Fatal Service Failures Across Cultures

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This study tests the existence of service failure and recovery categories, previously defined in the United States within the Chinese cultural setting of Taiwan. The CIT method was applied and found a high similarity between U.S. and Taiwan restaurant failure types and recovery strategies, while some unique differences were discovered, suggesting a uniform approach to service may benefit international restaurant chains. Extending previous research findings, this study describes specific failure type and recovery strategies that stand out as fatal in leading to a level of dissatisfaction that cannot be recovered from and that increase in severity if ignored. These fatal failures are also shown to be more malleable to recovery strategies than non-fatal failures. This leads to increased opportunity for moderation, or amplification, of the negative impression the customer takes away from the service incident. Catastrophe theory is applied in explaining this differential reaction to failure types. Restaurant managers are encouraged to empower service employees so that non-fatal incidents can be prevented or quickly dealt with through low-cost and effective recovery strategies while establishing policies to identify and then reduce the negative consequences of fatal incidents that require more costly recovery efforts.

Keywords: Service failures, Critical incident technique, Restaurant industry, Recovery strategy, Catastrophe theory

Introduction

Growth of the service sector in the U.S. economy has been widely reported in the popular media. Rather than a special case, growth of the service sector may be viewed as a natural outcome of general economic development of a nation. The Republic of China on Taiwan has followed the pattern first set by Japan of an export driven economy where the work force has little private time and few domestic services to spend their savings on. Accumulation of wealth then led to a rapid growth in the domestic economy, including all types of service-based products. Total quality management and the strive for zero defects places issues of quality at the center of management's attention. This is no less true in Taiwan, where issues of service quality have been driven by increasing levels of competition. Taiwan's service sector accounted for 49% of the country's total employment in1999. The number of foreign-based service firms entering the Taiwan market has increased dramatically during the past decade and in the restaurant business includes names such as McDonalds, KFC, Pizza Hut, Subways, Ponderosa Steak House, and T.G.I. Fridays. These firms have not only succeed in Taiwan, but have captured leading market share positions and raised the bar of competition with a special emphasis on high levels of customer satisfaction. The restaurant business in Taiwan is highly competitive, with the average citizen often eating outside the home resulting in Taiwan consumers spending an average of U.S.$1,596 per person (according to the R.O.C. Department of Economics), compared to the U.S. average of U.S.$768 per person (according to the National Restaurant Association). Restaurant franchises well known for their emphasis on service quality, such as McDonald's, have benefited from Taiwan consumers' eating out behavior. According the their 1999 annual report, Taiwan has the third largest number of McDonald's restaurants in the Asian region behind Japan and Australia. This success has been in part attributed to a high level of quality control at McDonald's.

Due to high levels of population congestion, 612 people per sq. km compared to 336 in Japan and only 30 in the U.S., consumers in Taiwan can conveniently visit any number of restaurants by walking, motorcycling, or short car trip (under ten minutes). Cultural background combines with this convenience to result in many types of dining experiences, which often blur the distinctions of fast-food, takeout, and full-service. The street vendor business alone can be observed in numerous forms, ranging from simple fast-food take-away to elaborately prepared meals served on portable tables set up along a street side. With a unique local history, cultural, and tradition, are restaurants in Taiwan encountering and addressing service quality problems in ways that differ from the U.S.? While clearly many unique cultural influences impact interaction with the customer, such as menu design, interior design, etc., the expectation of what constitutes a service failure and recovery is of central importance to the management of quality in international restaurant operations. If customers in one country perceive service failures in a fundamentally different way than customers in another country, than restaurant managers would not be well served to apply recovery techniques that have little, or even negative, effects. However, if customers around the world show a tendency to perceive service failures and their recoveries in similar ways, international restaurant chain managers can take advantage of this in unified training programs.

When service failures take place, the responses to customer complaints often reinforce negative feelings created by the incidents (Hart, Heskett and Sasser, 1990). Thus a service failure can assure that a customer will not return. It may be impossible to ever eliminate errors in the service context or even reach a level of errors approaching zero defects, yet understanding the most common errors in a given service context and the most effective responses may moderate negative repercussions. If customers can be retained after a service failure the firm will benefit as retaining customers may be a less painful way for a firm to improve profits than through cost cutting (Power, 1991).

A recovery is the action taken by the by a firm in response to defects or failures (Gronroos, 1988). In

fact, a failure event may present an opportunity to obtain higher ratings from customers than if the failure

had never happened as long as the recovery is effective (Etzel and Silverman, 1981; McCollough and

Bharadwaj, 1992; McDougall and Levesque, 1998). Both failures and recoveries are subjectively judged

by each customer so that what constitutes a failure for one person may not seem important to another.

