

**Customer's Responses to Crowded Restaurant Environment: Cross Cultural Differences  
between American and Chinese**

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## ABSTRACT

The study aims at demonstrating cultural differences between American and Chinese in terms of customer's perceptions and satisfaction of crowded environment within the context of restaurant setting. It has been noted that culture has a substantial impact on customer's affection and judgment, and crowding in service environments is a critical antecedent of customer's satisfaction. Considering the two main theme, this study examined how the cultural difference plays a role in predicting customer's satisfaction within the crowded restaurant setting. With the use of customers from the two different cultures in an experimental study, participant's responses to similarly crowded environment in a restaurant were compared. It is revealed that customer's perception of crowdedness negatively influences their satisfaction, but the relationships vary depending on customer's cultural background. Cultural difference in predicting customer's satisfaction also appears to be substantial. .

Keyword: Cultural differences, crowdedness, customer satisfaction, hierarchical regression.

# Customer's Responses to Crowded Restaurant Environment: Cross Cultural Differences between American and Chinese

## Introduction

Consumer behavior research has shown that consumers' interaction with service environments is directly related to their willingness to spend time and money there, to browse, evaluate, and consume (Donovan, Rossiter, Marcolyn, & Nesdale, 1994; Mehrabian & Russell, 1974). Previous studies have demonstrated how environmental conditions including store layout and design (Baker, Grewal, & Levy, 1992; Bellenger, Steinberg, & Stanton, 1976; Bitner, 1992; Darden & Babin, 1994), music (Alpert & Alpert, 1990; Milliman, 1986; Sweeney & Wyber, 2002), scent (Bone & Jantrania, 1992; Chebat & Michon, 2003; Morrin & Ratneshwar, 2000) and employee and customer appearance (Babin, Darden, & Boles, 1995), evoke varying levels and types of emotions among customers, and that these emotions impact store shoppers' approach/avoidance behaviors (Donovan & Rossiter, 1982), willingness to buy (Baker, Grewal, & Levy, 1992), price perceptions (Grewal & Baker, 1994), perceived value (Babin, Darden, & Griffin, 1994), and customer satisfaction (Babin & Darden, 1996). Among the various research topics in consumers' interaction with service environment, one of the emergent issues is a consumer's reaction to crowded environment. In regard to the issue, it has been noted that, in general, crowdedness represents one of the important environmental factors which negatively affect consumers' retail experience (Eroglu & Machleit, 1990; Machleit, Eroglu, & Mantel, 2000). However, recent studies in the context of hospitality industry (i.e., amusement parks, concerts, etc.) have mentioned that the relationship between crowdedness and customer's evaluation would vary depending on individual's traits, cultural background, and situational

factors such as the type of service, and the purpose of gathering (Eastman & Land, 1997; Holt, 1995; Price, Arnould, & Deibler, 1995; Sherry, 1998).

The effects of cultural difference on customer behavior have been recognized long before, and a great number of literatures indicate that cultural differences across countries lead to most problems in international marketing communications and promotions (Kale, 1991). Cultural differences are identified to have significant influence upon customers' behaviors, for example, cognition, emotion, and motivation styles (Markus, H. & Kitayama 1991), perception of risk and brand loyalty (Yavas, Verhage, & Green, 1992), decision making styles (Fan & Xiao, 1998), risk preference (Hsee & Weber, 1999), and evaluation of choice (Iyengar & Lepper, 1999).

To date, the main stream of research on customer satisfaction in the hospitality and tourism has been devoted to delivery of superior quality and value of product. That is, environmental factors which directly influence customers' perceptions and attitudes have been neglected in terms of research effort. In terms of cultural difference study, a large amount of study has been merely devoted to the comparison of customers' responses in different cultural background via field survey. Employing an experimental research method, the study was to examine customer's responses in a crowded environment, while investigating the influence of cultural differences in crowd-related issues. With the use of customers from the two different countries (i.e., China and US), customer reactions to similarly crowded situations in a restaurant environment are compared respectively. Moreover, the research made efforts to identify how cultural difference is influential in predicting the likelihood of customer's satisfaction by employing a hierarchical regression analysis. The study has four main research objectives to examine: (1) how differently American and Chinese perceive a crowded environment, (2) how the two different culture groups evaluate the crowded environment, (3) how the relationships

between the customer's perceptions of crowdedness and satisfaction vary between the two culture groups, and (4) how cultural difference influence the likelihood of customer's satisfaction.

