Revista Internacional de Sociología (RIS)
Special Issue on Organizational Innovation
Vol. 72, extra 2, 9-22, noviembre 2014
ISSN: 0034-9712; eISSN: 1988-429X
DOI:10.3989/ris.2013.08.03

STUDY ON THE INTERACTION BETWEEN THE FOOD AND BEVERAGE SERVICESCAPE AND CUSTOMER WAITING EXPERIENCE

ESTUDIO DE LA INTERACCIÓN ENTRE EL *SERVICESCAPE* DE COMIDA Y BEBIDA Y LA EXPERIENCIA DE ESPERA DE LOS CLIENTES

Chih-Yun Yang chihyun@mail.nkuht.edu.tw
Department of Hospitality and M.I.C.E. Marketing Management.
National Kaohsiung University of Hospitality and Tourism. Kaohsiung, TAIWAN.ROC.

Abstract
Past research on the customer waiting experience tended to focus on two primary areas, namely managing the wait and managing the perception of the wait. Very few studies conducted in-depth analysis and discussion of how external environmental factors affect the experience of customer waiting, which it was also viewed as a negative factor that decreases customer satisfaction toward service. However, in reality, the waiting experience can be positive as a result of certain environmental factors, and subsequently increases customer satisfaction toward the service. This study aimed to further examine the potential influencing factors arising from the servicescape during the customer waiting process, and the interaction between the servicescape and customers during their wait time. This paper is based on the causal feedback loop. A system dynamics perspective was applied to construct a conceptual systems model showing the interaction between the servicescape and the customer waiting experience.

Keywords
Critical Incident Technique (CIT); Dramaturgy theory; Servicescape; System dynamics; Waiting experience.

Resumen
Los estudios previos sobre la experiencia de espera de los clients suelen centrarse sobre todo en dos áreas: la gestión de la espera y la gestión de la experiencia de espera. Existen muy pocos estudios que hayan realizado análisis y discusiones en profundidad sobre cómo los factores ambientales externos afectan a la experiencia de espera de los clientes, que se ha considerado siempre como un factor negativo que reduce la satisfacción del cliente hacia el servicio. Sin embargo, la experiencia de espera puede incrementar en realidad la satisfacción del cliente hacia el servicio. Este estudio pretende profundizar en la influencia potencial de los factores que surgen del "servicescape" durante el proceso de espera del cliente, así como la interacción entre el "servicescape" y los clientes durante el tiempo de espera. Ese artículo se basa en el bucle de retroalimentación causal. Desde la perspectiva de la dinámica de sistemas se construye un modelo de sistemas conceptuales que muestra la interacción entre el "servicescape" y el cliente en la experiencia de espera.

Palabras clave
Dinámica de sistemas; Experiencia de espera; Servicescape; Técnica de incidentes críticos; Teoría dramatúrgica.

Introduction

In recent years, the output value of the food and beverage service industry and the number of food service workers have been increasing, indicating that today's society has moved into a service and consumer oriented era. With rising economic pressure and a quickening pace of life, there is an increasing focus on time cost-effectiveness. Therefore the subject of waiting has always been a mainstream area of study in the field of service management research (Katz, Larson and Larson 1991). Davis & Heineke (1993) believe that the operational improvement goals and sources of competitive advantages for businesses are based on customer demand for service quality, and the issue of waiting is often a main customer complaint against service quality. As such, improving and increasing the speed of service and offering appropriate customer wait times have become very important issues in service management.

Past discussions on waiting have tended to focus on queuing theory (Schwartz 1975) and the psychology of waiting (Master 1985) rather than on a more in-depth analysis of the nature of waiting and the impact of the external environment and management development. With the flourishing of service industries, researchers have expanded their discussions from early topics on waiting to discussions on managing the waiting for services. Generally speaking, studies on waiting management can be divided into two main areas, namely "managing the wait" and "managing the perception of the wait" (Katz, et al., 1991). In managing the wait, attempts are made to reduce the customer wait time through optimizing or controlling internal operational procedures. While in managing the perception of the wait, studies on the impact of the external environment on the customer perception of waiting are used to analyze the actual reactions of customers waiting in line. Businesses will generally control operational procedures to reduce customer wait time. Nevertheless, in many circumstances, non-mechanical or human power intensive operational procedures such as meal service in the food and beverage service industry are difficult to control. Hence in many service industries, because of the difficulty in controlling the actual wait time, attempts can be made to control consumer perception and the experience of waiting.