Receiving a meal not cooked to order could be quite serious for one customer and of little or no concern

to the next customer.

Research into different aspects of satisfaction has been dominated by the prevailing

confirmation/disconfirmation paradigm (Oliver, 1980). This strand of research includes variations and

extensions into such areas as contrast theory (Cardozo, 1965); assimilation theory (Anderson, 1973), and

equity theory (Oliver and Swan, 1989). The role of trust in buyer-seller relationships has been found to

also play a role in reducing transaction costs (Noordewier, John and Nevin, 1990) and as a prerequisite

for even being considered as a product source (Doney and Cannon, 1997). Thus, the sources of

satisfaction/dissatisfaction and the importance of satisfied customers is well established. Quantification

of service failures in specific service settings and industries has examined failures from both the customer

perspective as well as the service employee perspective (Bitner, Booms and Tetreault, 1990; Bitner,1992;

Bitner, Booms and Mohr, 1994; Hoffman, Kelley and Rotalsky, 1995; Kelley, Hoffman and Davis,

1993). Recent work has attempted to examine service failures from an exchange perspective, employing

theories from resource exchange, prospect theory, and mental accounting (Smith, Bolton and Wagner,

1999).

Clearly the research trend is toward an integrated understanding of what service failures are, how they are

overcome, and how they impact the customer and the firm. This study extends this trend by classifying

failures and recoveries in Taiwan (a Chinese culture) in order to test the cross-cultural robustness of

previous findings in the U.S. In addition, the nature of the failures that appear resistant to recovery strategies is explored through the use of catastrophe theory. The restaurant industry is the center of this study because of an existing base of research in the U.S. that can be replicated in a different cultural setting—Chinese. This business sector makes up a significant contribution to economies around the world making research results relevant to many managers including those in the tourism and hospitality industry. Results can guide managers of international restaurant chains in their quality control efforts as well as having a direct application in the emerging hospitality industry in China due to the high cultural similarity of China and Taiwan.

CIT Technique

The critical incident technique is an inductive research method that draws out categories of incidents from interview data. Developed during World War II, the United States Army Air Forces used the technique in selecting aircrews (Flanagan, 1954). The CIT technique has been widely used in studying the service industry. Kelley et al. (1993) successfully employed the Bitner et al. (1990) classification system through a CIT data collection and classification method. Bitner et al. (1994) also employed the CIT method successfully when examining service encounters from the service employee's perspective. The steps used in CIT include: (1) identify and classify failures; (2) identify and classify recovery strategies used in response to the failures; (3) measure customer satisfaction with the recovery; and (4) measure post-incident purchase behaviors. By keeping the survey open-ended, any new types of failures and or recoveries could be discovered.

Quality

Although economic change can occur rapidly, cultural change may not keep pace. In the U.S., the importance of monitoring the service encounter, as a method to inform management about needed changes, was pointed out during the rapid growth of the U.S. service sector in the mid and late 1980's (Parasuraman, Zeithaml and Berry, 1985; Shostack, 1987; Solomon et al., 1985; Surprenant and Solomon, 1987; Bitner et al., 1990). A firm's culture has been recognized as having an influence on the service encounter (Bowen and Schneider, 1988), which itself is influenced by the culture its employees are drawn from. Taiwan has experienced rapid economic growth accompanied by social change within the past ten years. Rising rates of double income families, smaller family size and urbanization are trends experienced by numerous developed countries and now repeated in Taiwan. Yet expectations about the dining experience would seem to be little changed as they are heavily influenced by traditions and behaviors learned decades or even generations ago.

Service quality is an elusive construct because of three features unique to services: intangibility, heterogeneity, and inseparability of production and consumption (Parasuran, Zeithaml and Berry, 1985). Much of the restaurant experience is not in the observable elements, but in the interaction between service providers and customers. Researchers (Holbrook and Corfman, 1985; Olson and Dover, 1979; Zeithaml et al., 1993) have emphasized the difference between objective and perceived quality. If the *product* is intangible, satisfaction is a perception about performance, rather than the utilization of an object (Berry, 1987). Satisfaction assessments relate to individual transactions whereas attitudes are more general (Swan, 1983). These general attitudes will act as input to the formation of expectations about the expected quality of a given service. Thus disconfirmation studies explore the gap between the general attitude towards a service and the specific experience of the service. If a customer enters a

restaurant expecting slow service, a failure may not be perceived when slow service is encountered. A

failure would be cognitively recognized if the service expected was fast, but the reality was slow service.

