend this airline to your friends and acquaintances[b]	0.66

Table 4 (continued)

Experiment 1		Experiment 2	
Scale[a]	Factor loading (Std)	Scale[a]	Factor loading (Std)
Complain to third party			
Inter item correlation=0.60, composite reliability=0.76, extracted variance=0.61		Coefficient alpha=0.76, composite reliability=0.80, extracted variance=0.59	
Feel a desire to punish the restaurant	0.90	Feel a desire to punish the airline	0.88
Feel a desire to fine the restaurant	0.89	Feel a desire to fine the airline	0.84
		Report the incident to a consumer agency so that you can warn other consumers	0.57
		write a letter to the student newspaper about your bad experience	0.42

[a] All scale items started with "If this had happened to you, how likely is it that you would…."
[b] These items were reverse coded

Appendix 3

Study 2 Text of Scenario

Scenario: $40 Compensation and Complete Downward Social Comparison for Study 2

Please read the following scenario and try to put yourself in the shoes of the hometown University student who had the following things happen over spring break. After you read the scenario, we will ask you to answer some questions as if you were the student that this happened to.

Scenario

You buy a vacation package to Acapulco for $640.00 for spring break 2007. The package included air travel from the local city ($400) and six nights in a hotel ($240) that is close to the clubs, has a large pool, is on the beach, and includes all of your breakfasts. Your friends, who will be your roommates at the hotel, pay for an extra night and leave on the Friday before spring break, but you have a prior commitment and have to leave on Saturday. You all plan to return together on the Friday of spring break. You are really looking forward to getting away from the cold.

On Saturday, you board the plane from your hometown to Chicago. You have to transfer to a different plane in Chicago. When you get to Chicago, you look at the screen inside the terminal and see that your flight is leaving from gate B1. When you get to B1, you realize that there are no people waiting in the gate area, but there is an airline personnel person behind the desk, apparently doing paperwork. You go to her and ask when the flight to Acapulco leaves. She says, "I'm sorry, you have the wrong gate. We had a last-minute unexpected gate change. The correct departure gate is C64."

You head over to C64, which is in a different terminal. When you arrive at gate C64, there is no one in the gate area, except an airline agent. When you approach her and tell her that you are here for the flight to Acapulco, she says, "I'm sorry, we have finished boarding that flight. It has pulled away from the terminal. You'll have to go to the customer service desk around the corner. They will reschedule you for the next available flight."

You get to the customer service desk and explain to the agent that you missed your flight because the airline made a last minute gate change, didn't correct the screen inside the terminal, and you ended up at the wrong gate. The customer service agent says, "I'm sorry you missed your flight. We'll get you a seat on the next available flight." The agent checks on the computer and says, "The next available flight isn't until tomorrow afternoon."

The agent says, "Unfortunately, this is a very busy time of year and we have only two flights a day to Acapulco—all the flights are full on Sunday morning. You can try flying standby, but it doesn't look good—all our flights are checking in full." The agent hands you a new boarding pass for the Sunday afternoon flight and a distressed traveler package, which includes toiletries. The agent then adds, "Today I can also offer you a 10% cash refund on the air portion of your vacation package. You can receive the cash refund of $40.00 right now and still take your vacation."

As you accept the cash, the agent adds, "You know, things could have been worse. My college-aged son got delayed in O'Hare when traveling on a different airline last spring break. The airline didn't get him to his destination until 5 days later."

After your transaction is complete, you go call your brother who lives in Chicago to arrange a place to stay.

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