Waiting to receive services is a common and unavoidable experience, and it is also an important deciding factor in customer overall service satisfaction and customer loyalty (Pruyn and Smidts 1993; Taylor 1994; Hui and Tse, 1996). Under general conditions, the customer mood during the wait experience will affect their perception of the overall service experience (Isen and Shalker 1982). Concurrently, most studies also show an inverse relationship between customer waiting and satisfaction. Nevertheless, in reality, instead of complaining about the inconveniences of waiting in line, customer satisfaction with their consumer experience will sometimes increase because of the wait. For example, Ahmadi (1996) found that in amusement parks, waiting in line can culminate in experiences of happiness for customers. An attractive waiting environment can also directly and positively impact customer satisfaction toward services (Smidits 1993). A

crowded store will often attract customers to gather nearby, and also attract others. Other studies also found that waiting lines can also be a way to attract customers, thus making a waiting line an asset with marketing power (Kostecki 1996). Based on the theory of dramaturgy, this research primarily aimed to explore environmental factors in the restaurant servicescape that affect customer waiting experience, determine servicescape factors that result in positive and negative customer moods, and determine factors and criteria in the customer causal feedback loop in order to establish a system dynamics model basic script for service wait. Lastly, from the perspective of system dynamics theory, the causal feedback loop relationships between influencing factors in the servicescape and customer waiting experience were described. Moreover, based on these relationships, a causal feedback loop diagram was constructed to conceptualize a systems model of interaction between servicescape and the customer waiting experience.

Literature review

Servicescape

Bitner (1992) first defined servicescape as "the environment in which the service is assembled." In the beginning, this definition referred to the physical environment, but because the people within the servicescape can also influence the physical environment, the more abstract concept of a social environment should also be incorporated as a broader definition of servicescape (Baker, Grewal and Parasuraman 1994). Sherry (1998) stated that servicescape plays a key role in shaping customer expectations, differentiating brands, achieving customer and employee goals, and influencing a customer's consumer experience. Wakefield and Blodgett (1999) also showed that when customers are satisfied with the various aspects of a servicescape, their willingness to buy increases.

Waiting Experience

The queuing theory was first proposed by Erlang around 1910 to study the issue of the Queuing System. Whenever a person or object waits to receive a service, a queuing system naturally forms wherein the commonality is "waiting" (Liao 1994). A waiting line is formed whenever existing services supplied by a service facility are less than the demand for services, which naturally results in a waiting system (Chen 1998). Customer perception of wait time is a more important variable than the actual wait time itself, and will directly or indirectly affect customer satisfaction or evaluation of the service. In service management, customer waiting is often viewed as a negative experience (Diaz and Ruiz 2002). Idle or unoccupied time makes customers feel that the wait time is longer and increases negative feelings (Naumann and Miles 2001), and such feelings are known as waiting perception.

In studying the psychology of customers, Maister (1985) and Haynes (1990) discovered that waiting individuals often have a shortened or lengthened perception of waiting time as a result of personal needs and external environmental factors. Hui and Tse (1996) pointed out that the perception of waiting time is the length of time that customers believed they have already waited. That is, it is an individual cognitive or emotional perception of wait time (Baker and Cameron 1996; Iacobucci and Swartz 2000). Generally speaking, the perception of wait time is the length of time from when the beginning of a service is identified to when the service is actually received. (Diaz and Ruiz, 2002). A longer perception of wait time results in a negative impact on emotional response and service evaluation. And thus the more concerned customers are about their wait time, the longer their perception of wait time (Hightower, Brady and Baker, 2002). However, Kostecki (1996) found that wait time need not always necessarily be a negative experience. Using the air travel industry as a subject, Taylor (1994) examined how waiting affects overall service evaluation, and found positive impacts of the waiting experience on overall service evaluation. Elements of the waiting experience included control of delays by the service provider, the level to which times were filled and actual delays. Therefore this research believes that maintaining effective interaction between the servicescape and customers can help facilitate a positive service experience.