Service Failures

It may not be the case that all types of incidents are equally bad, especially among different cultures.

Bitner et al. (1990) examined specific events and behaviors in order to explore the dimensions of

satisfaction in the service encounter. Across three industries, hotels, restaurants, and airlines, Bitner et al.

(1990) classified all satisfactory and dissatisfactory incidents into three groups, which are used in the

present study. An important finding was that responses to failure incidents, such as apologies,

compensatory actions, and explanations, could help lessen the dissatisfaction of customers. Hoffman et

al. (1995) applied the CIT method, as well as Bitner et al.'s (1990) classification schema to the restaurant

industry in the U.S.

This study replicates the Hoffman et al. (1995) study (hereafter referenced as *Hoffman*) in an Chinese

cultural context in order to test the validity of its failure and recovery categories across cultures. In a

wider context, the present study applies the techniques developed by Bitner et al. (1990) in order to better

understand the most common service failures in Taiwan, and by extension China, while also quantifying

the effectiveness of recovery methods.

Data Collection

During the spring of 1999, 36 graduate students of a service marketing course were briefed on the use of

CIT and given question guidelines, blank audio tapes and gift certificates. Each student interviewer was

required to find 10 subjects and not to use more than one family member and avoid using classmates. All

interviews took place in Taiwan and included only people of Chinese ethnicity. Each respondent was

first asked to describe the restaurant incident in his/or own words in as much detail as desired. The

seriousness of the incident was then rated on a scale from one (not serious) to ten (very serious). Next,

the respondent was asked to describe the restaurant's response to the incident and then to rate his/her

satisfaction with the response on a one (not satisfied) to ten (very satisfied) point scale. Any return to the

restaurant was asked and included the two obvious choices of *yes* and *no*, used in the Hoffman study, but

also offered a third choice of intention, i.e., *if the opportunity to visit the same restaurant again should*

arise, would the respondent frequent the restaurant.

These steps were followed once for an event that had a positive outcome and then again for a negative

outcome event. Interviews averaged 25 to 30 minutes and totaled 342 interviews, resulting in 684 critical

incident reports. Half of the respondents were male and half female. The mean age of the respondents

was 27 with a range from 16 to 57.

Classification

The Bitner et al. (1990) critical incident groups were found to be well represented within the sample: (1)

employee response to service delivery system failures, (2) *employee response to customer needs and*

requests, and (3) *unprompted and unsolicited employee actions*. A total of 13 incident categories were

found, eleven of which perfectly aligned with the Hoffman published results. The two additional

categories, not found in the Hoffman experiment, were *spillage of liquid* (liquid from serving plates) and

served out of order (patrons arriving at a later time being seated or served ahead of respondent).

Nine recovery strategies categories were found with eight of the categories perfectly aligned with those

found by Hoffman. The single additional recovery category was *blame customer* (the employee blamed

error on the respondent). Another group of researchers were given the categories and asked to place all

the incidents transcribed from the interviews into corresponding categories, resulting in an agreement rate of 92 % and 96 % for failure types and recovery strategies respectively.

Analysis and Results

ANOVA analysis showed no significant relationship between failure categories and any of the demographic variables. Failure categories of this study closely paralleled previous findings in the United States, however some important differences can be observed (see Table 1).

Insert Table 1 about here

Group 1 failures make up over half of all service failures in this study (56.29%) with categories in this group showing higher incident rates than the Hoffman study. Group 2 failures totaled 7.02% of all failures, which is less than half that found in the Hoffman, study. The low incident rate of not cooked to order failures (3.22%) accounts for this substantial difference. Group 3 failures aligned closely with the Hoffman, study. Differences clearly reflect variations in dining between cultures. For example, many Chinese dishes are stir-fried rather than baked, thus there is little chance of an order being undercooked while typical Chinese cuisine also includes a large number of dishes that include soup or liquid, explaining the category of spillage.

Recovery Categories

Retention, success of recovery from failure incident, was evaluated through three categories: visited again, would visit again if the opportunity should arise, and have not and would not visit again if the opportunity should arise. The first two categories were counted as revealing retention while the last category showed lack of retention.

Insert Table 2 about here

The present study shows a much lower level of replacement (see Table 2), which is likely related to the low occurrence of food not cooked to order (see Table 1). No effort to correct the failure occurred in 26.3% of the cases, which is quite similar to the Hoffman finding of 21.3%. If the new category of blame customer is included, the total number of what can be classified as non-constructive strategies is higher in the Taiwan context than in the United States. These two strategies received the lowest recovery rating of 1.64. The highest recovery rating was given to the free food strategy (7.37), with management intervention (7.28), coupon (7.25), and replacement (7.03) close behind. Frequencies of recovery strategies used in response to failures can be seen in Table 3.