## Literature Review

### *Multiple Dimensions of Crowdedness: Human, Spatial, and Perceived Crowdedness*

When the number of people, objects, or both, in a limited space restricts or interferes with individuals' activities and goal achievement, the individual will perceive that the environment is crowded (Machleit, Eroglu, & Mantel, 2000). It has been reported that the concept of crowdedness is multiple dimensional constructs composed of human, spatial, and perceived crowdedness (Machleit, Kellaris, & Eroglu, 1994). First, human crowdedness is the perception of individual in the environment, and the concerning not only the number of individual but also the degree of social interaction among people in a given environment setting. In general, high level of human crowdedness can negatively affect personal privacy and territory, and then the results of the negative influence may lead to unfavorable outcomes for consumers like dissatisfaction (Eroglu, & Machleit, 1990; Machleit, et al., 1994). Grewal, Baker, Levy, & Voss (2003) used the dimension of human crowdedness in order to examine the relationship between the perceptions of customer density, and the wait expectations and store atmosphere evaluation in the context of a luxury goods store. In the result of the study, the human crowding has positive relation with the amount of wait expectation and negative relation with store evaluation. Based on the study, the authors suggested that the human crowding can be critical antecedents of customer's satisfaction.

In contrast, spatial crowdedness is the customer's perception of nonhuman objects. The spatial crowdedness is the recognition of nonhuman in an environment and the relationship

between customers and objects which can affect the degree of spatial crowding perceived by individuals. In the hospitality context, for example, the amount and arrange of facilities and the structure and design of a restaurant can increase or decrease the perceived spatial crowdedness related with physical affection. Machleit, Eroglu, and Mantel (2000) found the negative relationship between special crowdedness and customer satisfaction (Eroglu, & Machleit, 1990).

As a more comprehensive dimension of crowdedness, perceived crowdedness is the personal estimate of the number of people, space available, and organization (Rapoport 1976). Compared to the two previous realms of crowdedness, this concept more inclusively encompasses crowding environment, in that this is a result of physical, social, and personal factors that sensitize the individual to actual or potential problems arising from scarce space (Stokols, 1972). Perceived crowdedness in restaurant settings, for instance, is derived from customer's associated feeling and evaluation of the environment which includes people, equipment, and interactions among them (i.e., cluttered aisles, slow checkout speed, distractions and noises). Eroglu and Machleit (1990) found that perceived crowdedness is an antecedent of customer's affection and satisfaction. More specifically, many researches have shown that an increase in perceived crowdedness in a retail store can decrease the level of satisfaction that customers have with the store (Eroglu & Machleit, 1990; Machleit, et al., 2000). Moreover, a recent study within the context of workplace (May, Oldham, & Rathert, 2005) indicated that perceived crowing environment negatively influenced individual's motivation and tardiness, and consequently job satisfaction. In all, it is generally assumed that there is a negative relationship between the perceived crowdedness and satisfaction.

### *Cultural Difference as an Influential Factor on Service Environment*

Hofstede (2001) proposed five dimensions of national culture such as power distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, and long-term versus short-term orientation. Among the five dimensions of culture, Triandis (1990) noted that the most important cultural dimension in social behavior is the relative emphasis on individualism versus collectivism, with individualism valued more in the West while collectivism is valued more in Eastern cultures. Among the cultural dimensions differentiating Western cultures from East Asian cultures, individualism versus collectivism seems to be one of the most frequently used across disciplines, including consumer behavior, marketing, communication, and advertising. In general, individualism and collectivism have been conceptualized as opposite ends of a unidimensional continuum (Hofstede, 1980). Hall (1976) also proposed that members of Eastern and Western cultures communicate differently. In the Western cultures, it is generally identified that people express themselves explicitly and directly. In the Eastern cultures, on the other hand, people more involve implicit messages embedded in the context. People in the Eastern cultures are also used to being very attentive to those they interact with, listening for exactly how something is said not just what is said.

A substantial amount of research has been conducted on the impact of culture on privacy (Lewis, 1961; Kuper, 1953; Westin, 1970; Sinha & Nayyar, 2000) and crowded environment issues (Hall, 1966; Baxter, 1970). In all cases, cultural differences in customer's response to spatial distancing were found to influence the use of space and the socialinteraction style (Hall, 1966; Heimstra & McFarling, 1978). The North American culture is often depicted as the archetypal individualistic and low-contact culture (Altman, 1975; Evans et al., 2000; Markus &

Kitamaya, 1991; Park, 1998), whereas the East Asian culture (i.e., China, Japan, and Korea), is generally described as a high-contact culture that promotes collectivistic strivings (Hall, 1966; Hofstede, 1980).