Dramaturgy

Sociologist Goffman (1959), the originator of contemporary dramaturgical study, proposed the well-known dramaturgy model where he used the process of stage performance as a metaphor for social interactions to examine the structure of social interactions. Applying dramaturgy to the service industry, Grove and Fisk (1983) pointed out many behavioral similarities between service marketing and dramaturgy, and service and consumer interaction during a service encounter which can be explained from the perspective of a stage performance. Grove & Fisk viewed service employees and customers as actors and audiences on the same stage, where together they act out a service performance. They developed a complete framework comprised of four major dimensions, namely the setting, actors, audience and performance. In terms of the restaurant industry, the restaurant itself is a hardware facility while the service environment is the setting, and the restaurant employees are the actors. Restaurant consumers are the audience, and the delicacies offered by the restaurant are akin to the scenes of a brilliant performance.

System Dynamics and System

Systems dynamics was first established by Jay W. Forrester (1961, 1987), Professor at the Massachusetts Institute of Technology (MIT) during the 1950s. It is mainly used to solve industrial management problems, especially for complex and multi-faceted system problems. Senge (1990) divided the complexity of problems into detailed com-

plexity and dynamic complexity. When many factors must be considered in a problem, then the problem is said to comprise detailed complexity. Based on the definitions in dramaturgy, this research attempted to apply systems thinking to analyze important factors that affect the mood of restaurant consumers when they are waiting to receive food services.

Research method

Critical Incident Technique (CIT)

To analyze the system structure of customers waiting for services, the theater script of the servicescape must be first established from the details of customer perception of waiting, and therefore, an exploratory research method was used in Stage I of this study. The Critical Incident Technique is a type of qualitative research method where researchers design investigative steps to observe human behaviors and classify them into major categories. CIT can be used as a data collection method for gathering many important behavioral facts from target scenarios. It is a convenient method of classification where researchers can easily categorize incidents or situations (Cheel and Pittaway 1998). In studying a service encounter, a critical incident refers to a specific interaction between a customer and service provider, especially for an interaction that can make the customer particularly satisfied or particularly dissatisfied. Without distorting the original narratives of respondents, we hope to provide a consistent and accurate interpretation of their accounts (Viney 1983), and adopted the CIT to interview customers waiting for services. Using interview data gathered from CIT questionnaires and the dramaturgy model (Grove and Fisk, 1983) as a theoretical base, the setting, actor, audience and performance were key elements in the data collection, classification and analysis. Important factors influencing the service encounter were further determined in order to understand the underlying causes of the critical incident.

Critical Incident Questionnaire Design and Data Collection

Aiming at ten restaurant brands in Wowprime, three restaurants each in Taipei, Taichung, and Kaohsiung cities are randomly selected for the ninety samples. Using convenience sampling, each sample are collected three customers with personal data for the questionnaire survey.questionnaires were administered to consumers dining in restaurants regarding their experience with various restaurant services to collect qualitative interview data from the customer standpoint.

(1) Have you dined at a restaurant and had a waiting experience within the past week? Which restaurant was it?

(2) Please describe your waiting experience. What was the most memorable incident —it could be a pleasant or unpleasant incident.

(3) Please write down your actions, words or atmosphere during that time (e.g. 1. What specific circumstance resulted in the situation; 2. What did you or others do, say, see or feel at that time; 3. What situation led you to consider this waiting experience as pleasant or unpleasant).

The data collection yielded a total of 348 incidents. To have the samples thoroughly present the parent structure (the actual customer data in the 90 sampled restaurants) and avoid the bias in data analyses, the valid samples and the parent structure are proceeded Chi-square goodness-of-fit. The samples are tested the differences in gender, age groups, and parent distribution to adjust the sample distribution based on the parent's gender and age groups. With weight adjustment, the sample structure and the parent approach the consistency and reveal representativeness. The percentage in the investigation result is shown with weighted percentage in Table 1.