Insert Table 3 about here

Interactions

Analysis of interactions among the various failure categories and recovery strategies reveals some interesting patterns. All data groups were analyzed using ANOVA analysis, followed by Sheffe multiple comparison test (at $p<.05$ significance level), chi-squared or correlation where appropriate.

The failure seriousness rating was not equivalent across all failure categories (F = 4.77, P<.001). Employee problem failures obtain significantly higher seriousness scores and lower recovery effectiveness ratings in relation to product defect, slow/unavailable service, wrong order, and spillage of liquid. Retention is significantly lower for employee problems than for the wrong order failure.

The type of recovery strategy used appears to have important differential effects on recovery rating (F = 73.42, P<.001), retention (F = 20.80, P<.001), failure type (F = 5.69, P<.001), and failure rating (F = 14.51, P<.001). Recovery ratings are significantly higher when free food or replacement is given in

comparison to correction, apology, nothing, blame customer, and other. The least effective recovery strategies are doing nothing and blame customer.

Satisfactory & Unsatisfactory Experience

Viewing critical incidents from a post-experience perspective allows us to see what the long-term results of the incident are, however, it also introduces the potential of biasing on the part of the respondents (Smith et al., 1999). Since the starting points for the critical incident descriptions are satisfied and unsatisfied, it is reasonable to expect respondents to make sure the descriptions they give fit the chosen category well. To investigate this question, the data was analyzed by satisfied and unsatisfied experience groups. Table 4 shows that there are significant differences between the scores of the satisfied and unsatisfied groups. This is not surprising as the unsatisfied and satisfied experiences should represent extremes to the respondents. What is interesting is the scale of the differences. For the failure rating, there is a difference of 2.49 between the means, while for the recovery rating the difference is 6.17 (over half of the scale).

Insert Table 4 about here

Examining the failure type for the two groups shows that over 40% of the failures for each group are of the product defect and the slow/unavailable service categories (satisfied 44.1%, unsatisfied 41.1%). The most striking difference between the groups is that the employee behavior failure accounts for 20.4% of all the unsatisfied group's failure types while only 4% for the satisfied group. This clearly points to employee behavior as being a *fatal flaw* that is involved in one fifth of all incidents leading to an unsatisfied impression. Outside of this failure type, however, there is little difference between the types of failures encountered by the satisfied and unsatisfied groups. For the recovery strategy and recovery

rating, satisfied customers were overwhelmingly given free food (39.4%), had food replaced (18.2%) or service errors corrected (19.9%). Unsatisfied customers had nothing done (46.5%), or service errors corrected (15.2%). Most striking is the distribution of recovery scores, with the satisfied group never scoring under six and the unsatisfied group never scoring over five. Members of the satisfied group rarely rate the recovery as bad, while members of the unsatisfied group rarely rate the recovery as good.

Catastrophe Theory

These results point to the importance of the recovery in deciding whether a critical incident leads to satisfaction or not. Further ANOVA analysis reveals that for the satisfied group, the recovery strategy does not have any significant effect on the recovery rating ($F = 1.61$, $P = 0.12$). For the unsatisfied group, however, the recovery strategy does have a significant effect on the recovery rating ($F = 13.28$, $P < .001$). Free food tends to increase the recovery rating, while blaming the customer and doing nothing decreases the recovery rating. Correlation between the failure rating and the recovery rating is weak for the satisfied group (Pearson correlation -0.08, $P = 0.18$) and strong for the unsatisfied group (Pearson correlation -0.45, $P < .001$). This group specific data leads us to conclude that the satisfied group members are equally open to any recovery strategy, as long as it is not one of the extremes of blame customer or do nothing. On the contrary, the dissatisfied group can be influenced by the recovery strategy, within the context of still being unsatisfied. Such a differential impact has been observed by Oliva et al. (1992) when consumers exhibit a non-linear response to service issues.

This observation can be interpreted in light of prospect theory, where changes in value are given priority over final outcomes (Kahneman and Tversky, 1979). An individual's perspective can greatly influence just how such changes are valued. Framing of displeasure (loss) related variables has a greater impact than corresponding pleasure (gain) related variables (Burton and Babin,1989). Most importantly, gains

and losses are not judged by objective values of the corresponding outcomes, but by the location of the

individual's reference point (Puto, 1987). Thus the failure rating in this study is not viewed the same by

all subjects, but reflects a much more serious event for those respondents who encountered the fatal

failures of employee behavior and blame customer, for example. Once a customer interprets the service

failure as extremely serious, the gains from any recovery effort are judged from a shifted reference point.