In regard with cultural difference studies in the hospitality and tourism field, Kale (1991) used the Indian tourism industry and the American consumer as an example to apply Hofsted's framework in the area of cross-cultural communication in marketing. Specifically, he argued that Hofsted's four dimensions of culture can be systematically used to diagnose and bridge culture gaps between a seller and a buyer engaged in cross-cultural communication. In hotel industry, Choi & Mattila (2006) explored the cross-cultural differences in customers' fairness perceptions of hotel room pricing and found that increasing the level of information improved fairness perceptions for respondents in both the United States and Korea. Particularly, while only full information had a positive effect on American consumers fairness perceptions (i.e., what factors affected room rates and how those factors operate), limited information (i.e., just the knowledge that room rates vary and what factors affected room rates) was sufficient to improve fairness perceptions among Korean consumers.

### *Cultural Differences between American and Chinese*

It has been noted that American culture mainly is rooted in the Western cultures derived from Christian, Greek, and Roman background, while the Chinese culture is influenced by Confucianism and Buddhism thinking (Mingxia, Quan, & Xuan, 2006). Hsu (1981) argues that in most western cultures the core values are "individualism, freedom and equality of opportunity", but traditional Chinese culture is built on a value system in Confucianism and collectivism (Mingxia et al., 2006). In addition, according to Hofstede's (2001) national culture

dimensions, China has high power distance, belongs to collectivism, masculine, strong uncertainty avoidance, and long-term oriented.

To date, a substantial literatures have argued that great culture diversity exists between China and US (Movius, Matsuura, Yan, & Kim, 2006; Shao & Webber, 2006), and this difference is viewed as a key factor which effects Chinese and American customers' behaviors (Mingxia, et al., 2006). However, there is an inconclusive understanding of the relationship between Chinese culture and customer behavior. When comparing consumer decision-making styles, Fan & Xiao (1998) found that Chinese consumers had moderately high levels of quality consciousness. In Hsee & Weber's research in 1999, Chinese people were found to express more risk preference than their American counterparts. In contrast, a more recent study by Sun et al. (2004) revealed that compared to American and Britain consumers, Chinese consumers were more pessimistic about their current states of being, less confident with their ability of financial management, less likely to stick to well-known brand names, less inclined to travel, more concerned about their personal appearance, more likely to claim themselves as impulsive buyers, more willing to be influenced by their in-group members, less likely to consider themselves as opinion leaders, more nervous if loss their faces in front of their in-group members, more family oriented, more conservative in their attitude toward the gender roles in the society, more likely to stick to their routine lifestyles and play safe.

These confounding results would be explained by the fact that the syndromes of individualism and collectivism are independent or discrete dimensions, because both co-exist in all individuals as well as in all societies (Triandis, 1990). It is argued that individuals and groups activate one or the other syndrome depending on the situation, and the classification of a society as individualistic or collectivistic is based on the degree to which individualistic or collectivistic

values, norms, beliefs, and assumptions apply in a majority of contexts and to a majority of members of that society. Similarly, although individuals can vary broadly within a given society, the identification of an individual as idiocentric or allocentric reflects the individual's relative probability of behaving in a way that is consistent with individualism or collectivism in a majority of contexts. In terms of cultural difference aspect, however, these inconsistent results more firmly assure the general consensus that there should be differences between Chinese and American.

### Hypotheses

Considering research in the areas of the perception of crowdedness, satisfaction, and cultural difference, several hypotheses are proposed. Hui and Bateson (1991) revealed that perceived crowding (measured as a unidimensional construct) decreases customer's satisfaction in a service environment. In this study, it is expect to replicate this finding with the three dimensions of crowdedness in the restaurant environment. Furthermore, affective response was taken into consideration with customer's satisfaction in the study. The affective responses are partly based on previous studies that posits that two dimensions of emotional response—pleasure and arousal—encompass a range of emotional reactions that can take place in an environment (Mehrabian & Russell, 1974; Russell, 1980). Literature suggests that crowded environment would influence affective response which consequently influences customer's satisfaction (Stokols, 1972). Based on the recognitions of the three dimensions of crowdedness, cultural differences, affective evaluation, and satisfaction, a set of hypotheses and a conceptual framework within the context of restaurant environment is offered below:

**H1:** In a crowded restaurant environment, customer's perception of crowdedness will vary depending on the cultural backgrounds.