Classification of Critical Incident Technique Interview Data

CIT data collection does not offer a clear formula for determining the number of samples. Therefore in this study, the researcher had to carefully evaluate whether the collected incidents generally encompassed all the behavior types being studied (Flanagan, 1954). After the data were collected, the first research assistant made the first classification

Table 1.
Structural percentage between samples and the parent

Location	Number of samples (people)	Structural percentage of sample (%)	Weighted structural percentage of sample (%)	Structural percentage of parent (%)
Total	348	100.0	100.0	100.0
Male	184	52.8	54.6	54.6
Female	164	47.2	45.4	45.4
Total	348	100.0	100.0	100.0
Age 11-20	70	20.1	17.2	17.1
Age 21-30	108	31.2	33.6	33.5
Age 31-40	115	32.9	28.3	28.4
Age 41-50	40	11.5	14.7	14.8
Age 51 Above	15	4.3	62	6.2

Chi-square=0.18< χ^2 (degree of freedom 5, level of significance 5%)=11.07

based on classification rules and definitions by Bitner, Booms, and Tetreault (1990). In the classification process, incidents that were inconsistent with the criteria were temporarily put aside until all the incidents were classified. Then together with the second research assistant, these unclassified incidents were read, ranked, combined and re-ranked until a consistent coding scale was developed.

After classification, the number of valid samples collected in this study was 217 incidences of pleasant waiting experiences, and 105 incidences of unpleasant waiting experiences. To facilitate subsequent reading and analysis, all responses were input and organized into a computer, and following the CIT steps and procedures, the two research assistants conducted content analysis and classification. The classification was based on the dramaturgy model proposed by Grove et al. (1998).

Reliability Analysis-Consistency in Individual Classification

The classification process of the CIT is most susceptible to debate because its steps rely on the subjective judgment of the researcher (Travers 1958). Using the reliability and validity test method applied by Andersson and Nilsson (1964) toward CIT to ensure classification reliability, each research assistant classified data from the same sample twice, with 5 days between each classification in order to avoid interference due to memory. Thereafter, the consistency number of the two classifications by each research assistant was calculated. In other words, a measure of whether the same incident was classified into the same category was obtained. Furthermore, this study also used the Reliability Index formula proposed by Perreault and Leigh (1989) to test for reliability in the classification process.

$$Ir = \sqrt{\frac{(F_0 / N - 1/K)}{(K/K-1)}}$$

I r = Reliability Index
Fo= the number of pair wise interjudge agreements)
N = total number of observations
K = the number of classification categories

Results of the reliability analysis

To obtain research reliability, the two research assistants carefully read the definitions of every scenario type in the dramaturgy model and the questionnaire responses of customers who had incidences of pleasant waiting experiences and those who had incidences of unpleasant waiting experiences at the restaurant. The samples were independently classified, and after 5 days, each research assistant once again re-classified the data to

achieve consistent criteria in individual classification. Among the samples with pleasant waiting experiences, 217 had valid data while 19 were invalid; and among the unpleasant waiting experiences, 105 were valid while 11 were invalid. Organization by the two research assistants yielded a consensus of 198 pleasant waiting experiences and 94 unpleasant waiting experiences. A comparison to the original samples showed mutual agreement of 91.5% for pleasant waiting experiences and 89.5% for unpleasant waiting experiences, indicating a reliability index of 0.844 and 0.835, respectively.

Classification Results Contributing to Pleasant and Unpleasant Waiting Experiences

The 217 pleasant waiting experiences of restaurant customers comprised 122 types of incidents, which can be classified according to 9 major types of influencing factors. Of these, a high proportion (47.92%) was centered on the Type D "Performance", and it included 56 interaction incidents that make customers happy, such as friendly waiters serving cold beverages, complimentary snacks during waiting, and waiters pre-taking orders. Next was the Type B "Actor" (30.96%), and it included 37 incidents such as helpful initiatives by the waiters, well-experienced waiters, and being seated in an obscure area but still receiving timely service from the waiters. Accounting for 17.51% of the factors were a Type A "Setting" classification, and it included 21 types of interaction incidents such as having a TV available in the waiting area, the decor being pleasant enough for pictures, and having a pleasant indoor atmosphere. Lastly, accounting for 1.84% of the factors were the Type C "Audience", and it included 5 types of incidents such as chatting with friends, and seeing other diners enjoying their meals making the wait worthwhile.