Recovery strategies, therefore, are unlikely to change the reference point or frame no matter how much

utility they have for the customer.

Catastrophe theory (Cobb, 1978) describes such a shift in reference point and has been applied to

consumer satisfaction situations (Oliva et al., 1995). While numerous models have been described, the

cusp catastrophe appears to best represent the results found in this experiment. The cusp surface is

represented by Equation 1 and can be seen in Figure 1 where a shift from satisfied to unsatisfied may be

caused by a fatal failure and lead to an unsatisfactory outcome (the retention measure has been reversed

and used as a measure of satisfaction, so that 1 represents low satisfaction, 2 medium satisfaction, and 3

high satisfaction). When a consumer is in the cusp, recovery actions may have strong influence on the

satisfaction level, depending on the slope of the lower section of the S curve, but a shift to the upper level

of the surface is much more difficult.

Equation 1. Cusp catastrophe surface

$$Z^3 - X \bullet Y - X = 0$$

Insert Figure 1 about here

Charting the data from this study, using a surface plot with all measures standardized, does show

resemblance to the cusp model (see Figure 2), although the satisfaction measure is only represented by

three scores making accurate modeling difficult. The top area shows little responsiveness to changes

in failure or recovery ratings, while there is a steep drop to lower satisfaction scores when failure ratings

are high and recovery ratings are low. The group experiencing a satisfactory outcome make up the top of

the chart, while the unsatisfactory outcome group make up the bottom.

Insert Figure 2 about here

Discussion

While some unique situations may accompany different cultural settings, the core categories of failures

and recoveries found by Bitner et al. (1990) and Hoffman have been confirmed in the Chinese cultural

setting of Taiwan. Product defects or employee behavior followed by blaming the customer or doing

nothing, are the most extreme combinations found by this study. Such a situation is likely to be

perceived by the customer as a very serious failure and nearly always leads to an unsatisfactory outcome.

Outside of these fatal combinations customers are likely to find the critical incident resolution

satisfactory. Within this context any constructive recovery strategy proves useful, including the simple

act of an apology. Implementing more costly recovery strategies does not significantly impact the

satisfaction level, nor does it change the customer's view of the failure.

When fatal failures occur, the recovery strategy is judged much more harshly. In such a case, the

customer is unlikely to leave with an impression that the outcome is satisfactory. This does not mean that

the restaurant should simply give up on the customer. Constructive recovery strategies can lower a

customer's perception of the failure seriousness as well as increase the satisfaction level. More costly

strategies, such as free food, are helpful to this end, but even this strategy will not overcome the negative

impression made by the failure. However, no attempt to correct such a situation will lead to a customer

who is even more dissatisfied. These results fit well within the context of previous applications of the catastrophe model to satisfaction.

Prevention of fatal failures should be a priority of restaurant managers across all cultural settings. Reduction in product defects in the service context is complicated by the heterogeneity of the service encounter, yet firms like McDonalds have become renowned for their consistency in product quality around the world and these research results support such a practice. Employee behavior would appear to be amendable through training. More often than not employee behavior is a reflection of the firm's values. If employees are punished for taking back a product that appears to have a problem, they certainly will not be proactive in preventing such errors from reaching customers. Restaurants need not be driven by the product produced in the kitchen, and a philosophy of what comes out of it must be forced upon the customer. Employee empowerment can help address both product defect problems and employee behavior problems. By making each employee a stakeholder in the restaurant, quality can be overseen by each employee with increased opportunities to prevent problems and to deal quickly with those that do arise enacting recovery strategies leading to customer satisfaction. Customers experiencing small problems will leave the restaurant feeling satisfied as long as some action was taken, including the simple act of an apology. For such a customer, more costly recovery strategies, such as supplying free food, would raise costs with little added benefit above that of a simple apology on the part of the service employee.

The catastrophe model applied here clearly shows that fatal failures are on a different level than less serious failures. It may be difficult telling exactly when a customer has experienced such a fatal failure since the interpretation is subjective. From a manager's perspective, it would be useful to treat problems involving employees and product defects as serious errors requiring immediate attention and positive recovery techniques. A customer experiencing a fatal flaw will reduce his/her negativity about the

experience when an action is taken and especially if the action involves free food. By establishing

guidelines for dealing with such failures, which have the tendency to be considered fatal failures by

customers, employees can quickly react to reduce customers' negative feelings. Management could

create guidelines for dealing with product defects and employee problems that require the offer of free

food as a response. For problems that do not involve an employee or a product defect, the use of an

apology could be formalized. The exact nature of the cusp catastrophe model should be explored within

the context of different service failure environments and even different cultures. While such details could

be helpful in developing response models to service failures, it is clear that there is a benefit to addressing

failures constructively. Customers who suffer fatal failures actually require more attention in the

response phase than customers who do not view the failure as extremely serious. The payoff for the

service firm, in expending resources, is a less dissatisfied customer. Such a customer may consider

patronizing the firm in the future at which time expectations may be lowered opening an opportunity for

increases in satisfaction levels. The alternative is an extremely dissatisfied customer who is certain to not

patronize the firm again and may go out of his/her way to spread negative information about the firm.