**H2:** In a crowded restaurant environment, customer's affective evaluation of the environment will vary depending on the cultural backgrounds.

**H3:** In a crowded restaurant environment, customer's satisfaction will vary depending on the cultural backgrounds.

**H4:** In a crowded restaurant environment, customer's perception of crowdedness will be negatively related to customer's satisfaction. Specifically:

H4a: The level of customer's spatial crowdedness will be negatively related to the level of satisfaction.

H4b: The level of customer's human crowdedness will be negatively related to the level of satisfaction.

H4c: The level of customer's perceived crowdedness will be negatively related to the level of satisfaction.

[Figure 1 is about here]

## Methodology

### *Sample*

An experimental design was employed in order to investigate the influence of culture on customer's reactions to a crowded service environment. As described in previous studies (e.g., Kim, Park, & Suzuki, 1990), "countries" were used as a proxy for culture. Intracountry differences may (and do) exist, but it is expected in this study that intercountry differences will account for the greater part of variation in reactions to crowd. This method has been successfully used in similar studies investigating cross-cultural differences (Buda & Elsayed-Elkhouly, 1998;

Harcar & Karakaya, 2005; Reynolds, Simintiras, & Diamantopoulos, 2003; Samiee & Jeong, 1994). In order to ensure comparable samples with regard to age, undergraduate students were used as respondents in this research. Undergraduate students also had the nonnegligible advantage of being conveniently accessible to the researchers.

A total 103 undergraduate students in a college in the Mid-West area was employed and asked to fill out a questionnaire. The final sample is composed of 59 American undergraduates and 44 Chinese undergraduates. The American sample was drawn from a Hospitality Sales and Marketing class with the class bonus points. The Chinese sample was recruited through campus-wide flyers with \$5 coupons as an incentive.

#### *Procedure and Data Collection*

The participants were met in a classroom which has an audio-visual presentation equipment, and read a short introduction (context definition) prior to watching the video film. After the short introduction of the study, the participants first watched 20 slide photos of a crowded local restaurant, and then watched 5 minutes video film. A previous research (Machleit, Eroglu, & Mantel, 2000) found that photos and videotapes produce valid consumer responses to crowded environment. In order to eliminate the participants' bias from their past experience at the local restaurant, the local restaurant's name and signage were intentionally excluded in the photos and video film. Cues about the service experience were given in a short written scenario that is read and distributed to the participants, insisting on the fact that they have to picture themselves in the situations (i.e., *"It is Friday night and you are going out to eat. This photos and short video represents what you see when entering the restaurant"*). After watching the video, respondents were asked to answer questions about three dimensions of crowdedness, affective

evaluations of the crowding, and satisfaction. A 7-point Likert scale was used for all the items which are adopted from existing environmental psychology studies. Specifically, human and spatial crowdedness were measured by the items adopted from several existing environmental psychology studies (Eroglu & Machleit, 1990; Grewal, Baker, Levy, & Voss, 2003; Machleit, Eroglu, & Mantel, 2000; Machleit, Kellaris, & Eroglu, 1994), whereas the items on perceived crowdedness were adopted from Hui and Bateson (1991). The affective evaluation of the crowdedness was assessed through the degree of liking of each density-related variable (personal space, privacy, territoriality, freedom of movement, perceived number of people). Satisfaction was measured for the overall perceived service experience as suggested by Oliver (1997) and Machleit, et al. (2000). The questionnaire also included socio-demographic measures and an assessment of the overall number of customers in the setting.

## Results

### *Manipulation Checks*

In order to control for unwanted method effects and ensure that the two cultures involved in the survey did not differ in their understanding of the stimuli, several checks were performed. Respondents in both groups equally rated their perceived number of people depicted in the video (American *Mean* = 5.54 vs. Chinese *Mean* = 5.82;  $t = -1.22$ ;  $p = .22$ ). In addition, there was no significant difference in the general feeling of the crowding environment (i.e., Customers at the restaurant are squashed up) between the two cultural groups (*Mean*American= 5.19 vs. *Mean*Chinese= 5.25;  $t = -.247$ ;  $p = .806$ ).