On the other hand, the 105 unpleasant waiting experiences comprised 78 types of incidents, which can be classified according to the 9 major types of influencing factors. Of these, a high proportion (57.13%) was centered on Type B "Actor" classification, and included 47 interaction incidents such as failing to inform the customer when seating was available, irritability of the waiters, and waiting in vain for attention. Next, accounting for 30.47 % of the factors as being a Type D "Performance", this included 25 types of incidents such as customers who came later after being seated first, lack of a systematic process, and disorder. Accounting for 5.71% of the factors were the Type C "Audience" classification, and it included 5 types of incidents such as someone cutting in the line, and customers not playing by the waiting rules. Lastly, accounting for 4.76% of the factors were Type A "Setting" classification, and it included 4 types of incidents such as the waiting area being too noisy, and the surrounding environment being too loud and disorderly.

Table 2 depicts a dramaturgical based classification of key incidents impacting the pleasantness and unpleasantness of the waiting experience of the restaurant customers.

From Table 2, it is evident from critical incidents that affect the pleasantness and unpleasantness of the waiting experience among restaurant customers were mainly centered around "Actor" (Type B) and "Performance" (Type D) dimensions. Hence this research viewed these two major scenarios, actor and performance, as the primary interaction systems, and setting and audience as the secondary.

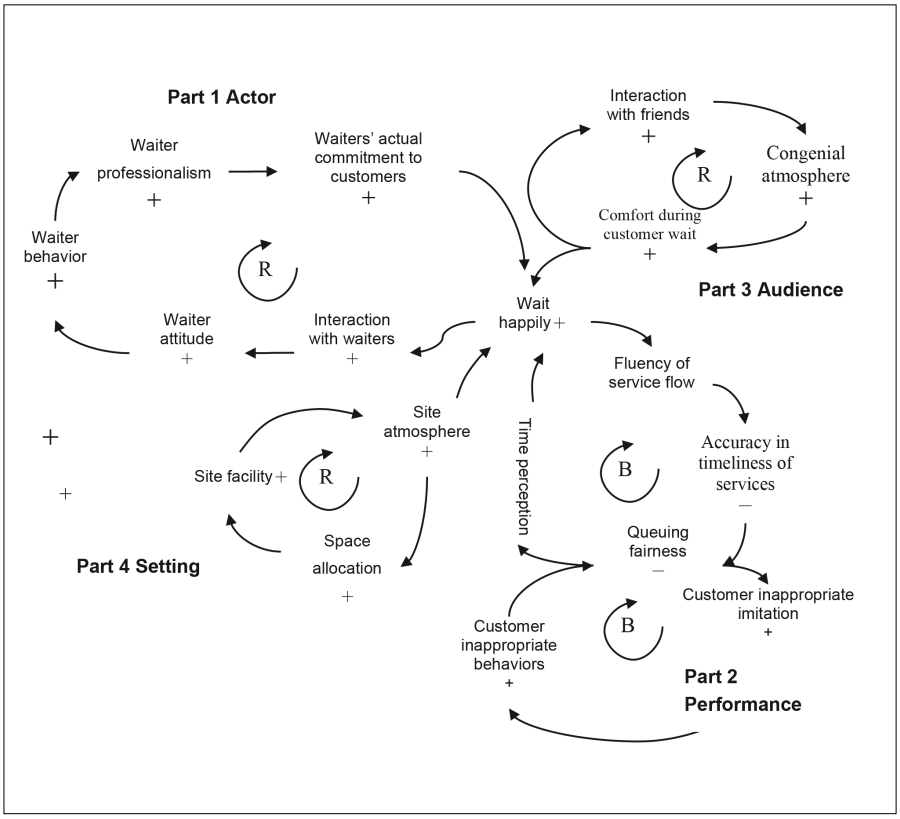
Table 2.
Dramaturgical Classification in Restaurant Scenario