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Table 1. Restaurant failure categories and summaries (including Hoffman et al. (1995) percentages)

	Count	Percent-age	Hoffman Percentage	Failure rating	Recovery rating	Time months	Retained Percent
Group 1: Employee response to service delivery failures							
Product defect	158	23.10	20.9	7.32	4.69	12.12	57%
				(2.52)	(3.46)	(17.81)	(90/158)
Slow/unavailable service	132	19.30	17.9	6.61	5.3	8.26	65.2%
				(2.41)	(3.13)	(12.33)	(86/132)
Facility problems	32	4.68	3.2	6.75	4.97	12.94	56.3%
				(2.78)	(3.55)	(18.09)	(18/32)
Out of stock	23	3.36	0.8	6.87	3.91	7.76	47.8%
				(2.69)	(3.27)	(17.42)	(11/23)
Unclear policy	16	2.34	1.6	8.25	3.63	7.78	56.3%
				(2.02)	(2.99)	(9.18)	(9/16)
Served out of order	16	2.34	NA	8.13	3.13	6.78	50%
				(2.22)	(2.25)	(7.44)	(8/16)
Other type I	8	1.17	NA	5.63	3.75	11.25	50%
				(2.92)	(3.37)	(15.1)	(4/8)
Group 1 total	385	56.29	44.4	7.04	4.75	10.19	58.7%
				(2.52)	(3.31)	(15.48)	
Group 2: Employee response to implicit/explicit customer requests							
Seating problem	24	3.51	3.4	7.08	5.88	7.17	62.5%
				(2.47)	(3.25)	(6.05)	(15/24)
Not cooked to order	22	3.22	15.0	6.68	5.23	7.43	63.6%
				(2.15)	(3.12)	(10.76)	(14/22)
Other type II	2	0.29	NA	5.50	2	12.5	100%
				(0.71)	(1.41)	(0.71)	(2/2)
Group 2 total	48	7.02	18.4	6.98	5.42	7.51	75%
				(2.79)	(3.19)	(8.41)	64.6
Group 3: Unprompted and unsolicited employee actions							
Employee behavior	91	13.30	15.2	8	2.55	6.58	33.3%
				(1.98)	(2.45)	(9.18)	(30/90)
Wrong order	68	9.94	12.6	5.32	6.44	8.06	72.1%
				(2.51)	(3.01)	(10.74)	(49/68)
Lost order	44	6.43	7.5	6.73	5.14	14.11	65.1%
				(2.51)	(3.29)	(27.75)	(28/43)
Spillage	36	5.26	NA	6.33	6.64	8.38	68.6%
				(2.65)	(3.15)	(9.66)	(24/35)
Mischarged	8	1.17	1.9	5.63	6.25	11.63	50%
				(3.11)	(3.92)	(19.76)	(4/8)
Other type III	4	0.58	NA	5.75	3.75	10.7	50%
				(0.96)	(3.40)	(16.50)	(2/4)
Group 3 total	251	36.70	37.2	6.70	4.78	8.79	55.6%
				(2.58)	(3.40)	(15.12)	

Grand total	684	100	100	6.91	4.81	9.41	58.0%
				(2.53)	(3.34)	(14.97)	(395/684)

Table 2. Restaurant recovery strategies and summaries (including Hoffman et al. (1995) percentages)