### *Characteristics of the Participants*

Respondents consisted of 59 American (57.3 per cent) and 44 Chinese (42.7 per cent). It was observed that slightly more female students (53.4 per cent) than male ones (44.7 per cent) participated in this study. In terms of dining experience, the sample was almost normally split by the experience. The experience category of 3 to 5 (36.0 per cent) was slightly more than the categories of 1 to 2 (20.4 per cent) and 6 to 10 (22.3 per cent). Chi-square tests showed there were significant differences in “Dining out per month” between the two culture groups.

[Table 1 is about here]

### *Cultural Differences in Perceptions of Crowding Environment*

The cultural differences in customer’s perceptions of crowding restaurant environment were first examined by employing independent sample t-tests. As noted, human crowdedness consisted of a total of four variables. The results revealed significant mean differences ( $p < 0.05$ ) on the dimension for “the restaurant seemed very crowded to me,” “the restaurant was a little too busy;” and “there wasn’t much traffic in the restaurant during my dinner” (see Table 2). No significant mean difference was found for “there were many people in restaurant” and it might be assumed to be a result of the video manipulation stimuli. The results of the t-tests on spatial crowdedness shows significant mean differences for “I felt cramped in the restaurant;” and “the restaurant felt confining to shoppers;” whereas no significant differences are found for “the restaurant seemed very spacious” and “the restaurant had an open, airy feeling to it.” Perceived crowdedness was made of three variables; “I feel crowded being there;” “I feel there are too

many people;” and “I feel no room for me there.” It was observed that all variables show significant mean differences on the dimension.

Summated scales were also conducted for capturing more precise meaning of the cultural differences on the three dimensions. It was identified that the three constructs of crowdedness had significant mean differences between culture differences ( $p < 0.001$ ). Particularly, perceived crowdedness had the most mean difference between American ( $M = 5.08$ ) and Chinese ( $M = 5.95$ ). The result also shows significant mean differences on human crowdedness and spatial crowdedness between Chinese ( $M = 5.50, 4.24$ ) and American ( $M=4.67, 3.74$ ) respectively in a given restaurant environment. Overall, the T-tests of summated values on the three dimensions revealed that Chinese tend to recognize more crowdedness than American (H1 is supported).

[Table 2 is about here]

### *Cultural Differences in Affective Evaluation*

In the next phase, another t-test was performed to identify cultural differences in affective evaluation (see Table 3). The results of t-tests revealed the cultural differences on 8 affective evaluation items. All variables about the affective evaluation were statistically significant different ( $p < 0.05$ ) between the two groups (H2 is supported). It was observed that Chinese were more likely to show negative affective response at the crowded restaurant than their American counterparts. In other words, Chinese is inclined to be more unpleasant than American within the context of crowded restaurant environment. In addition, the finding indicates that crowdedness is an antecedent of affection which is related to satisfaction. This is also consistent with the

previous study (Stokols, 1972) that crowding negatively influence customer's affection since Chinese perceived more crowdedness/less pleasant feeling and vice versa.

[Table 3 is about here]

### *Cultural Differences in Satisfaction*

The culture differences in satisfaction were examined by t-test. In this analysis, the four satisfaction variables (i.e., I enjoyed dining at the restaurant/ I would be satisfied with my dining experience at the restaurant/ given a choice, I would probably not go back to the restaurant/ I would recommend the restaurant to other people) were the dependent variables and the two different groups (American and Chinese) were the independent variable. The results revealed significant mean differences ( $p < 0.001$ ) for all satisfaction variables (H3 was supported). Noticeably, all significant mean differences showed that American was more satisfied with the crowded restaurant setting than Chinese. The result of the reverse question, "Given a choice, I would probably not go back to the restaurant," also showed that Chinese were less satisfied with the crowded restaurant environment ( $p < 0.001$ ).

[Table 4 is about here]

### *Relationship between Crowdedness and Satisfaction*

To investigate the relationship between crowdedness and satisfaction, the three dimensions of crowdedness were correlated with each satisfaction variables. Summated item

measurement was employed on the three dimensions of crowdedness for more precise understanding about the relationship. It was clearly observed that increased perceptions of crowdedness were resulted in decreased satisfaction. Specifically, all the three dimensions of human crowdedness were negatively related to the three satisfaction variables, “I enjoy dining at the restaurant” ( $r = -.39, -.20, -.48; p < 0.01$ ), “I would be satisfied with my dining experience at the restaurant” ( $r = -.52, -.12, -.55; p < 0.01$ ), and “I would recommend the restaurant to other people” ( $r = -.39, -.20, -.40; p < 0.01$ ). The reversed item showed positive relationships with the three dimensions of crowdedness which are consistent with the research hypotheses. The results of correlation analysis, thus, supported the hypotheses 4.