Classification Item	Pleasant Waiting Experience		Unpleasant Waiting Experience	
	Frequency	Percentage	Frequency	Percentage
A. Setting				
Servicescape facilities	18	8.30%	1	0.95%
Servicescape space allocation	4	1.84%	2	1.9%
Servicescape atmosphere	16	7.37%	2	1.9%
Subtotal	38	17.51%	5	4.76%
B. Actor				
Attitude and behavioral performance of waiters	57	26.26%	53	50.47%
Professionalism of waiters	3	1.38%	2	1.90%
Commitment of waiters toward customer	7	3.32%	5	4.76%
Subtotal	67	30.96%	60	57.13%
C. Audience				
Interaction among customers	4	1.84%	6	5.71%
Subtotal	4	1.84%	6	5.71%
D. Performance				
Quality of tangible products	2	0.92%	0	0
Fluency of service flow	102	47.0%	27	25.71%
Accuracy in timing of services	0	0	5	4.76%
Subtotal	104	47.92%	32	30.47%
Total	217	100.00%	105	100.00%

Interaction system of servicescape and customer waiting experience

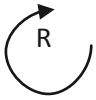
Based on the aforementioned classification and literature on the cause-effect relationship among various factors, a causal diagram (Diagram 1) based on a system dynamics perspective was constructed for the restaurant customer waiting experience and various factors in the overall servicescape. At the same time, the servicescape systems revealed by customers was divided into four main categories according to the dramaturgy theory. The systems are the Actor System which describes the interaction between the waiters and consumers, the Audience System which describes the interaction among customers, the Performance System which describes the interaction

Diagram 1.
Causal diagram of the customer waiting experience based on the dramaturgy model

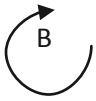


between the service product and the flow of customers, and the Setting System which describes the physical environment of the restaurant.

Part 1 of Diagram 1 represents the Actor, the main system defined in the dramaturgy theory. The waiting experience of customers shows a positively reinforcing cycle where pleasant experiences are enhanced through interaction opportunities between customers and waiters. Correspondingly, the frequency of interaction opportunities between customers and waiters affect the waiter attitude (Gutek et al. 1999), which in turn shows positive improvement, and subsequently their behaviors also show positive patterns (Ramsey and Sohi 1997). The positive behaviors of the waiters will also increase their professionalism, which then affect their commitment to the customers. And subsequently, the mood of waiting customers will also become positive (Lagace, Dahlstrom and Gas-

senheimer 1991). This cycle is a positive feedback loop, also termed the Reinforcing Loop, and represented by 

in the diagram.

Part 2 represents Performance, the other main system in the dramaturgy theory. When the service flow becomes less fluent, the accuracy of timeliness of service will also decrease, which subsequently decreases the fairness in the waiting (Hart et al. 1990; Tax and Brown 1998; Smith et al. 1985). With a decrease in fairness, the probability of inappropriate imitation will increase among customers, thereby increasing the proportion of inappropriate behaviors. As the proportion of inappropriate customer behavior increases, queuing fairness will naturally become more adverse, which increases customer time awareness, and hence lengthens their perception of time (Rafaeli et al. 2002). In other words, this means that customer perception of waiting time is lengthened, thus showing a low accuracy in the flow and design of the system. When customers become highly aware of time, it negatively affects their waiting mood. These two loops are negative feedback loops, also known as a Balancing Loop, and is represented by 

in the diagram.

Part 3 in the diagram is defined as the Audience of the secondary system. When the mood of waiting customers improves, their interaction with friends will also improve. In turn; their feelings toward the atmosphere will also improve. Correspondingly, the customers will also feel more comfortable during their wait, thereby resulting in a more positive mood during the waiting time. Thus the causal loop in the audience system is also a reinforcing loop. Through positive interaction with accompanying friends, customers are happier while waiting. On the other hand, although inappropriate imitation and behavior among customers are in the audience classification according to dramaturgy model, their mutually important factors have negative moderating effects are also highly related to queuing fairness, and therefore this study classified them as a subsystem within this category.