				Failure rating	Recovery rating	Time months	Retention rate
Recovery strategy	Count	Percentage	Hoffman Percentage	Mean	Mean	Mean	Percent (count)
Free food	148	21.60%	23.5%	6	7.37	10.57	85%
				(2.63)	(2.25)	(15.88)	(125/147)
Management intervention	25	3.70%	2.7%	6.04	7.28	8.28	64.0%
				(1.86)	(2.81)	(10.16)	(16/25)
Coupon	12	1.80%	1.3%	6.5	7.25	9.04	83.3%
				(1.45)	(2.63)	(10.27)	(10/12)
Replacement	74	10.80%	33.4%	5.61	7.03	11.32	79.7%
				(2.62)	(2.92)	(16.36)	(59/74)
Discount	20	2.90%	4.3%	6.95	5.55	7.85	50%
				(2.86)	(3.17)	(8.7)	(10/20)
Correction	118	17.30%	5.7%	6.4	5.43	7.37	66.7%
				(2.48)	(3.08)	(11.76)	(78/117)
Apology	55	8.00%	7.8%	7.36	3.75	7.04	45.5%
				(2.54)	(2.8)	(9.92)	(25/55)
Nothing	180	26.30%	21.3%	8.33	1.64	9.15	28.5%
				(1.66)	(0.93)	(14.07)	(51/179)
Blame customer	28	4.10%	NA	8	1.64	14.88	32.1%
				(2.21)	(1.57)	(20.07)	(9/28)
Other	24	3.50%	NA	7.17	4.5	12.31	50.0%
				(2.88)	(3.4)	(30.36)	(12/24)
Total	684	100%	100%	6.91	4.81	9.49	58.0%
	60.07			(2.53)	(3.34)	(14.97)	(395/681)

Table 3. Restaurant failure categories and corresponding recovery strategies

	Free food	Dis-count	Cou-pon	Manage-ment inter-vention	Replace-ment	Cor-rection	Apol-ogy	Noth-ing	Blame cus-tomer	Other
Group 1: Employee response to service delivery failures										
Product defect	33	4	2	2	45	17	9	30	12	4
Slow/unavailable service	49	4	4	5		23	10	35		2
Facility problem	7			1		13	1	8		2
Out of stock	4	2		2	1	2	5	5		2
Unclear policy	2	1		1			5	4	3	
Served out of order	3					1	4	7	1	
Type 1 other		1				2	1	3		1
Group 2: Employee response to implicit/explicit customer requests										
Seat problem	4	2	1			10		5		2
Not cooked to order	2			2	5	6	2	3	1	1
Type 2 other								2		
Group 3: Unprompted and unsolicited employee actions										
Employee behavior	4	3		3		11	8	54	4	4
Wrong order	18		1	2	21	7	2	8	6	3
Lost order	9	1	2			15	4	11	1	1
Spillage of liquid	12	2	1	6	2	3	4	4		2
Mischarge	1					6		1		
Type 3 other				1	1	2				

Table 4. T-test between satisfied and unsatisfied outcomes

	Outcome	Mean	t	df	Sig. (2-tailed)	Mean Difference
Failure Rating	Unsatisfied	7.99	14.60	682	.00	2.49 9
	Satisfied	5.50				
Recovery Rating	Unsatisfied	2.13	-60.30	682	.00	-6.17
	Satisfied	8.30				
Restaurant Class	Unsatisfied	4.53	-6.91	681	.00	-1.14
	Satisfied	5.67				
Restaurant Type	Unsatisfied	1.95	.56	682	.58	.00
	Satisfied	1.91				
Retention	Unsatisfied	2.45	18.08	679	.00	1.06
	Satisfied	1.39				
Time Months	Unsatisfied	9.72	.46	678	.65	.53
	Satisfied	9.19				

Figure 1. Cusp catastrophe model of satisfaction with failure, recovery, and retention axis
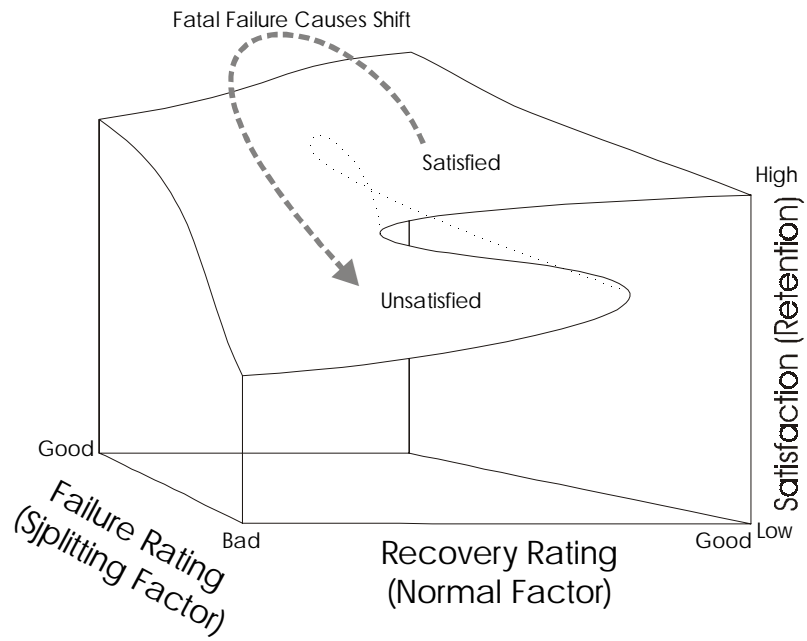
Figure 2. Standardized data from study