[Table 5 is about here]

A hierarchical regression analysis was conducted to examine whether cultural difference is influential factor on the likelihood of satisfaction. Table 6 shows the beta coefficient and the amount of variation accounted for after each step. Model 1 was estimated first to assess the influence of the three dimensions of crowdedness. The results shows that the three dimensions are important factors for explaining variation in the model ( $R^2=0.22, p < 0.001$ ). Moreover, the result of Model 1 supports the hypotheses that crowdedness negatively affects satisfaction. Particularly, perceived crowdedness is statistically significant out of the three variables ( $p < 0.05$ ). Dining experience was then added to the hierarchical regression analysis (Model 2), since it is logically assumed that people’s satisfaction would vary depending on their prior experience and knowledge. It was observed that the number of dining out for dinner did almost not affect the

relationship with satisfaction. ( $R^2=0.22, p < 0.001$ ). The amount of F change did also not be changed notably (F Change = .60,  $p > 0.05$ ).

A third analysis was performed to examine the importance of culture within the context of crowded restaurant environment. As can be seen in Model 3, cultural difference significantly increases accounted variance ( $R^2 = 0.33, p < 0.001$ ). In regard to the F Change, the value of the F  $\Delta$  demonstrated obviously and statistically significant increasing outcomes (F Change = 15.25,  $p < 0.001$ ). The coefficient number (-.40,  $p < 0.001$ ) indicates that Chinese are less likely satisfied with the crowded restaurant within this research setting. Comparison of the three models indicates that the addition of cultural difference to the three dimensions of crowdedness improve significantly model performance. That is, cultural difference was significant factor in predicting customer's satisfaction. The results also show that perceived crowdedness is an influential factor in the model among the three crowdedness dimensions.

[Table 6 is about here]

## Conclusions and Implications

The results of this study provide valuable insights into understanding the cultural differences on the perception of crowdedness between American and Chinese, and the relationship between the crowdedness and satisfaction within the context of restaurant environment. First, this research demonstrates that there are significant differences between American and Chinese in terms of perceptions of crowdedness, affective evaluation, and satisfaction. The result of summated mean values on the three dimensions of crowdedness

indicates that Chinese tend to perceive more crowding than American through the video film. It implies that individual's perception of crowdedness vary depending on their cultural background. Second, it was revealed that Chinese were more likely to show negative affective response and less satisfaction with the crowded restaurant than their American counterparts. This is assumed that the higher level of perception of crowdedness would be resulted in the lower level of affective evaluation and satisfaction. The results of correlations and hierarchical regression analysis reconfirm the previous findings that the relationship between perception of crowdedness and satisfaction is negative. In other words, the results indicate that there is a strong linkage between customer's perception of crowdedness and satisfaction. Third, this study identified that cultural difference is an influential factor in predicting the likelihood of satisfaction. As can be seen, the value of  $R^2$  significantly increases by adding cultural difference variable in the hierarchical regression model. That is, cultural difference can be a valuable factor to measure the level of customer satisfaction. The four research hypotheses regarding the level of crowdedness and satisfaction considering cultural differences between the two countries were all supported.

In regard to the results in the study, one noticeable finding was that Chinese tend to recognize more crowdedness from the restaurant environment than American in the study. This is somewhat inconsistent with the previous findings that collectivistic cultures such as Asian, Mediterranean, and Latin American cultures tend to favor closed distance and higher levels of contact than that of individualistic cultures including Northern European and Caucasian North American counterparts (Altman & Vinsel, 1977; Baxter, 1970). This would be due to familiarity, prior knowledge, and experience related to the Western-typed restaurants. It is reasonably presumed that American participants are more familiar with the restaurant environment whereas Chinese participants have less experiences and knowledge about the type of restaurant shown in

the video film. That is, even though this experimental study successfully manipulated participants to be in a crowding restaurant setting, there would be underlying factors which influence participant's perception. Compared to American participants, more specifically, it would be possible that Chinese participants might have relatively less experience to picture themselves into the real restaurant setting through the video film. As a result, this may influence participant's perceptions of crowdedness which are towards questions about the satisfaction in the restaurant. Thus, it is suggested that those factors should be considered in the future study on cultural difference. It is also recommended that more researches should be replicated within the research framework in order to increase the validity of the study.