Another secondary system defined in the dramaturgy model is the Setting. Good space allocation in a service setting will affect a store's coordination of product and setting to enhance its facility. Enhancing a facility will positively affect the setting atmosphere, and thereby positive customer moods and positive customer perceptions in the waiting experience. As a result, customers will manifest positive emotional responses to their waiting, subsequently culminating in a happy waiting mood, and vice versa. This is also a reinforcing loop affecting the customers' willingness to wait.

Lastly, also worth noting is that every system happens simultaneously and exists in the overall process of customer waiting. The factors between the systems are closely linked, and the pleasant waiting mood of customers comes from the total accumulated amount of factors affecting each other between the four systems.

Research conclusions

As evident from Diagram 1 in this research, in an overall servicescape, the waiters, accompanying consumers and service environment respectively defined in the actor, audience and setting categories are positive feedback mechanisms for the consumer, and they positively reinforce the general waiting mood of the consumer. On the other hand, the service product and service flow defined in the performance category of the dramaturgy model are negative feedback mechanisms, and they negatively moderate the waiting mood of the consumer. From the above servicescape and customer waiting experience interaction system model constructed from empirical analysis, it is apparent that the final waiting experience of consumers is in effect the total accumulation of interactions between the consumers and all intangible and tangible factors they experienced while waiting to dine, and the resulting impact of these interactions. In other words, the mood of the waiting consumers is affected by the resulting impact of the service hardware, waiter interaction, smooth service flow, and customer interaction between themselves. The more positive interactive feedback the customers receive from the service environment, the happier their moods are when waiting, and vice versa.

Past studies on management recommend that managers focus their regulations on a particular management function or procedure, such as controlling an operational procedure to reduce customer waiting time, or using work flow planning, system fluency and accuracy to increase the customer willingness to wait. Nevertheless, the research results showed that when consumers are exposed to the servicescape of a business, their perceptions are formed from a full range of contacts. Therefore from a system perspective, managers should not only limit their management thinking to certain functions or incidents, but rather to develop systematic thinking (Senge 1990) and view the management of consumer waiting from a comprehensive perspective. For example, when planning a waiting system, a design that is based only on procedures will easily result in the pursuit of operational efficiency while neglecting the actual needs and feelings of customers. Only a plan that simultaneously considers waiters and customer perspectives and takes into account both the waiters' convenience and customer comfort and convenience when waiting can achieve optimal results.

Based on the research framework of using the servicescape of the restaurant industry, this study proposed a simple system model describing the interaction between customer waiting experience and the restaurant servicescape. Accordingly, this study recommends that in their management of customer waiting, the service industry can divide their overall service environment into four major scenarios, namely servicescape, service employees, service flow and products, and customer interaction. At the same time, their management should focus on each scenario and its influencing factors that have reinforcing effects on the moods of the waiting customers. Providing more positive stimulating factors and integrating each service detail to increase positive consumer waiting experience can result in a high level of satisfaction and thus maintain competitiveness.

References

Baker, J. and Cameron, M. 1996, "The effects of the service environment on affect and consumer perception of waiting time: an integrative review and research propositions." *Academy of Marketing Science Journal* 24(4): 338-349.

Bitner, M. J., Booms, B. H., and Tetreault, M. S., 1990, "The service encounter: diagnosing favorable and unfavorable incidents." *Journal of Marketing* 54: 71-84

Chell, E. and Pittaway, L. 1998. "A study of entrepreneurship in the restaurant and café industry: exploratory work using the critical incident technique as a methodology." *International Journal of Hospitality Management* 17: 23-32.

Davis, M. M. and Heineke, J. 1993 "Understanding roles of the customers and the operation for better queue management." *International Journal of Operations and Production Management* 9: 21-34.

Diaz, A. B. C. and Ruíz, F. J. M. 2002, "The consumer's reaction to delay in service." *International Journal of Service Industry Management* 13(2): 118-140.