Satisfied Group

Unsatisfied Group

1.0   High

Satisfaction (Retention)

-1.0   Low

1.0   Good

Good   -1.0

Failure Rating
(Sjplitting Factor)

1.0

-1.0

Bad

Recovery Rating
(Normal Factor)
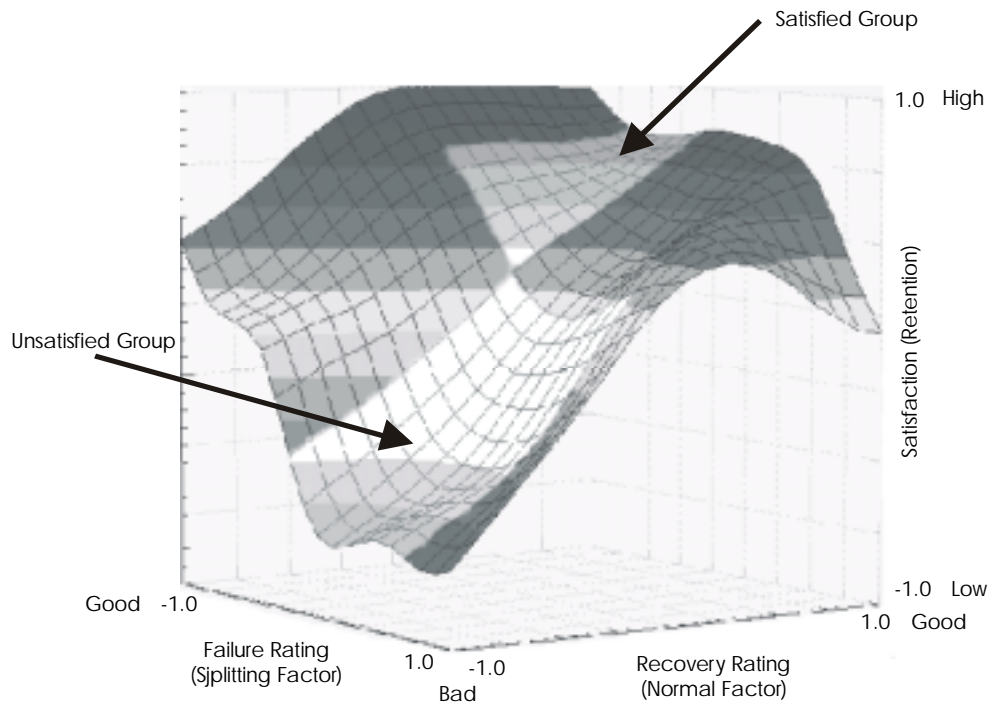
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March 3, 2001

Michigan State University
The Eli Broad College of Business
Journal of Hospitality & Leisure Marketing
ATT: Dr. Bonnie J. Knutson
School of Hospitality Business
235 Eppley Center
East Lansing, MI 48824-1121 U.S.A.

Dear Dr. Knutson:

Please consider the enclosed manuscript for publication in the <u>Journal of Hospitality & Leisure Marketing</u>. The manuscript, "Fatal Service Failures Across Cultures" contains approximately 5644 words, four tables and two figures.

This paper expands on the previous recovery strategy classifications of Hoffman et al. However, we apply this work to a very different culture setting, while also exploring the underlying results for more meaning, rather than simply description. Our finding of fatal failures, and the importance of attempting to reduce the seriousness of such failures is an important step forward in understanding how to react to service failures. Application of these results are especially important for the numerous franchising operations now expanding into the Chinese market but can be applied to hospitality operations in general.

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Thank you for your assistance.

Sincerely,

Clyde A. Warden
Associate Professor

Dear Clyde:

I got some statistics of resturants (industry) in Taiwan as follows:

1. Sales of 1999: 230.4 billions(營業額) (source: Department of Economics,Adminstrative Yuan. R.O.C)

2.employees :

125,688 persons(resturant and the related:eating and drinking places)

2,855,638 persons(service sector,industry)

5,812,225 persons(all sectors,industries)

3.population density: 612 per sq. km (Taiwan area)(at the end of 1999)

note: urban areas are more than 1,700 per sq. km(i will give u the detailed)

4.the **household** *average annual* consumption on eating outside home in Taipei City:(Taipei citizens' figure)(1999)

$ 4,123.4 NT dollars