Practically, this study provides hospitality marketers with some meaningful implications in terms of how to arrange and set their service environment which ultimately related to customer satisfaction considering cultural differences. Despite of many studies on customer satisfaction, there has been a paucity of research in regard to the role of crowdedness in the hospitality field. This study demonstrates that contextual issues are key aspects of customer satisfaction. Indeed, through the choice of a restaurant service setting, this study empirically supports an impact of crowdedness on customers' service experience. According to the result of this study, the cultural differences affected not only customers' feeling of crowdedness but also the value of affective evaluation and satisfaction. Another implication derived from the results, thus, is that restaurant managers and marketers should be able to use such information to tailor their cross-cultural promotional strategies for maximizing customer satisfaction.

In terms of academic contribution, this study can be used as a basis for more extensive examinations of cultural difference studies and crowdedness within the context of the hospitality and tourism. Similar research should be conducted in different settings in the future. On the other

hand, it is important to endow with a word of caution regarding generalization of the results of the study since it represents analysis of one experimental study at one period of time. As noted above, it is expected that the type of restaurant affect people's responses to the crowdedness. Also it is assumed that the nature of consumer keeps changing continuously. Therefore, future research should seek to examine the salience and stability of these findings across settings and different time period.

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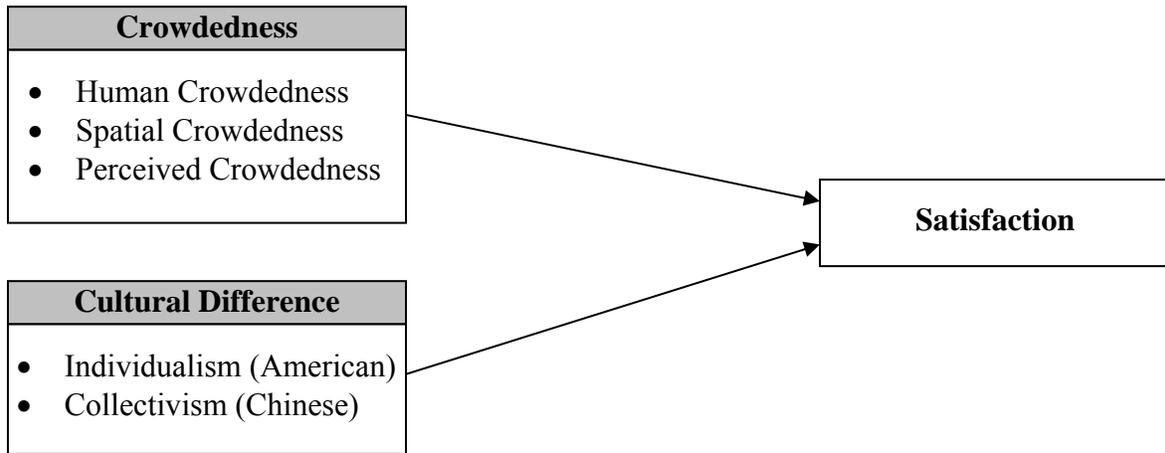


Figure 1: The Proposed Model in the Study

Table 1. Characteristics of the Participants

Variable	Frequency (%)			
Culture (N = 103)				
American	59 (57.3)			
Chinese	44 (42.7)			
Gender (N = 101)				
Male	46 (44.7)			
Female	55 (53.4)			
Dining out per month		American	Chinese	Chi-square
None	9 (8.7)	2 (2.0%)	7 (6.9%)	12.12 *
1 to 2	21 (20.4)	9 (8.9%)	12 (11.9%)	
3 to 5	38 (36.9)	22 (21.8%)	16 (15.8%)	
6 to 10	23 (22.3)	16 (15.8%)	7 (6.9%)	
Over 10	10 (9.7)	9 (8.9%)	1 (1.0%)	