Eroglu, Sevgin A., and Karen A. Machleit 1993. "Atmospheric factors in the retail environment: sights, sounds and smells." *Advances in Consumer Research* 20: 34.

Erlang, A.K. 1917. *Solution of some problems in the theory of probabilities of significance in automatic telephone exchanges*. *Elektrotkeknikeren* 13.

Forrester, J. W. 1961. *Industrial Dynamics,* Cambridge, Mass: MIT Press.

Forrester, J. W. 1987. " Lesson from system dynamics modeling." *System Dynamics Review* 3(2): 136-149

Flanagan, J. 1954. "The critical incident technique." *Psychological Bulletin* 51: 327-358.

Goffman, E. 1959. *The presentation of self in everyday life*. New York: Doubleday and Co.

Grove, S. J. and Fisk, R.P. 1983. *The Dramaturgy of Services Exchange: An Analytical Framework for Services Marketing* in Leonard L. Berry, G. Lynn Shostack and G.D. Upah (eds) Emerging Perspectives on Services Marketing." Chicago: American Marketing Association.

Haynes, P. J. 1990. "Hating to wait: managing the final service encounter." *The Journal of Services Marketing* 4: 20-26.

Hightower, J. R., Brady, M. K., and Baker, T. L., 2002. "Investigating the role ofthe physical environment in hedonic service consumption: an exploratory study of sporting events." *Journal of Business Research* 55(9): 697-707.

Hui, M. K. and Tse, K. D. 1996. "What to tell consumers in waits of different lengths: an integrative model of service evaluation." *Journal of Marketing*, 60(2): 81-90.

Lacobucci, D. and Swartz, T. A. 2000. *Handbook of Services Marketing and Management*. London: Sage Publications.

Isen, A.,and Shalker, T. 1982. "The effect of feeling state on evaluation of positive, neutral and negative stimuli: When you "accentuate the positive" do you "eliminate the negative?." *Social Psychology Quarterly,* 45:58-63.

Katz, K. L., Larson, B. M. and Larson, R.C. 1991. "Prescription for the waiting-in-line blues: entertain, enlighten, and engage." *Sloan Management Review* 32(2): 44-53.

Kostecki, M. 1996. "Waiting lines as a marketing issue." *European Management Journal* 14 (3): 295-303.

Maister, D. H. 1985. "The psychology of waiting lines." *The Service Encounter* Pp. 113-123.

Naumann, S. and Miles, J. 2001."Managing patients' perceptions." *Journal of Management in Medicine* 15(5): 376-386.

Perreault, W. D. and Leigh E. L. 1989. "Reliability of nominal data based on quantitative judgments." *Journal of Marketing Research*, 23: 130-43.

Pruyn, A. T. H., and Smidts, A. 1993. "Customers' evaluations of queues: Three exploratory studies." in W. F. v. Raaij & G. Bamossy (Eds.), *European Advances in Consumer Research* 1: 371-382.

Schwartz B. 1975. *Queuing and Waiting*, Chicago: University of Chicago Press.

Smith, Ruth Ann, and Michael J. Houston 1985. "A psychometric assessment of measures of scripts in consumer memory." *Journal of Consumer Research* 12: 214-224.

Travers, M. W. 1958. *An Introduction to Educational Research.* New York: Macmillan.

Smith, S. 1983. Recreation geography, London and New York: Longman.

Taylor, S. 1994. "Waiting for service: the relationship between delays and evaluations of service." *Journal of Marketing* 58(2): 55-69.

Wakefield, K.L. and Blodgett, J.G. 1999. "Customer response to intangible and tangible service factors." *Psychology and Marketing* 16 (1): 51-68

Viney, L. 1983. "The assessment of psychological states through content analysis of verbal communications." *Psychological Bulletin* 94: 542-563.

Dr. Chih-Yun Yang is an Associate Professor in the department of hospitality marketing and event management at National Kaohsiung University of Hospitality and Tourism (Taiwan). Her research interests includes Hospitality Industry management, Service Management, and Yield Management.

RECEIVED: 3 August 2013.
ACCEPTED: 5 March 2014.
PUBLISHED ONLINE: 15 April 2014.