\*p < .05; \*\* p < .01

Table2. T-test of Cultural Differences in the Dimensions of Crowdedness

Constructs	American (N = 59)	Chinese (N = 44)	
Variable	Mean (SD)	Mean (SD)	<i>t</i>
Human Crowdedness	4.67 (0.66)	5.50 (0.85)	-5.37**
The restaurant seemed very crowded to me.	5.80 (1.11)	6.20 (1.07)	-1.87*
The restaurant was a little too busy.	4.76 (1.56)	5.72 (1.32)	-3.27**
There wasn't much traffic in the restaurant.	1.95 (1.02)	3.91 (2.08)	-6.29**
There were a lot of customers in the restaurant.	6.16 (1.24)	6.21 (1.07)	-.25
Spatial Crowdedness	3.74 (0.65)	4.24 (0.77)	-3.61**
The restaurant seemed very spacious.	2.31 (1.04)	2.80 (1.73)	-1.79
I felt cramped dining in the restaurant.	5.03 (1.11)	5.75 (1.31)	-2.99**
The restaurant had an open, airy feeling to it	2.59 (1.13)	3.07 (1.91)	-1.58
The restaurant felt confining to customers	5.02 (1.18)	5.53 (1.49)	-1.96*
Perceived Crowdedness	5.08 (1.02)	5.95 (1.14)	-4.07**
I feel crowded being there.	5.85 (0.87)	6.34 (0.99)	-2.69**
I feel there are too many people.	4.88 (1.43)	6.02 (1.29)	-4.19**
I feel no room for me there.	4.51 (1.46)	5.48 (1.53)	-3.27**

Measured on a 7-point Likert-type scale: Strongly Agree (7), Neither agree nor disagree (4), Strongly Disagree (1).

\*  $p < .05$ ; \*\*  $p < .01$

Table3. T-test of Cultural Differences in Affective evaluation

Variable	American (N = 59)		Chinese (N = 44)		<i>t</i>
	M	SD	M	SD	
I feel uncomfortable	4.14	1.51	5.80	1.15	-6.07**
I feel stuffy	4.75	1.45	5.80	1.15	-3.97**
I feel dull	3.00	1.51	5.50	1.32	-8.77**
I feel annoyed	4.28	1.52	5.41	1.45	-3.79**
I feel lost	2.90	1.52	4.77	1.82	-5.70**
I feel confused	3.03	1.59	4.70	1.84	-4.94**
I feel rushed	4.19	1.76	5.07	1.72	-2.54**
I feel cramped	5.02	1.31	5.62	1.12	-2.46**

Measured on a 7-point Likert-type scale: Strongly Agree (7), Neither agree nor disagree (4), Strongly Disagree (1).

\*  $p < .05$ ; \*\*  $p < .01$

Table4. T-test of Cultural Differences in Satisfaction

Variable	American (N = 59)		Chinese (N = 44)		<i>t</i>
	M	SD	M	SD	
I would enjoy dining at the restaurant	4.92	1.42	3.43	1.58	5.01**
I would be satisfied with my dining experience at the restaurant	4.71	1.30	3.30	1.50	5.11**
Given a choice, I would probably not go back to the restaurant	3.08	1.56	4.82	1.66	-5.43**
I would recommend the restaurant to other people	4.78	1.31	3.27	1.56	5.41**

Measured on a 7-point Likert-type scale: Strongly Agree (7), Neither agree nor disagree (4), Strongly Disagree (1).

\*  $p < .05$ ; \*\*  $p < .01$

Table 5. Correlation Matrix among Measured Variable

Variables	1	2	3	4	5	6	7
Human Crowdedness							
Spatial Crowdedness	.26**						
Perceived Crowdedness	.68**	.33**					
I enjoyed dining at the restaurant	-.39**	-.20**	-.48**				
I would be satisfied with my dining experience at the restaurant	-.52**	-.12	-.55**	.81**			
Given a choice, I would probably not go back to the restaurant (a)	.47**	.29**	.52**	-.73**	-.69**		
I would recommend the restaurant to other people	-.39**	-.20**	-.40**	.64**	.62**	-.67**	
Mean	5.02	3.95	5.45	4.28	4.11	3.83	4.14
Standard Deviation	.84	.74	1.15	1.65	1.55	1.81	1.60

Note: N = 101, \* p < .05; \*\* p < .01  
(a): reversed item

Table 6. The Result of Hierarchical Regression Analysis

Variables	Model 1	Model 2	Model 3
Crowdedness			
Human Crowdedness	-.21	-.22	-.07
Spatial Crowdedness	.07	-.06	.15
Perceived Crowdedness	-.31 *	-.32 *	-.32 **
The number of dining out for dinner		-.07	-.16
Culture			-.40 ***
R <sup>2</sup>	.21	.21	.33
Adjusted R <sup>2</sup>	.18	.18	.29
F	8.68 ***	6.64 ***	9.14 ***
F Δ	8.68 ***	.60	15.25 ***
Degree of Freedom	3	4	5

\*p < .05; \*\*p < .01; \*\*\*p < .001